

COMPARATOR

ORIGINAL TO SAVITSKY REG.

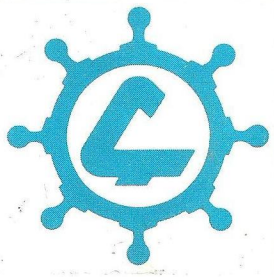
21.2.2000 - 03.3.2000

1260 Pages

DEMO-COPY

1





ÇEMBERCİ DENİZCİLİK



1988

OKTAY

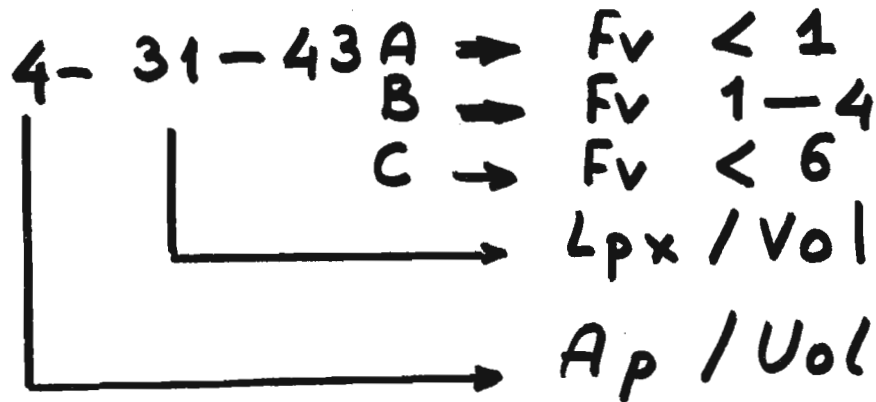


ORHAN



OSMAN

4665



Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCİ DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez. Teksir  
veya kopya edilemez ve her ne mak-  
satta olursa olsun maksadı dışında  
izinsiz kullanılamaz.

Cost Price = 1000 Dolar TOTAL

Law = No Black Copy

Model	=	4665
Ref	=	SNAME
Friction	=	ATTC Ca=0.0
Lpx	=	3.912 ft
Lwl	=	3.783 ft
Bpx	=	1.956 ft
Ap	=	6.469 sqft
Vcg	=	0.000 ft
Disp.	=	129.08 Lb
Deadrise	=	13.00 degree
Twist Angle	=	0.50 degree
Shaft Angle	=	19.41 degree
Vce	=	-2.15 inc
Lpx/Bpx	=	2.000
Lpx/AP	=	2.366
Ap /Vol	=	4.052
Lpx/Vol	=	3.097
Cvload	=	0.270
Lbload	=	0.078
Disp-Lpx	=	962.530

*Hota* NSRDC  $\Rightarrow 1.2817 \times 10^{-5} \ell$   
 Lwl/Lpx  $\Rightarrow 0.967$   
 Model Lwl  $\Rightarrow 3.783$   
 friction  $\Rightarrow$  ATTC  $e^{-4}$

NavCad(tm) 3.1d

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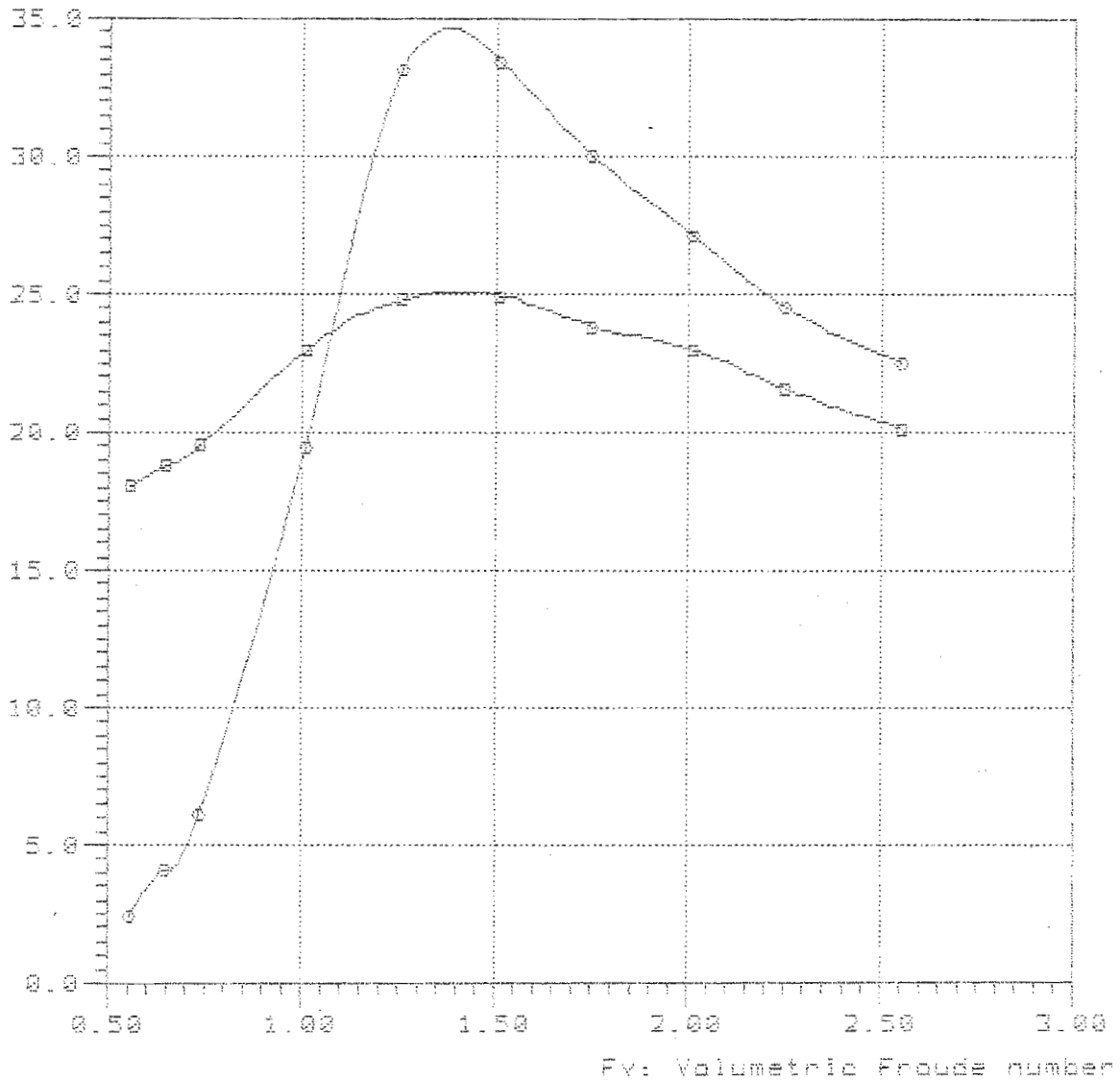
HydroComp, Inc.

File: 4-31-396.mdl

Date: 21 Feb 88

Time: 9:58

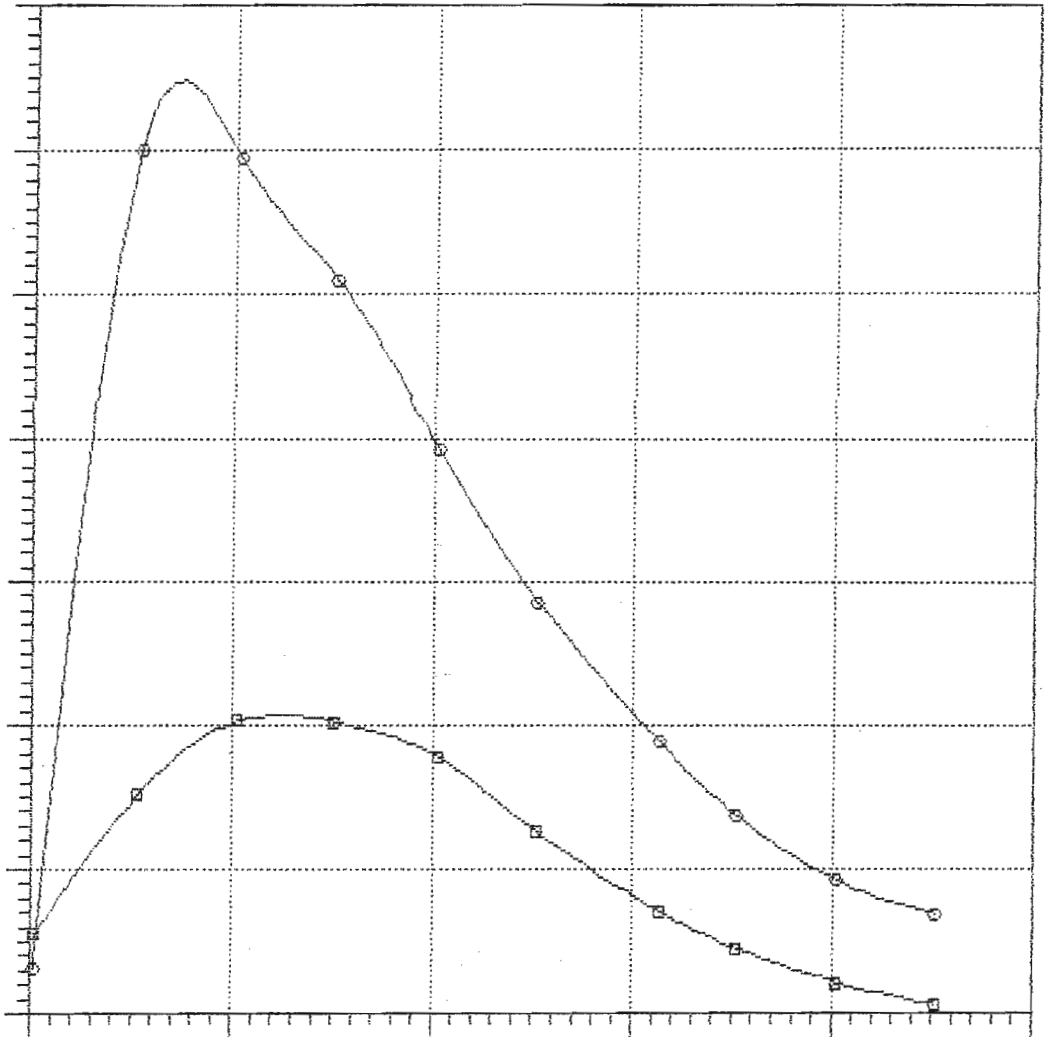
Rbare: bare-hull resistance (lbs)



—■—

—●— T15-4665 Lpx/Bpx=2.00 Ap/Vol=4.00 Lpx/Ap=2.366 Lcg/Lpx=0.396

4-31-435



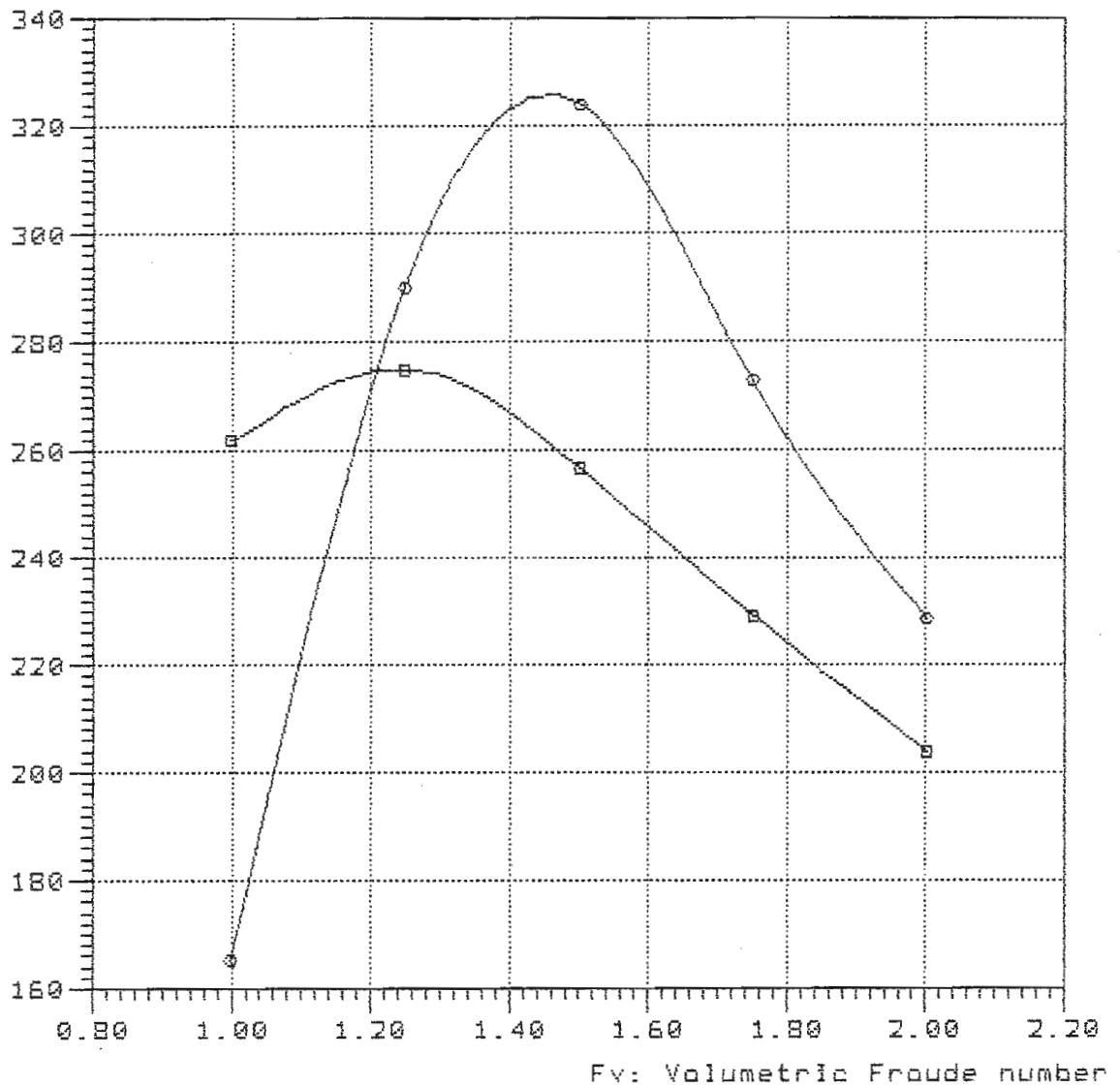
—□—  
—○—

Model = 4665  
Ref = NSRDC  
Friction = ITTC  $C_f = 4e^{-4}$

Lpx = 8.700 ft  
Lwl = 8.596 ft  
Bpx = 4.350 ft  
Disp = 1000.000 lb  
Ap = 32.004 sqft  
Deadrise = 13.00 degree  
Shaft Ang = 0.00 degree  
Vce = 0.00 ft

Lpx/Bpx = 2.000  
Lpx/Ap = 2.365  
Ap /Vol = 5.121  
Lpx/Vol = 3.490

Rbare: Bare-hull resistance (lbs)



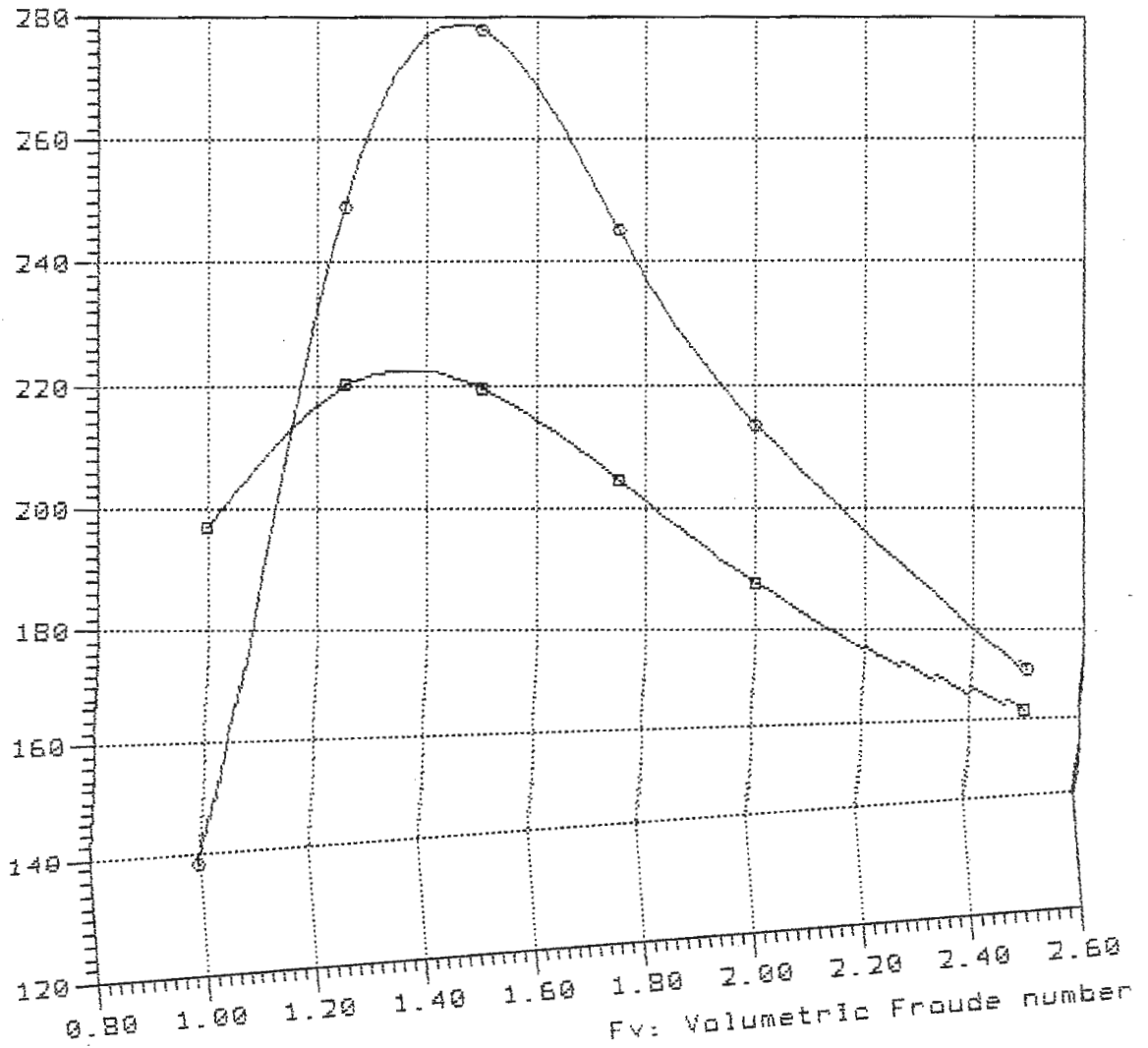
**Curve legend**

—■—

—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=5.12 Lpx/Ap=2.366 Log/Lpx=0.355



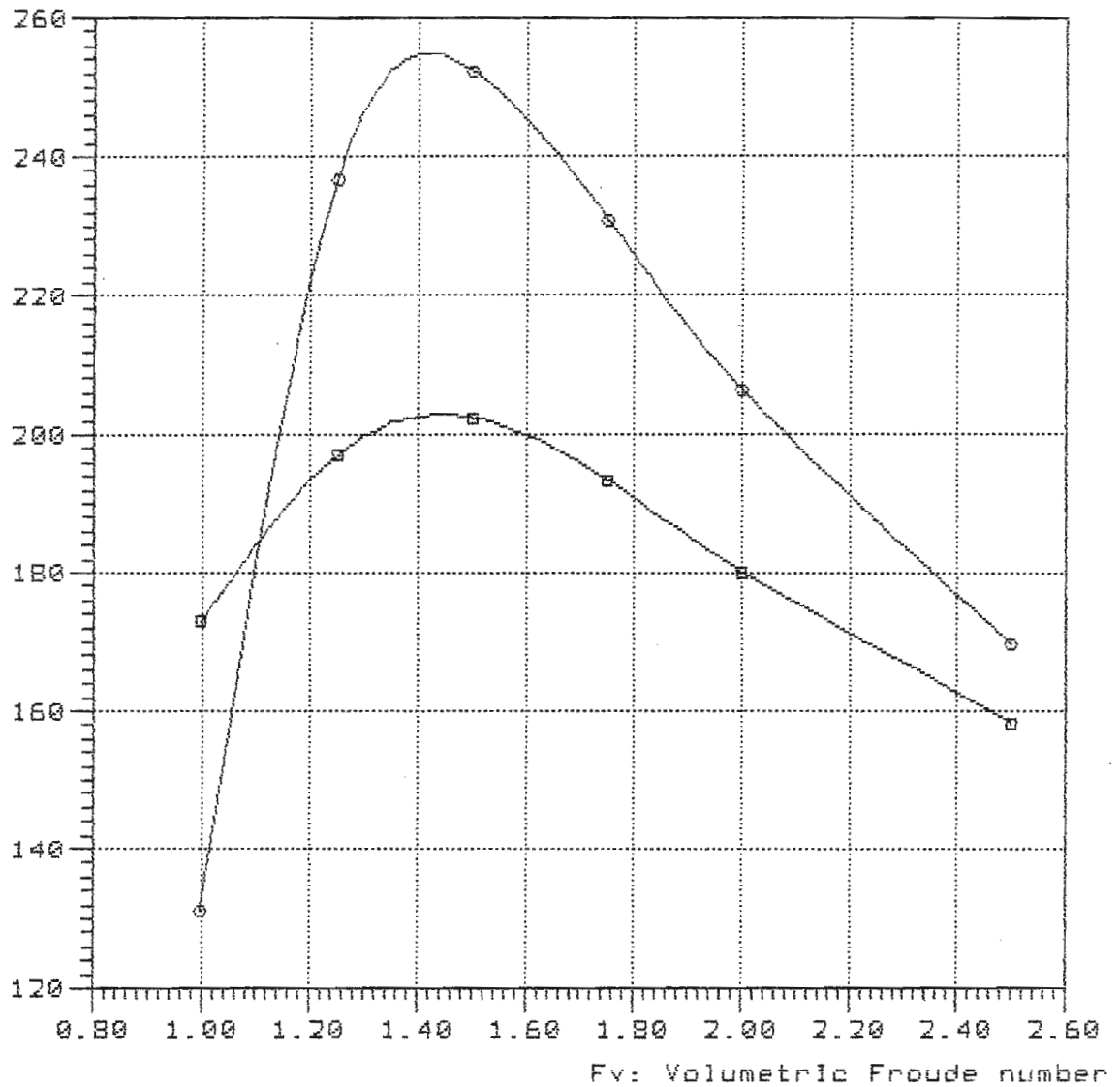
Rbare: Bare-hull resistance (lbs)



**Curve legend**

—□—  
 —○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=5.12 Lpx/Ap=2.366 Log/Lpx=0.395

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=5.12 Lpx/Ap=2.366 Lcg/Lpx=0.415

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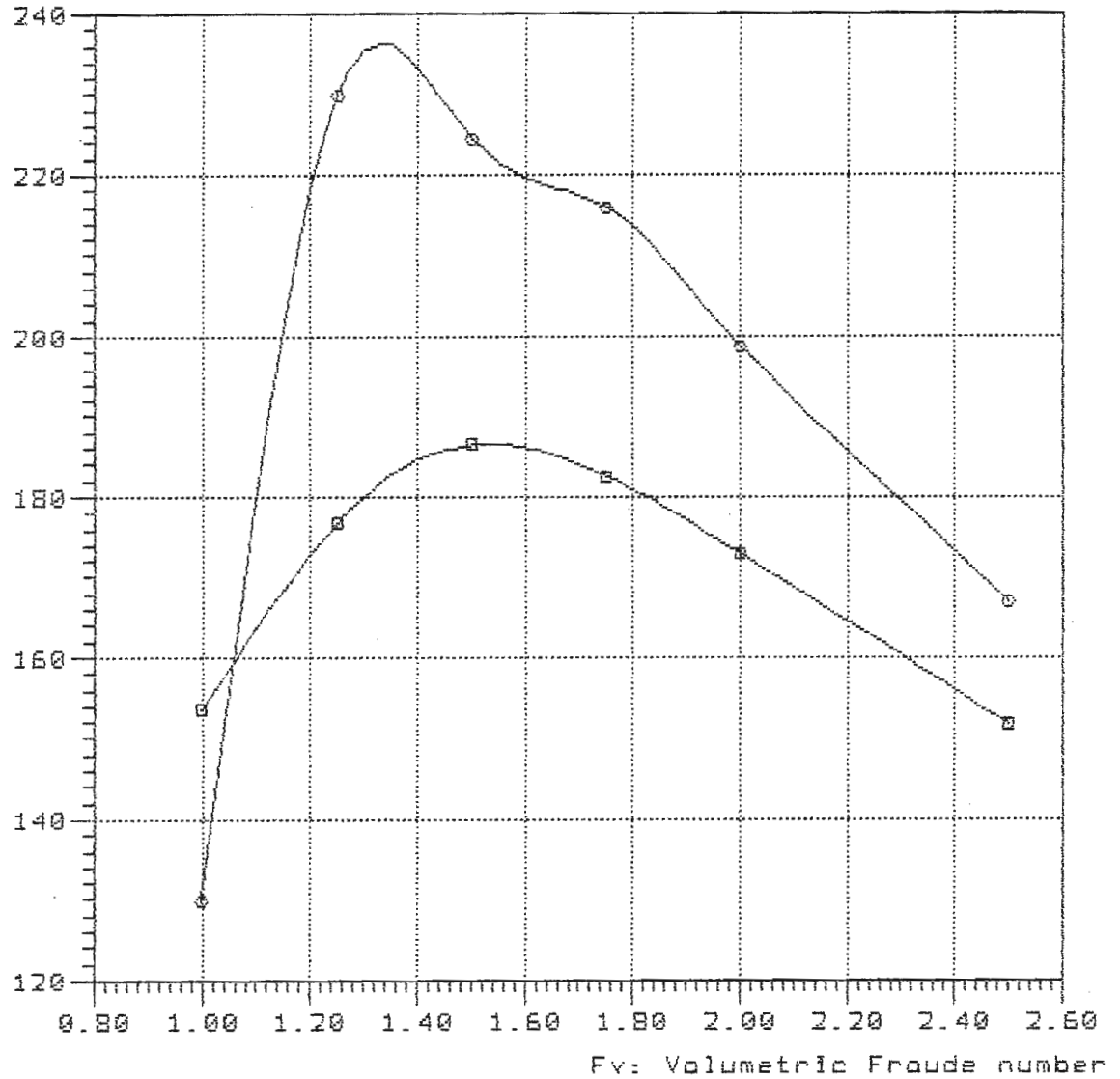
HydroComp, Inc.

File: 5-35-435.mdl

Date: 21 Feb 00

Time: 11:34

Rbare: Bare-hull resistance (lbs)



—■—

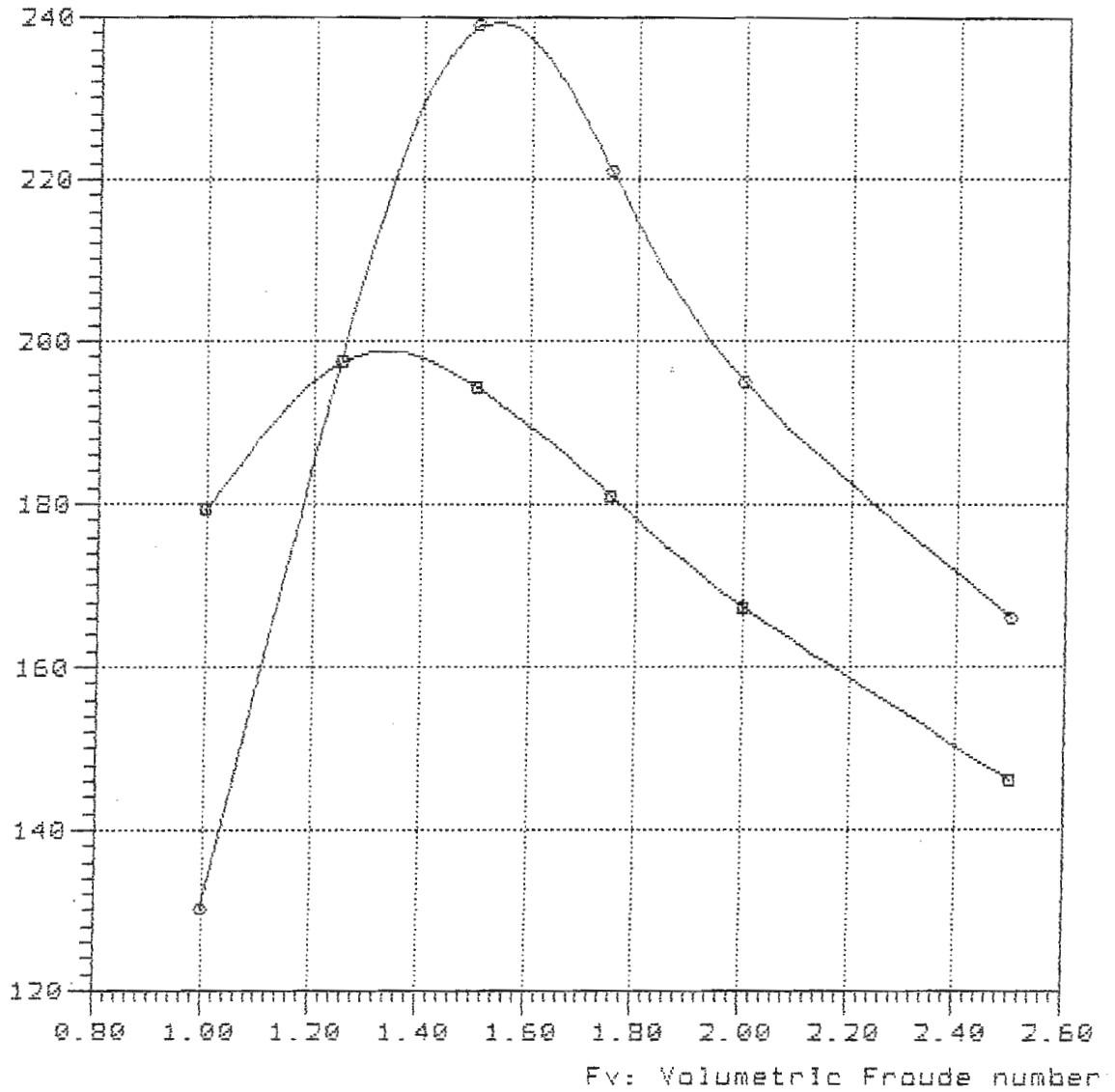
—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=5.12 Lpx/Ap=2.366 Lcg/Lpx=0.435

Model = 4665  
Ref = NSRDC  
Friction = ITTC  $C_a = 4e^{-4}$

Lpx = 10.000 ft  
Lwl = 9.880 ft  
Bpx = 5.000 ft  
Disp = 1000.000 lb  
Ap = 42.283 sqft  
Deadrise = 13.00 degree  
Shaft Ang = 0.00 degree  
Vce = 0.00 ft

Lpx/Bpx = 2.000  
Lpx/Ap = 2.365  
Ap /Vol = 6.766  
Lpx/Vol = 4.012

Rbare: Bare-hull resistance (lbs)



—□—

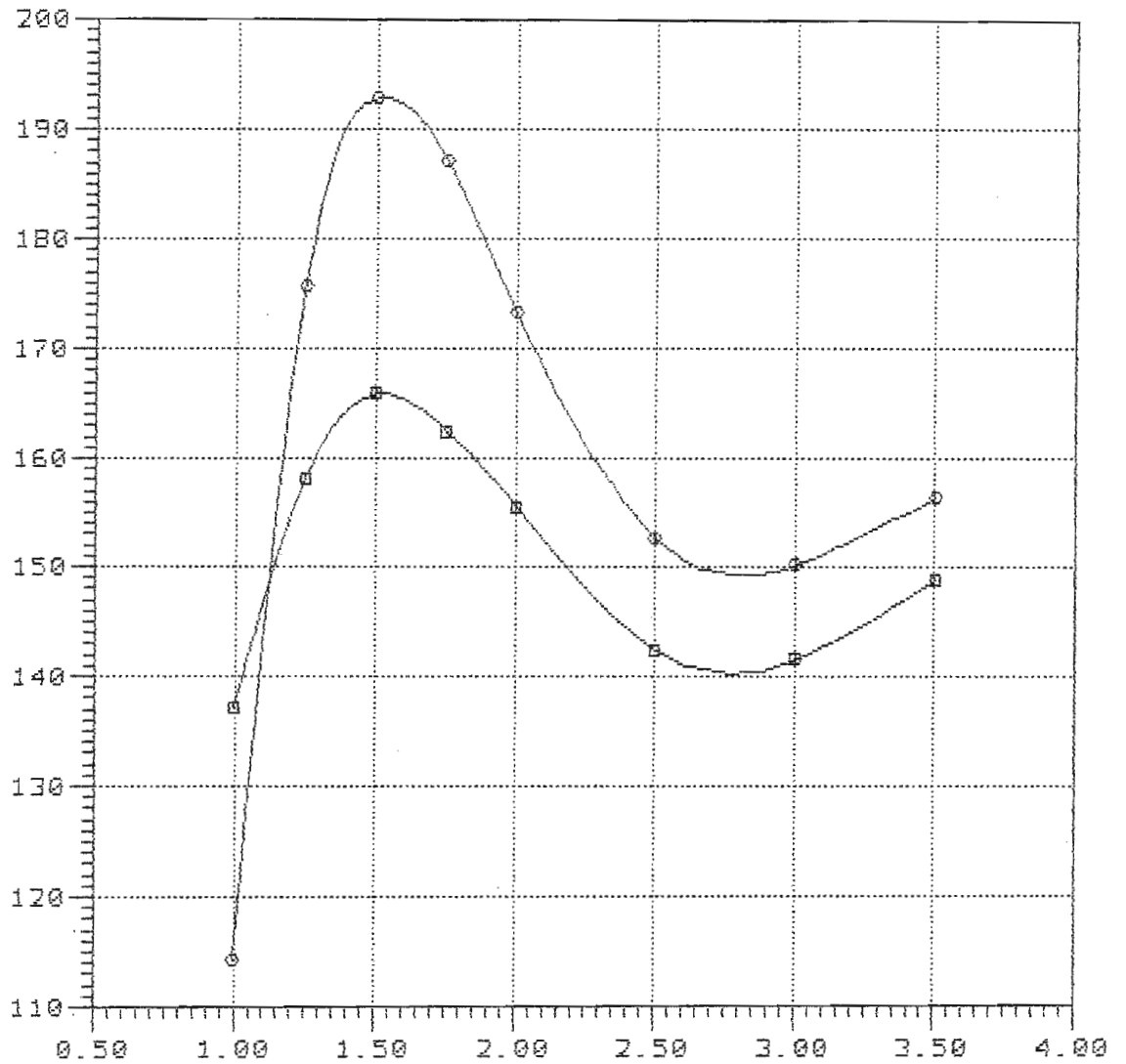
—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=6.765 Lpx/Ap=2.366 Lcg/Lpx=0.355

## Bare-hull resistance

vs.

## Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



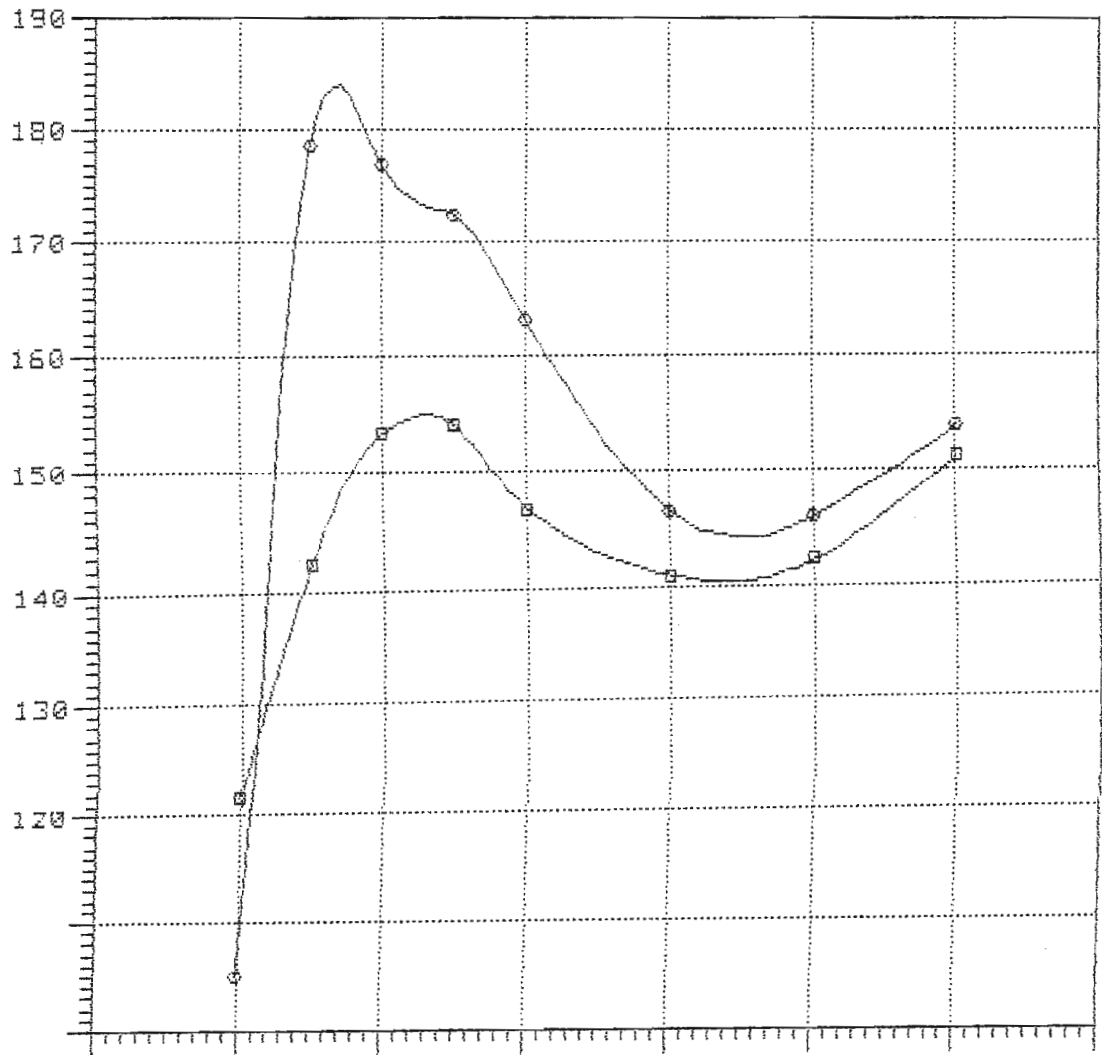
Fv: Volumetric Froude number

## Curve legend

—■—

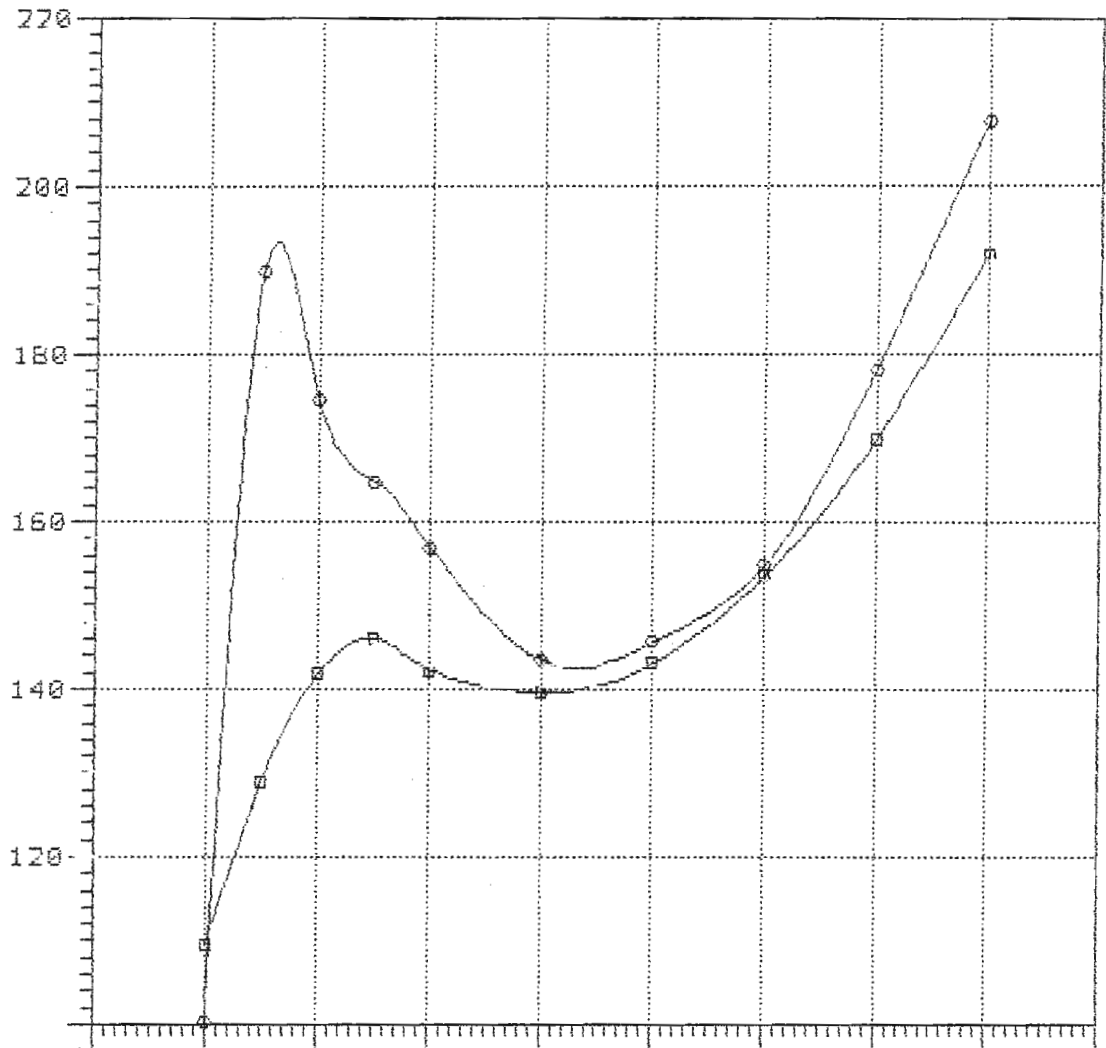
—●— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=6.765 Lpx/Ap=2.366 Lcg/Lpx=0.395

Rbare: Bare-hull resistance (lbs)



—□—  
—○—

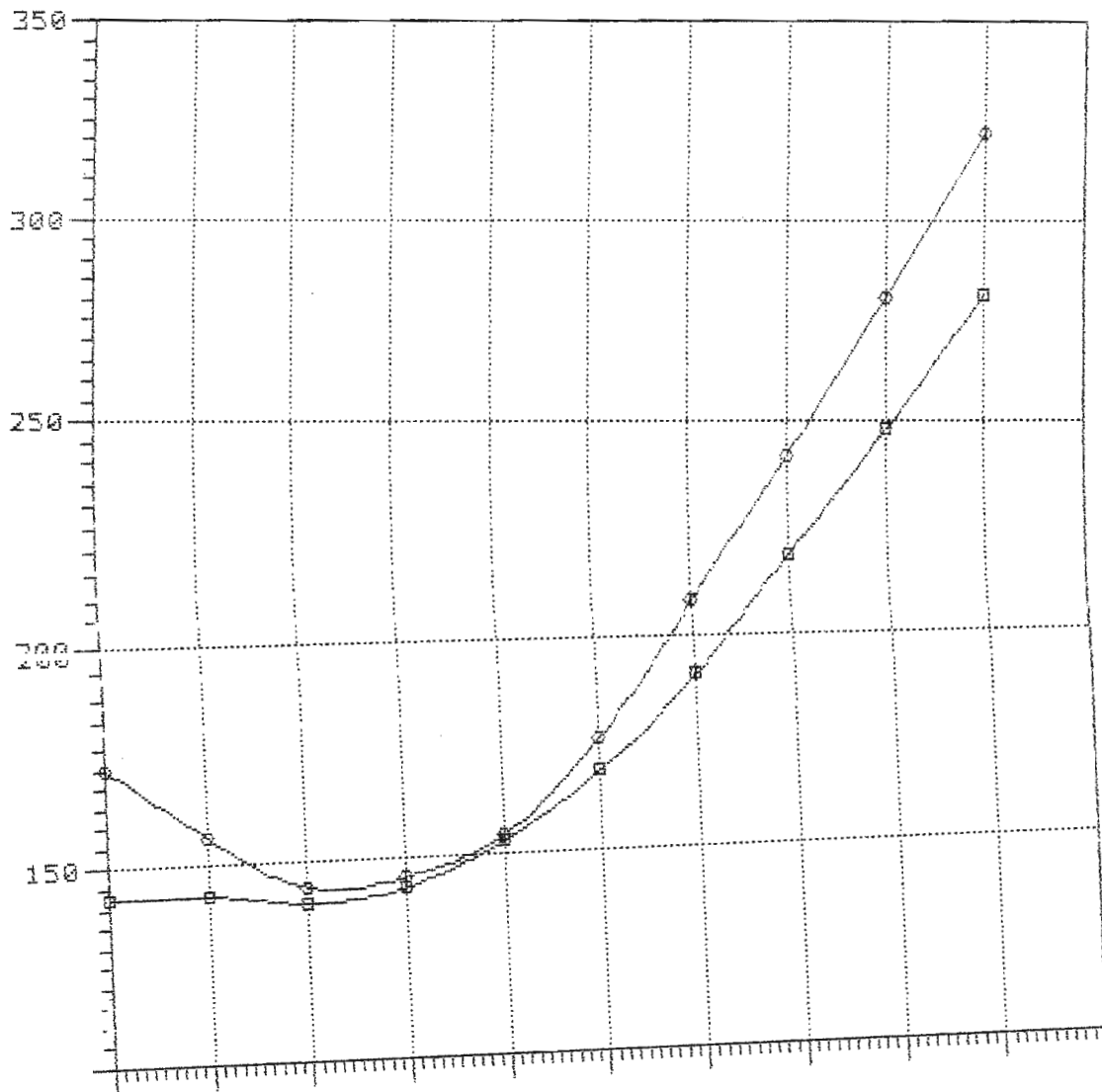
Rbare: Bare-hull resistance (lbs)



— □ —  
— ○ —



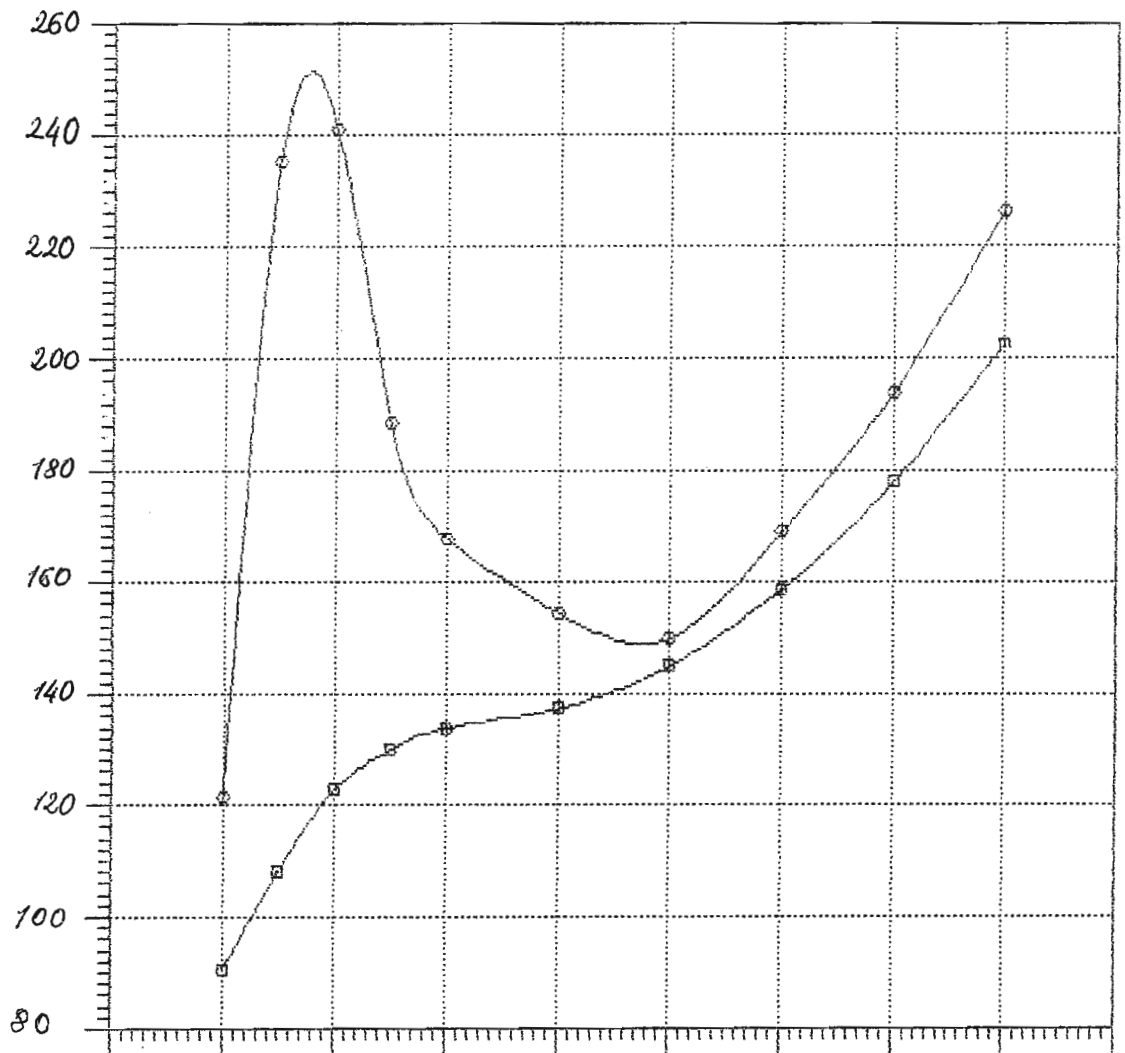
Rbare: Bare-hull resistance (lbs)



— □ —

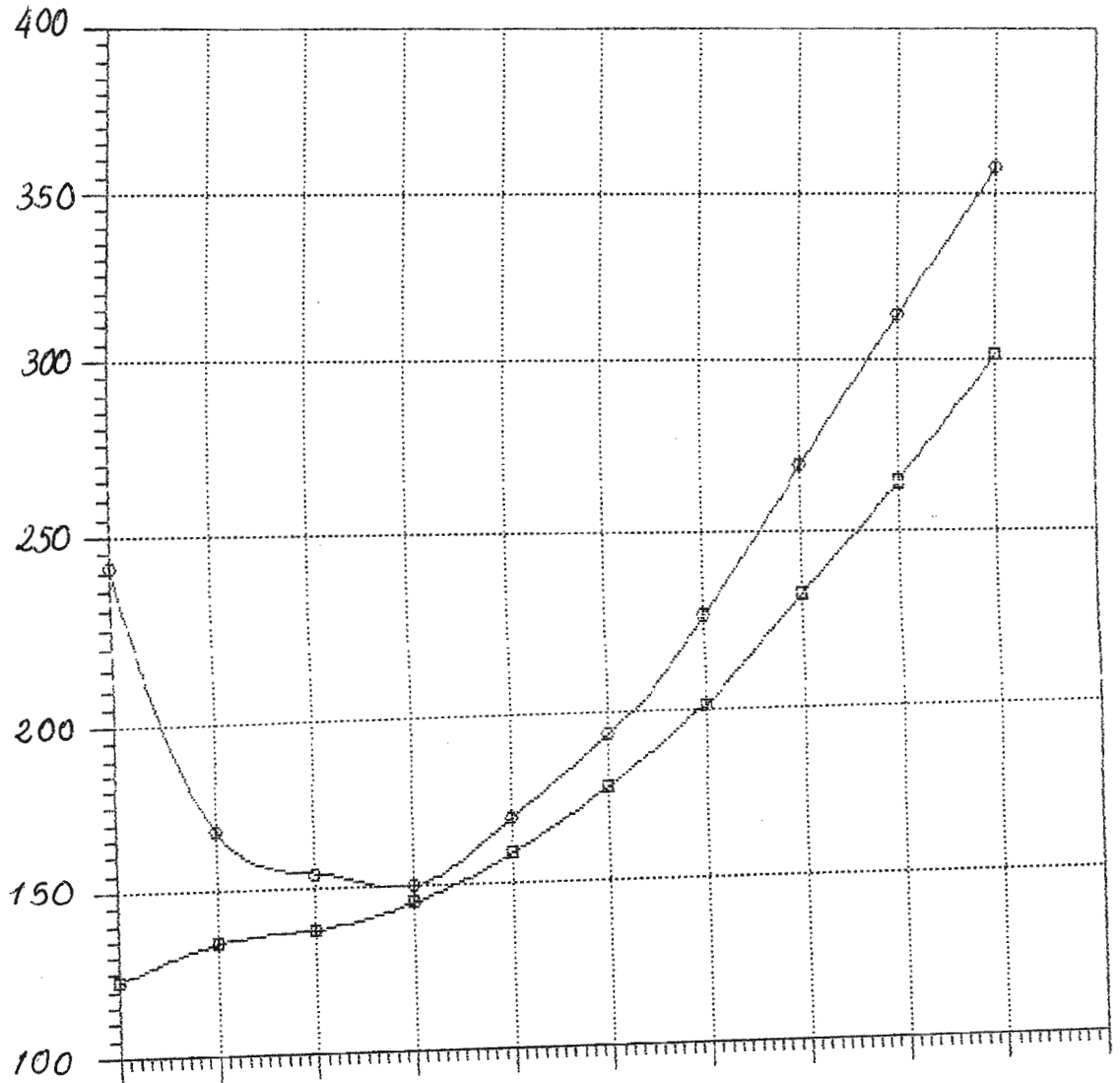
— ○ —

7-40-47A



—□—  
—○—

7-40-47B



—○—  
—□—

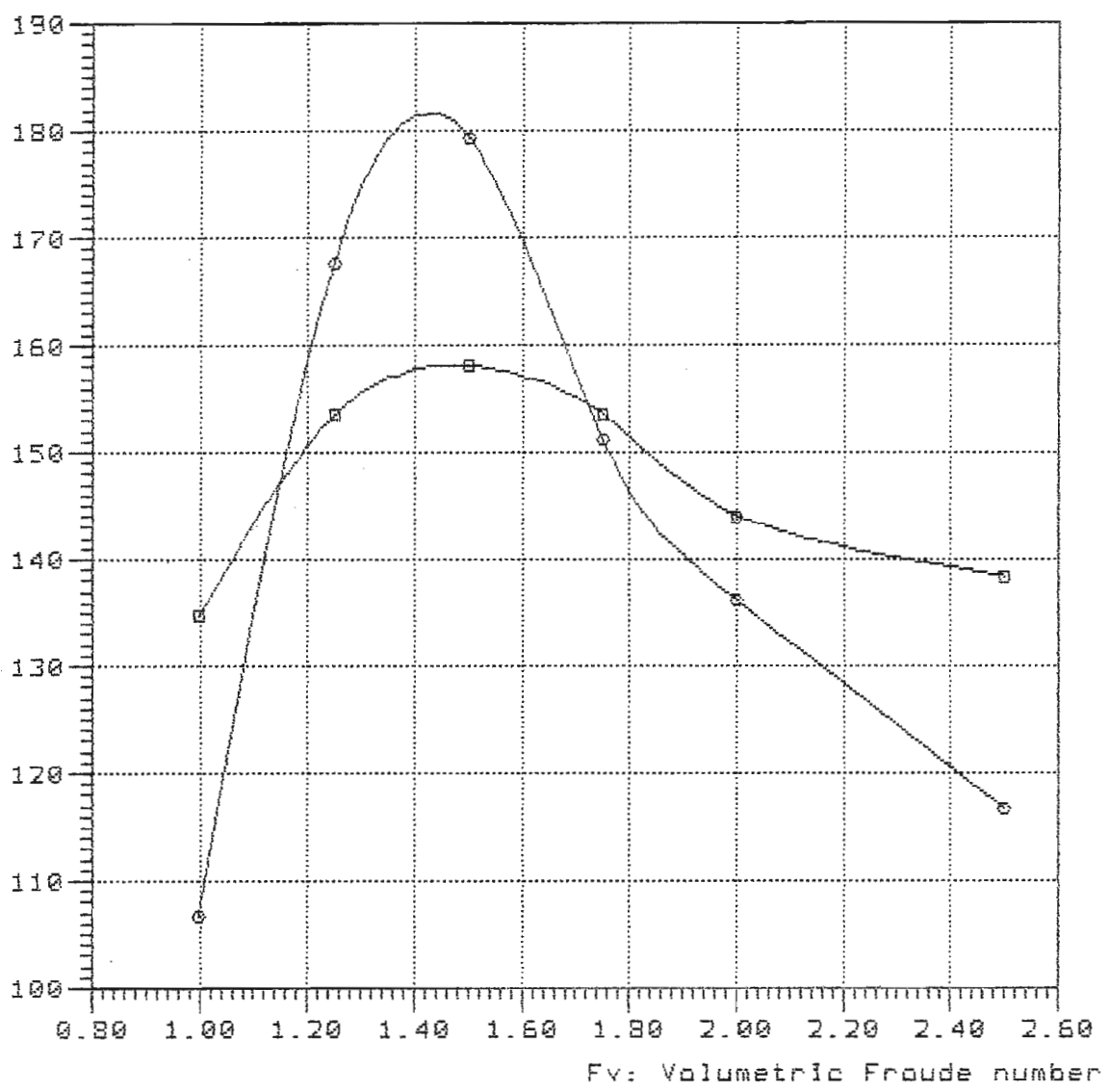
Model = 4665  
Ref = NSRDC  
Friction = ITTC  $C_a = 4e^{-4}$

Lpx = 11.200 ft  
Lwl = 11.066 ft

Bpx = 5.600 ft  
Disp = 1000.000 lb  
Ap = 53.040 sqft  
Deadrise = 13.00 degree  
Shaft Ang = 0.00 degree  
Vce = 0.00 ft

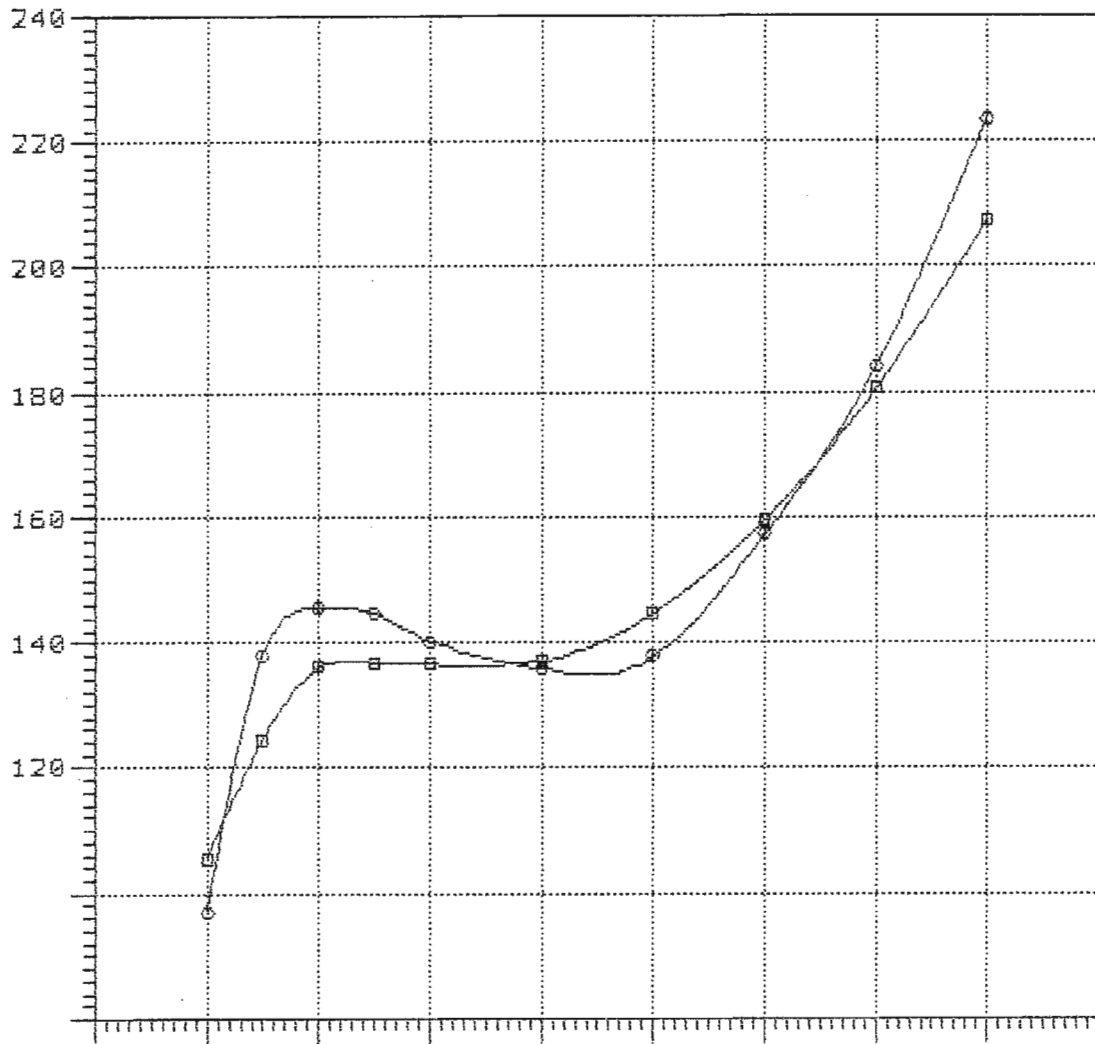
Lpx/Bpx = 2.000  
Lpx/Ap = 2.365  
Ap /Vol = 8.487  
Lpx/Vol = 4.493

Rbare: Bare-hull resistance (lbs)



—■—  
—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=8.486 Lpx/Ap=2.366 Leg/Lpx=0.355

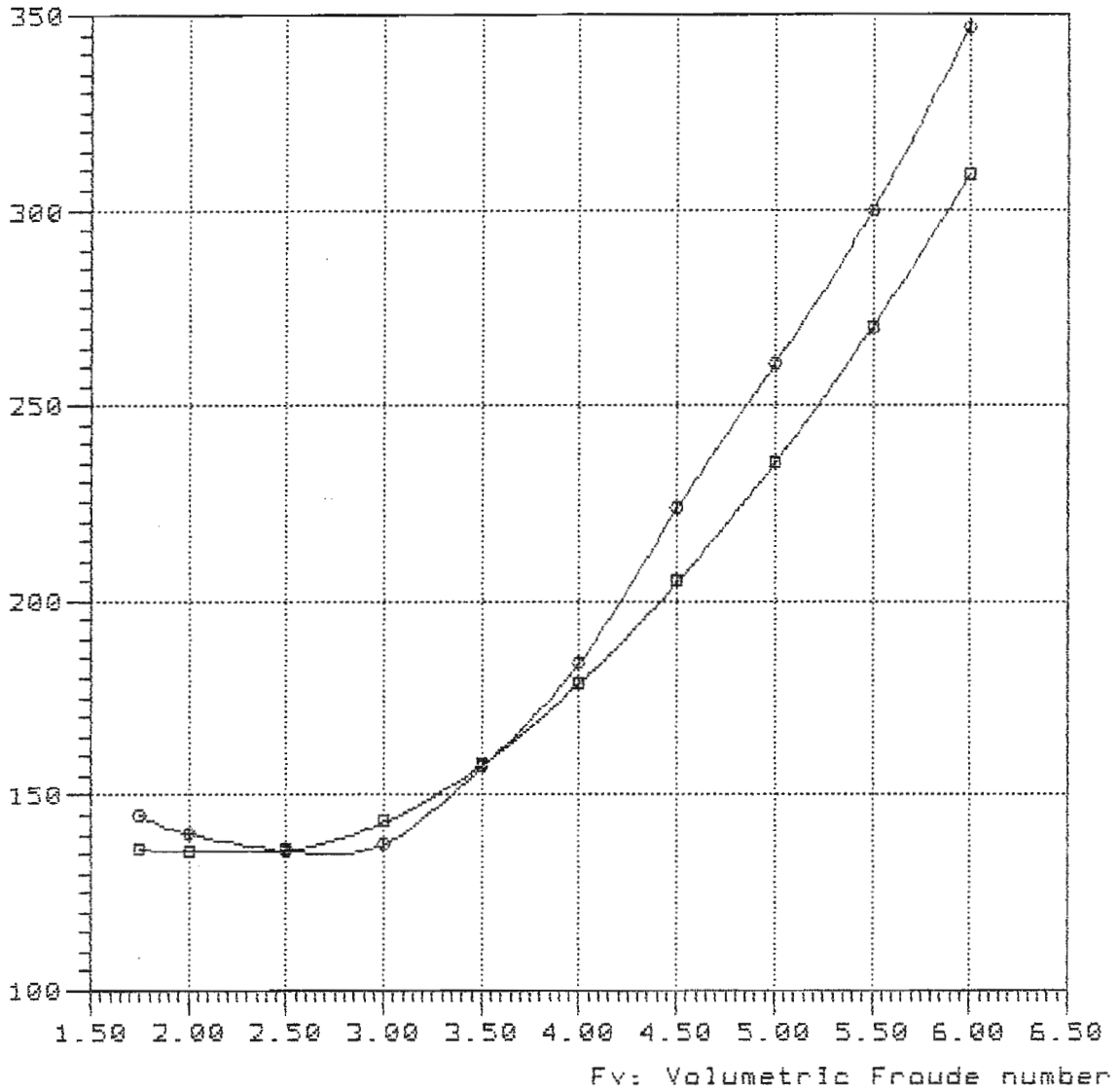
Rbare: Bare-hull resistance (lbs)



—■—

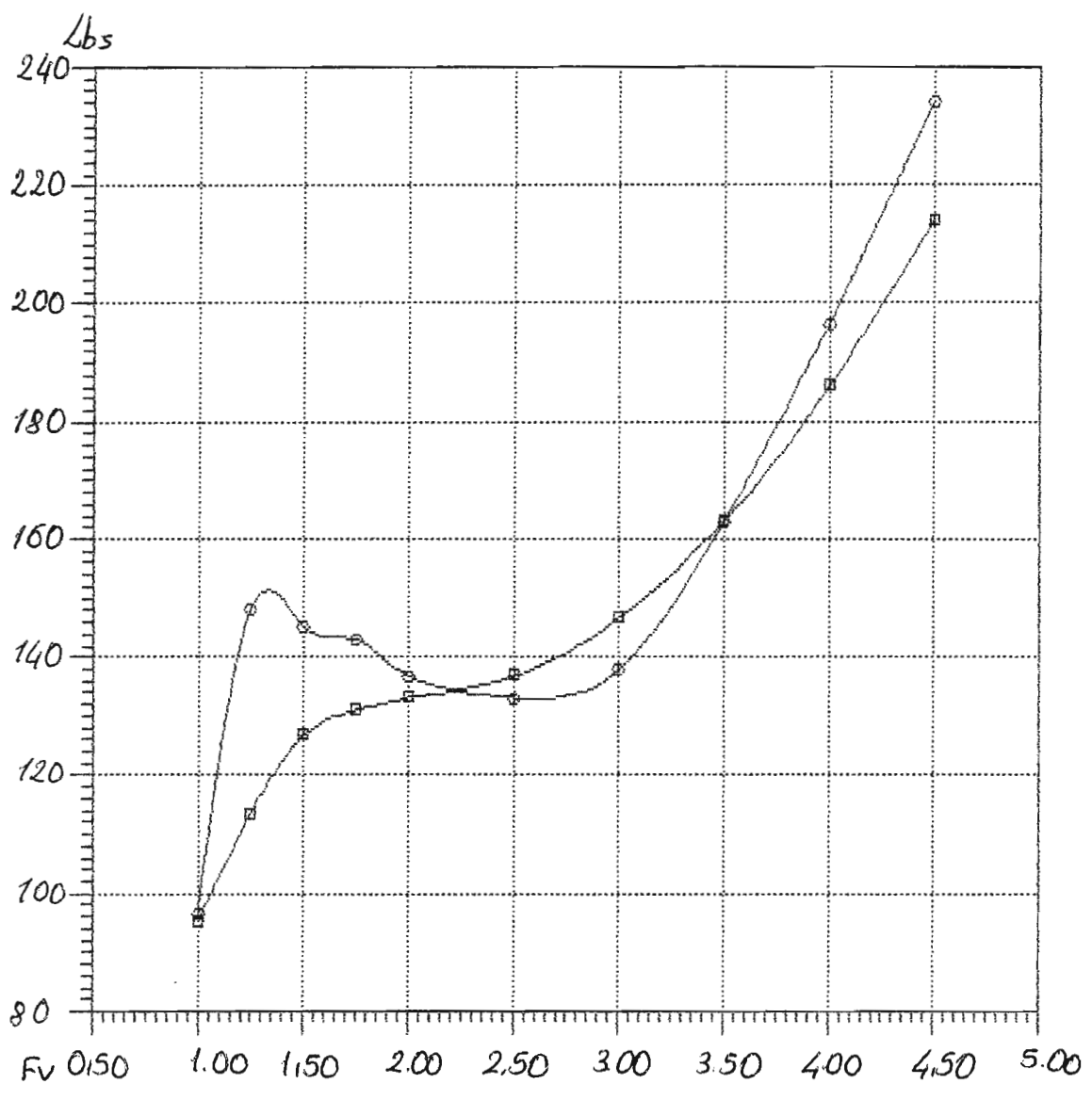
—○—

Rbare: Bare-hull resistance (lbs)



—■—

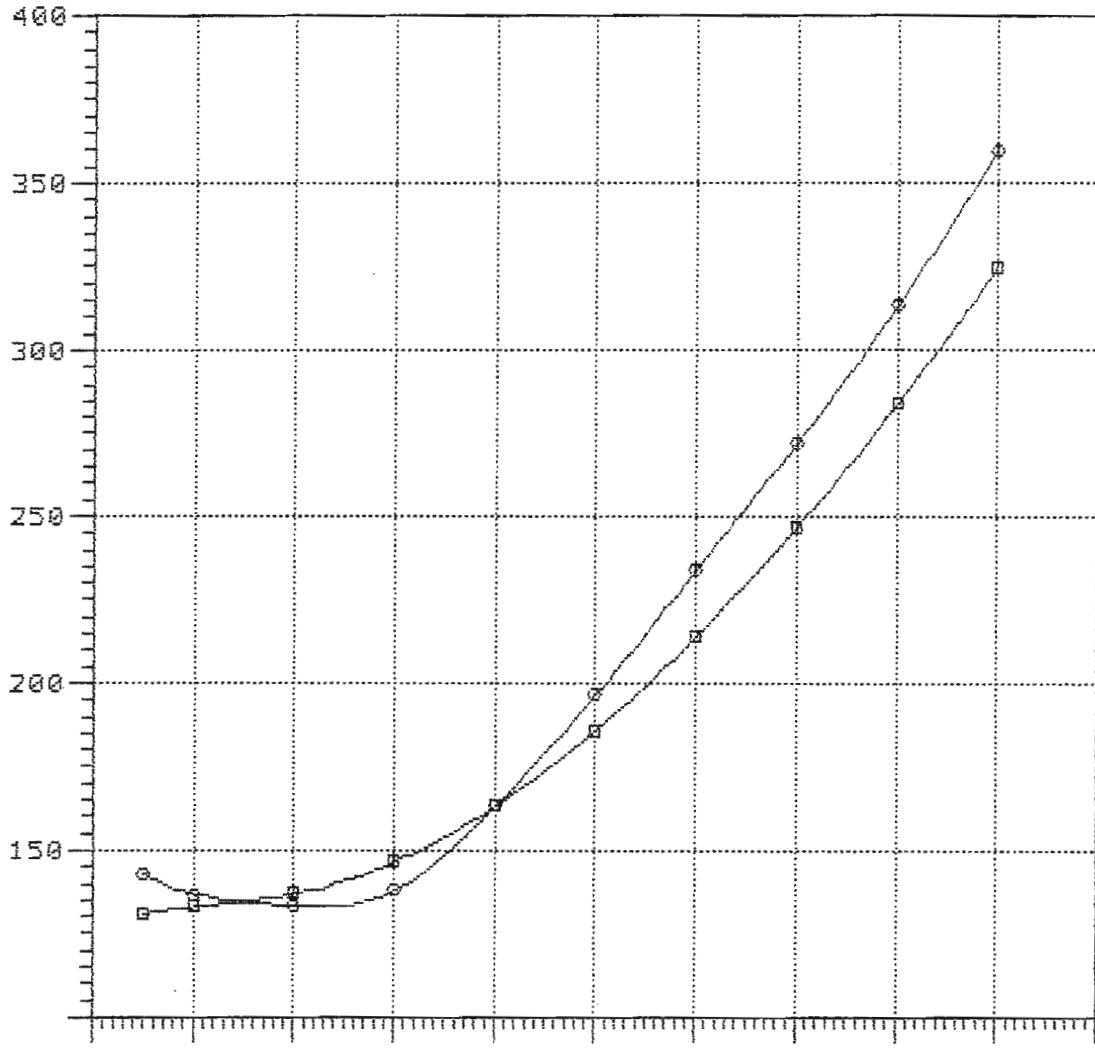
—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=8.486 Lpx/Ap=2.366 Log/Lpx=0.395



— □ —  
 — ○ —

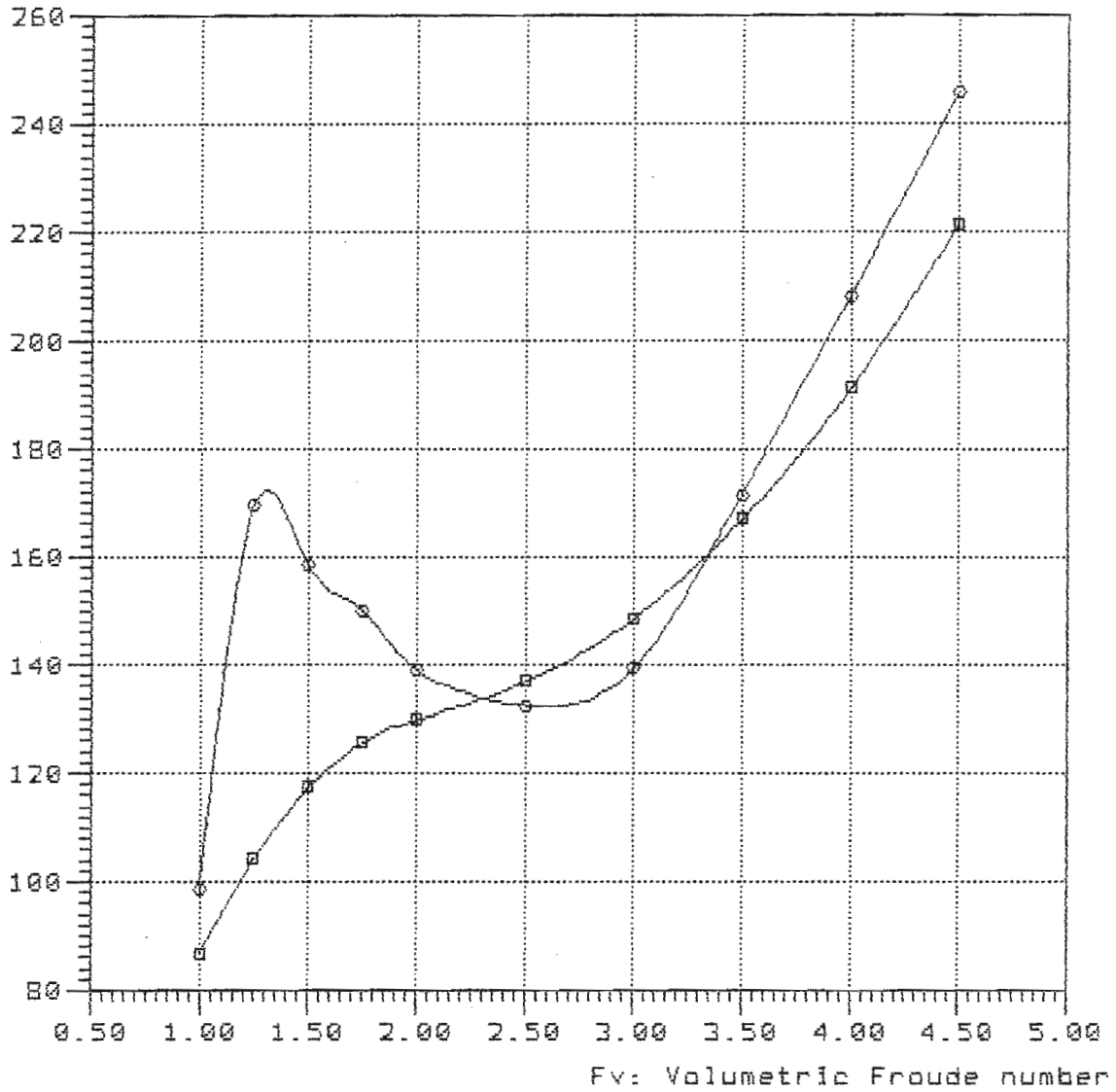


Rbare: Bare-hull resistance (lbs)



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— ○ —

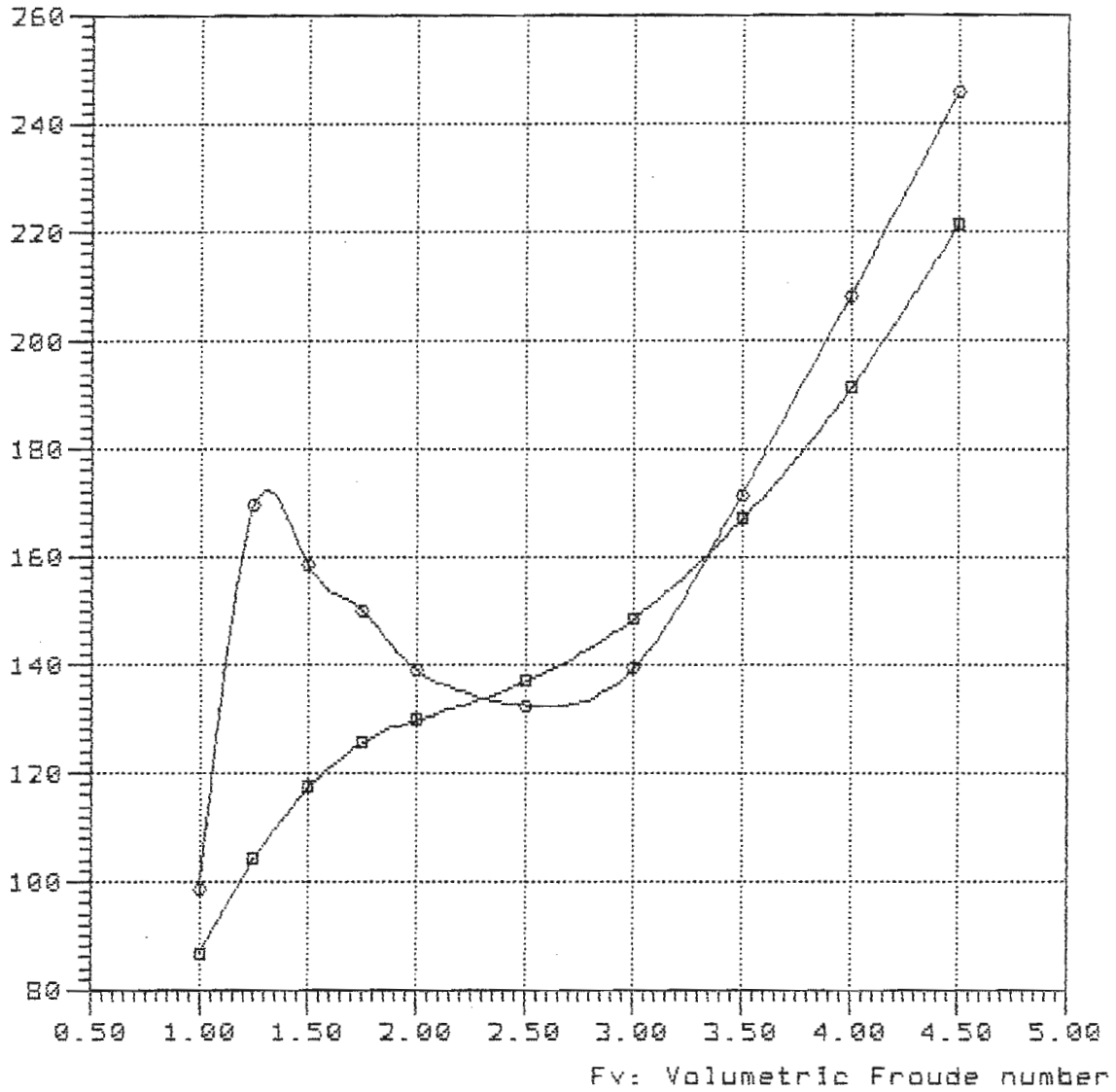
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=8.486 Lpx/Ap=2.366 Lcg/Lpx=0.435

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=8.486 Lpx/Ap=2.366 Lcg/Lpx=0.435

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### Bare-hull resistance

vs.

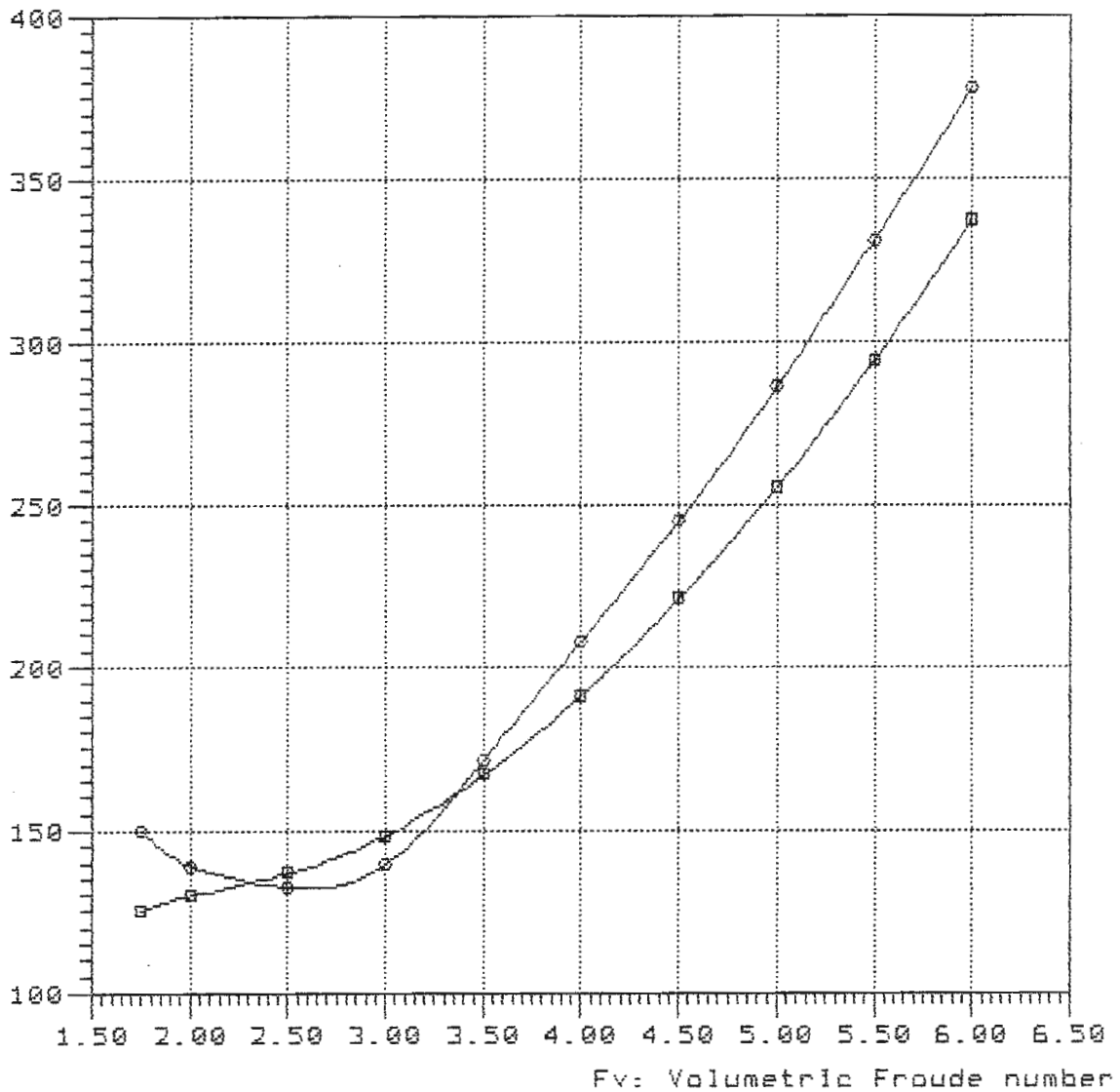
### Volumetric Froude number

File: 8-45-43b.mdl

Date: 21 Feb 00

Time: 12:43

Rbare: Bare-hull resistance (lbs)

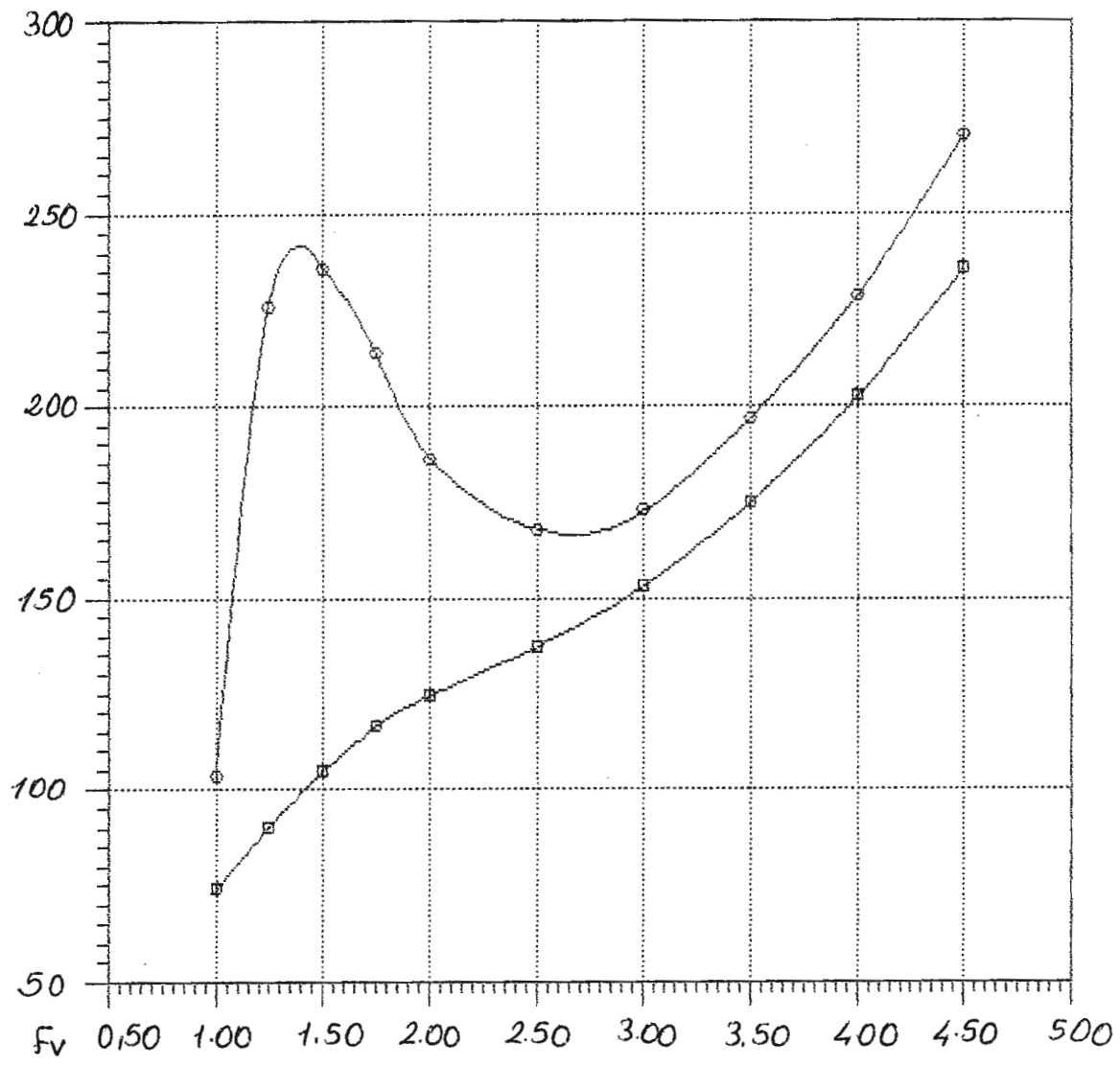


#### Curve legend

—■—

—●— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=8.486 Lpx/Ap=2.366 Lcg/Lpx=0.435

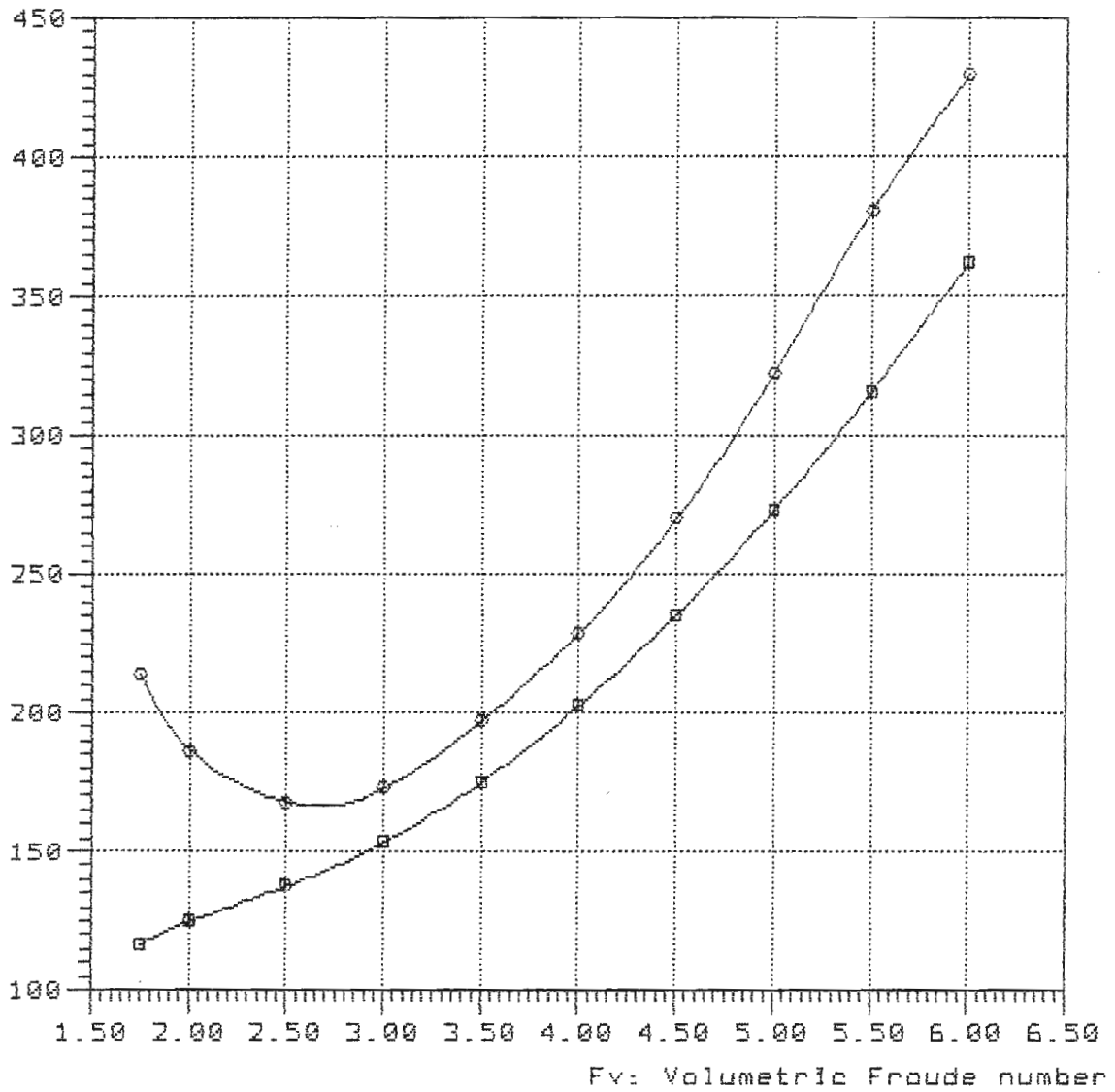
8-45-47A



—□—  
—○—

**Bare-hull resistance**  
vs.  
**Volumetric Froude number**

Rbare: Bare-hull resistance (lbs)



**Curve legend**

—□—

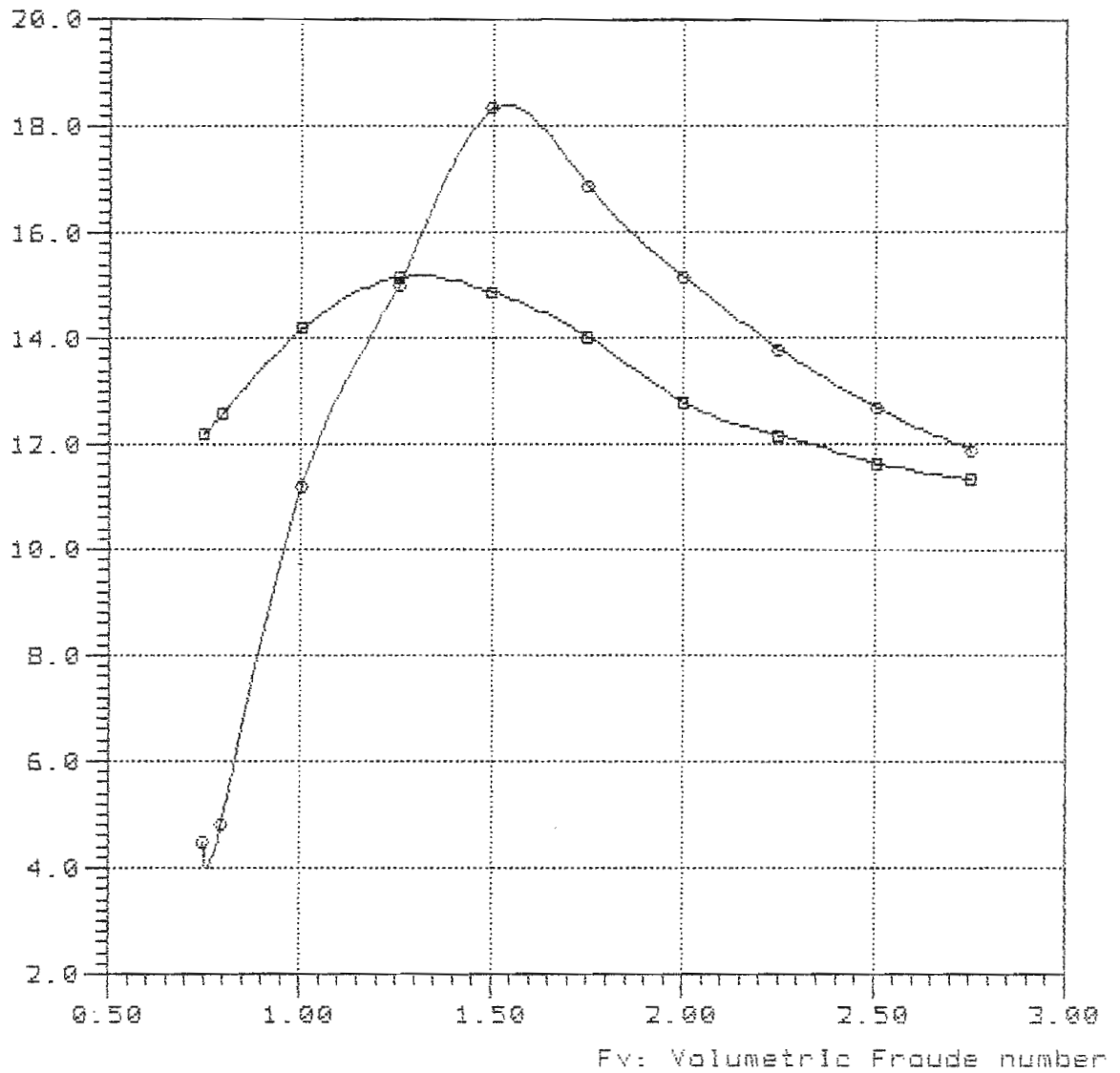
—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=8.486 Lpx/Ap=2.366 Lcg/Lpx=0.475

Model = 4665  
Ref = SNAME  
Friction =ATTC Ca=0

Lpx = 3.912 ft  
Lwl = 3.783 ft  
Bpx = 1.956 ft  
Dep = 80.070 lb  
Ap = 6.469 sqft  
Dead = 13.00 degree  
Shaft Ang= 19.41 degree  
Vce = -2.15 ft

Lpx/Bpx = 2.000  
Lpx/Ap = 2.366  
Ap /Vol = 5.572  
Lpx/Vol = 3.641

Rbare: Bare-hull resistance (lbs)

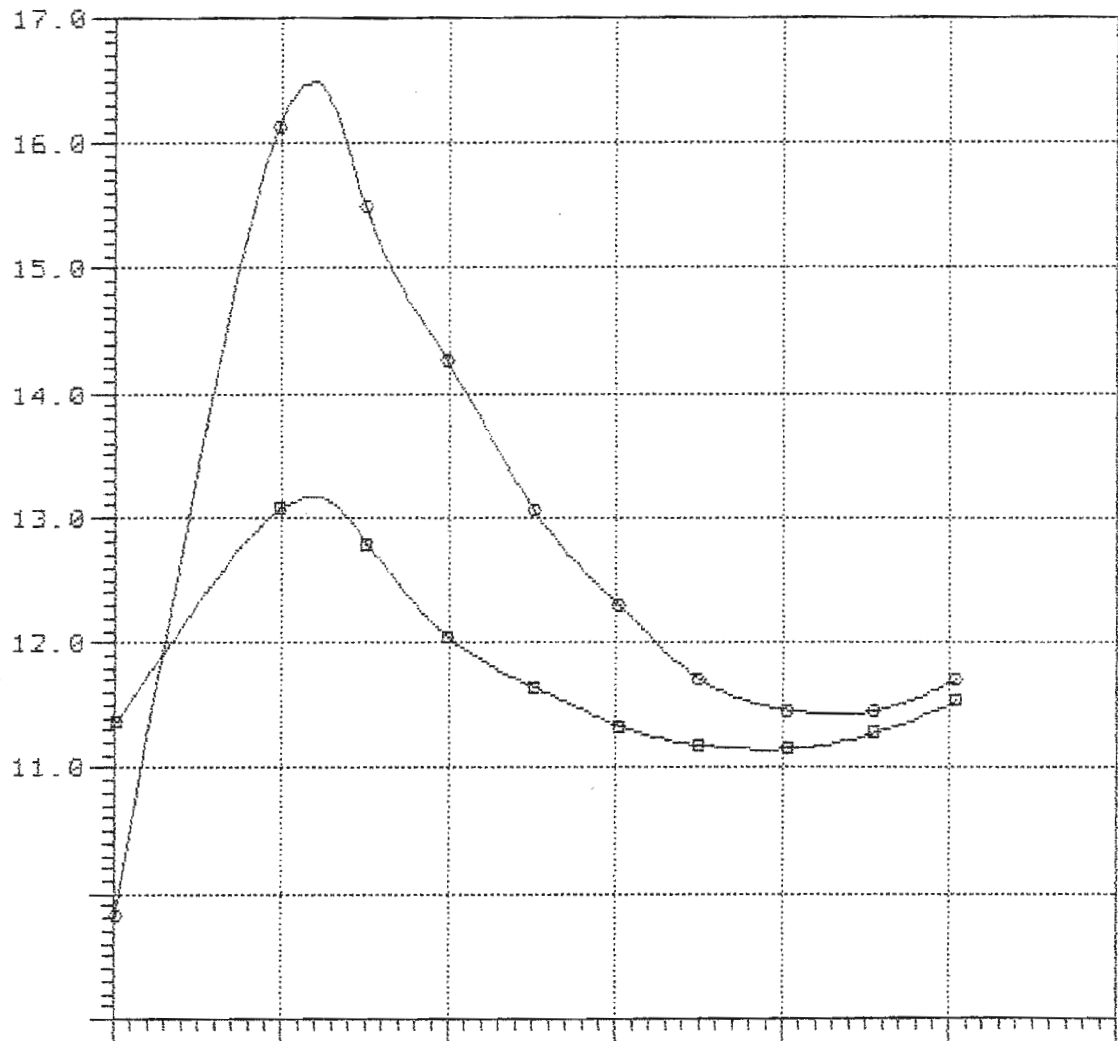


—■—

—●— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=5.50 Lpx/Ap=2.366 Lcg/Lpx=0.355



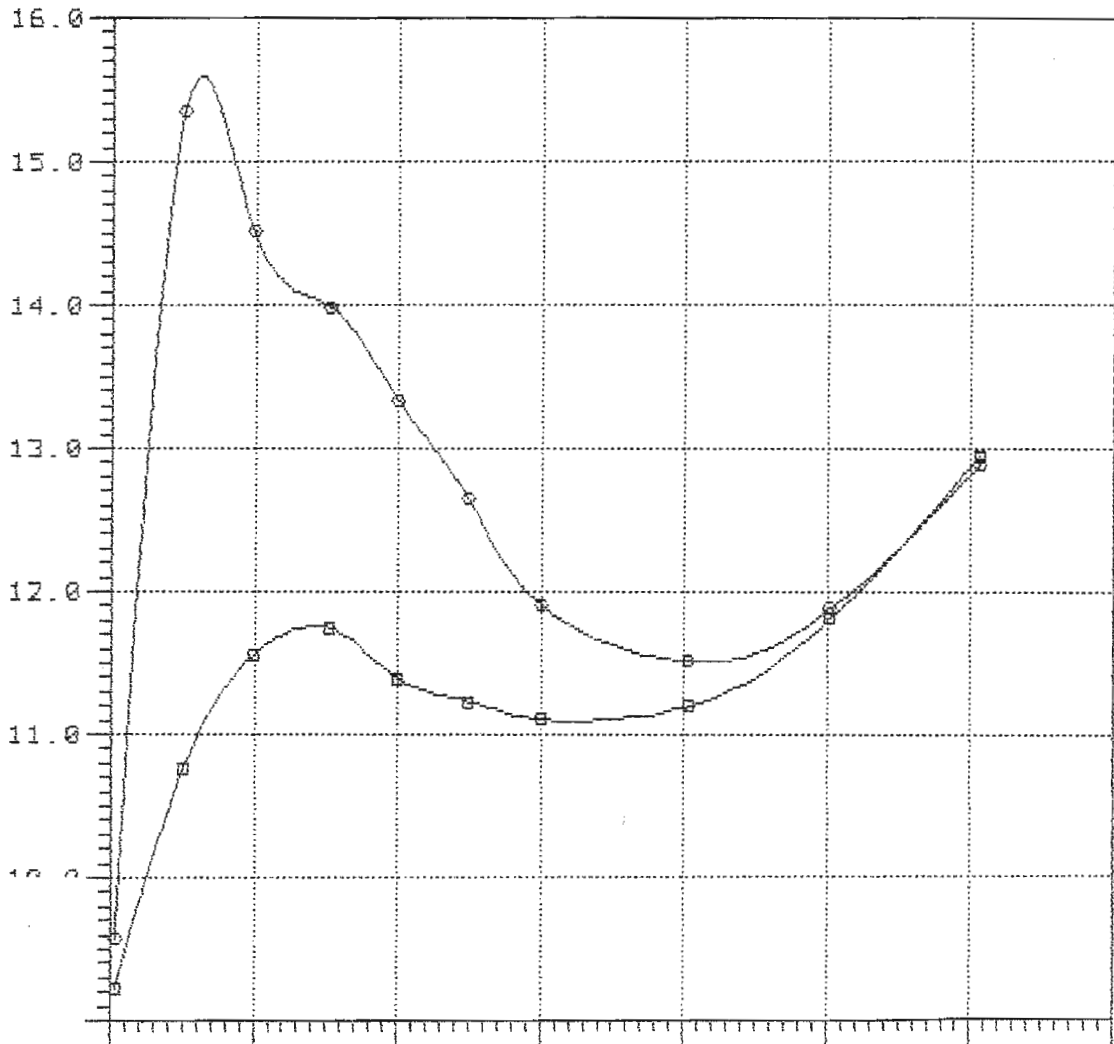
Rbare: Bare-hull resistance (lbs)



—■—

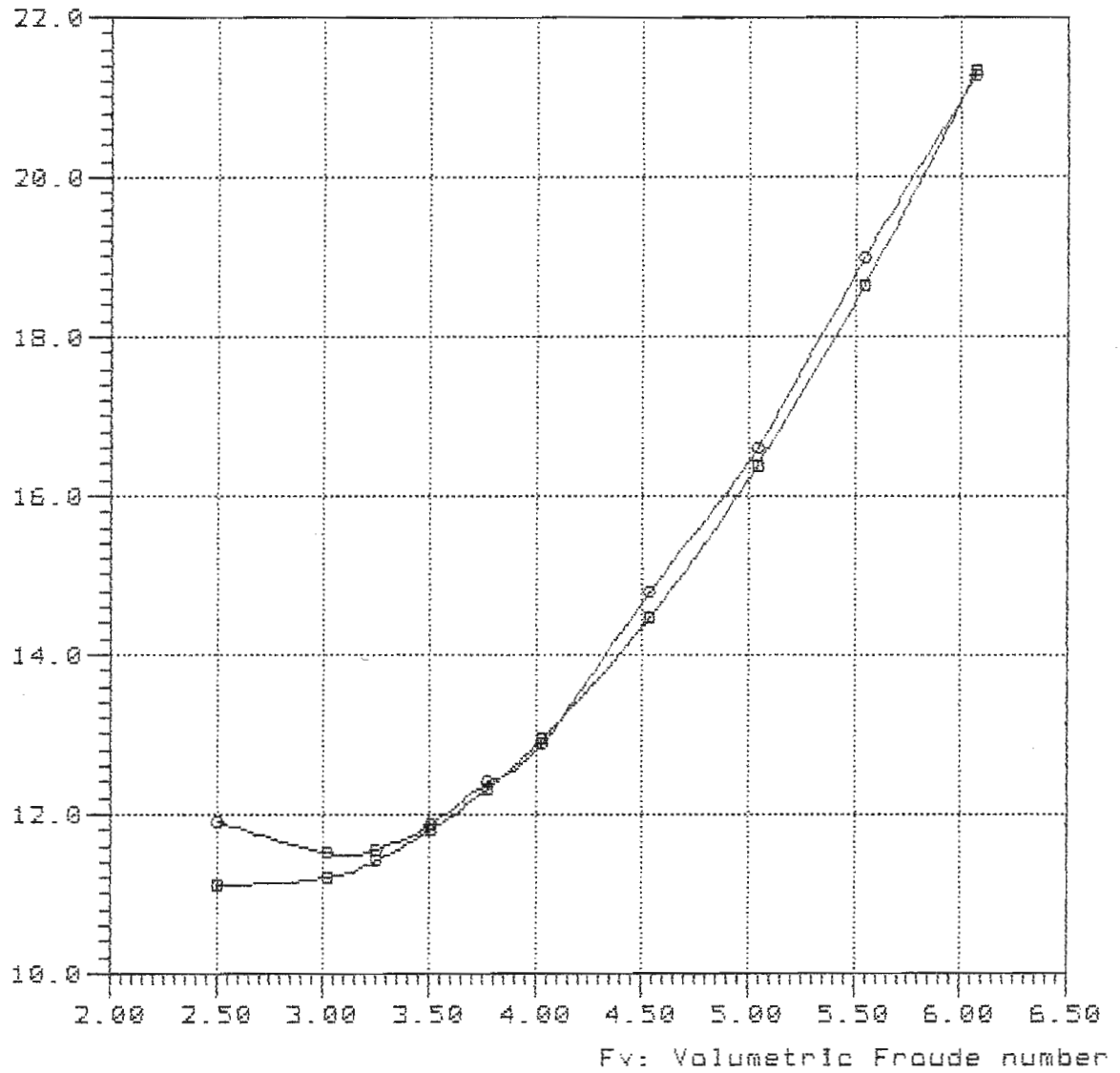
—●—

Rbare: Bare-hull resistance (lbs)



—□—  
—○—

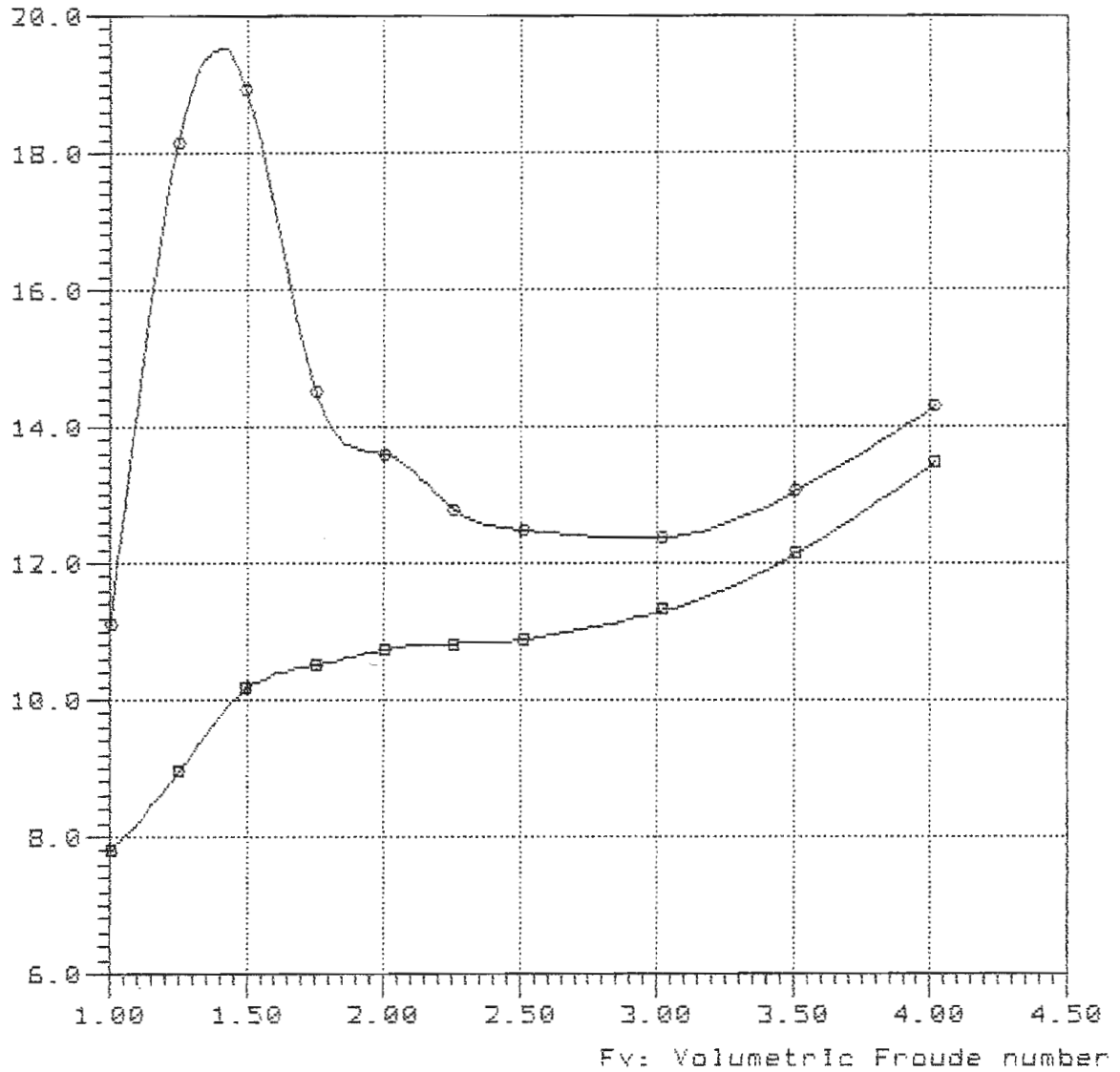
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=5.50 Lpx/Ap=2.366 Log/Lpx=0.435

Rbare: Bare-hull resistance (lbs)



—■—

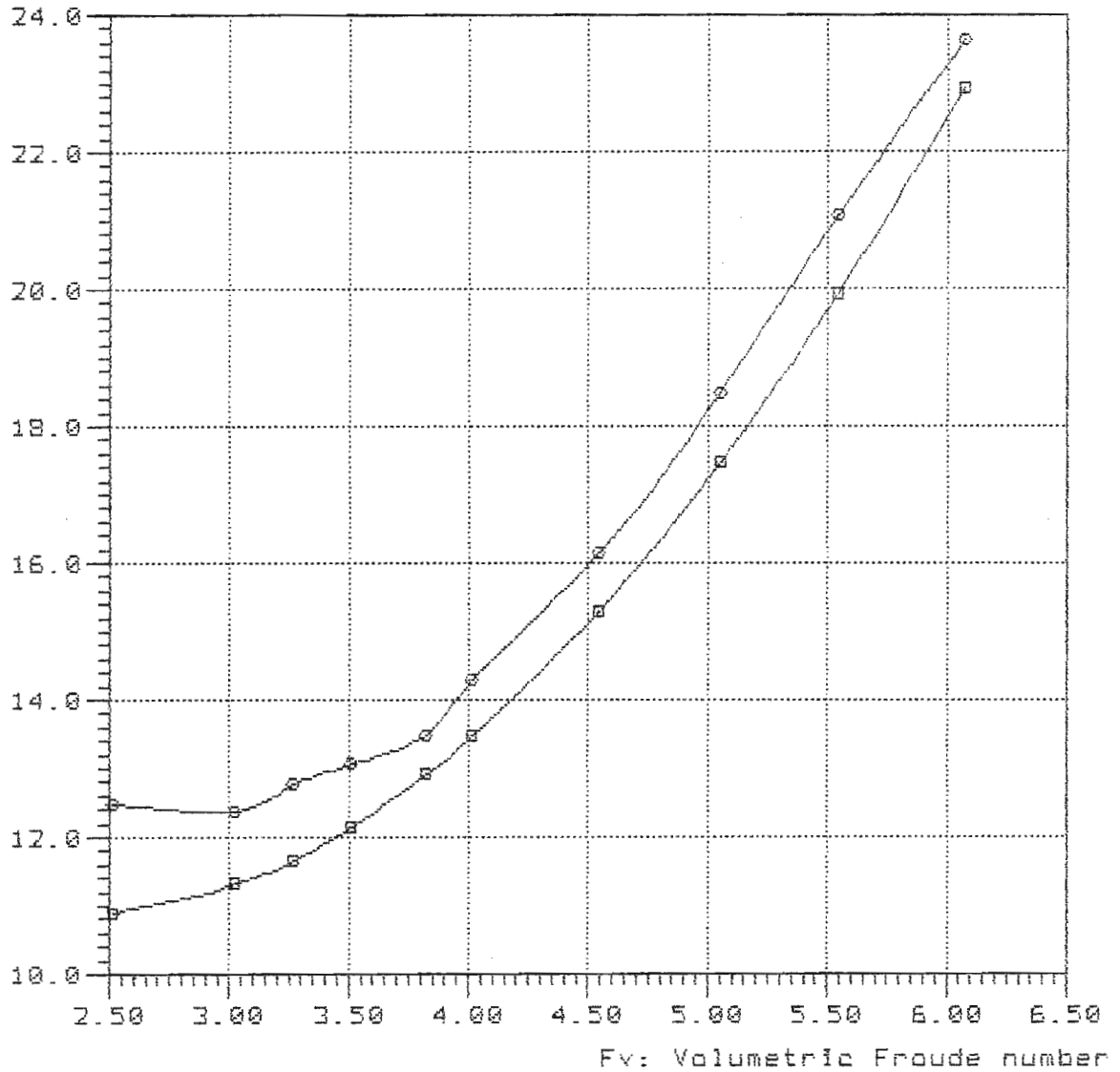
—●— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=5.50 Lpx/Ap=2.366 Lcg/Lpx=0.475

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

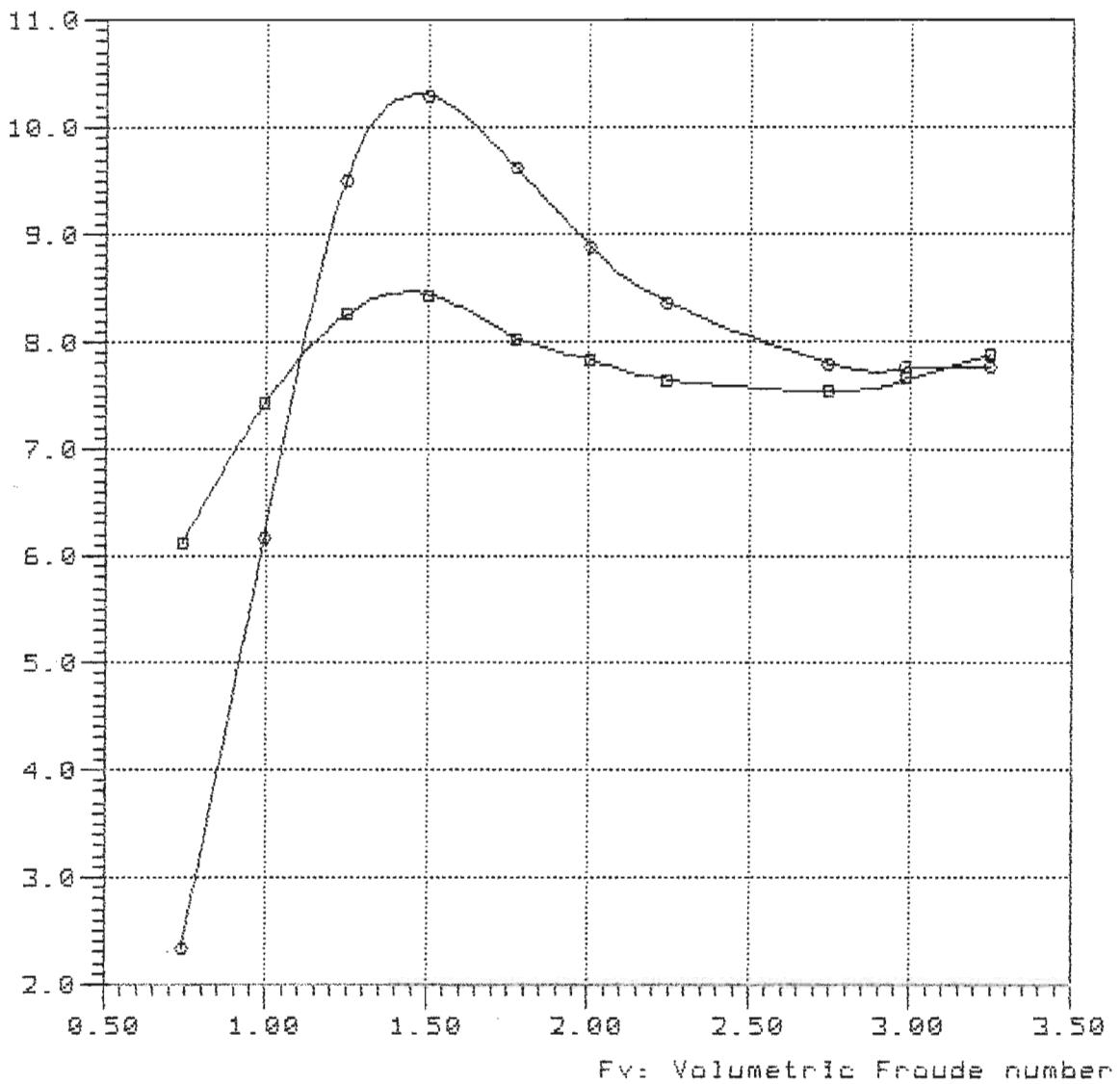
—●— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=5.50 Lpx/Ap=2.366 Log/Lpx=0.475

Model = 4665  
Ref = SNAME  
Friction =ATTC Ca=0

Lpx = 3.912 ft  
Lwl = 3.783 ft  
Bpx = 1.956 ft  
Dep = 54.550 lb  
Ap = 6.469 sqft  
Dead = 13.00 degree  
Shaft Ang= 19.41 degree  
Vce = -2.15 ft

Lpx/Bpx = 2.000  
Lpx/Ap = 2.366  
Ap /Vol = 7.197  
Lpx/Vol = 4.138

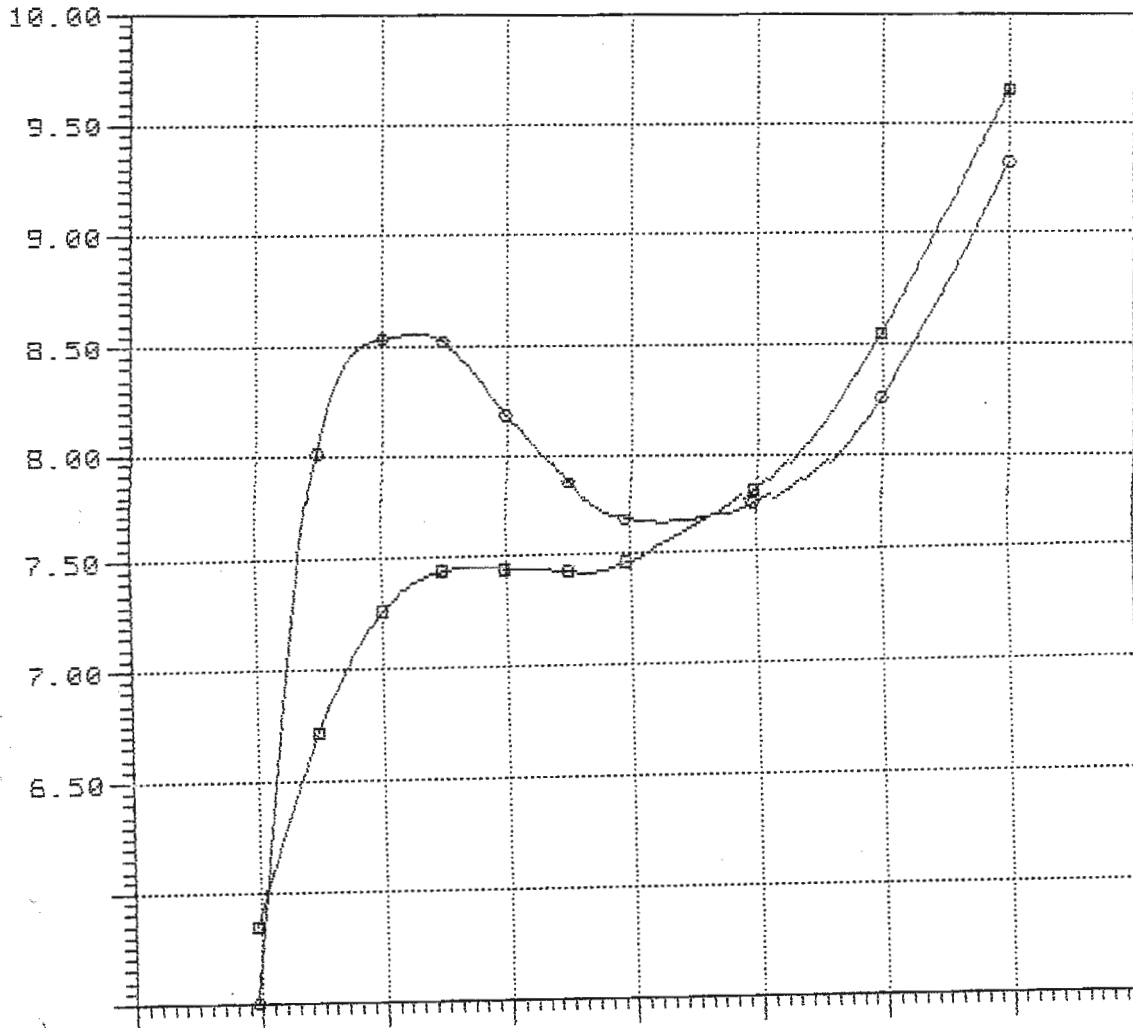
Rbare: Bare-hull resistance (lbs)



—■—

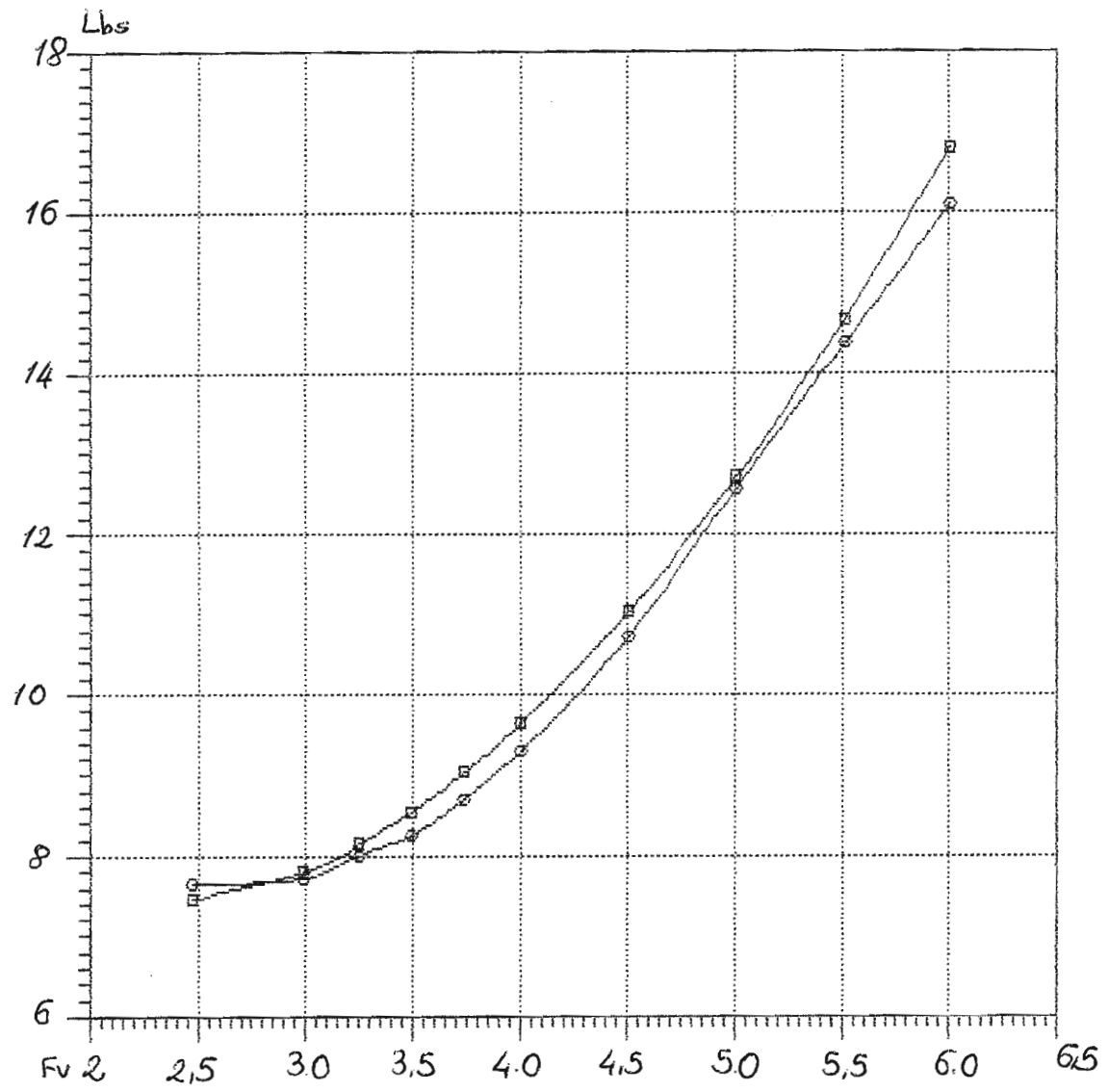
—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=7.106 Lpx/Ap=2.366 Lcg/Lpx=0.355

Rbare: Bare-hull resistance (lbs)



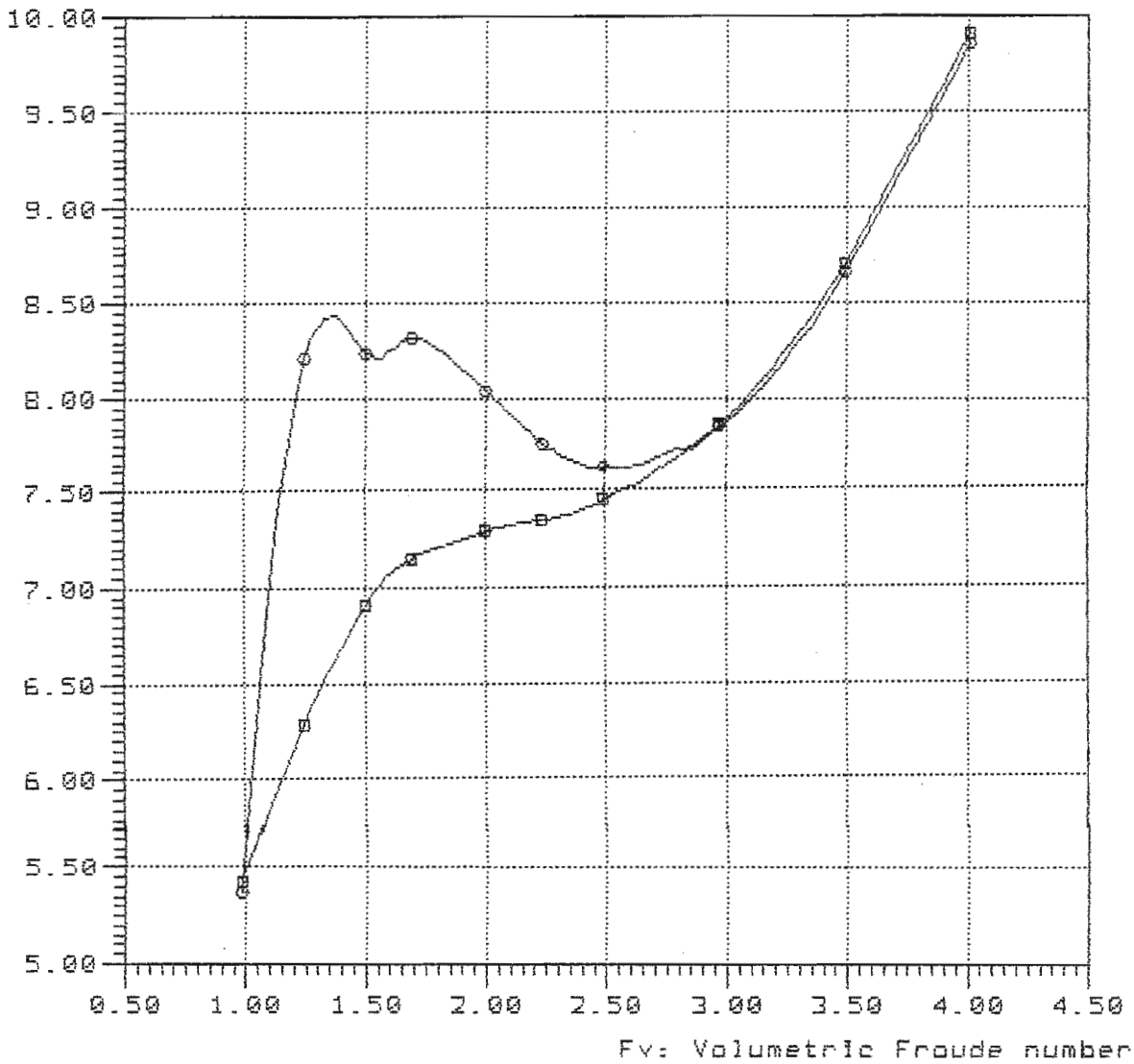


7-41-39C



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—○—

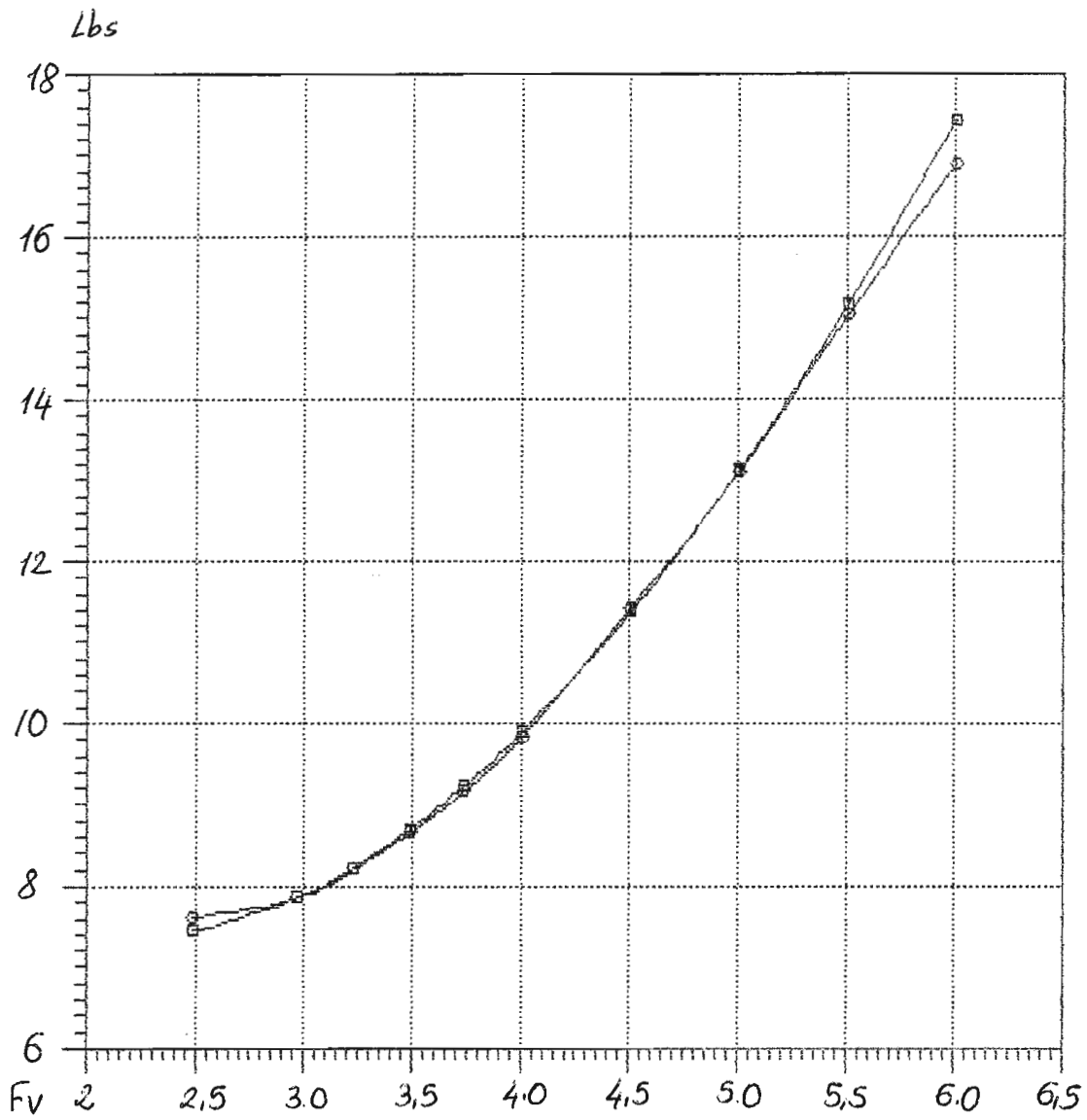
Rbare: Bare-hull resistance (lbs)



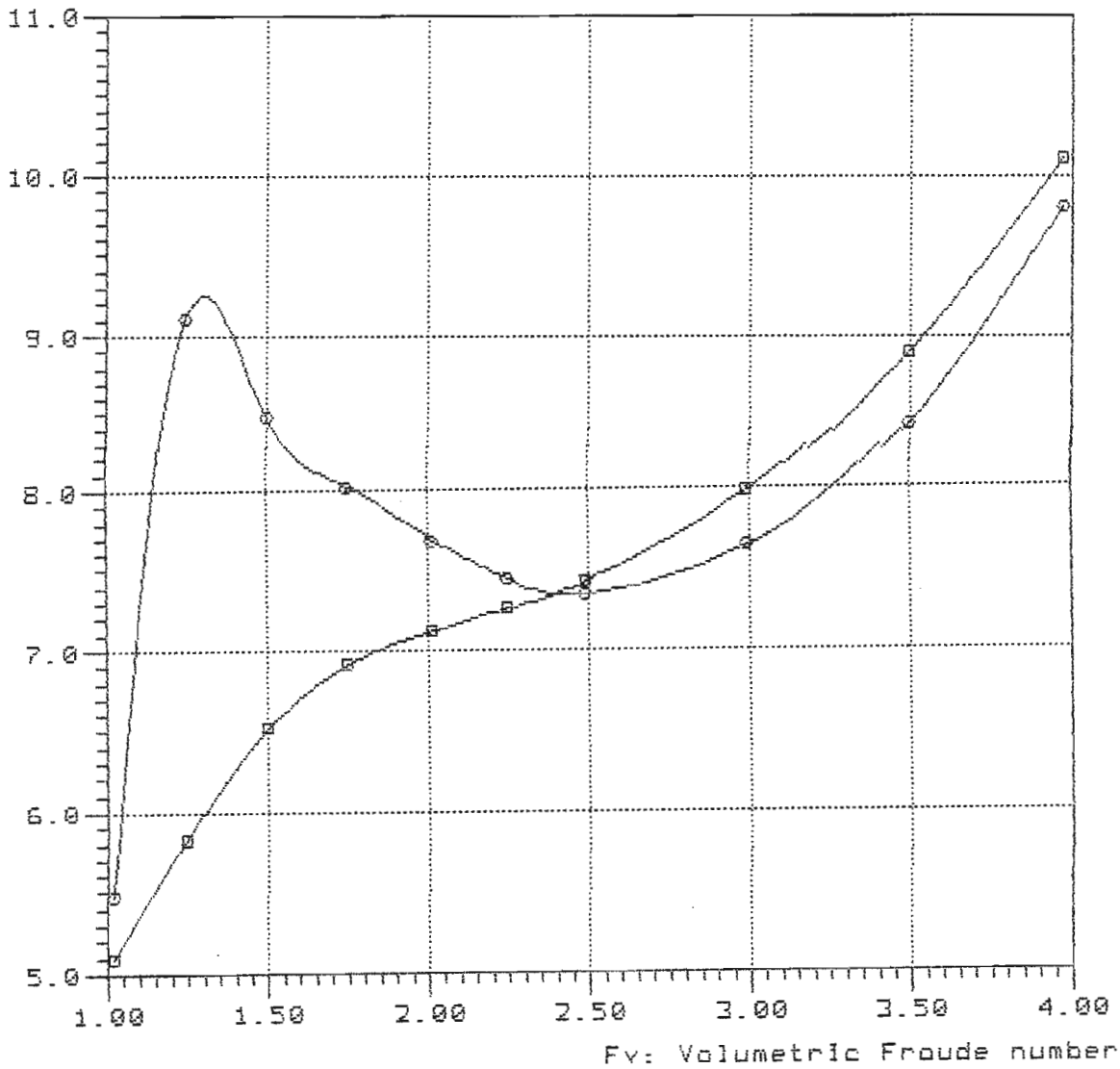
—■—

—●— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=7.106 Lpx/Ap=2.366 Lcg/Lpx=0.414

741-41C



Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

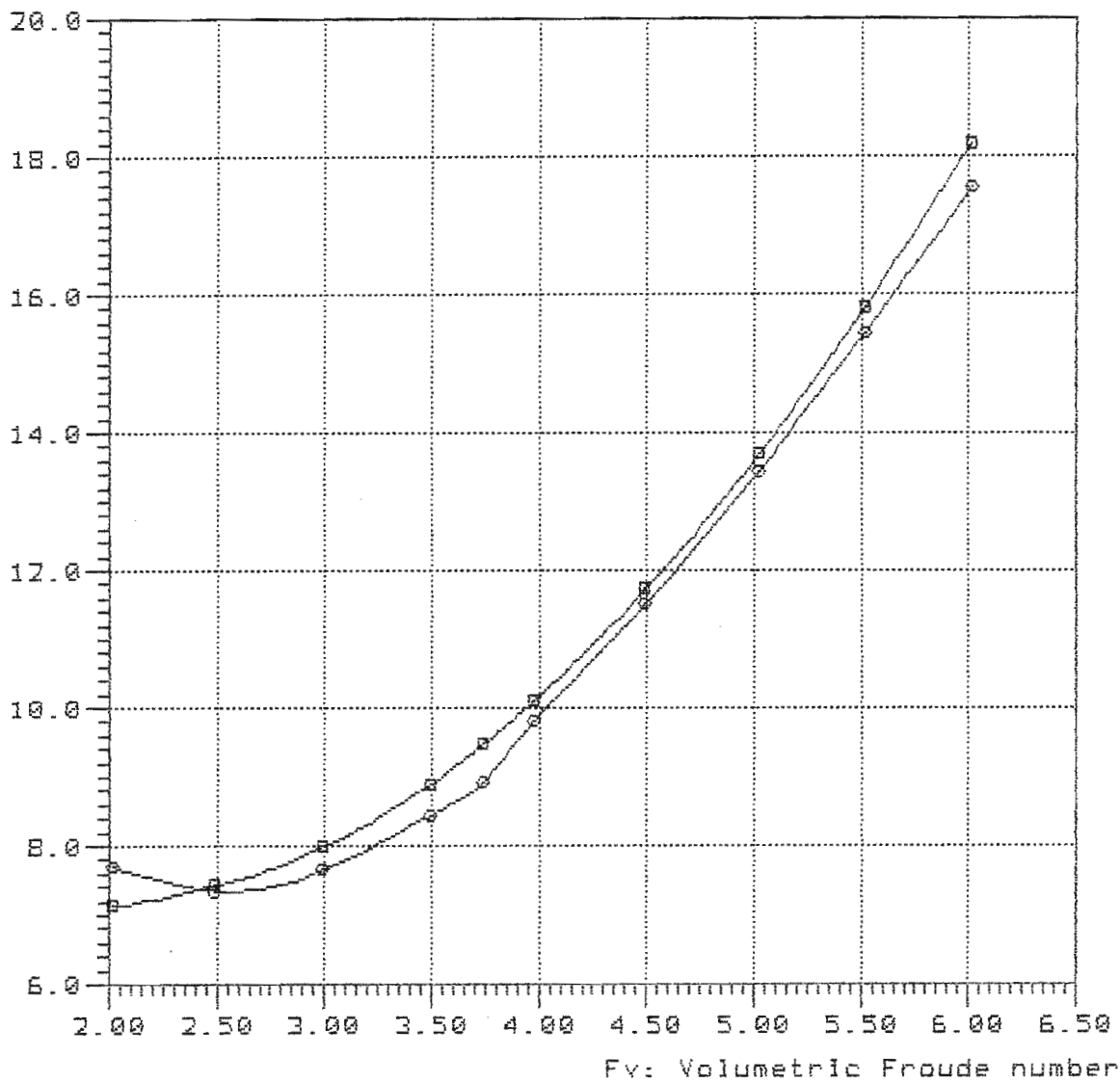
—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=7.106 Lpx/Ap=2.366 Lcg/Lpx=0.435

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)

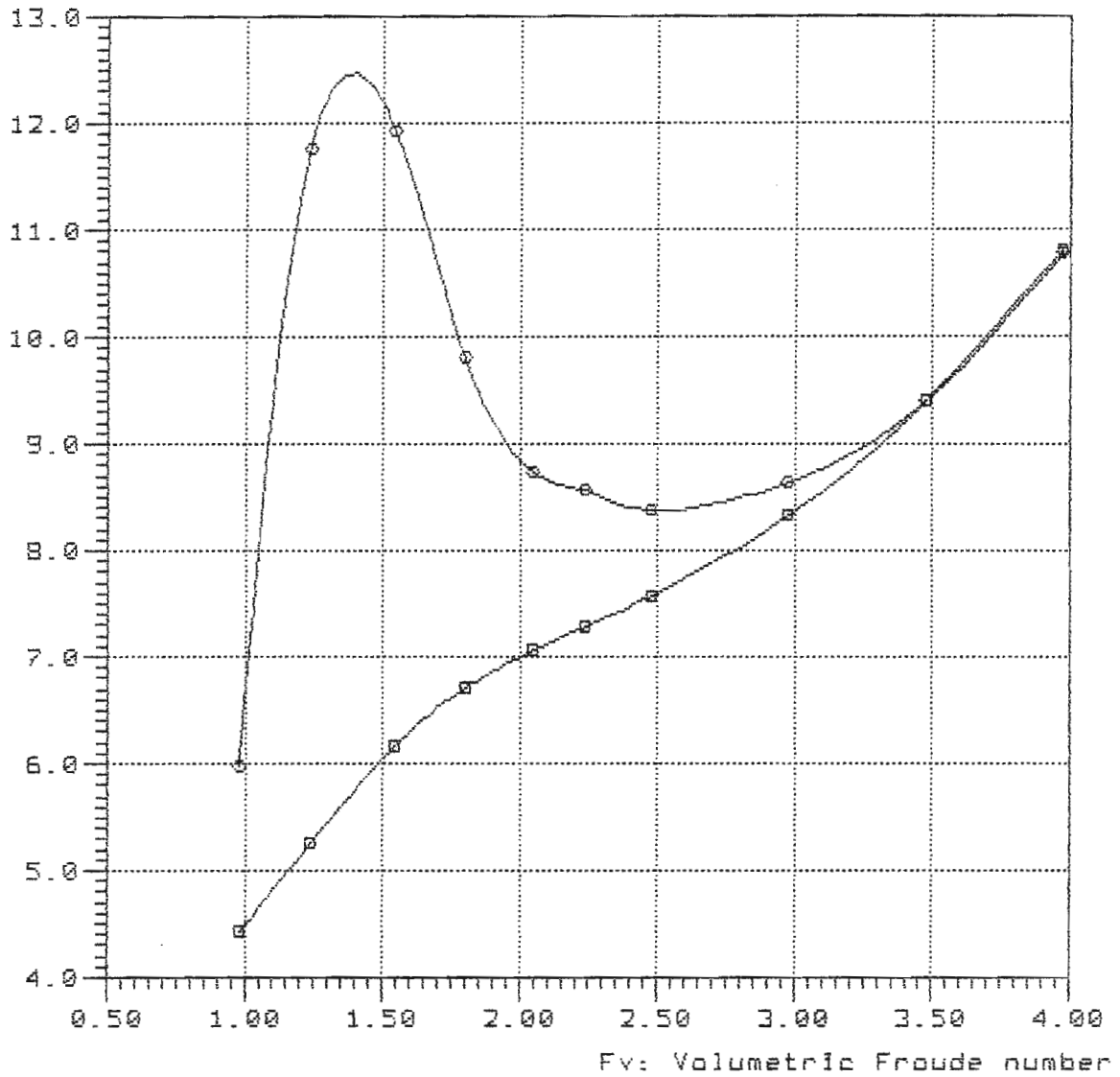


#### Curve legend

—■—

—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=7.106 Lpx/Ap=2.366 Lcg/Lpx=0.435

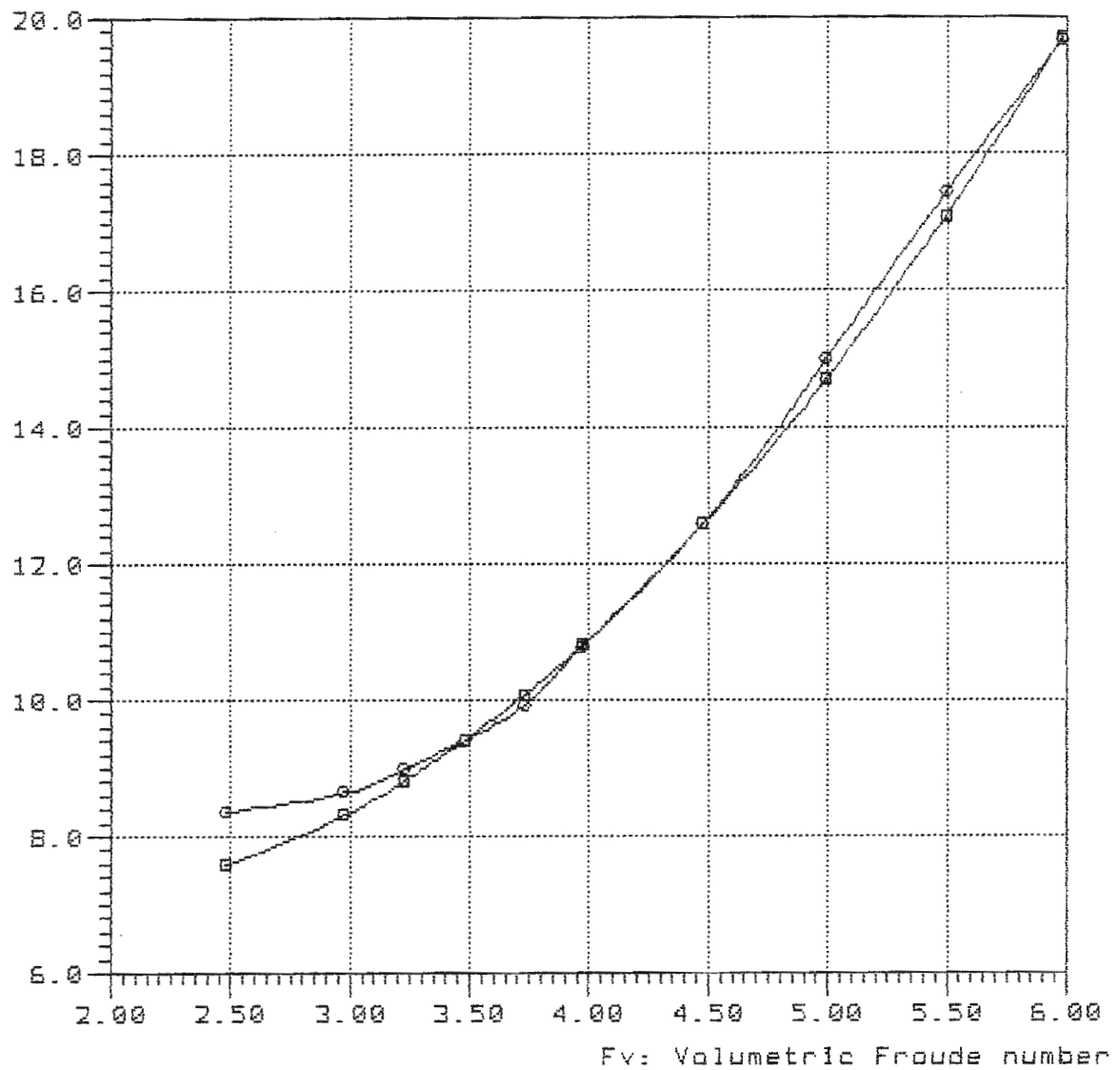
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=7.106 Lpx/Ap=2.366 Lcg/Lpx=0.475

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=7.106 Lpx/Ap=2.366 Lcg/Lpx=0.475

Model = 4665  
Ref = SNAME  
Friction =ATTC Ca=0

Lpx = 3.912 ft  
Lwl = 3.783 ft  
Bpx = 1.956 ft  
Dep = 41.350 lb  
Ap = 6.469 sqft  
Dead = 13.00 degree  
Shaft Ang= 19.41 degree  
Vce = -2.15 ft  
  
Lpx/Bpx = 2.000  
Lpx/Ap = 2.366  
Ap /Vol = 8.657  
Lpx/Vol = 4.538



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### Bare-hull resistance

vs.

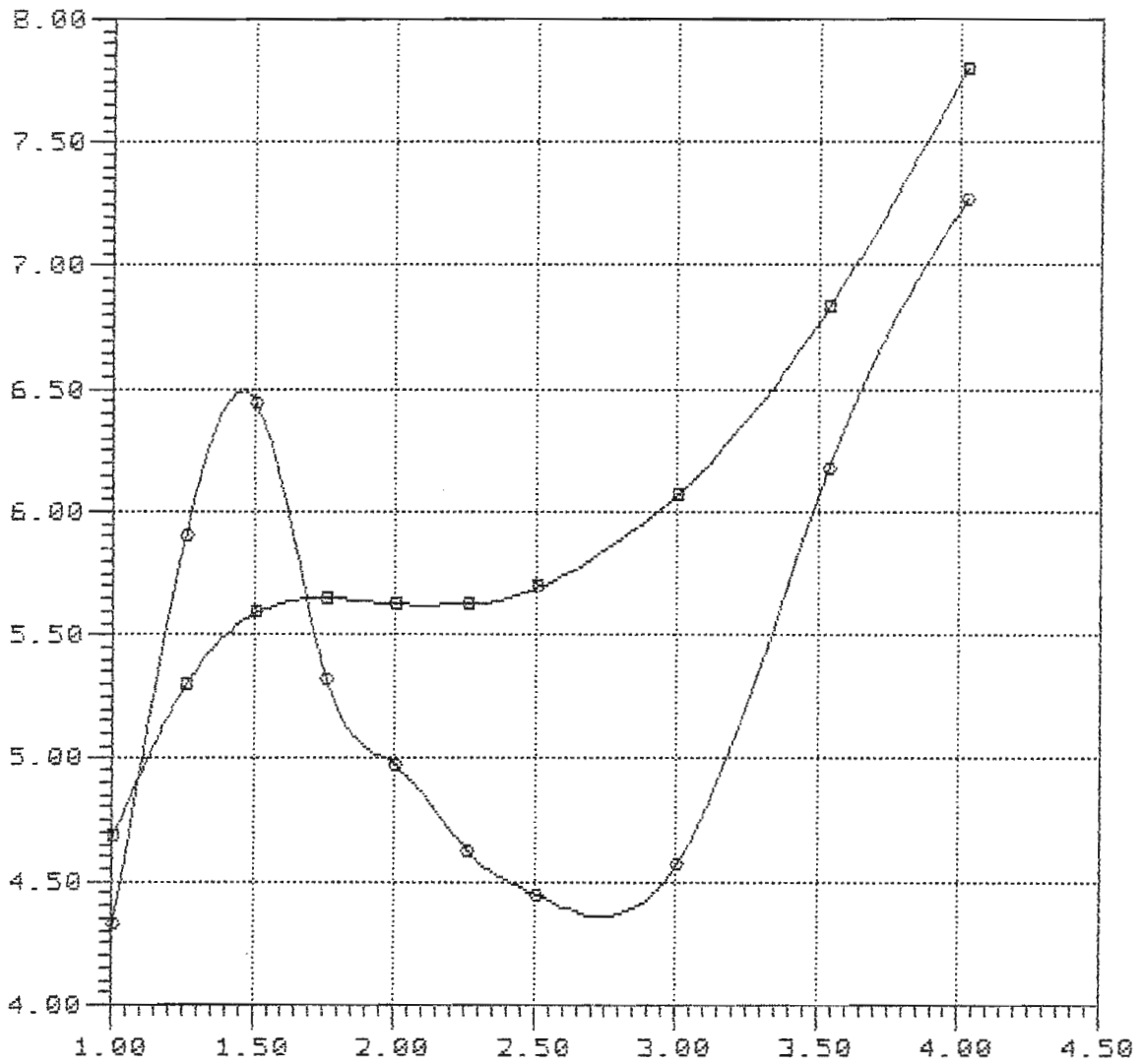
### Volumetric Froude number

File: 9-45-35b.mdl

Date: 21 Feb 00

Time: 13:40

Rbare: Bare-hull resistance (lbs)



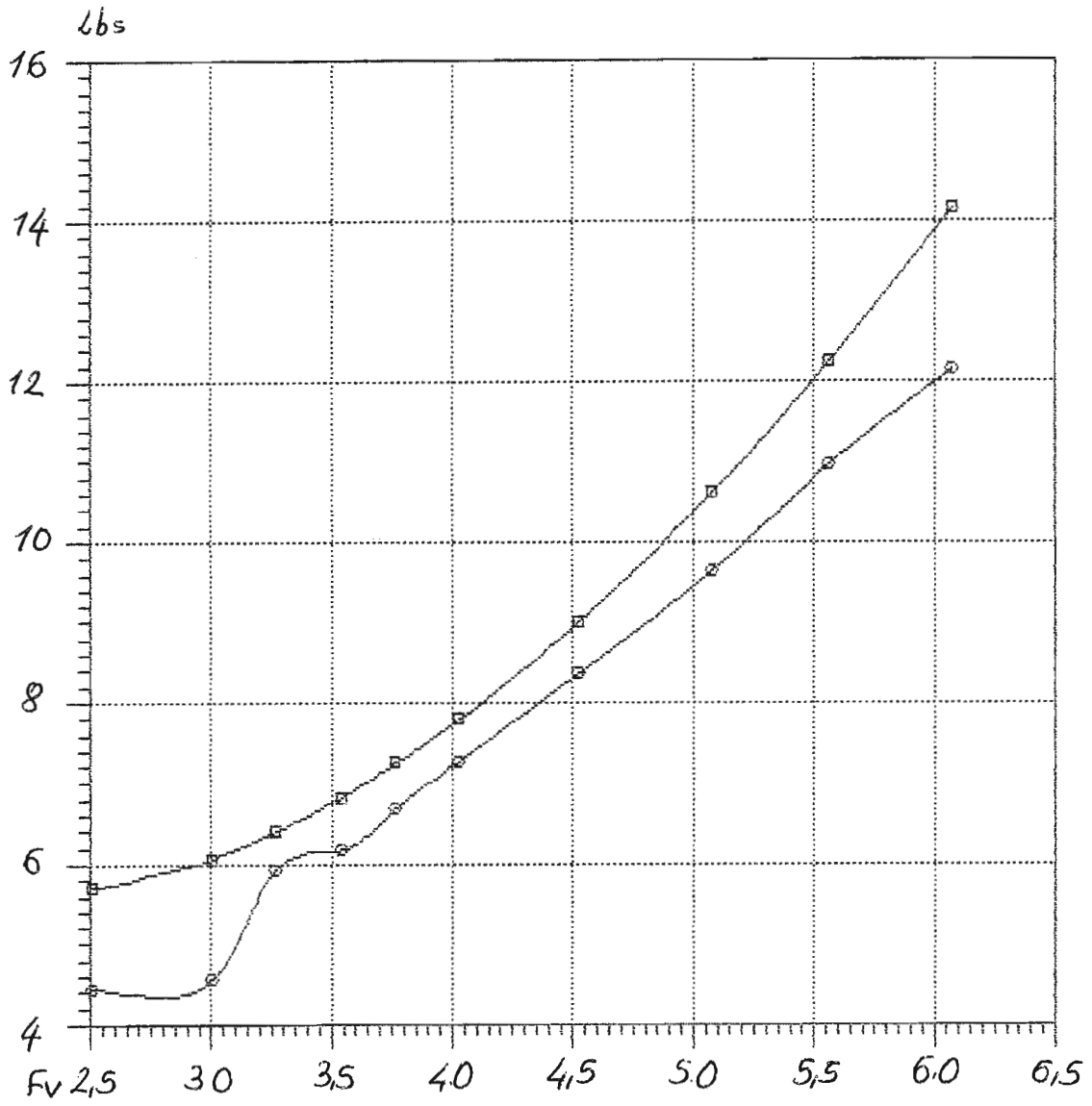
Fv: Volumetric Froude number

#### Curve legend

—■—

—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=8.548 Lpx/Ap=2.366 Leg/Lpx=0.355

9-45-35C

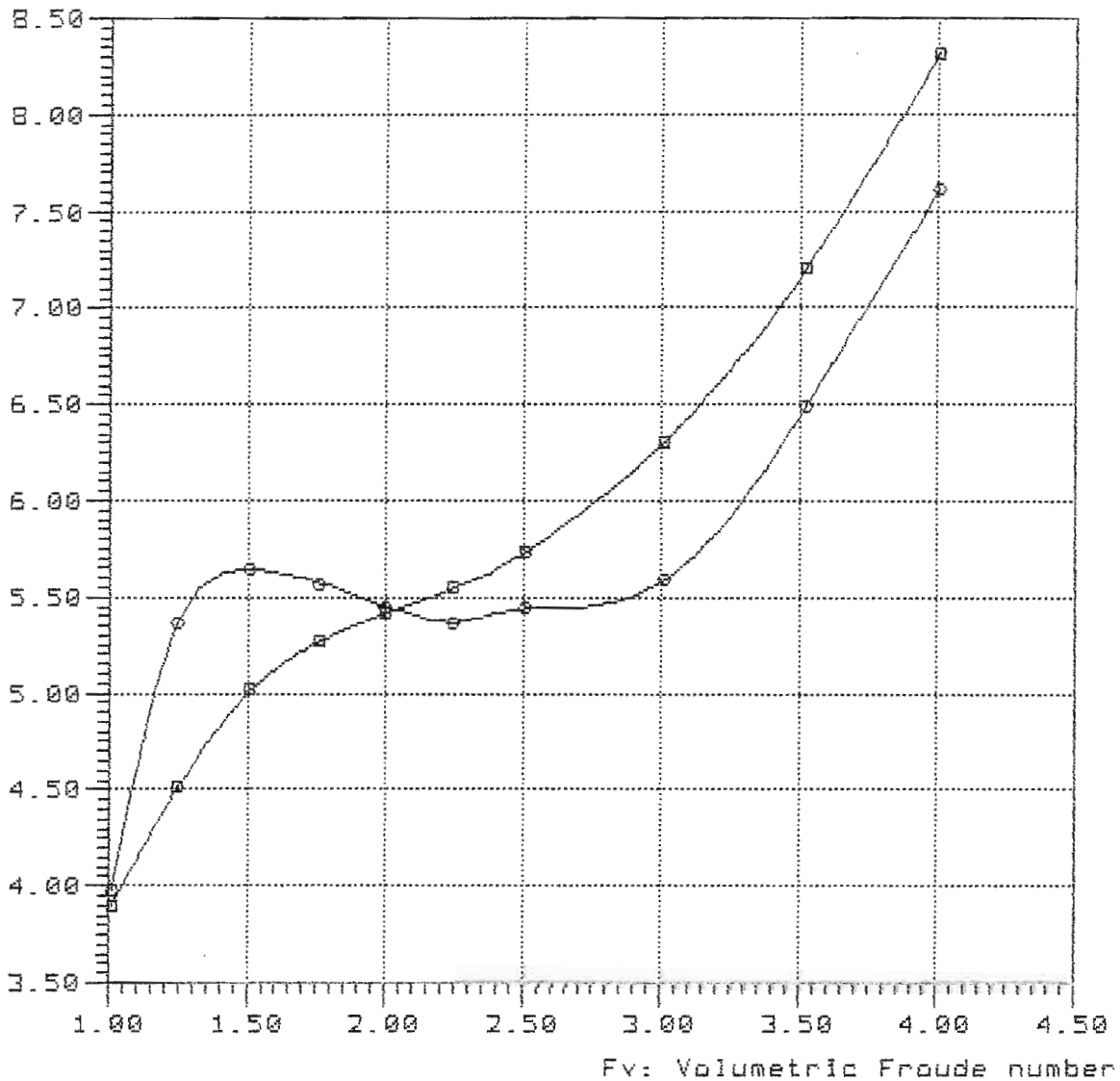


### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

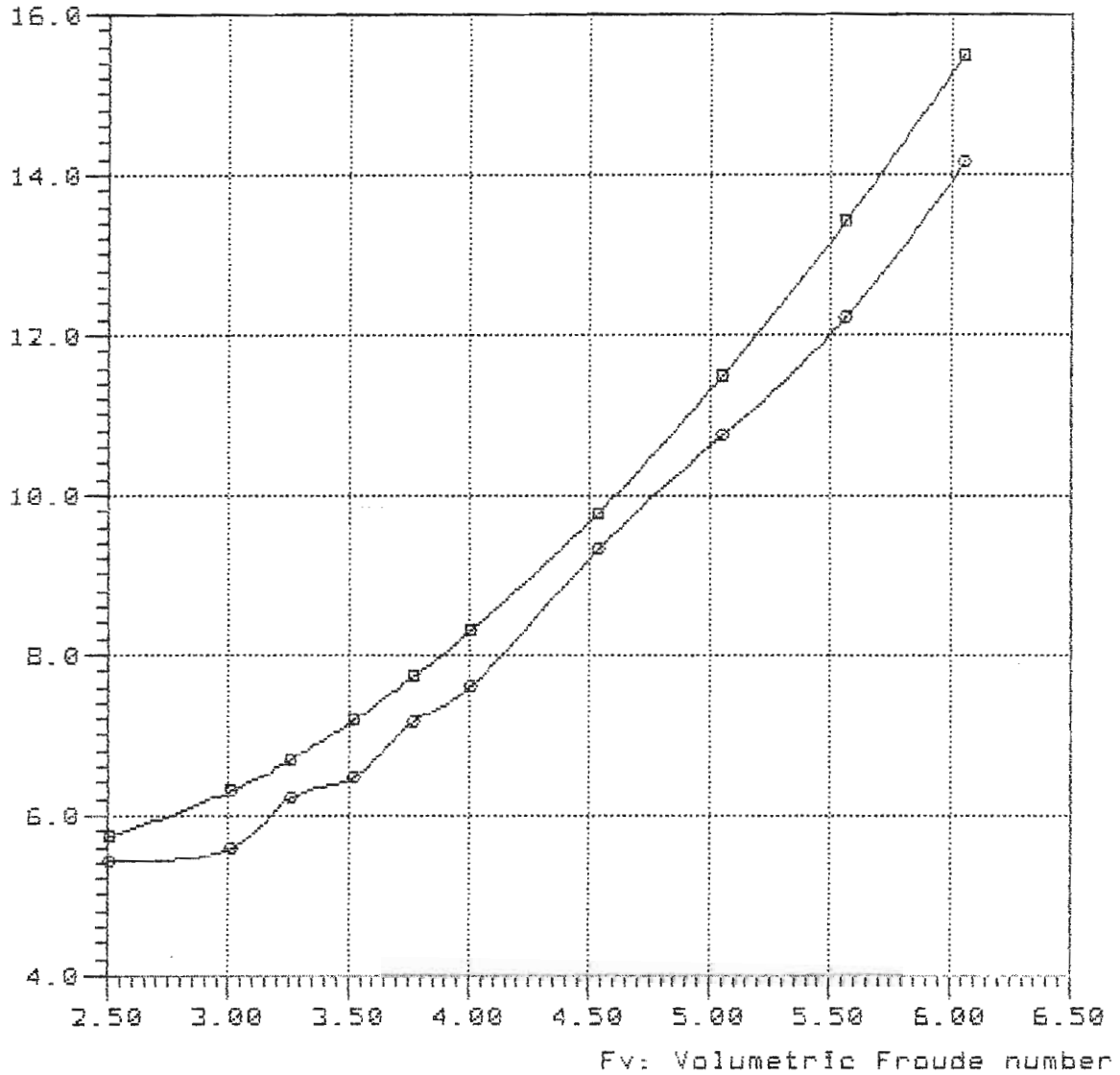
—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=8.548 Lpx/Ap=2.366 Lcg/Lpx=0.396

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

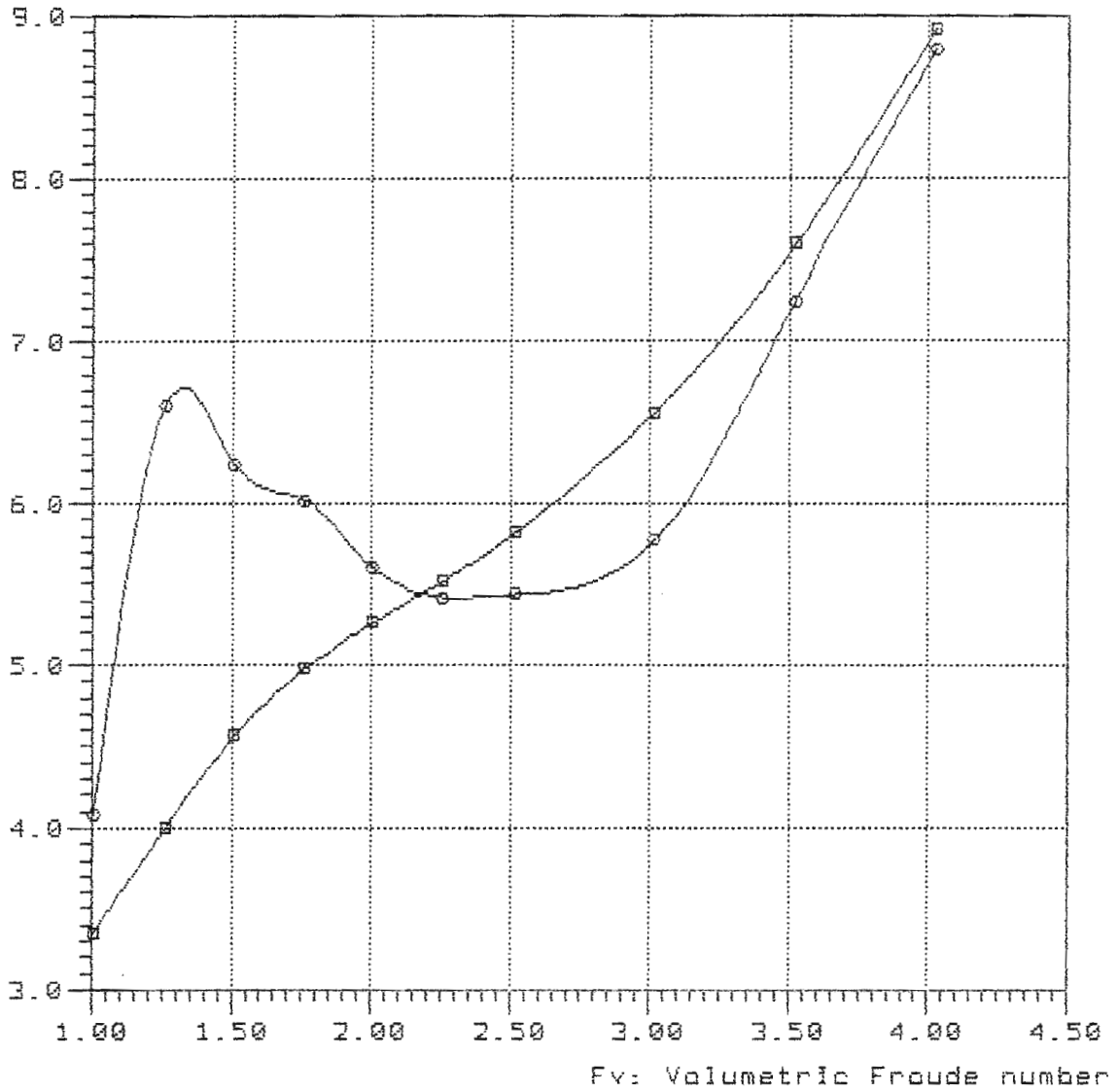
—●— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=8.548 Lpx/Ap=2.366 Lcg/Lpx=0.396

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)

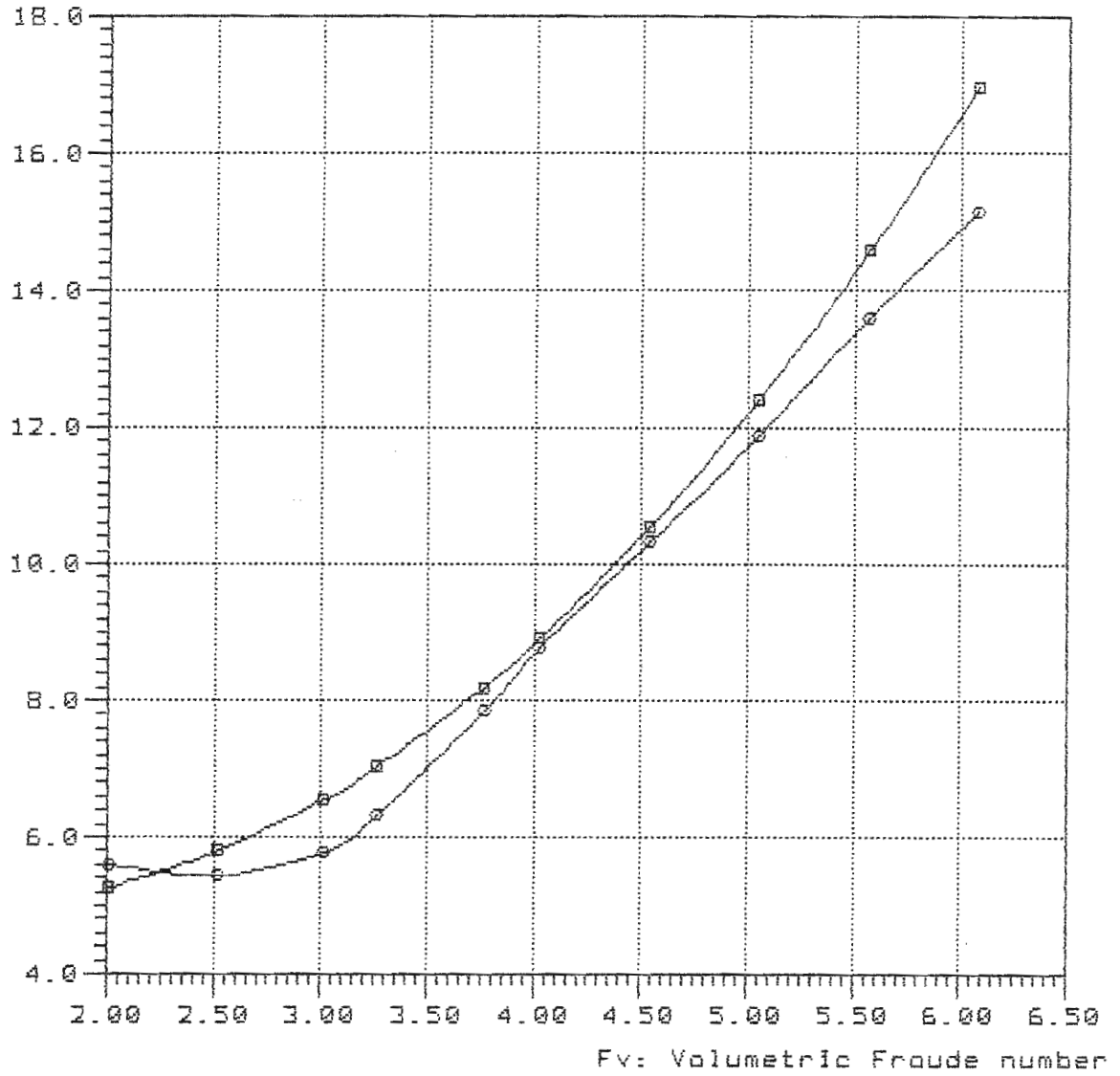


#### Curve legend

—■—

—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=8.548 Lpx/Ap=2.366 Lcg/Lpx=0.435

Rbare: Bare-hull resistance (lbs)

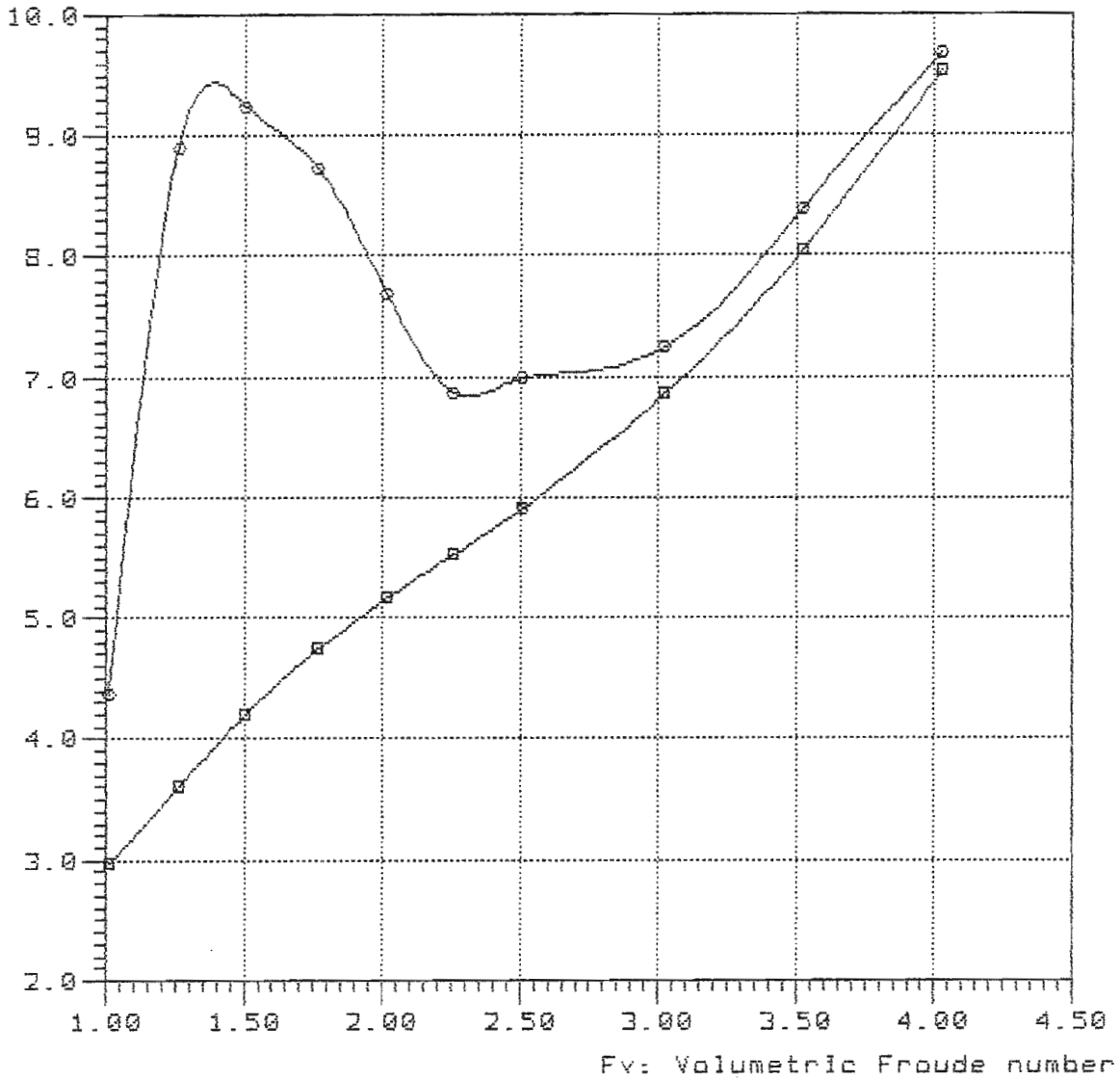


Curve legend

—■—

—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=8.548 Lpx/Ap=2.366 Log/Lpx=0.435

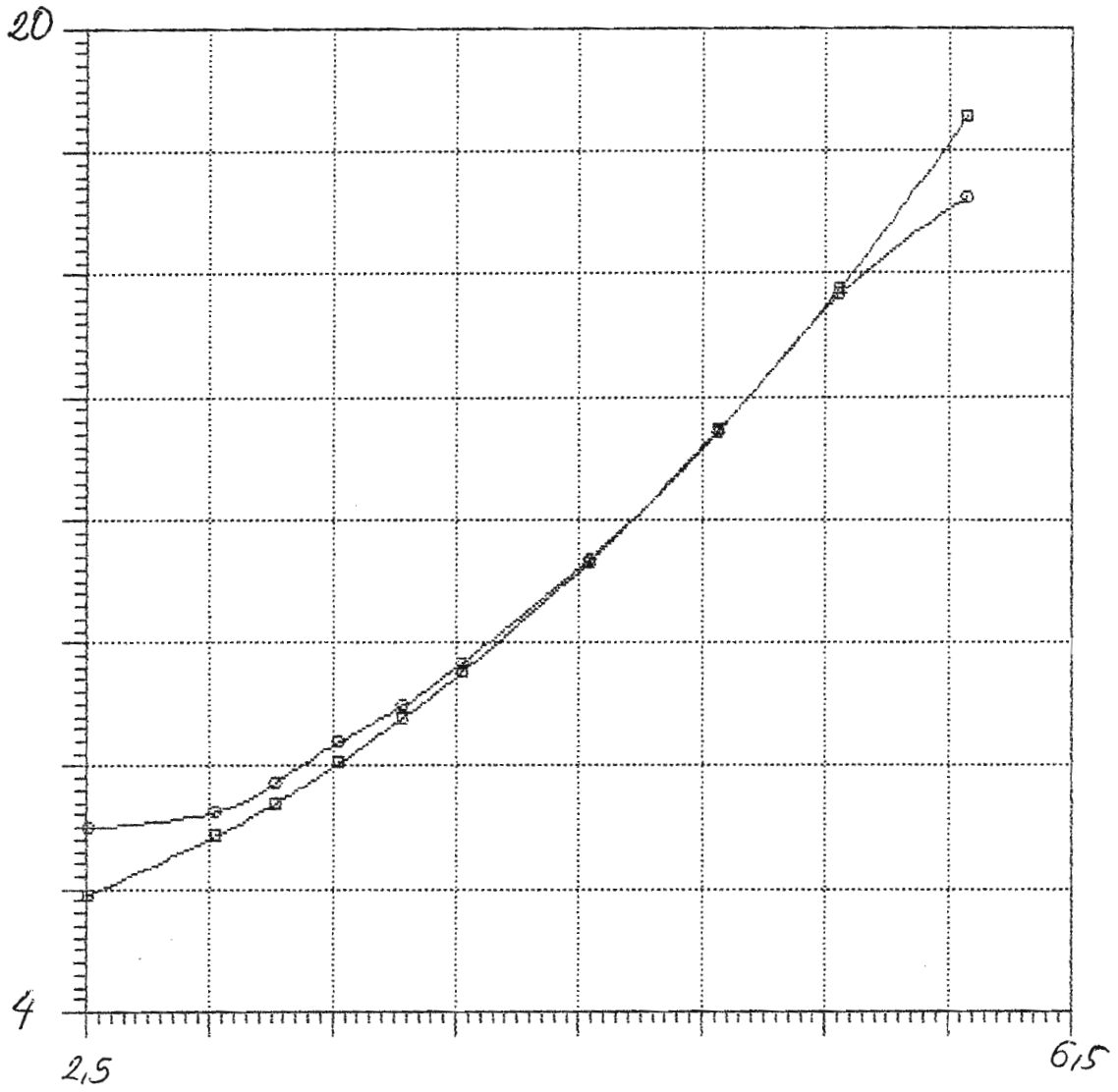
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4665 Lpx/Bpx=2.00 Ap/Vol=8.548 Lpx/Ap=2.366 Lcg/Lpx=0.475

9-45-47C



—□—  
—○—



4666

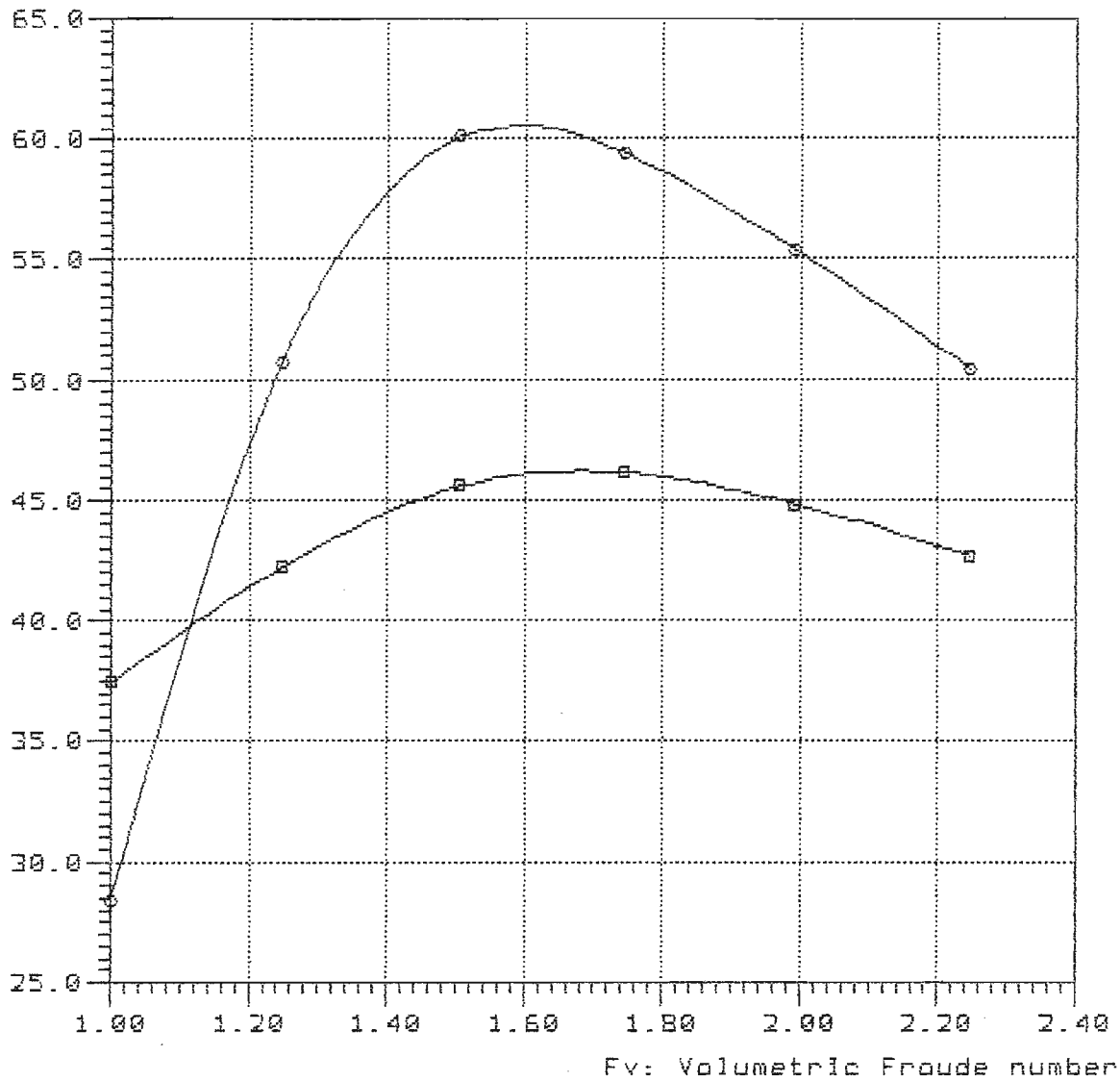
Model = 4666  
Ref = SNAME  
Friction =ATTC Ca=0

Lpx = 5.987 ft  
Lwl = 5.836 ft  
Bpx = 1.956 ft  
Disp = 235.700 lb  
Ap = 9.715 sqft  
Deadrise = 13.00 degree  
Shaft Ang= 12.97 degree  
Vce = -2.15 ft

Lpx/Bpx = 3.061  
Lpx/Ap = 3.690  
Ap /Vol = 4.074  
Lpx/Vol = 3.888

Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCI DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez. Taksir  
veya kopya edilemez ve her ne mak-  
sadı olursa olsun maksadı dışında  
izinsiz kullanılamaz.

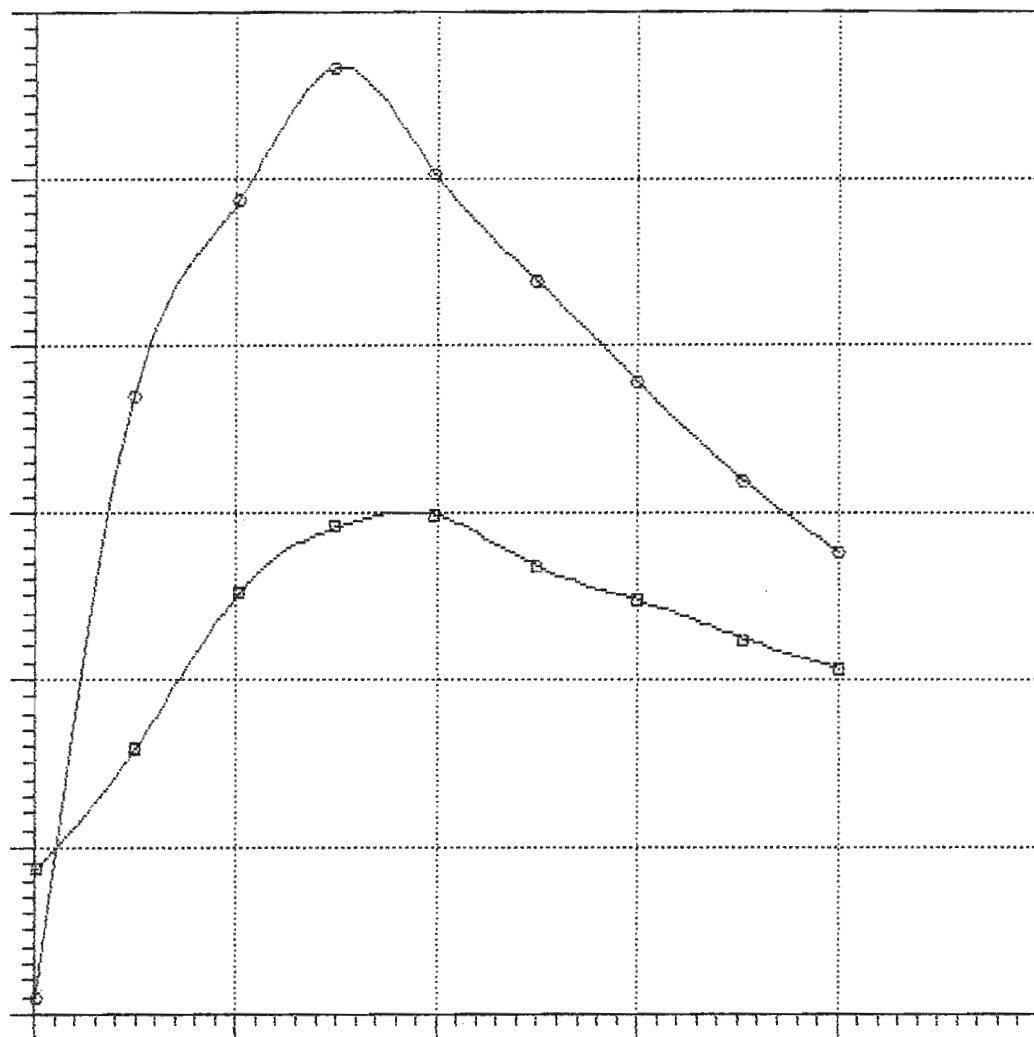
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=4.021 Lpx/Ap=3.69 Log/Lpx=0.352

4-39-403



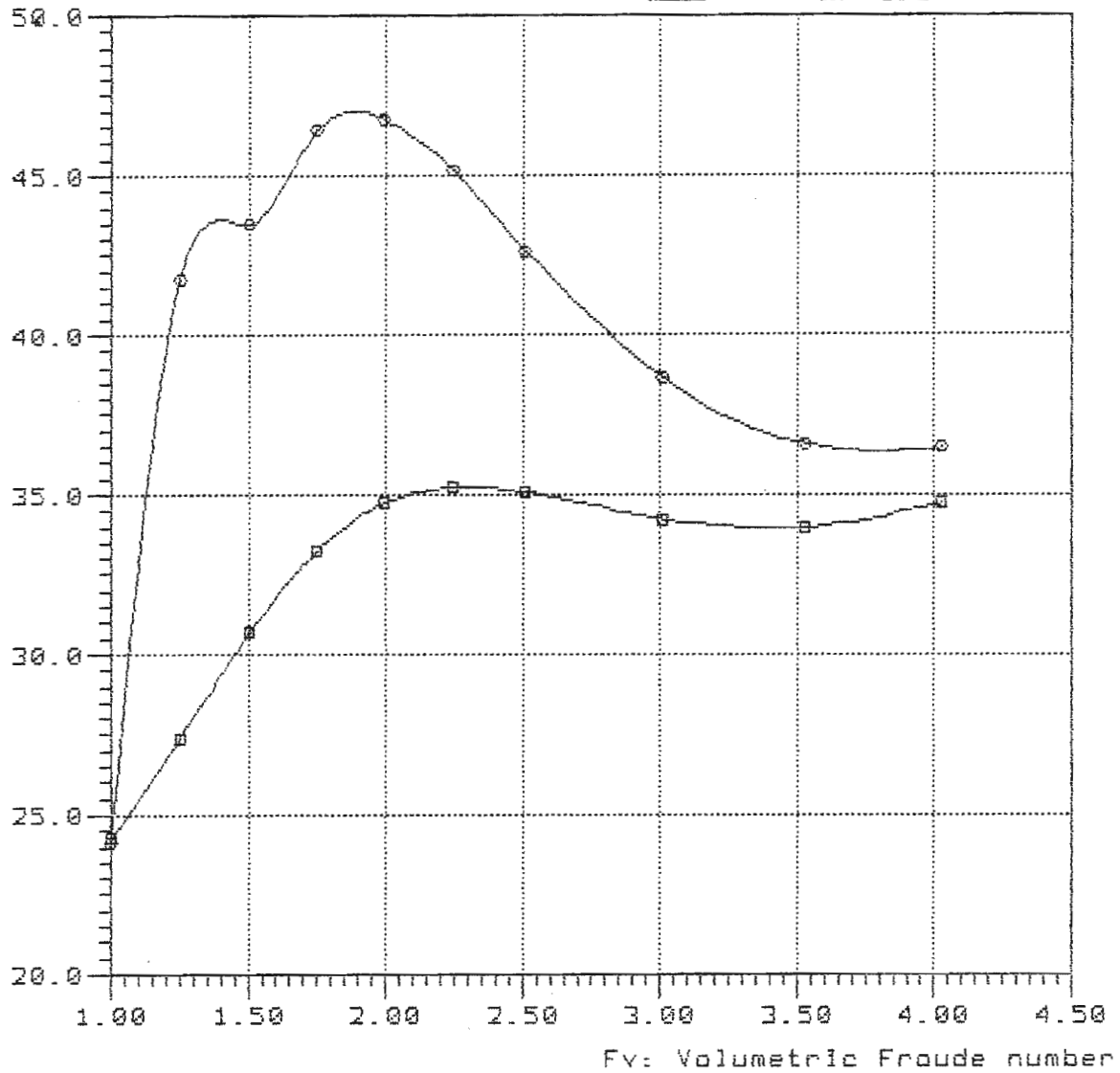
—□—  
—○—

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lba)



#### Curve legend

—■—

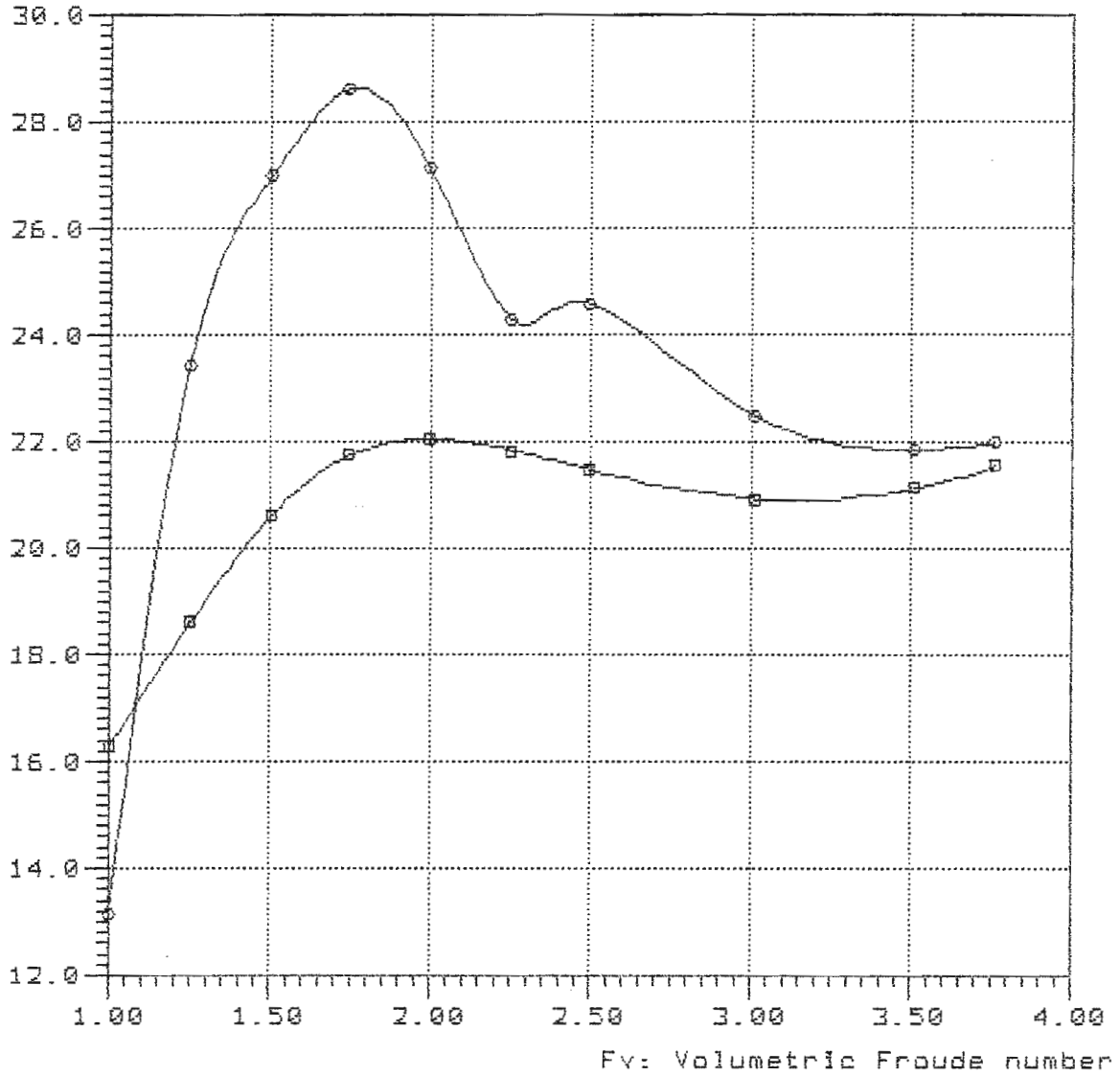
—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=4.021 Lpx/Ap=3.69 Lcg/Lpx=0.443

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=5.529 Lpx/Ap=3.69 Lcg/Lpx=0.362

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### Bare-hull resistance

vs.

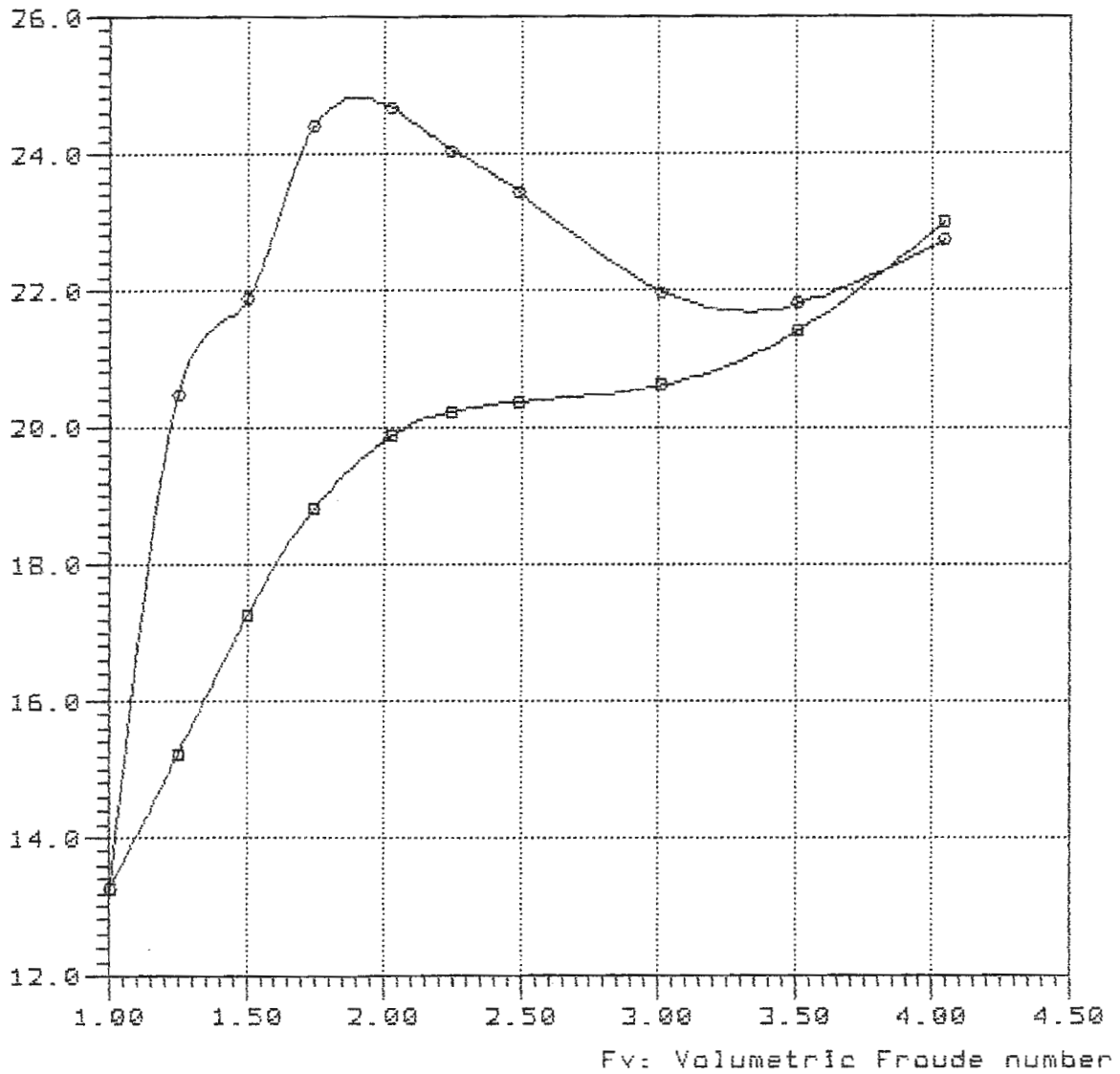
### Volumetric Froude number

File: 6-46-40b.mdl

Date: 21 Feb 00

Time: 15:22

Rbare: Bare-hull resistance (lbs)

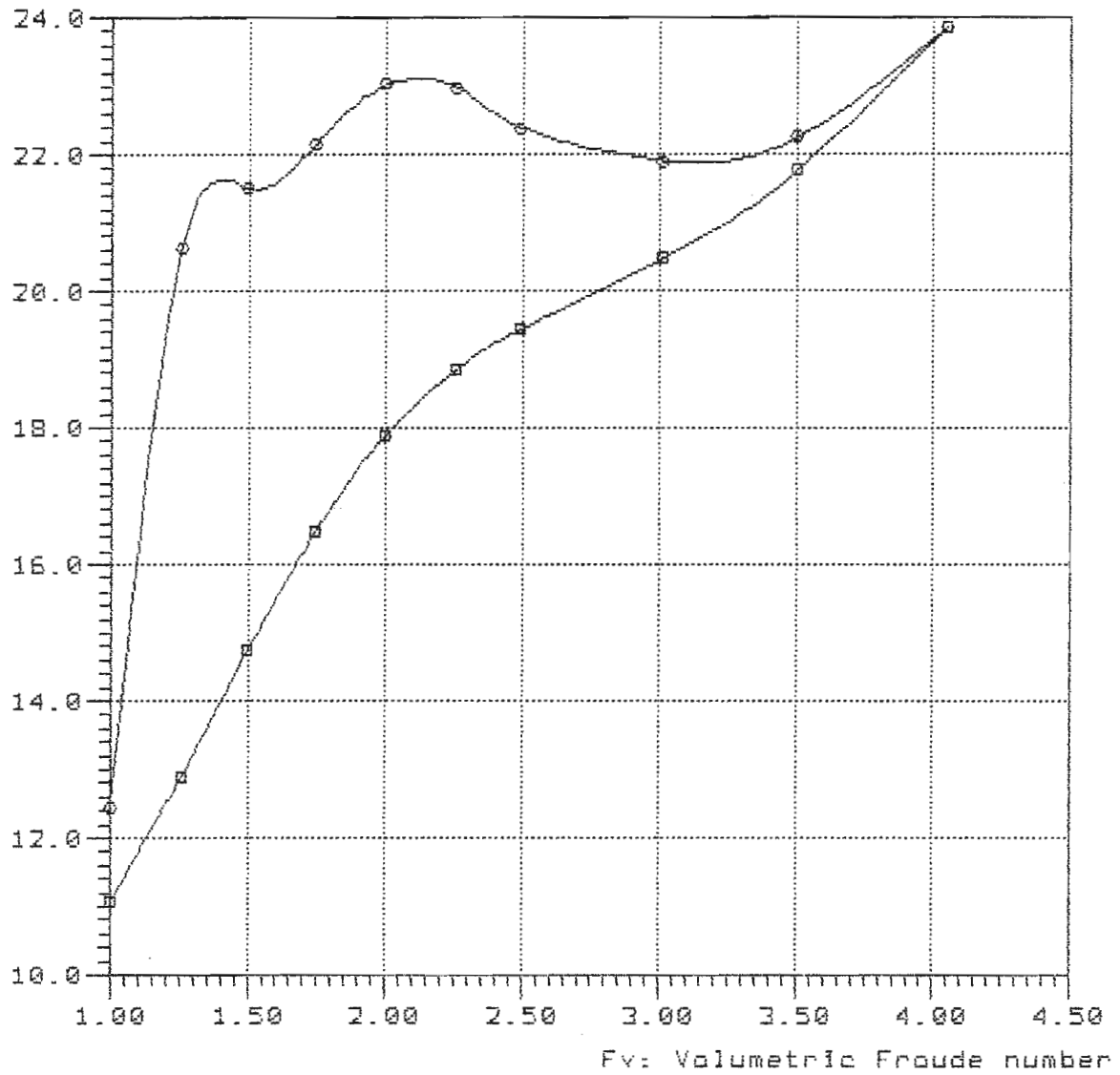


#### Curve legend

—■—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=5.529 Lpx/Ap=3.69 Log/Lpx=0.403

Rbare: Bare-hull resistance (lbs)

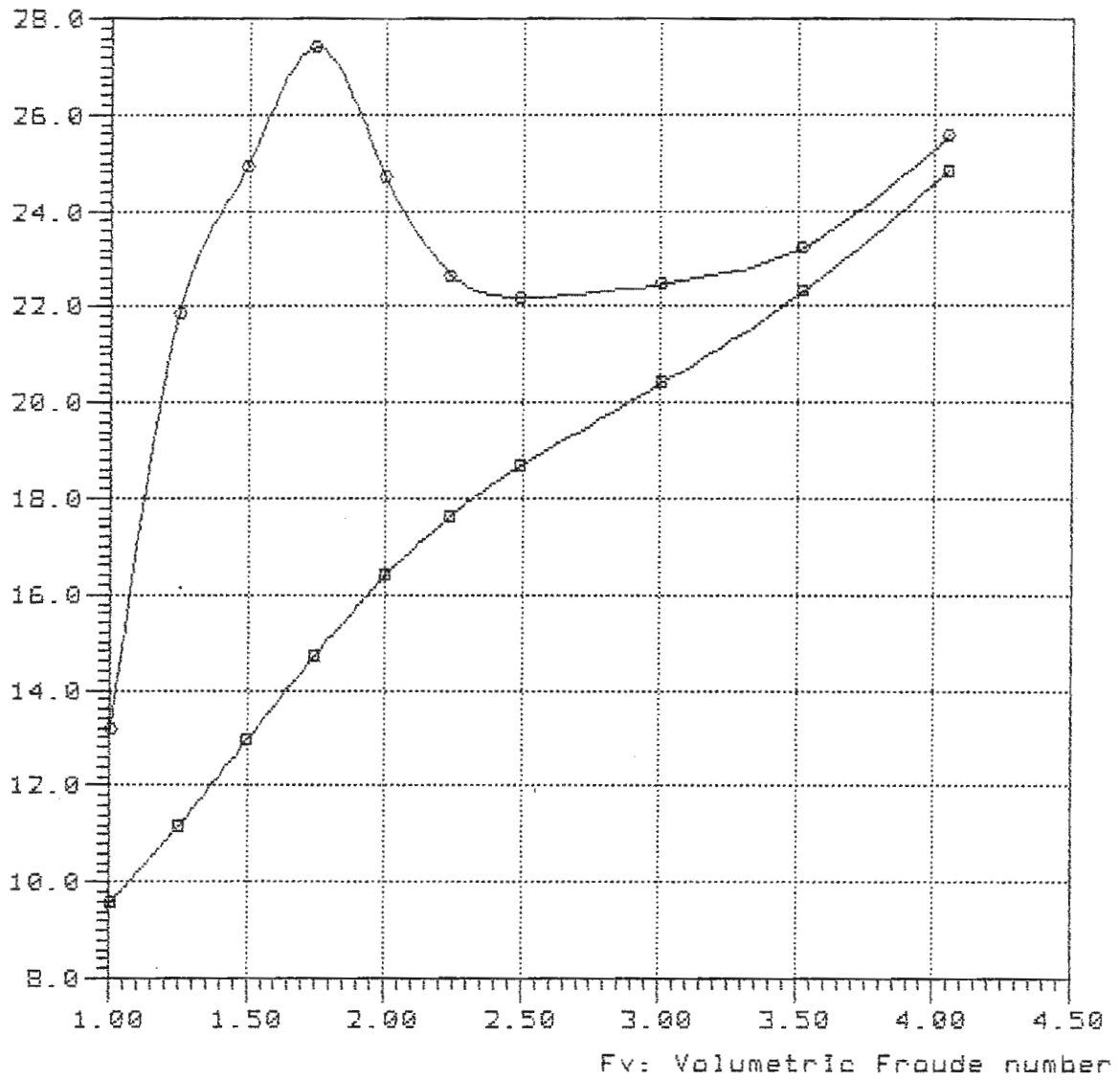


—□—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=5.529 Lpx/Ap=3.69 Log/Lpx=0.443



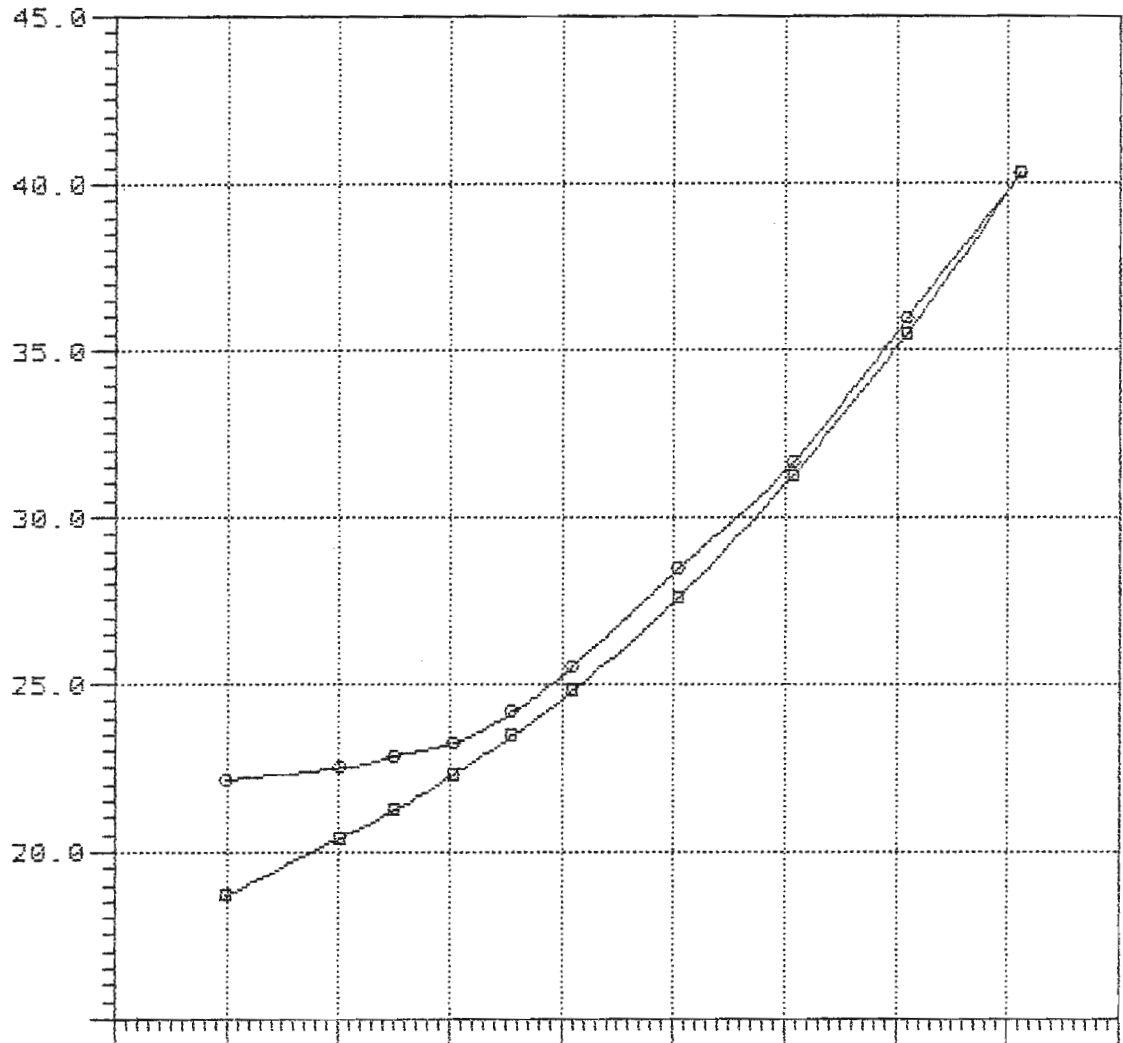
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=5.529 Lpx/Ap=3.69 Lcg/Lpx=0.483

Rbare: Bare-hull resistance (lbs)



—■—  
—○—

Model = 4666  
Ref = SNAME  
Friction =ATTC Ca=0

Lpx = 5.987 ft  
Lwl = 5.836 ft  
Bpx = 1.956 ft  
Disp = 146.200 lb  
Ap = 9.715 sqft  
Deadrise = 13.00 degree  
Shaft Ang= 12.97 degree  
Vce = -2.15 ft

Lpx/Bpx = 3.061  
Lpx/Ap = 3.690  
Ap /Vol = 5.602  
Lpx/Vol = 4.559

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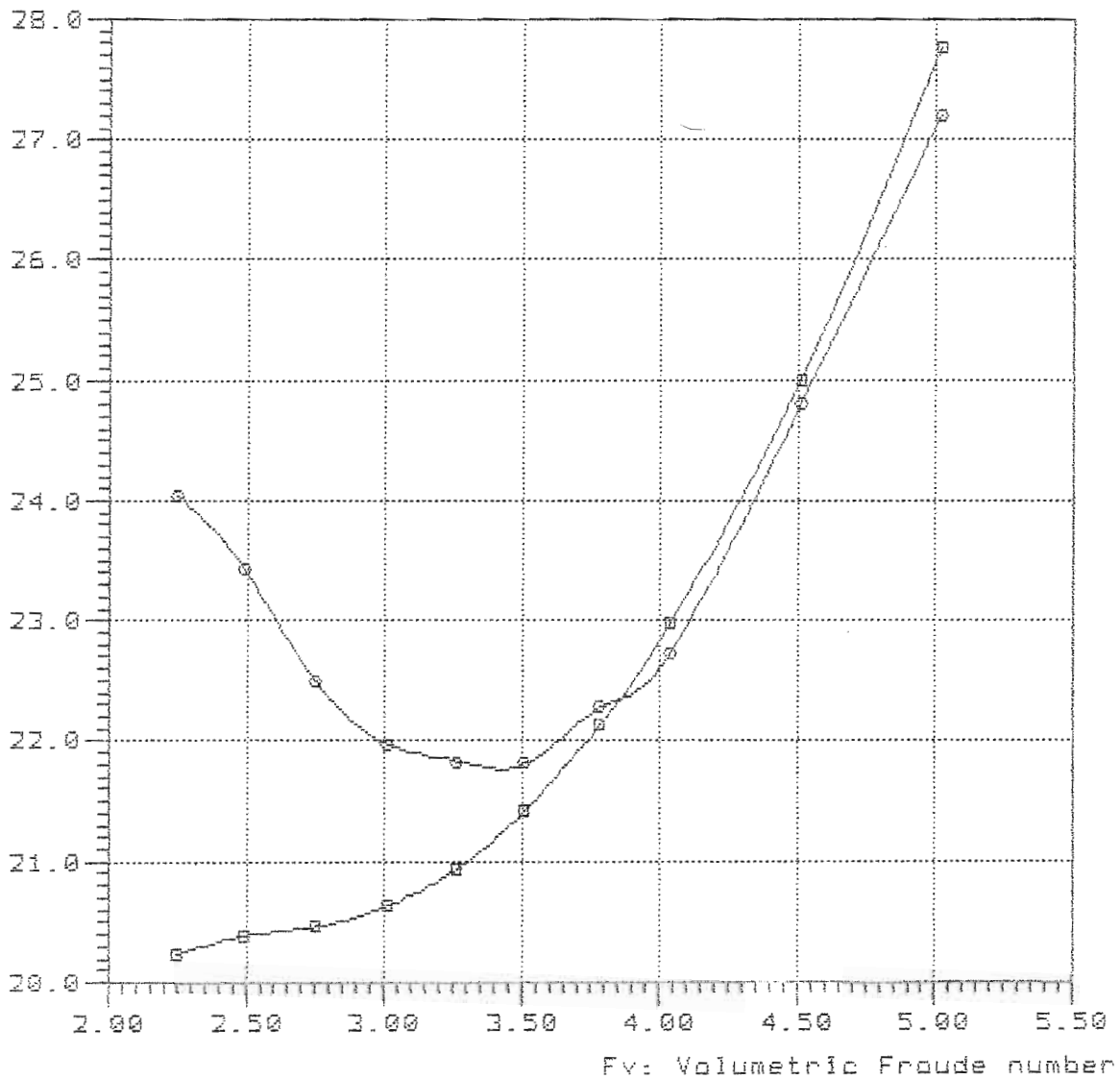
HydroComp, Inc.

File: E-46-40c.mdl

Date: 21 Feb 00

Time: 15:25

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=5.529 Lpx/Rp=3.69 Lcg/Lpx=0.403

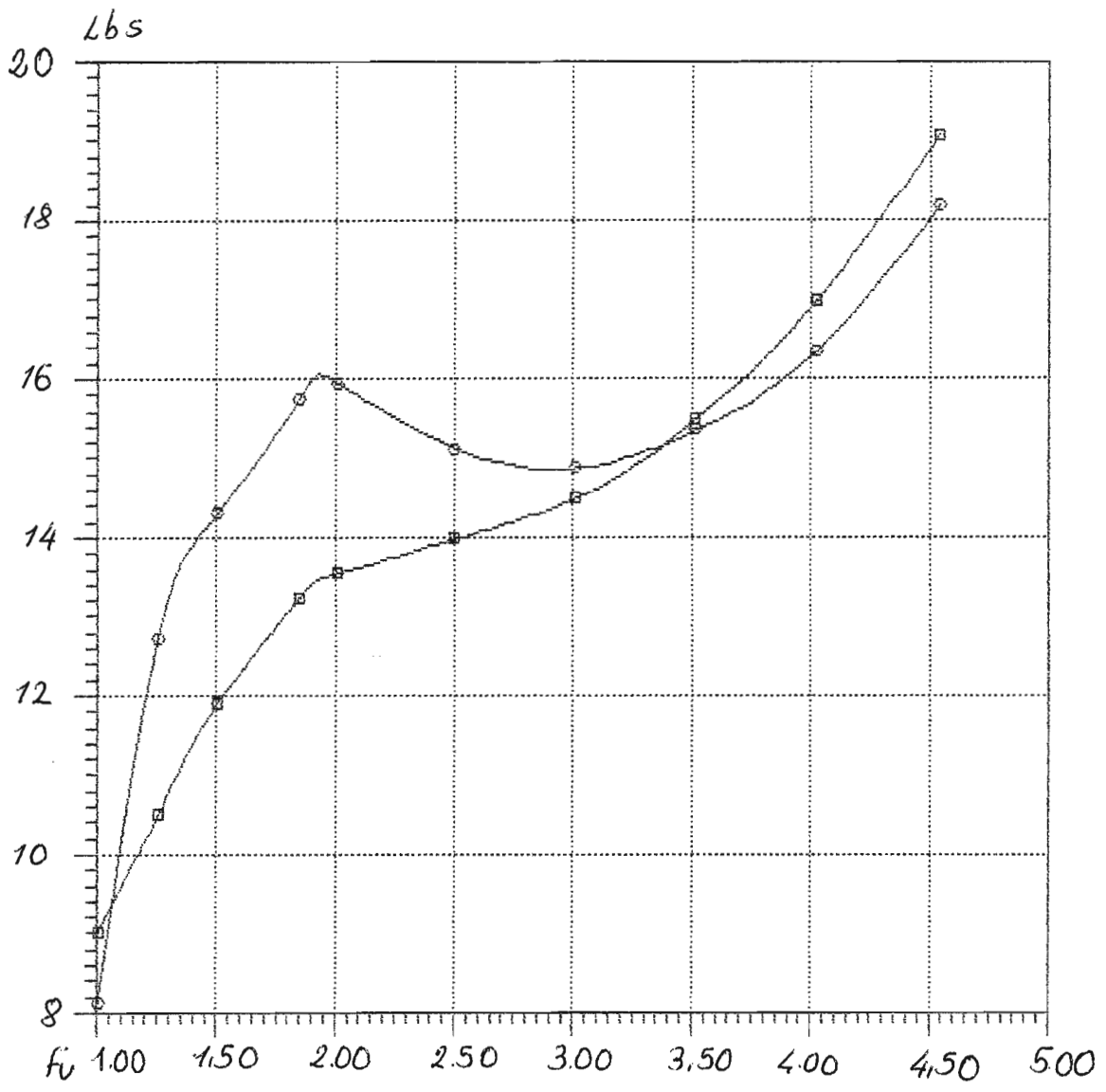
Model = 4666  
Ref = SNAME  
Friction = ATTC Ca=0

Lpx = 5.987 ft  
Lwl = 5.836 ft  
Bpx = 1.956 ft  
Disp = 101.800 lb  
Ap = 9.715 sqft

Deadrise = 13.00 degree  
Shaft Ang= 12.97 degree  
Vce = -2.15 ft

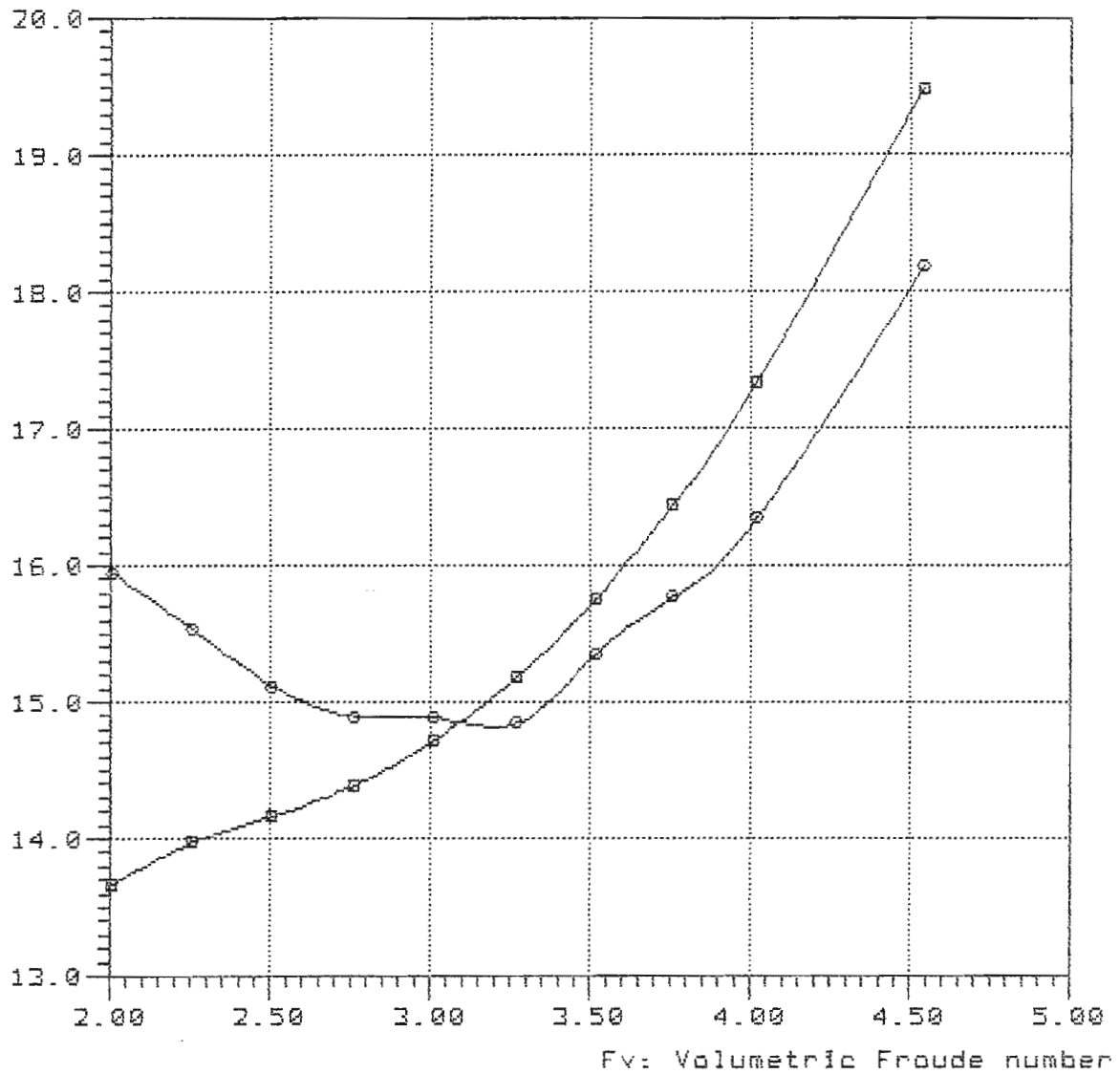
Lpx/Bpx = 3.061  
Lpx/Ap = 3.690  
Ap /Vol = 7.130  
Lpx/Vol = 5.144

7-51-36b



—□—  
—□—

Rbare: Bare-hull resistance (lbs)

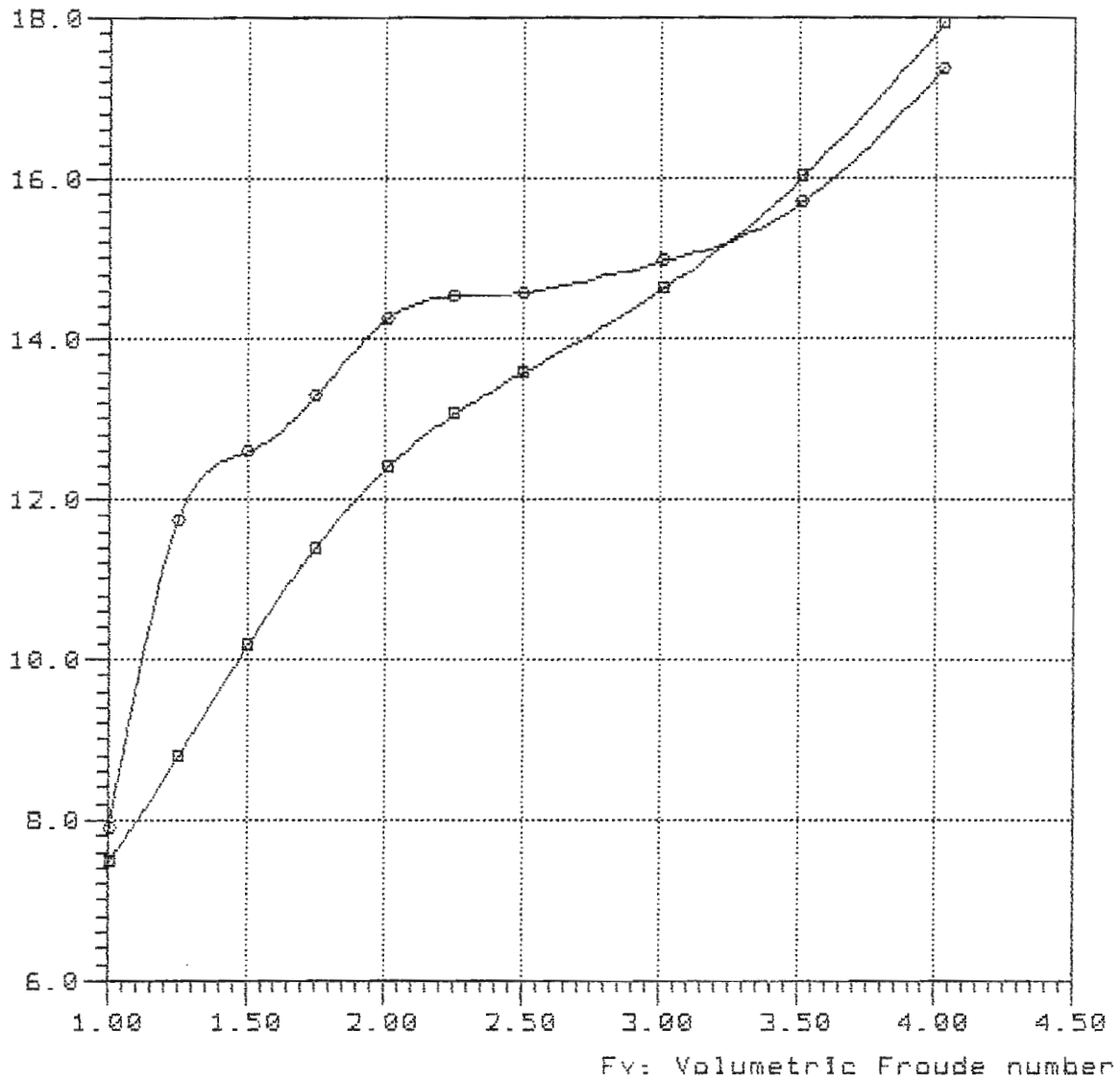
**Curve legend**

—■—

—●— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=7.039 Lpx/Ap=3.69 Lcg/Lpx=0.362

**Bare-hull resistance**  
**vs.**  
**Volumetric Froude number**

Rbare: Bare-hull resistance (lbs)

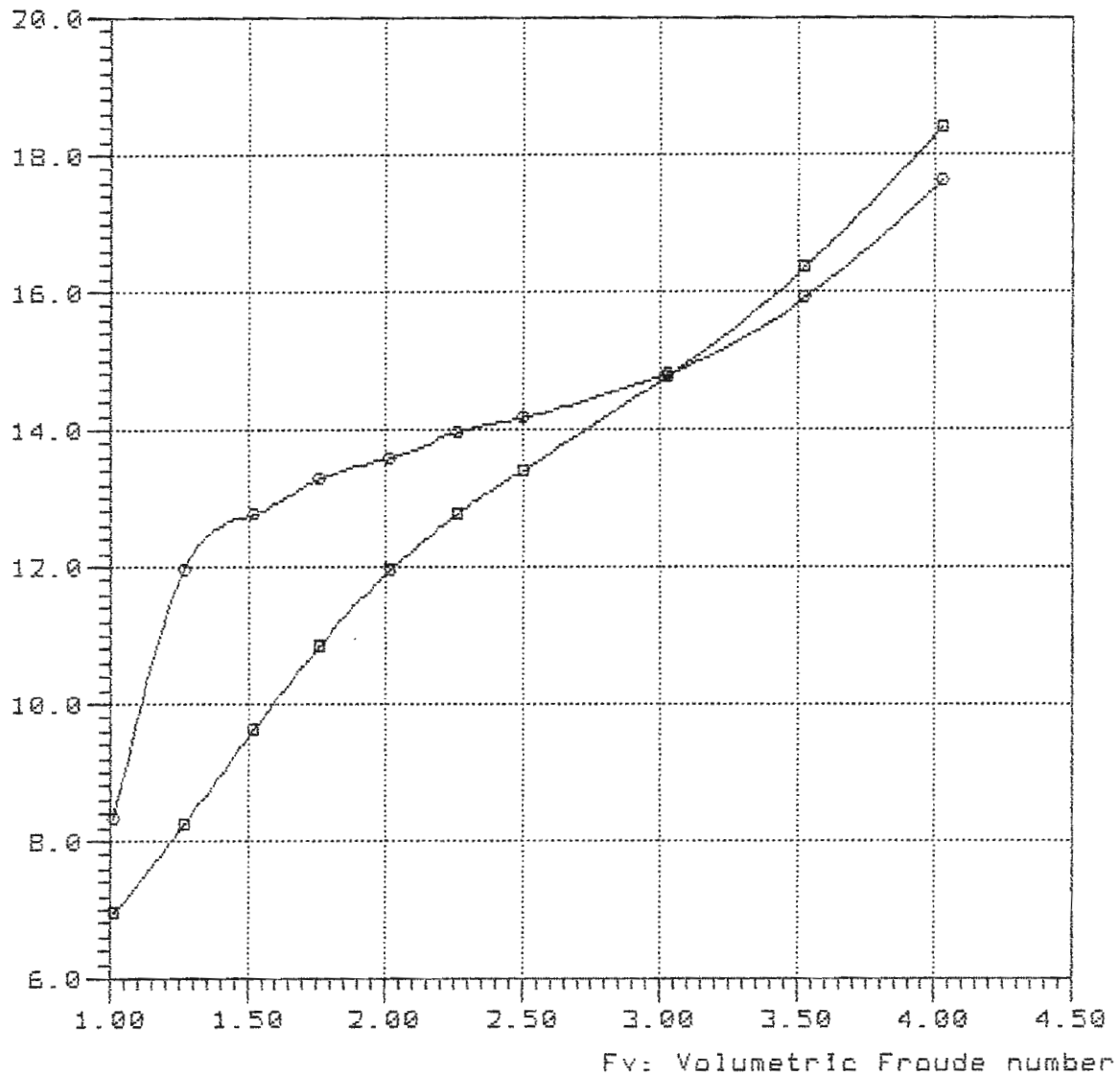


**Curve Legend**

- 
- TMB-4666 Lpx/Bpx=3.06 Ap/Vol=7.039 Lpx/Ap=3.69 Lcg/Lpx=0.403



Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=7.039 Lpx/Ap=3.65 Log/Lpx=0.423

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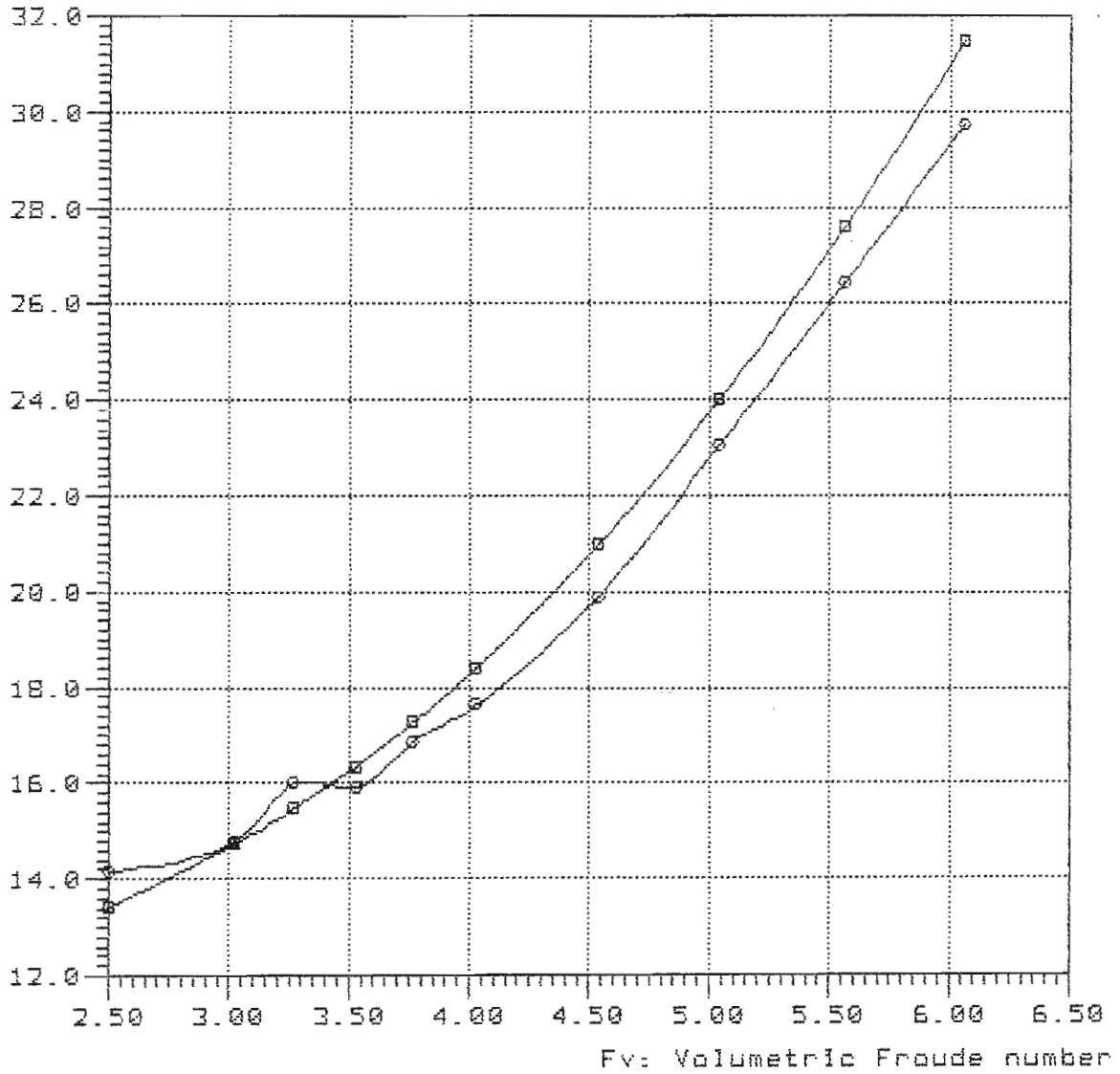
HydroComp, Inc.

File: 7-51-42c.mdl

Date: 21 Feb 00

Time: 16:35

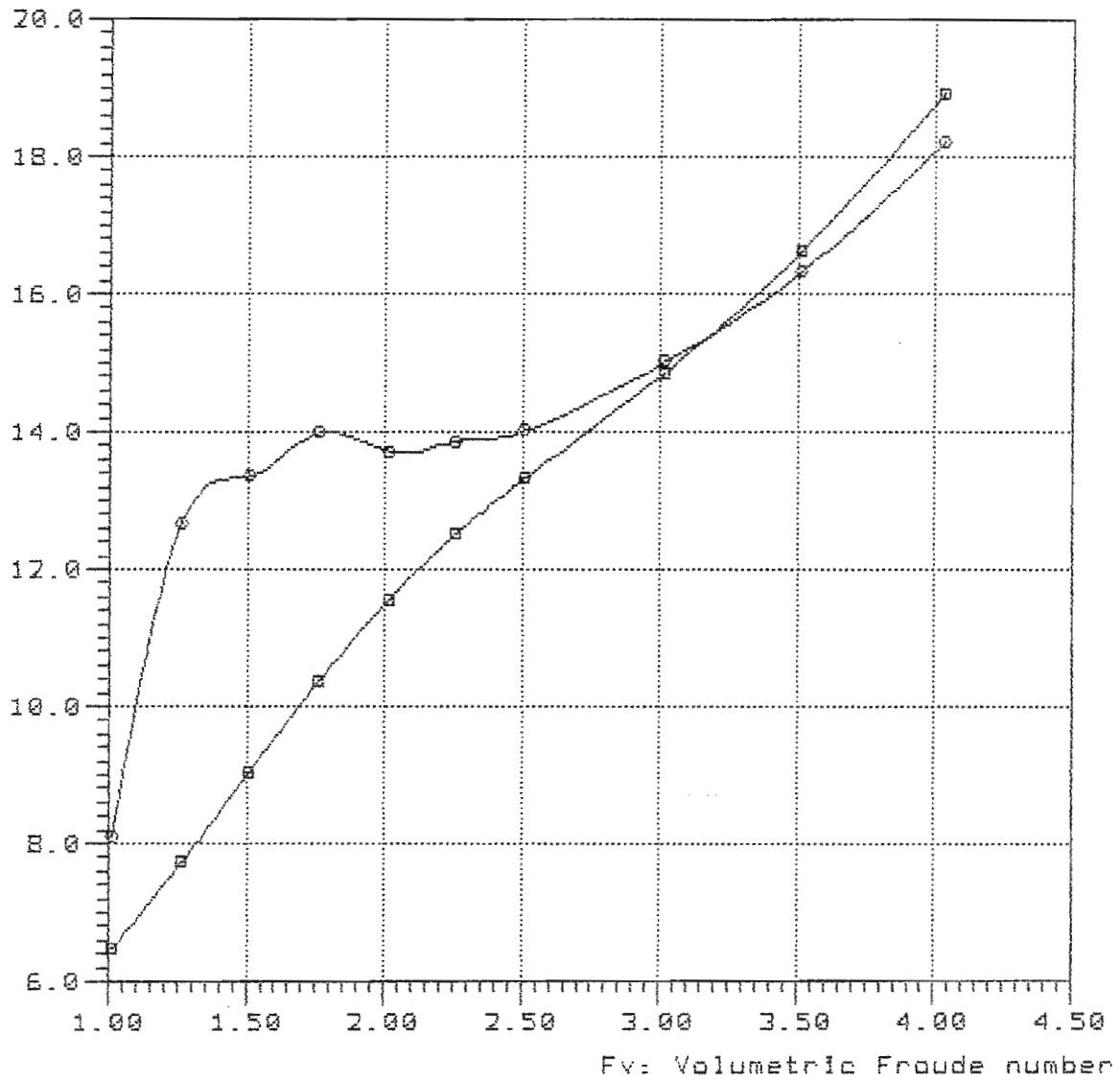
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=7.039 Lpx/Ap=3.69 Log/Lpx=0.423

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=7.039 Lpx/Ap=3.69 Log/Lpx=0.443

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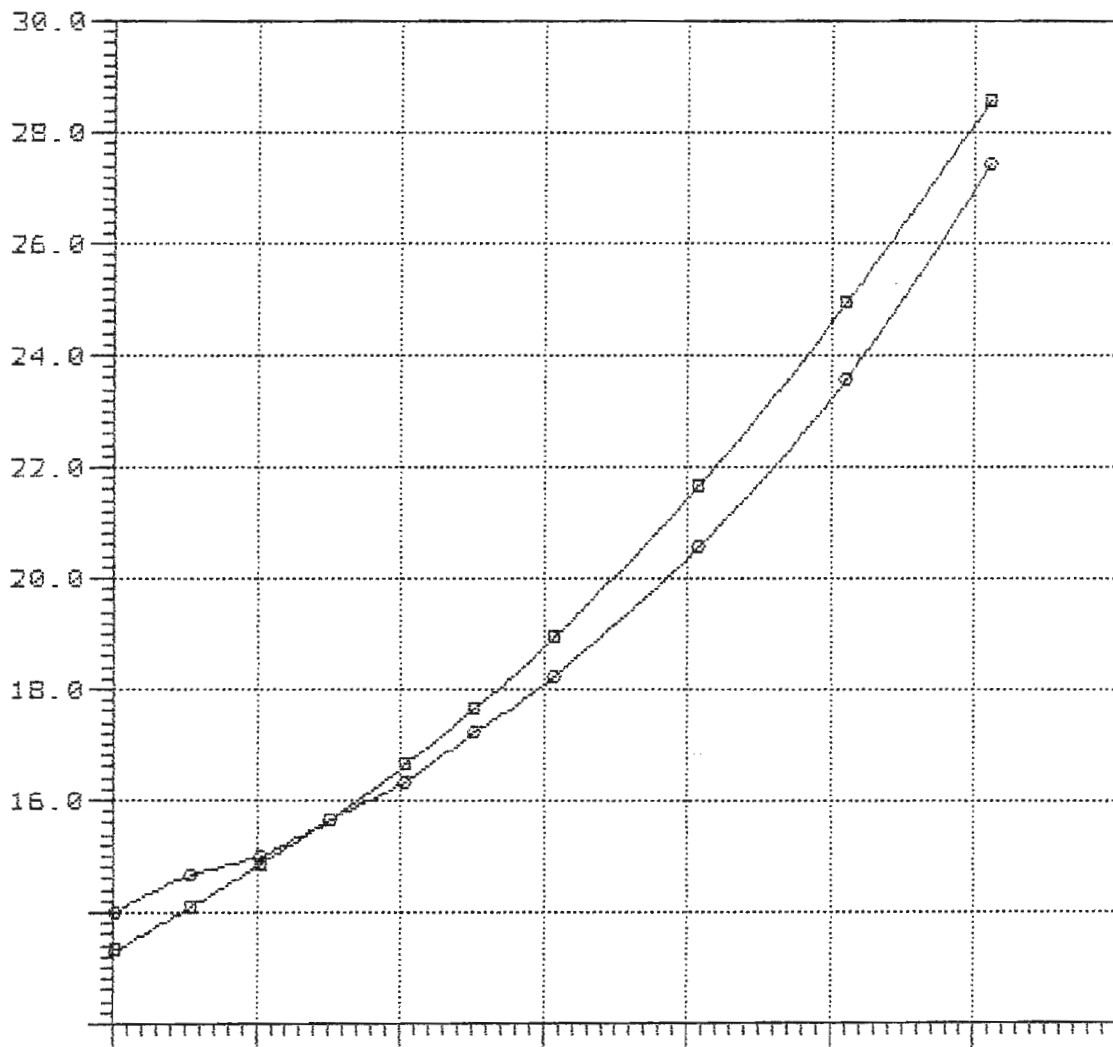
HydroComp, Inc.

File: 7-51-44c.mdl

Date: 21 Feb 88

Time: 16:42

Rbare: Bare-hull resistance (lbs)



—□—

—○—

NavCad(tm) 3.1d

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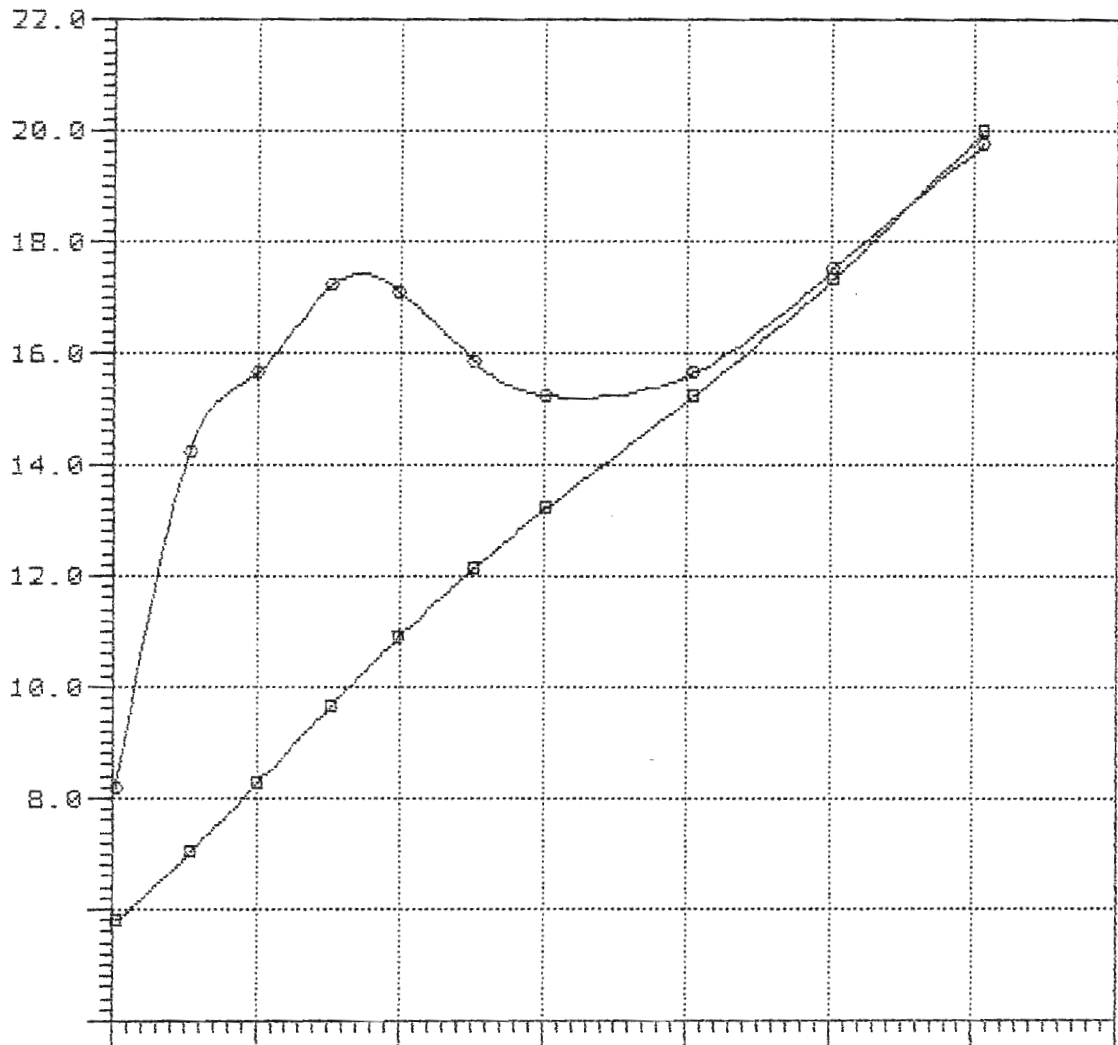
HydroComp, Inc.

File: 7-51-48b.mdl

Date: 21 Feb 00

Time: 16:45

Rbare: Bare-hull resistance (lbs)



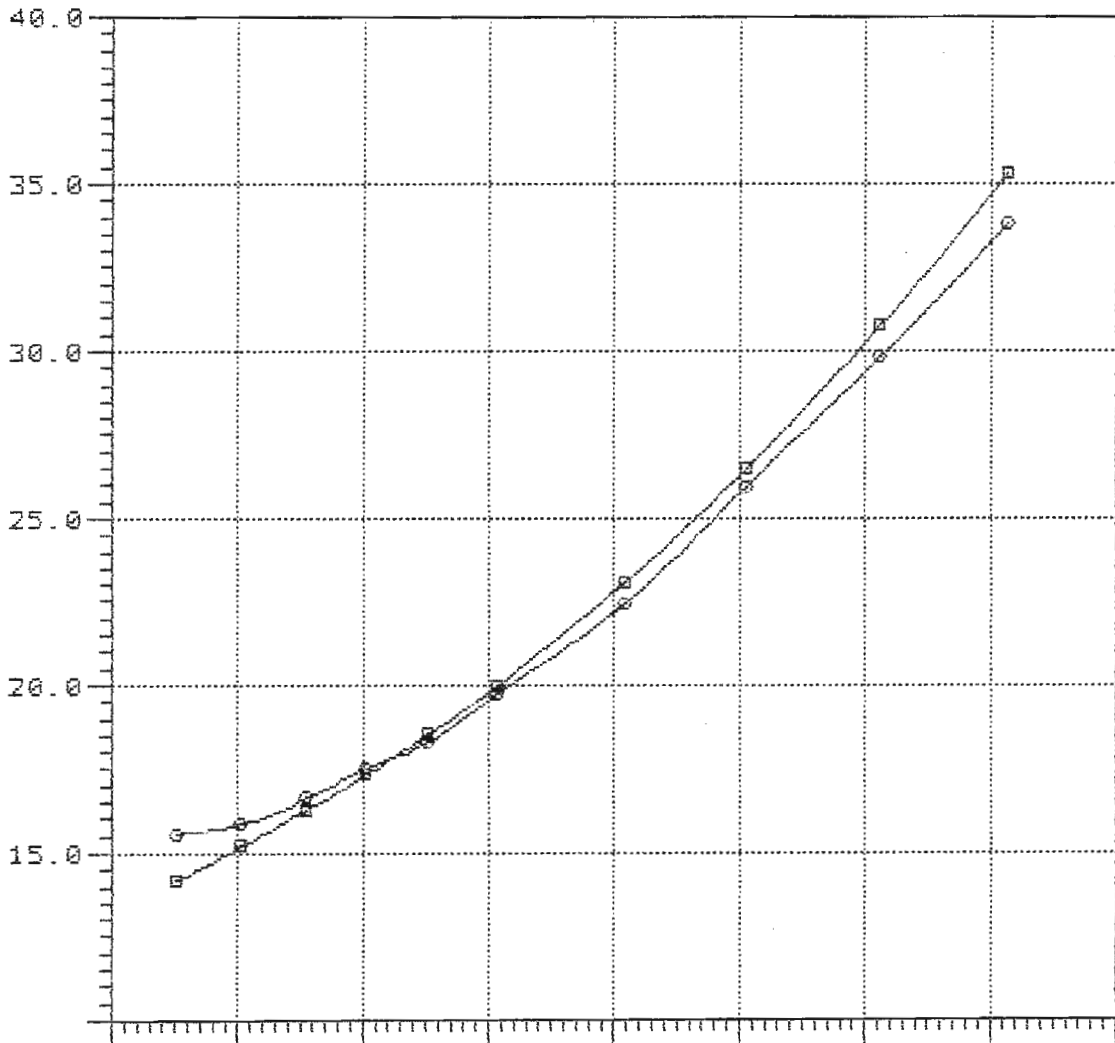
—■—

—○—

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HydroComp, Inc.

File: 7-51-48c.mdl  
Date: 21 Feb 00  
Time: 16:49

Rbare: Bare-hull resistance (lbs)



—■—  
—○—

Model = 4666  
Ref = SNAME  
Friction = ATTC Ca=0

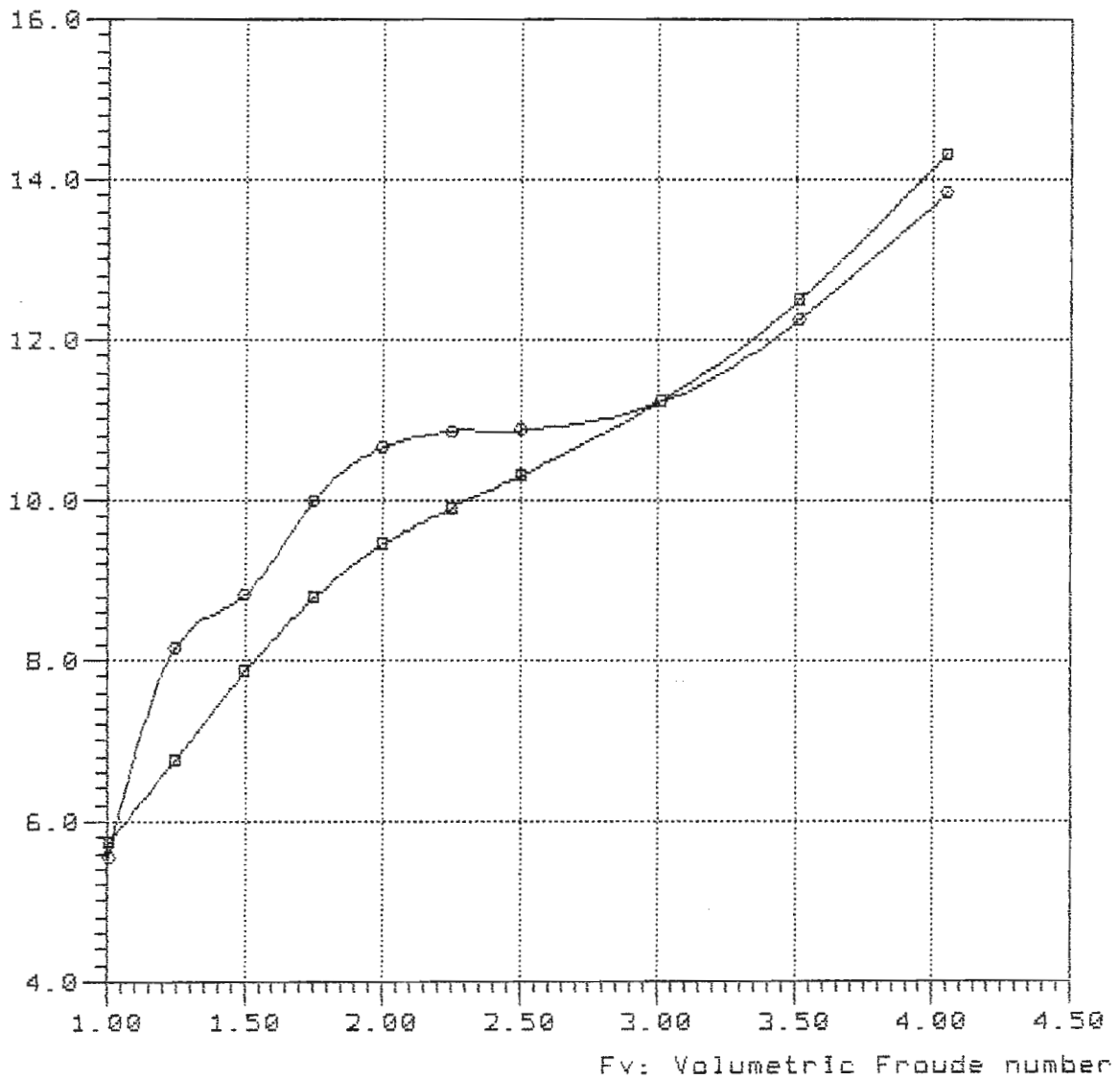
Lpx = 5.987 ft  
Lwl = 5.836 ft  
Bpx = 1.956 ft  
Disp = 76.100 lb  
Ap = 9.715 sqft  
Deadrise = 13.00 degree  
Shaft Ang= 12.97 degree  
Vce = -2.15 ft

Lpx/Bpx = 3.061  
Lpx/Ap = 3.690  
Ap /Vol = 8.657  
Lpx/Vol = 5.667

NavCad(tm) 3.1d  
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File: 9-57-36b.mdl  
Date: 21 Feb 00  
Time: 17:13

Rbare: Bare-hull resistance (lbs)

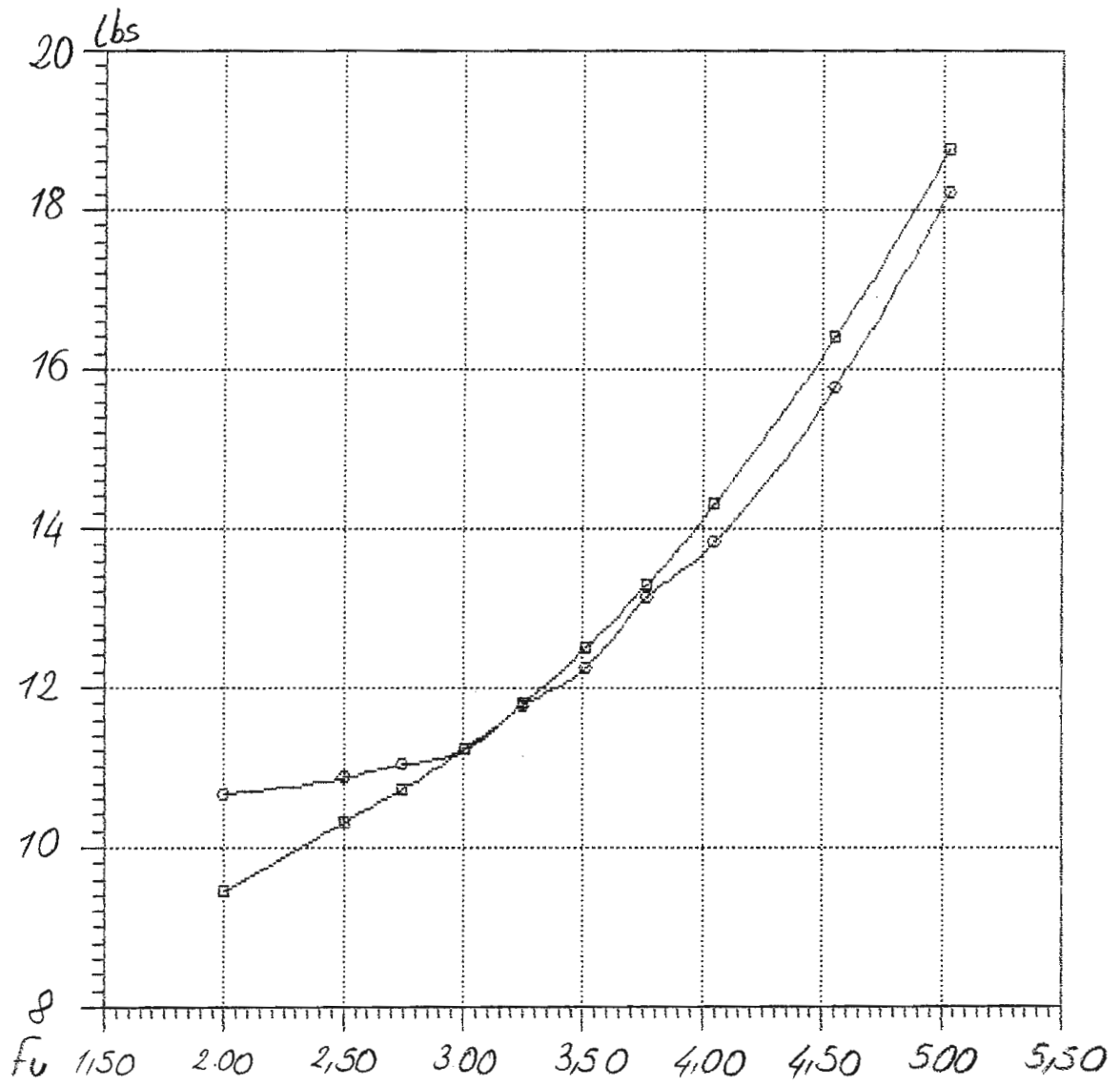


—■—

—●— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=8.546 Lpx/Ap=3.69 Lcg/Lpx=0.362



9-57-36c



—□—  
—○—

NavCad(tm) 3.1d

(c) Copyright 1995

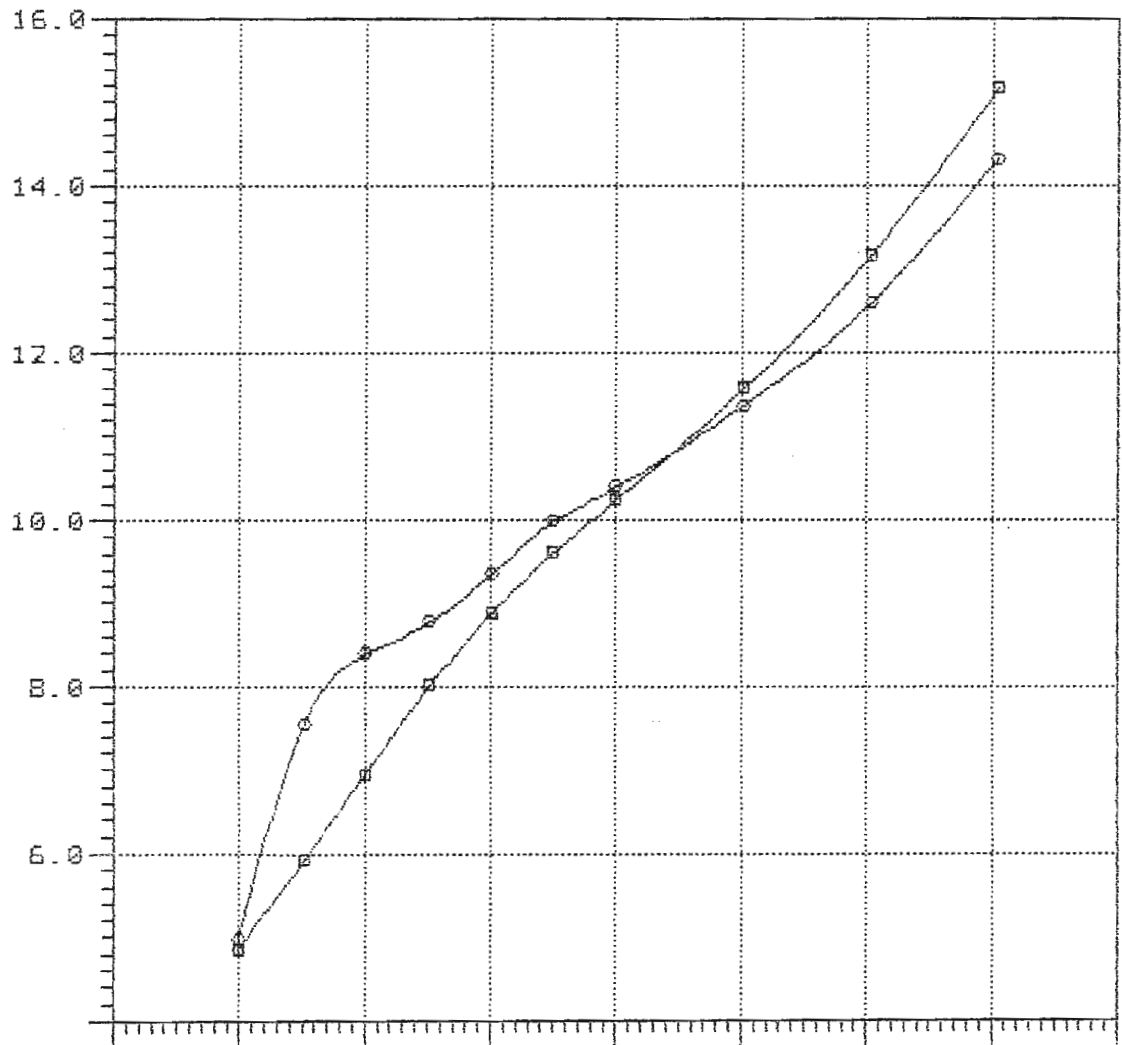
HydroComp, Inc.

File: 9-57-40b.mdl

Date: 21 Feb 00

Time: 17:19

Rbare: Bare-hull resistance (lbs)



—■—

—○—

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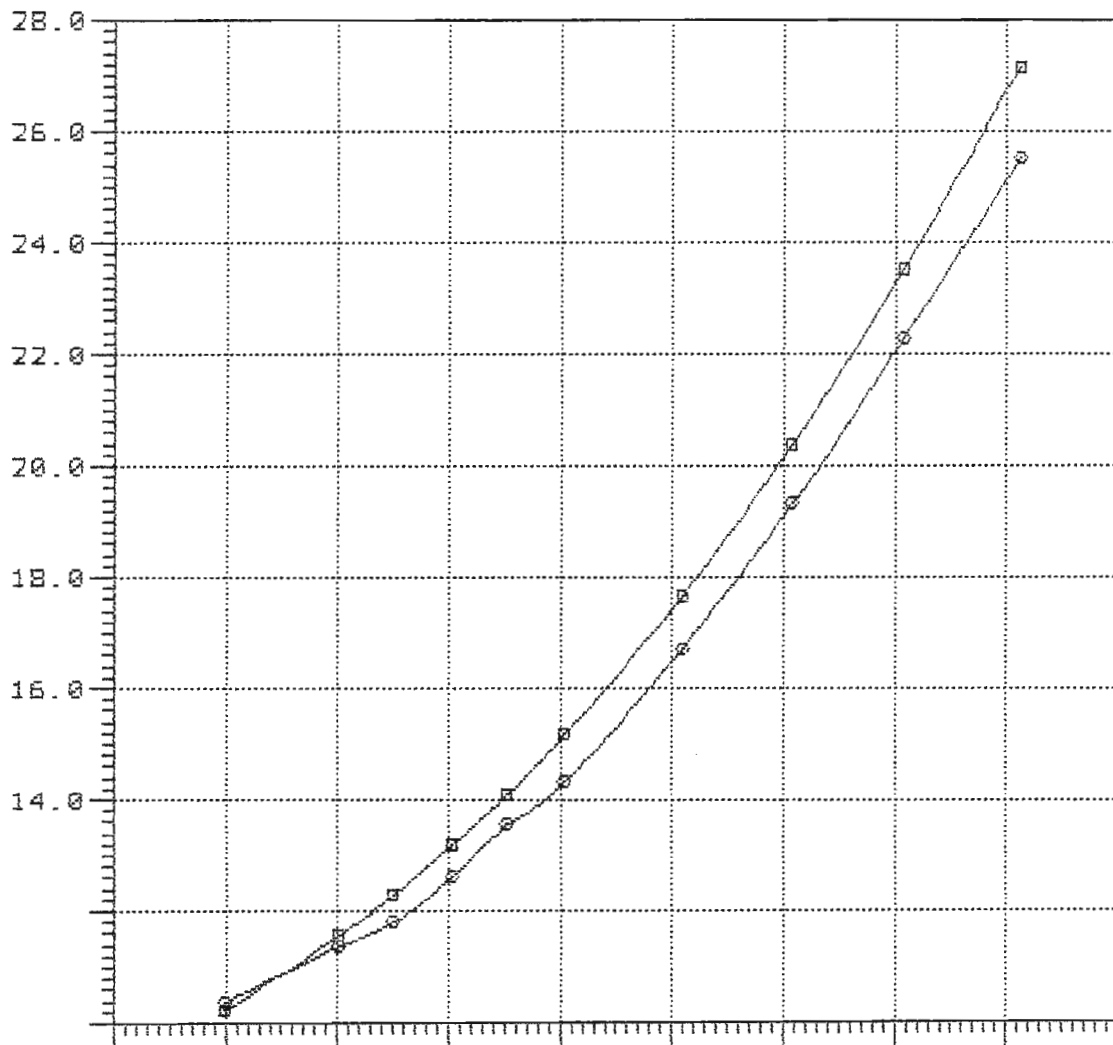
HydroComp, Inc.

File: 9-57-40c.mdl

Date: 21 Feb 00

Time: 17:23

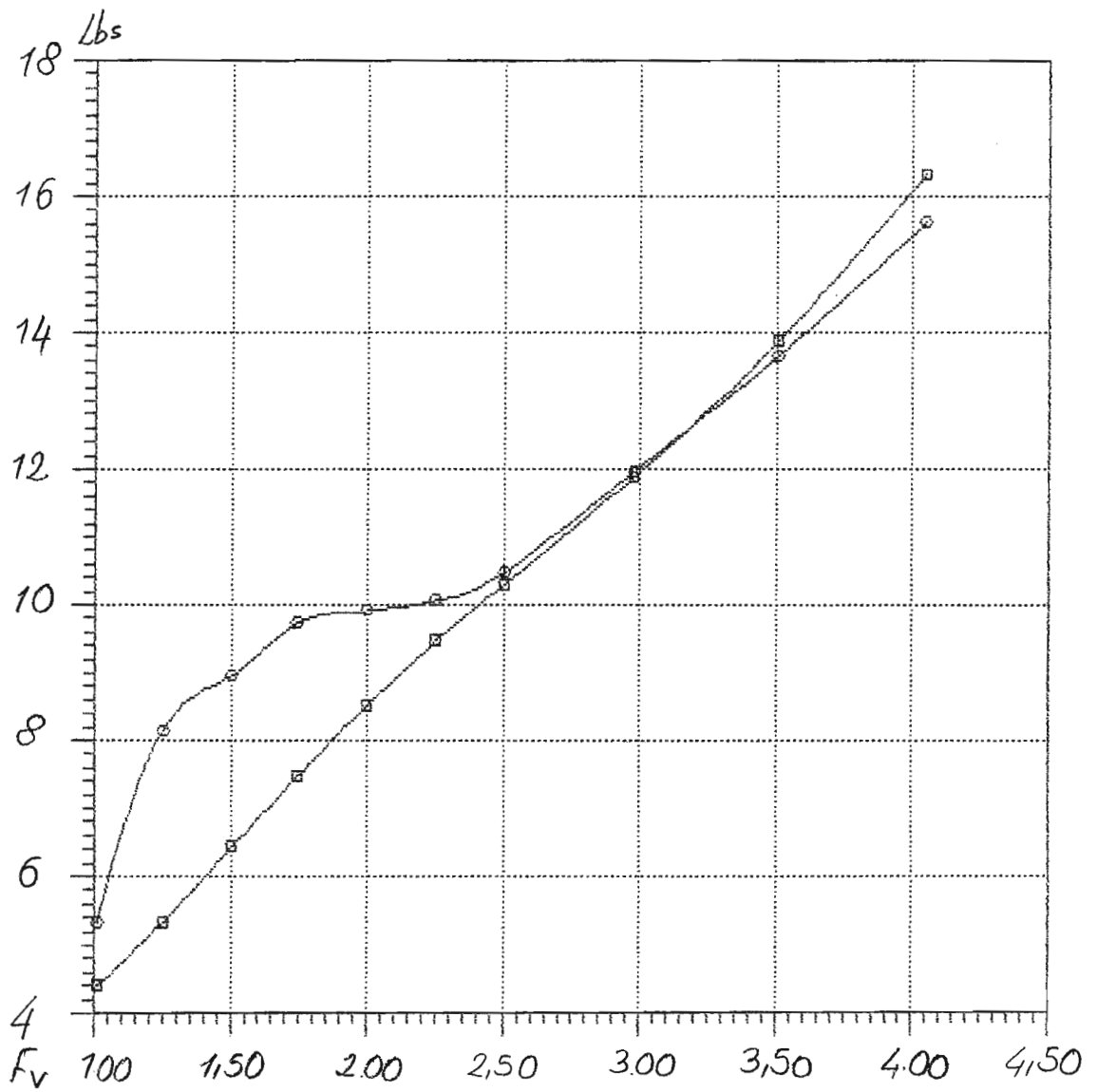
Rbare: Bare-hull resistance (lbs)



—□—

—○—

9-57-446



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—○—

NavCad(tm) 3.1d

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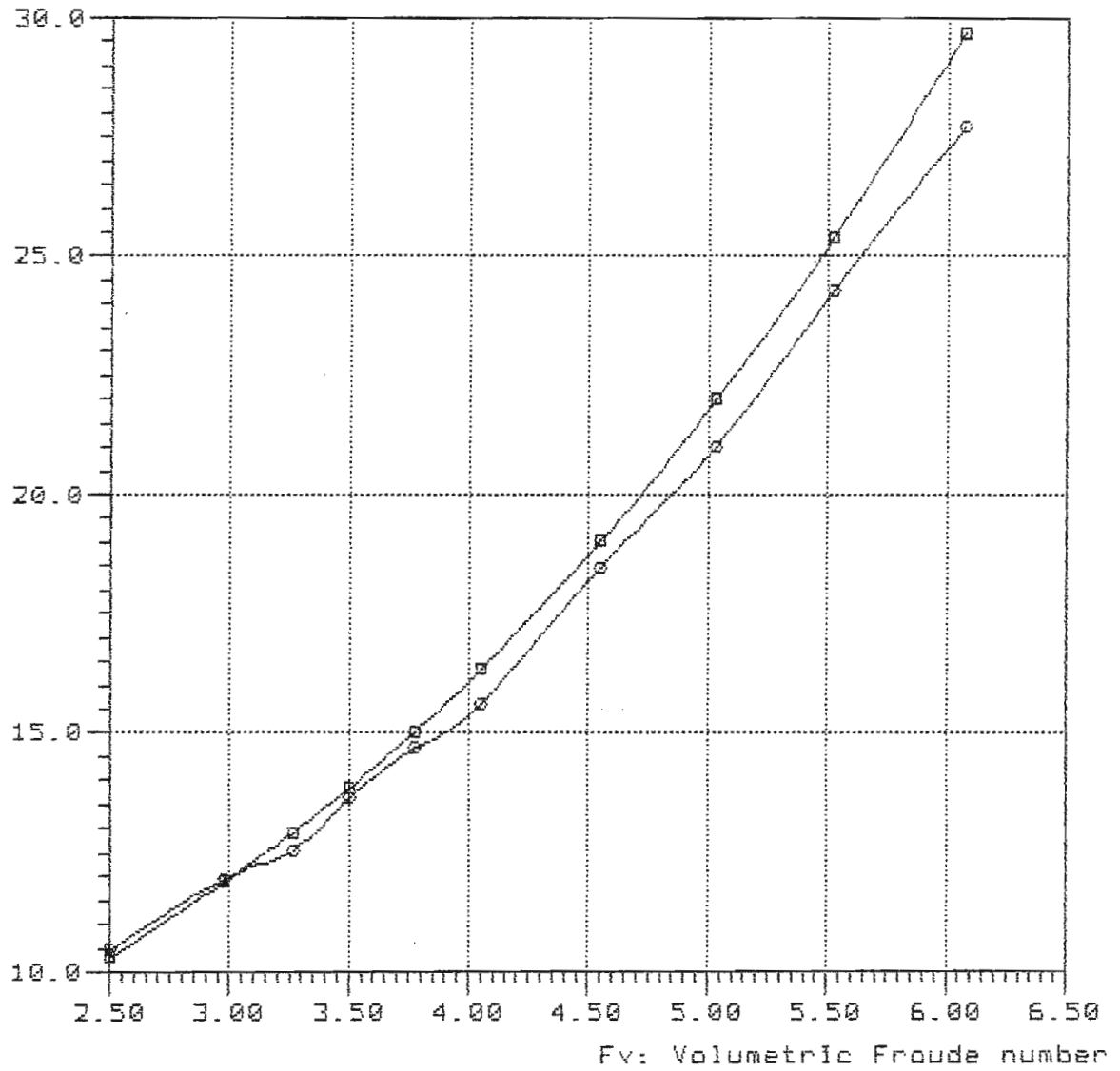
HydroComp, Inc.

File: 9-57-44c.mdl

Date: 21 Feb 88

Time: 17:31

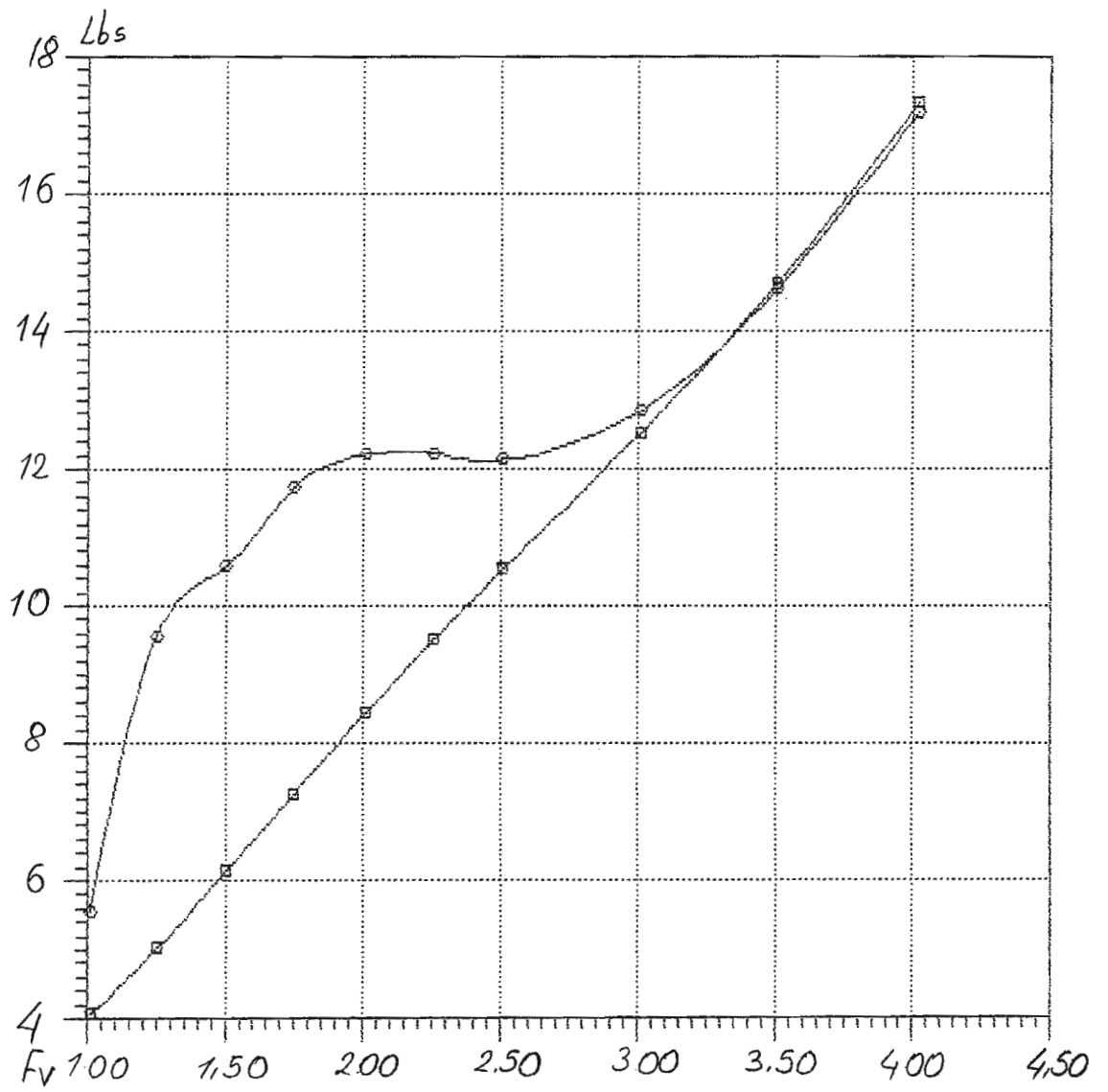
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=8.546 Lpx/Ap=3.69 Log/Lpx=0.443

9-57-486



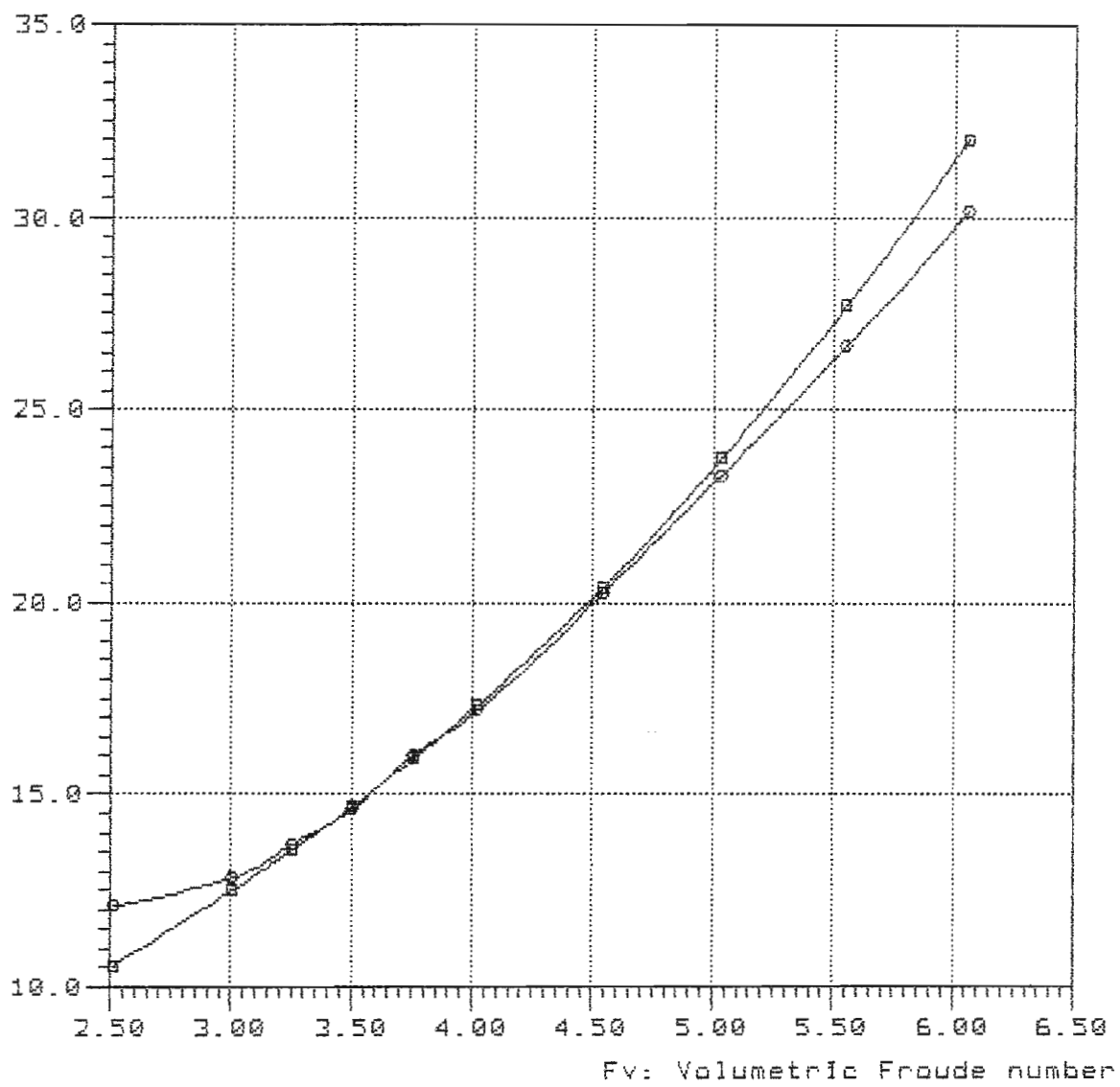
—□—  
—○—

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**Bare-hull resistance**  
**vs.**  
**Volumetric Froude number**

File: 9-57-48c.mdl  
Date: 21 Feb 00  
Time: 17:39

Rbare: Bare-hull resistance (lbs)



**Curve legend**

- 
- TMB-4666 Lpx/Bpx=3.06 Ap/Vol=8.546 Lpx/Ap=3.69 Lcg/Lpx=0.483

Model = 4666  
Ref = NSRDC  
Friction = ~~A~~ATTC Ca=4e-4

Lpx = 10.000 ft  
Lwl = 9.880 ft  
Bpx = 3.268 ft  
Disp = 1000.000 lb  
Ap = 27.115 sqft  
Deadrise = 13.00 degree  
Shaft Ang = 0.00 degree  
Vce = 0.00 ft

Lpx/Bpx = 3.060  
Lpx/Ap = 3.688  
Ap /Vol = 4.339  
Lpx/Vol = 4.012



NavCad(tm) 3.1d

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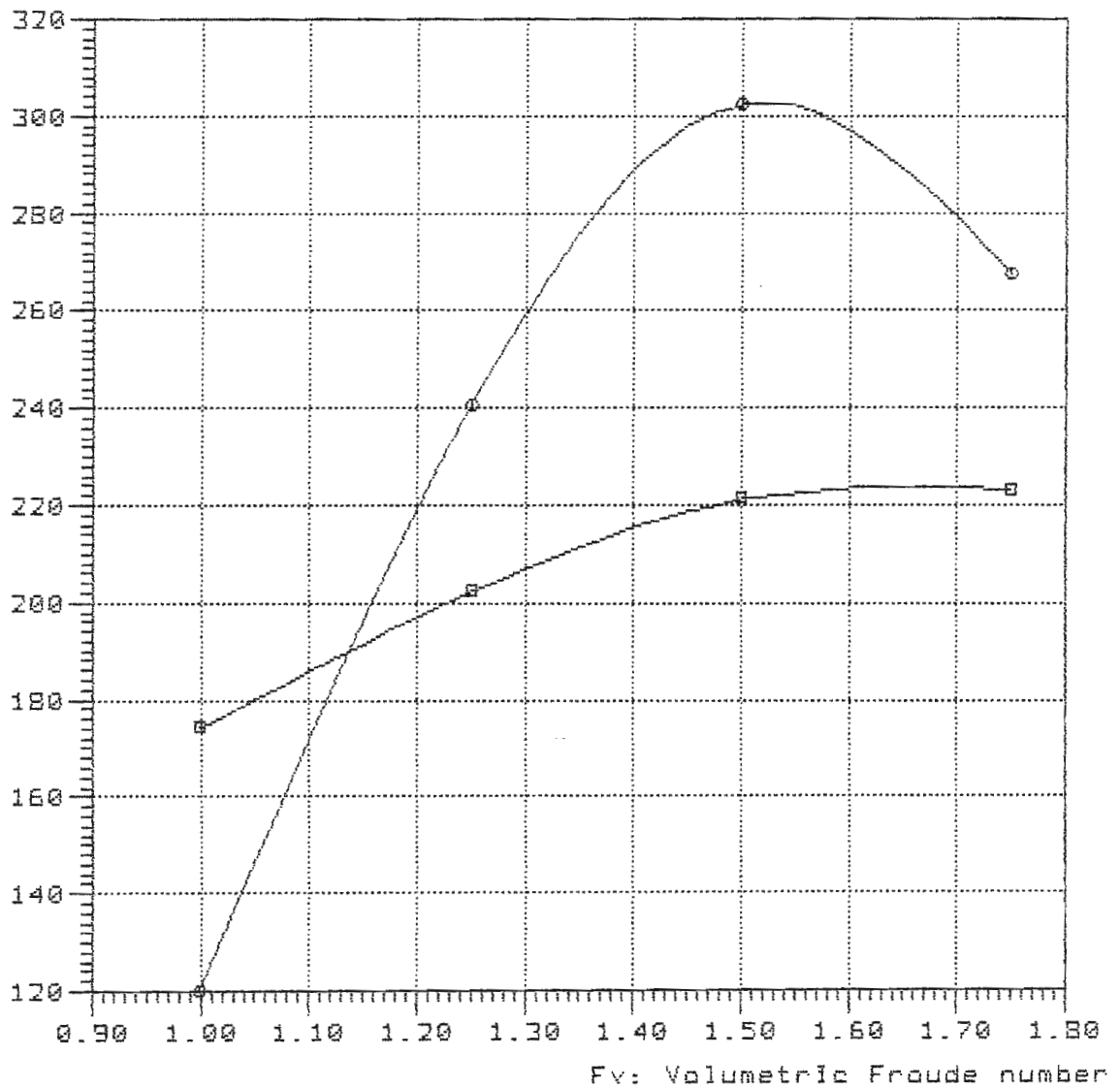
HydroComp, Inc.

File: 4-40-363.mdl

Date: 21 Feb 00

Time: 14:43

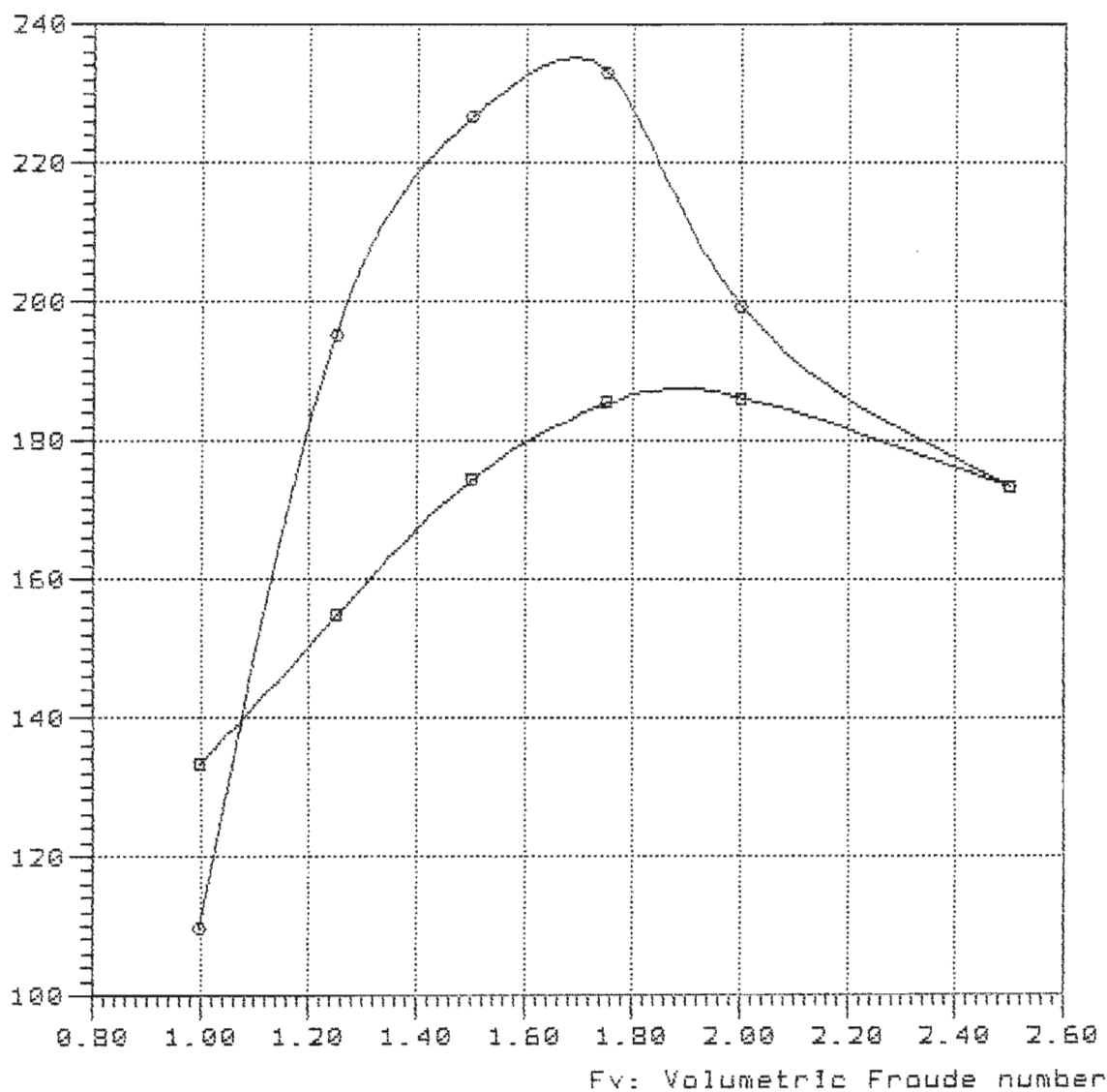
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=4.338 Lpx/Ap=3.688 Lcg/Lpx=0.363

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=4.338 Lpx/Ap=3.688 Lcg/Lpx=0.403

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

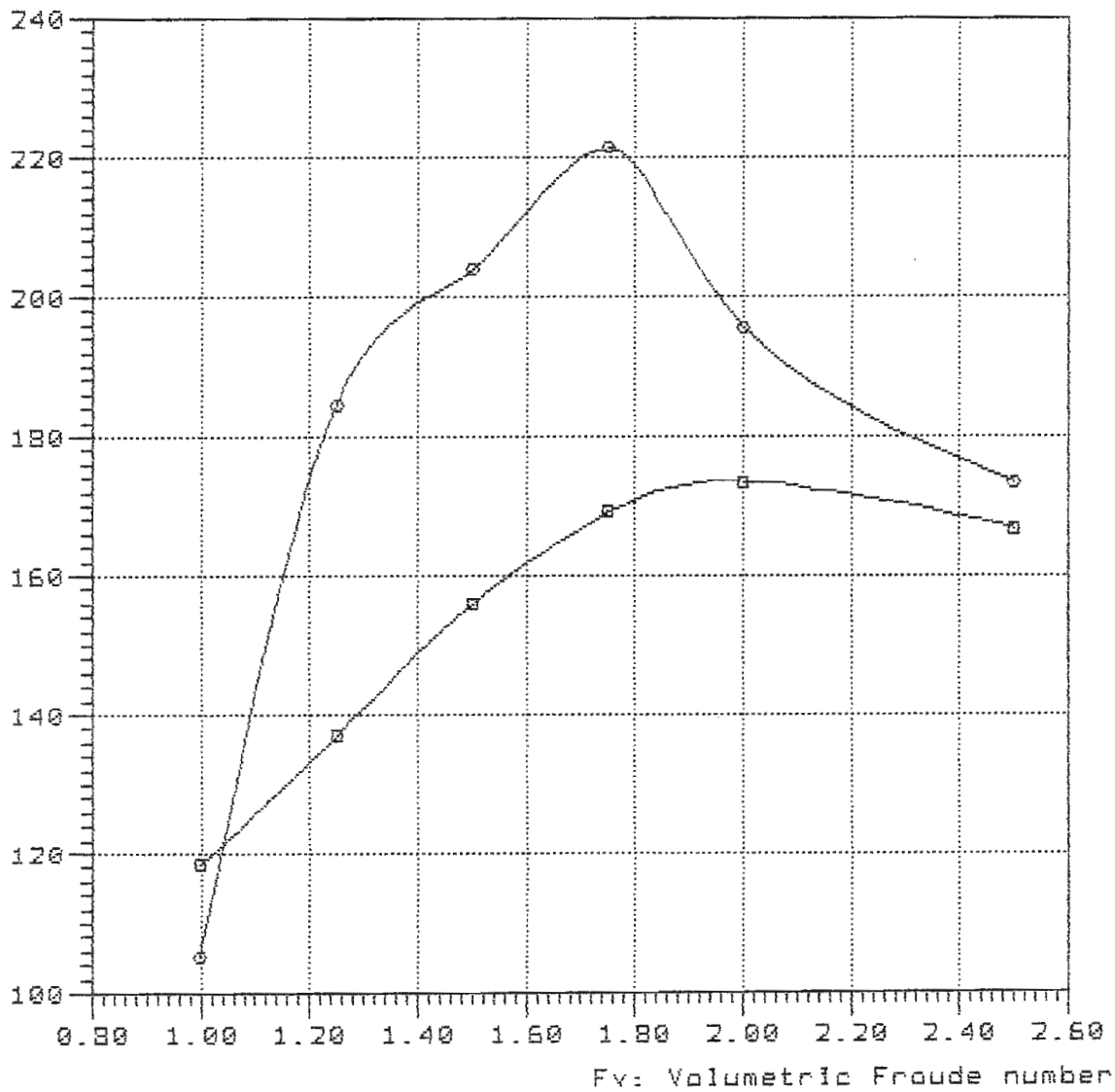
### Volumetric Froude number

File: 4-40-423.mdl

Date: 21 Feb 00

Time: 14:50

Rbare: Bare-hull resistance (lbs)

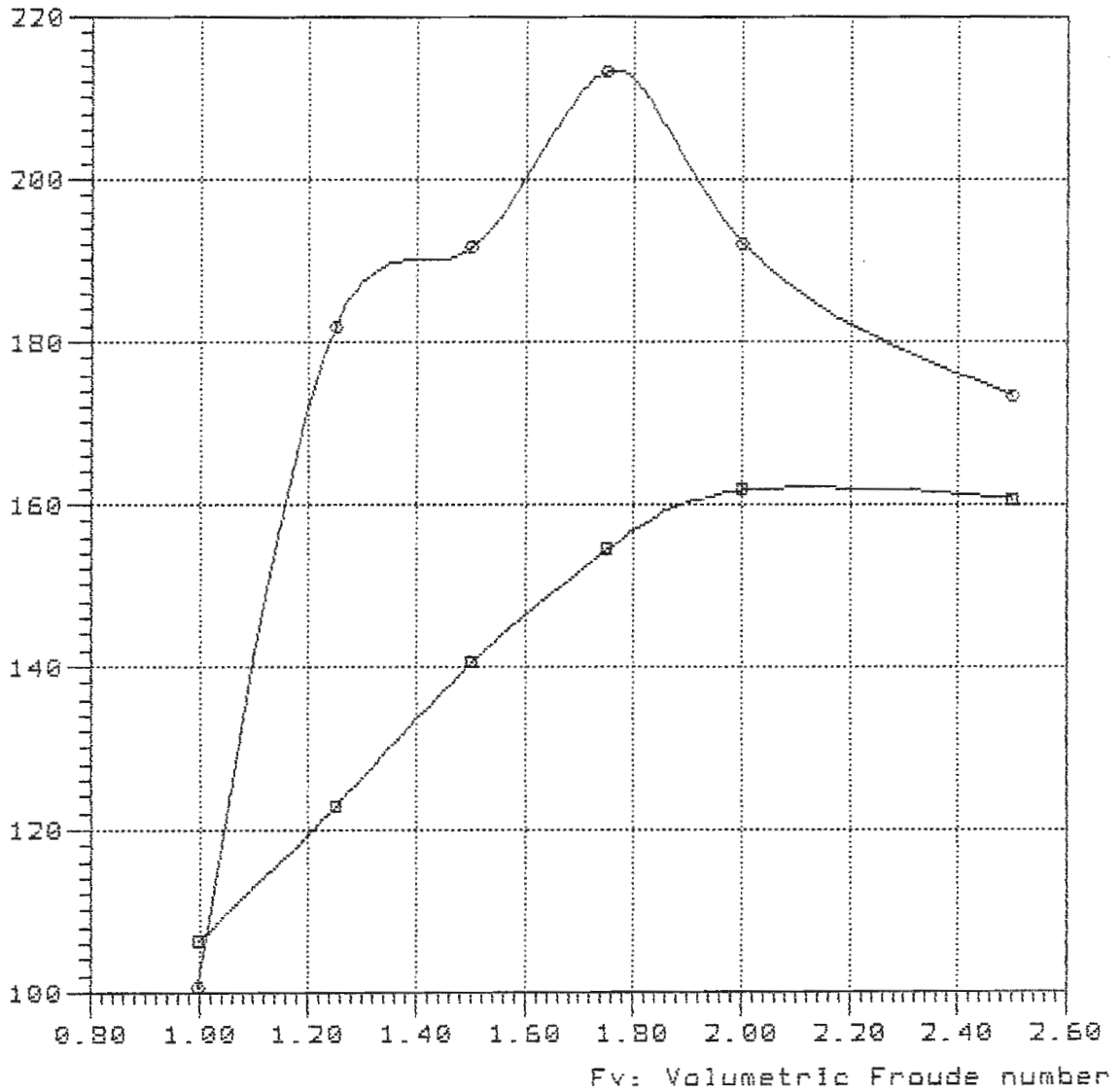


#### Curve legend

—■—

—●— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=4.338 Lpx/Ap=3.688 Lcg/Lpx=0.423

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=4.338 Lpx/Ap=3.688 Lcg/Lpx=0.443

Model = 4666  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 11.200 ft  
Lwl = 11.066 ft  
Bpx = 3.660 ft  
Disp = 1000.000 lb  
Ap = 34.013 sqft  
Deadrise = 13.00 degree  
Shaft Ang = 0.00 degree  
Vce = 0.00 ft

Lpx/Bpx = 3.060  
Lpx/Ap = 3.688  
Ap /Vol = 5.442  
Lpx/Vol = 4.493

NavCad(tm) 3.1d

(c) Copyright 1995

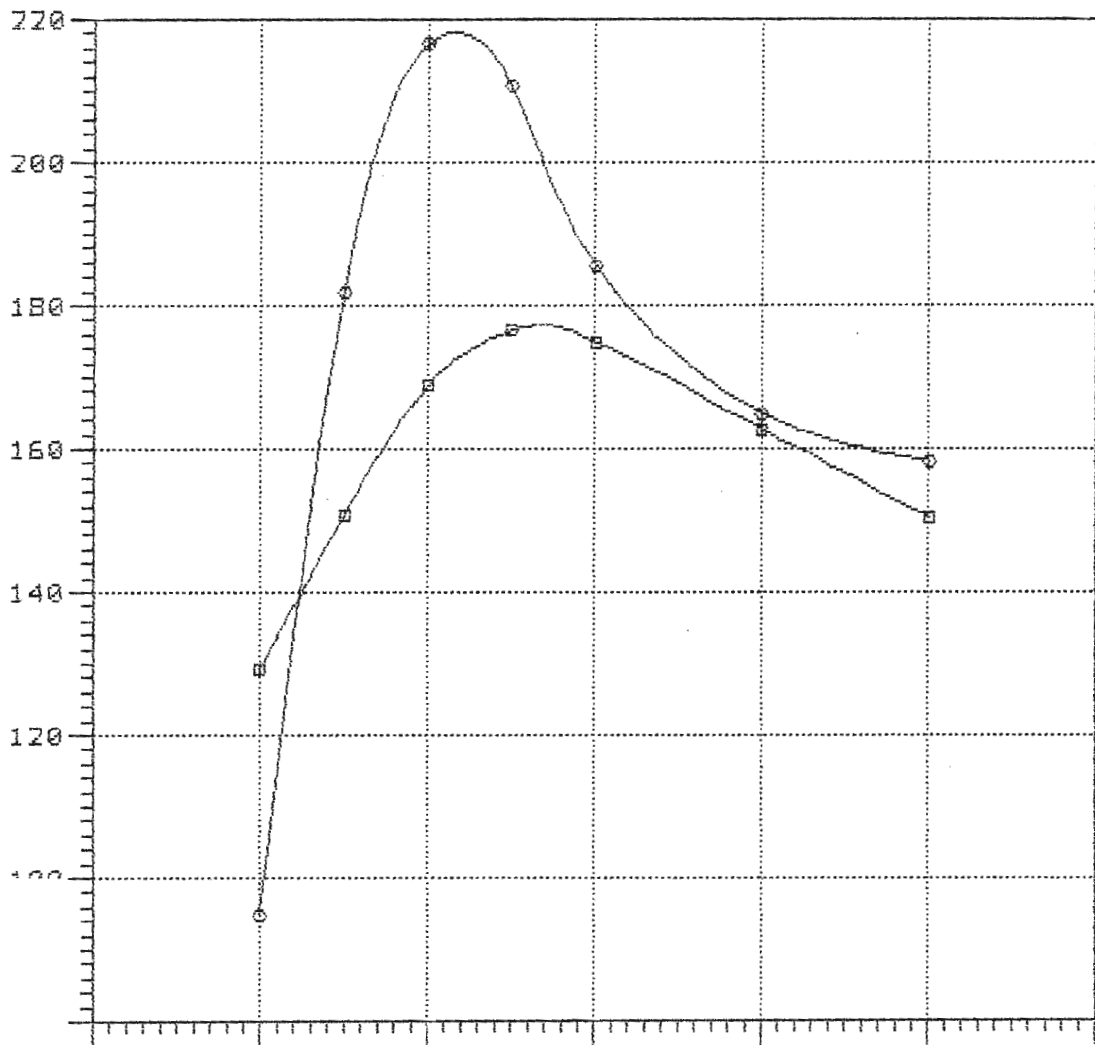
HydroComp, Inc.

File: 5-45-363.mdl

Date: 21 Feb 00

Time: 14:57

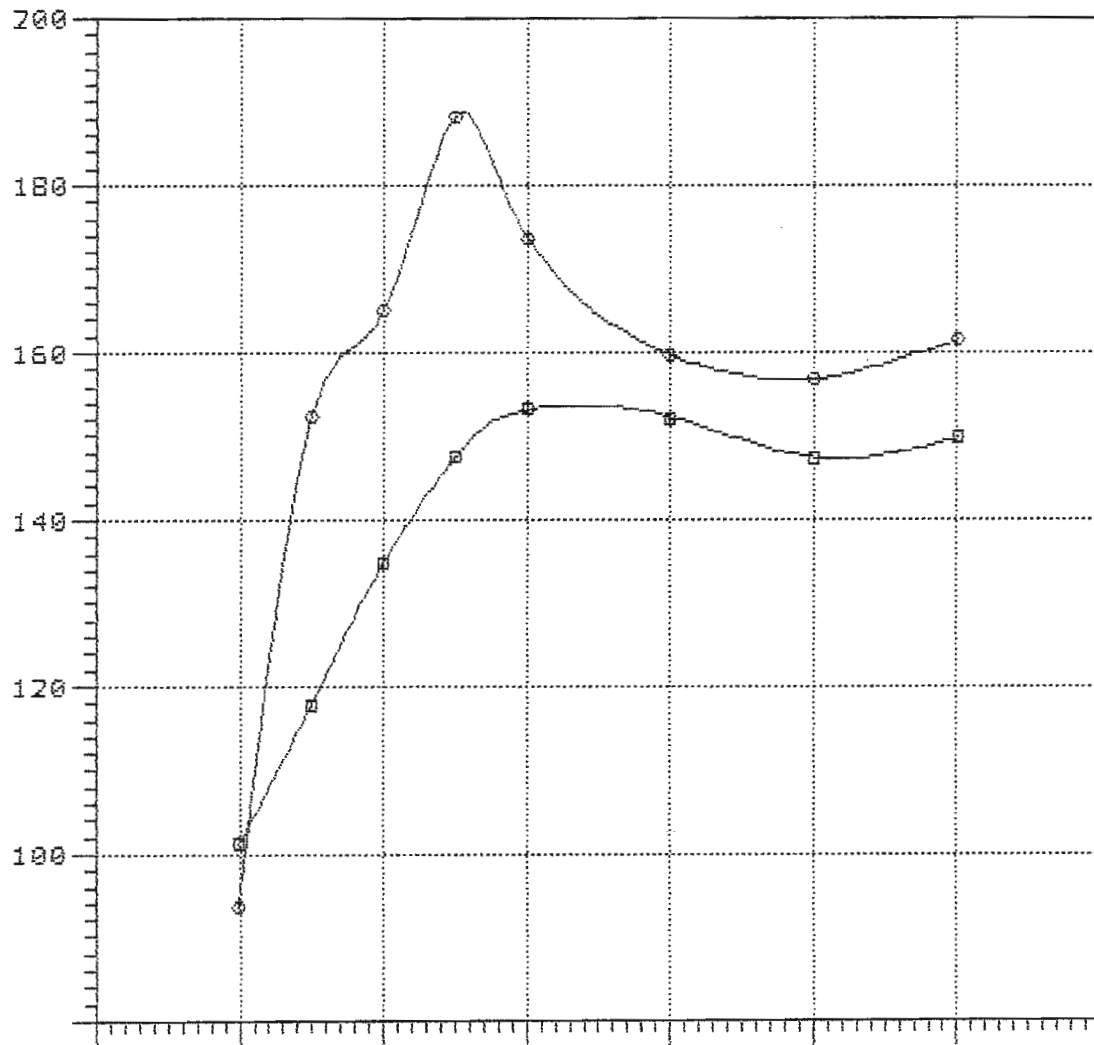
Rbare: Bare-hull resistance (lbs)



—■—

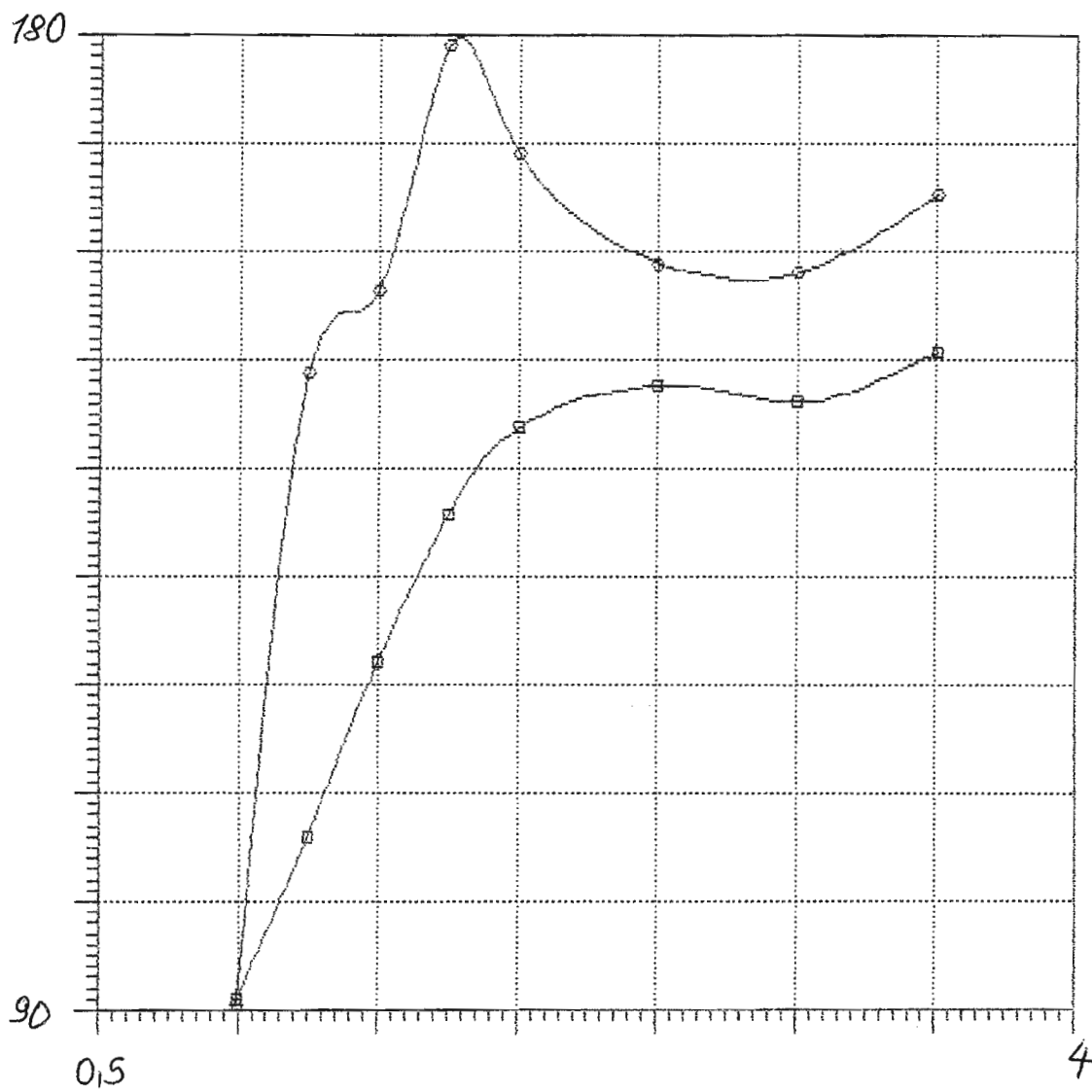
—○—

Rbare: Bare-hull resistance (lbs)



—□—  
—○—

5-45-423



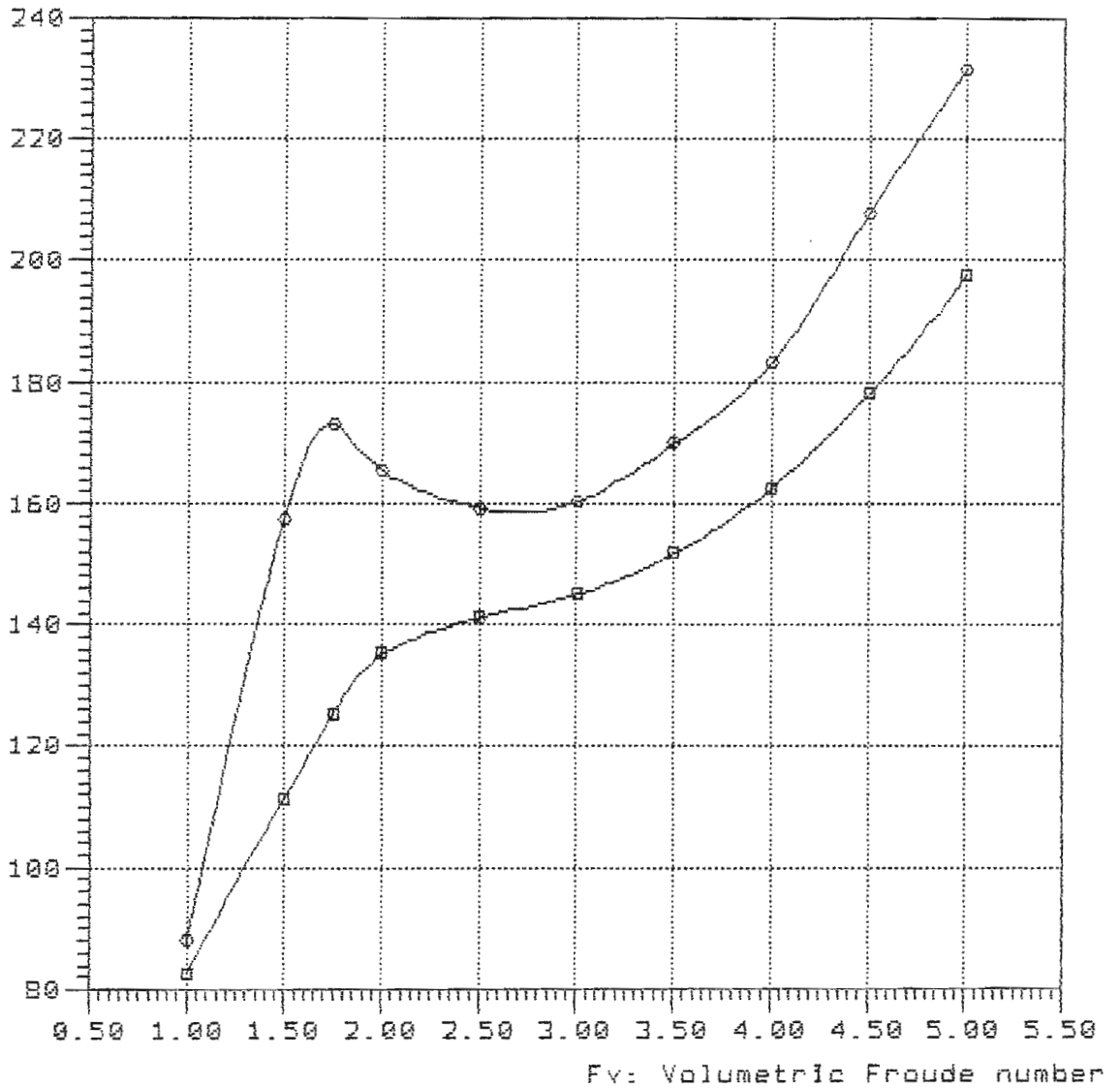
—□—  
—○—



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File: 5-45-443.mdl  
Date: 21 Feb 00  
Time: 15:12

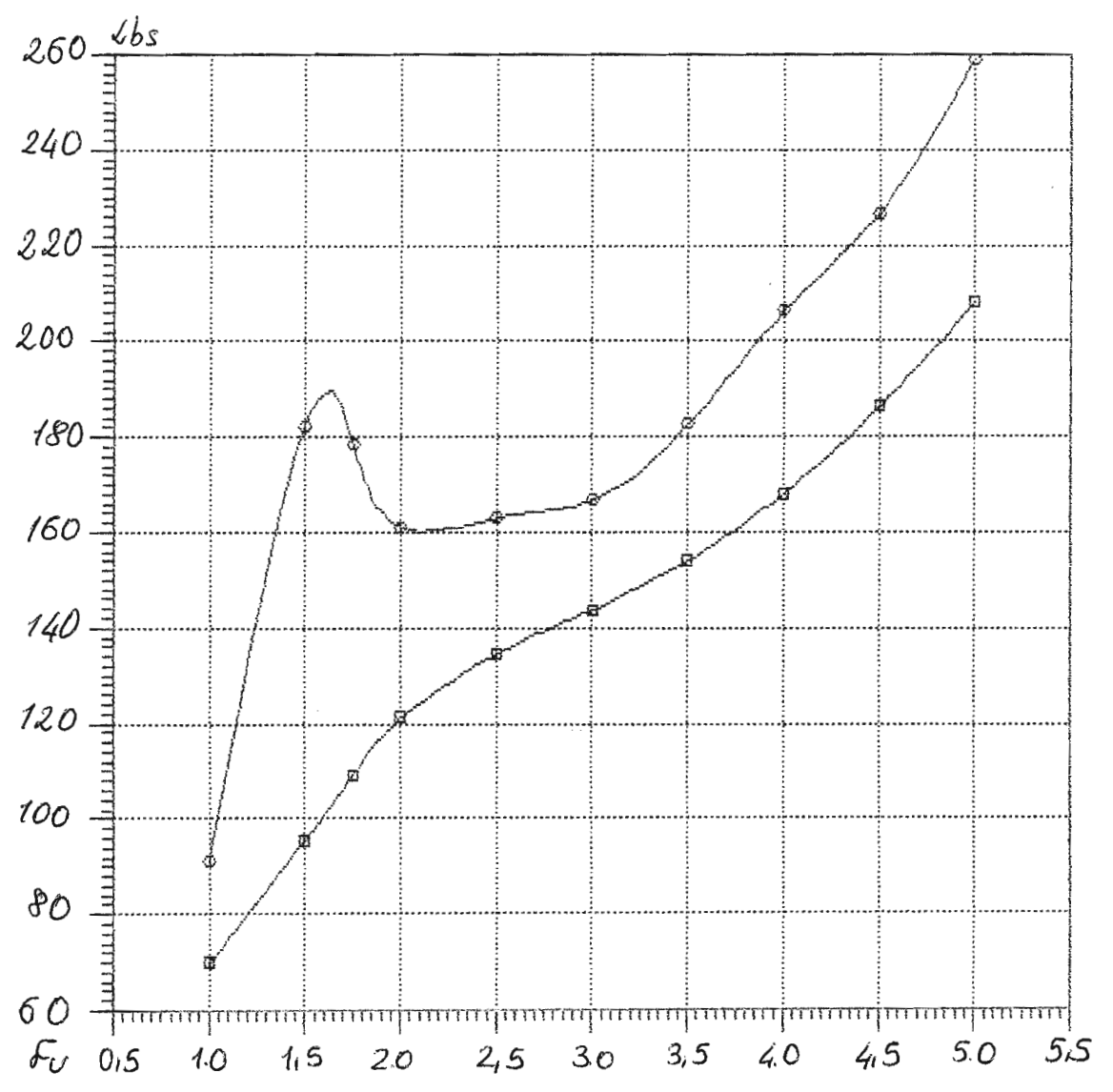
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=5.442 Lpx/Ap=3.688 Log/Lpx=0.443

5-45-483



—□—  
—○—

Model = 4666  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 12.500 ft  
Lwl = 12.350 ft  
Bpx = 4.085 ft  
Disp = 1000.000 lb  
Ap = 42.367 sqft  
Deadrise = 13.00 degree  
Shaft Ang = 0.00 degree  
Vce = 0.00 ft

Lpx/Bpx = 3.060  
Lpx/Ap = 3.688  
Ap /Vol = 6.779  
Lpx/Vol = 5.015

NavCad(tm) 3.1d

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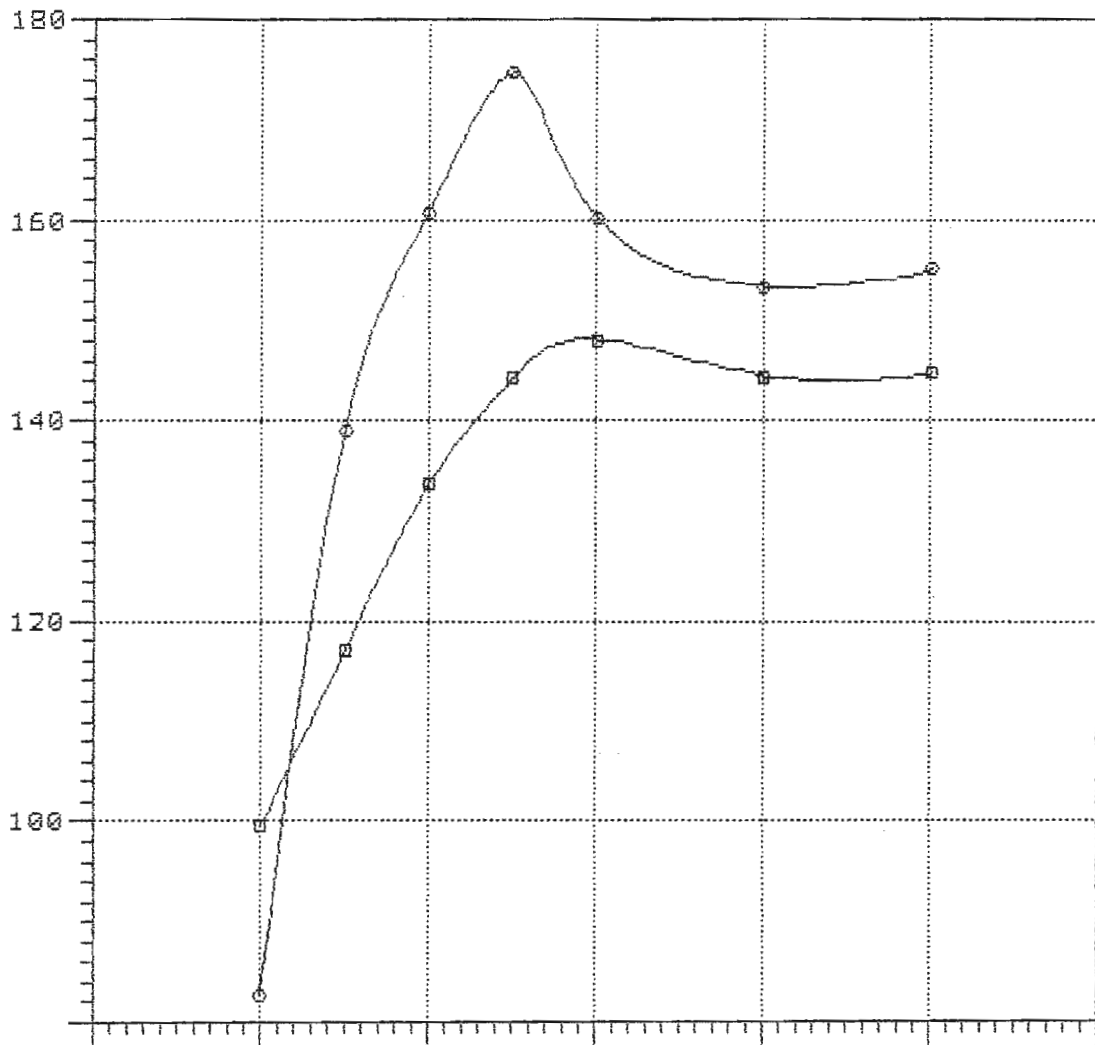
HydroComp, Inc.

File: 7-50-363.mdl

Date: 21 Feb 00

Time: 15:39

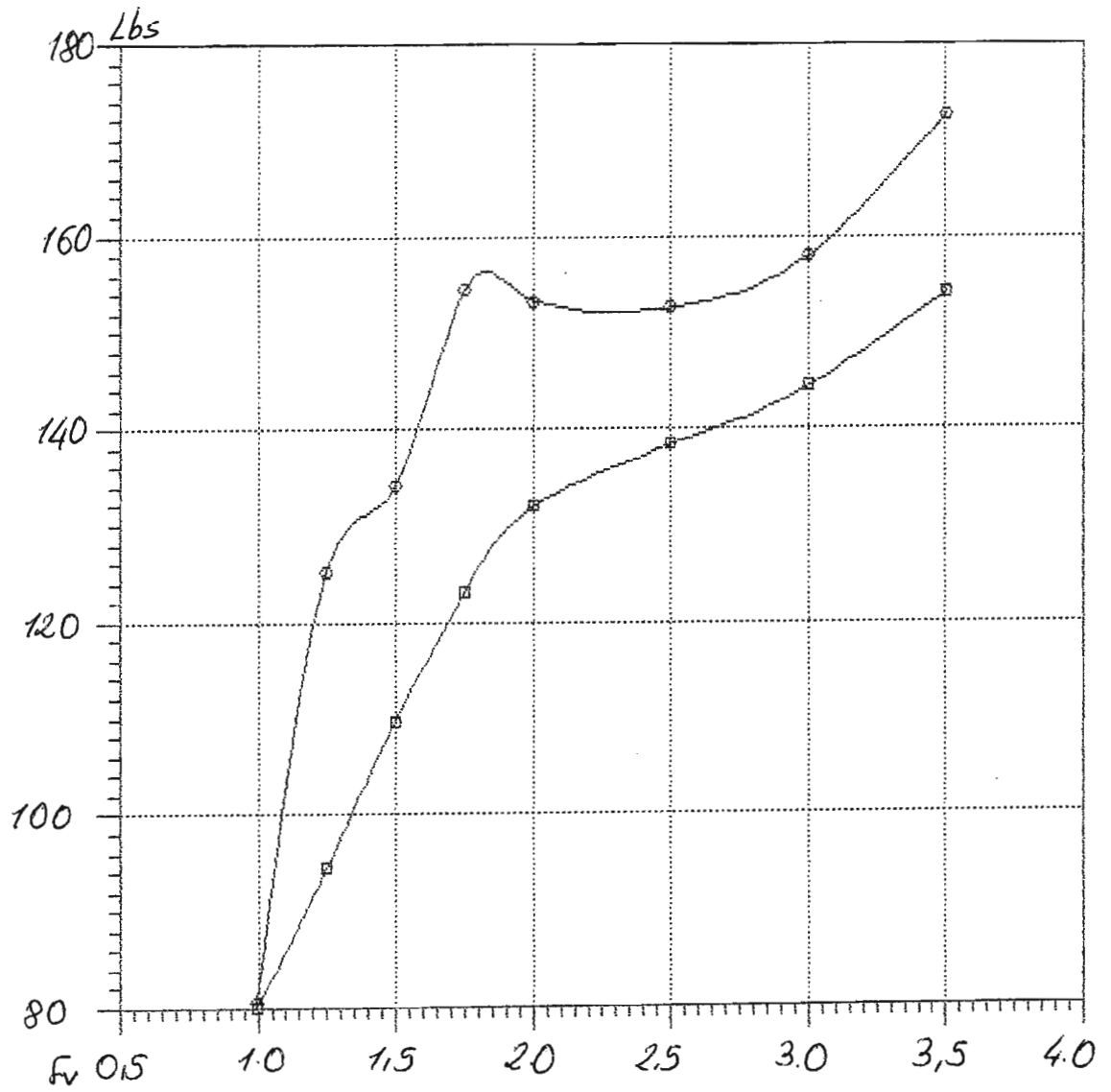
Rbare: Bare-hull resistance (lbs)



—□—

—○—

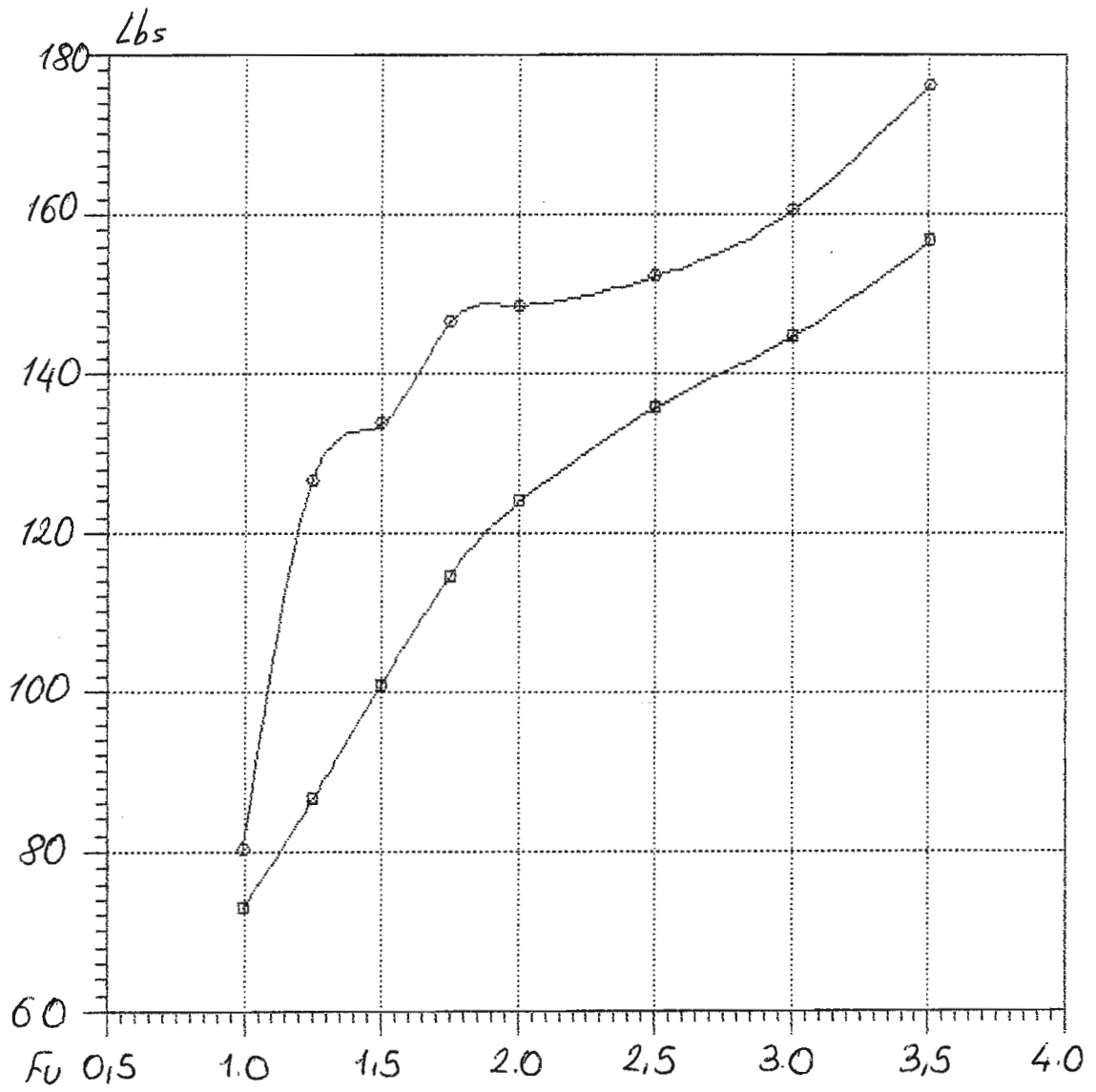
7-50-403



—□—

—□—

7-50-423

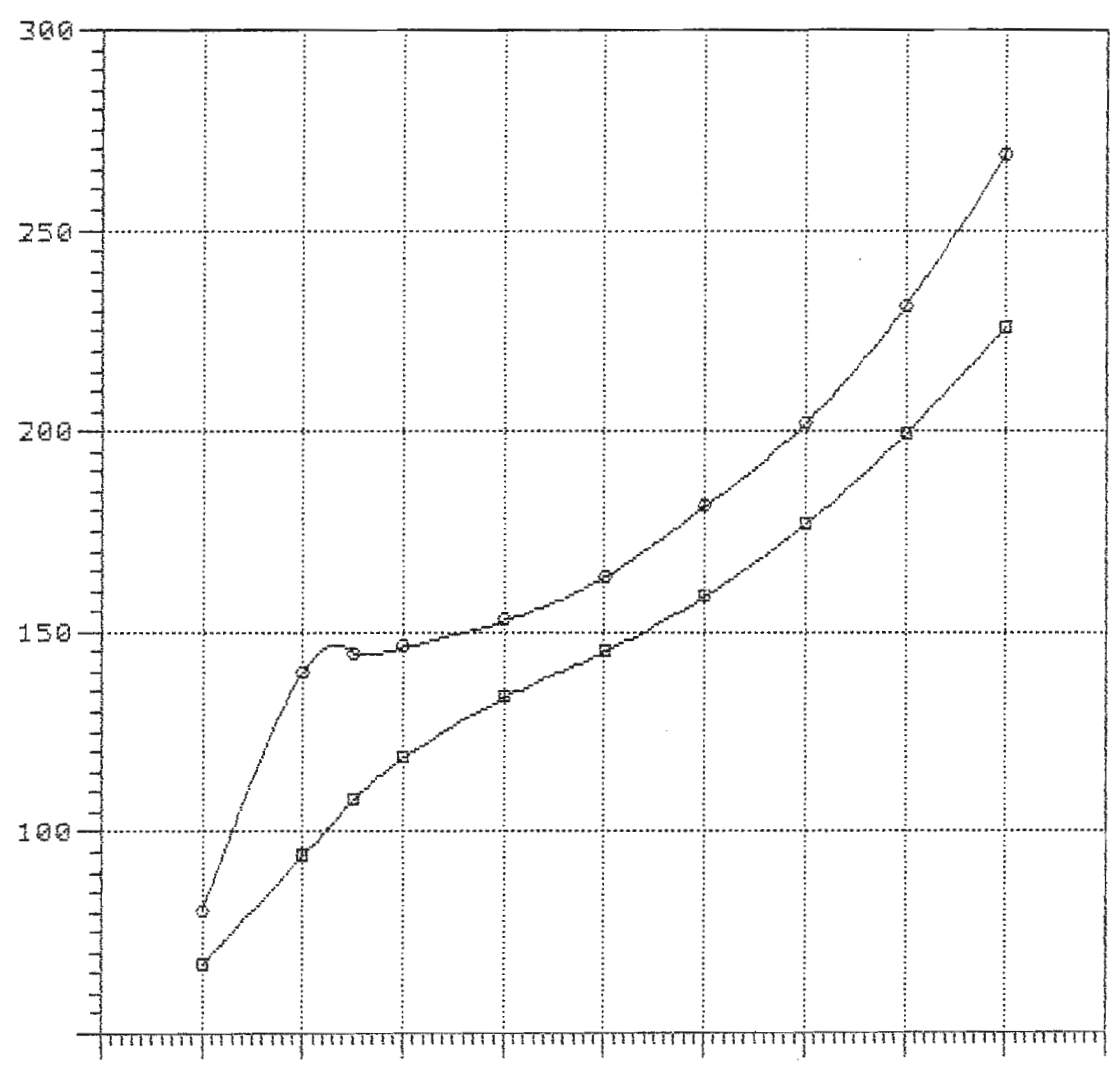


—□—  
—○—

NavCad(tm) 3.1d  
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HydroComp, Inc.

File: 7-50-443.mdl  
Date: 21 Feb 00  
Time: 15:51

Rbare: Bare-hull resistance (lbs)



—□—  
—○—

NavCad(tm) 3.1d

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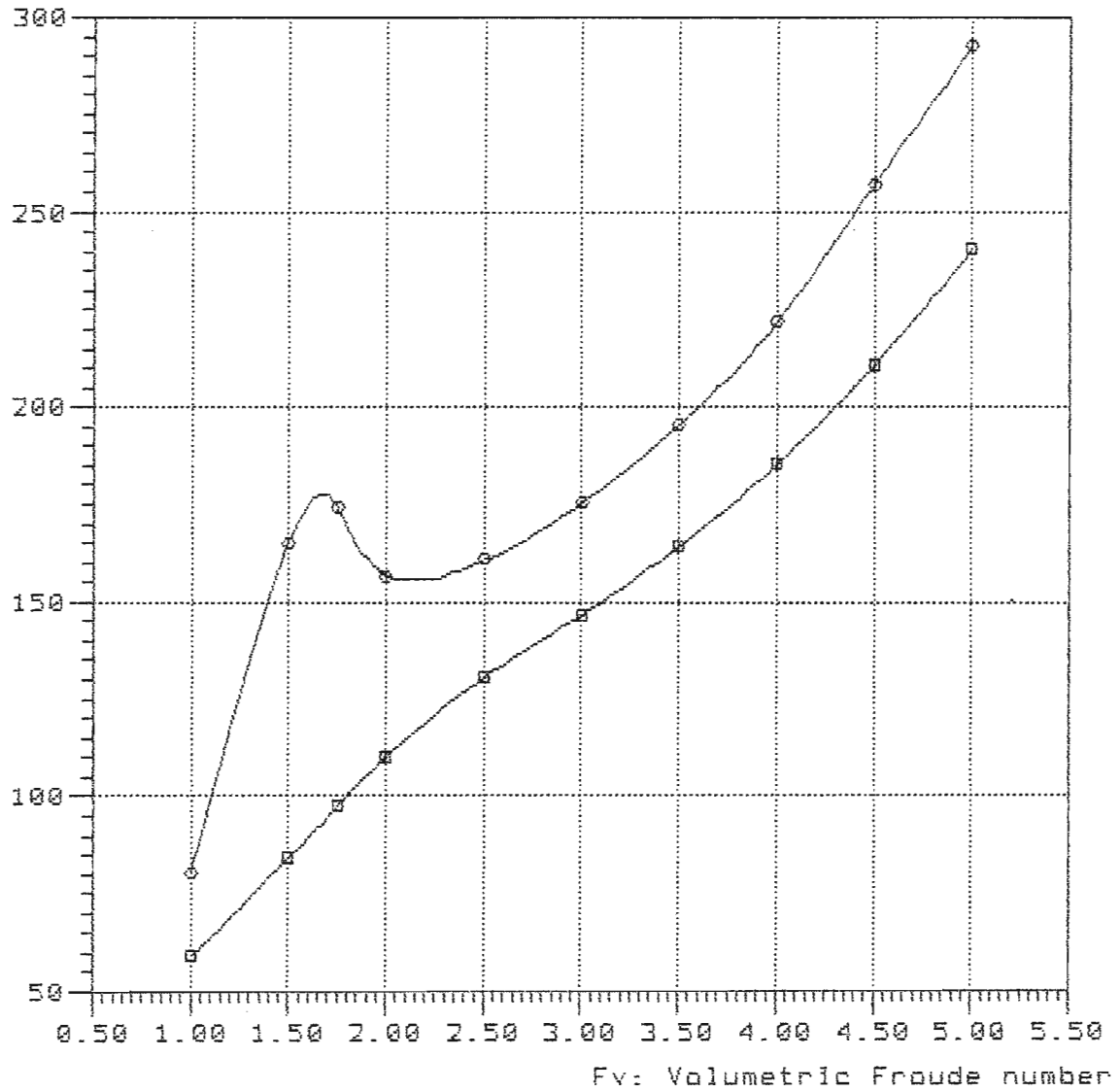
HydroComp, Inc.

File: 7-50-483.mdl

Date: 21 Feb 00

Time: 15:56

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=6.779 Lpx/Ap=3.688 Lcg/Lpx=0.483



Model = 4666  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 13.700 ft  
Lwl = 13.536 ft  
Bpx = 4.477 ft  
Ap = 50.892 sqft  
Disp = 1000.00 lb  
Deadrise = 13.00 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 ft

Lpx/Bpx = 3.060  
Lpx/Ap = 3.688  
Ap /Vol = 8.143  
Lpx/Vol = 5.496

NavCad(tm) 3.1d

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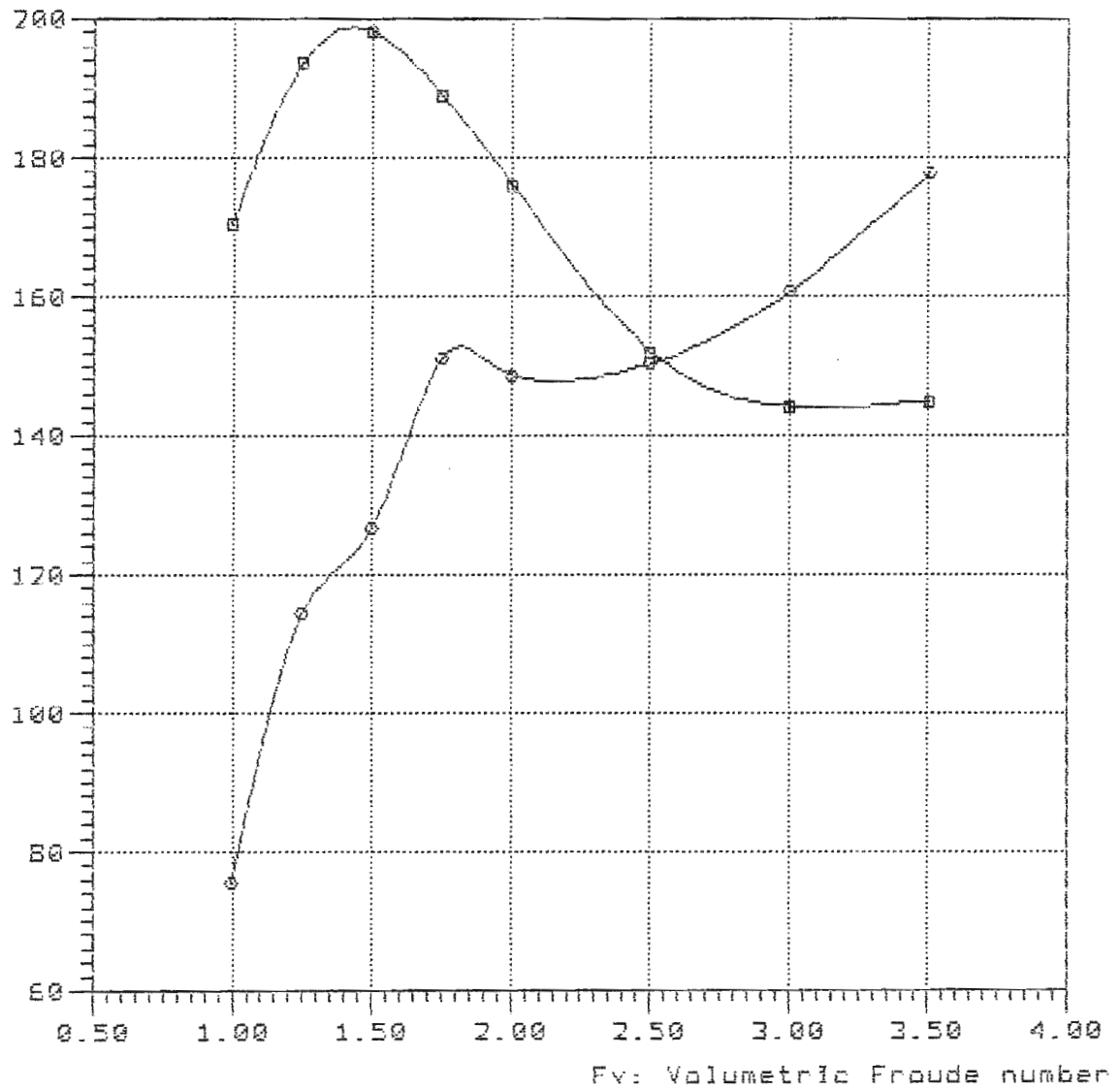
HydroComp, Inc.

File: 8-55-363.mdl

Date: 21 Feb 00

Time: 16:55

Rbare: Bare-hull resistance (lba)



—■—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=8.143 Lpx/Ap=3.688 Lcg/Lpx=0.363

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### Bare-hull resistance

vs.

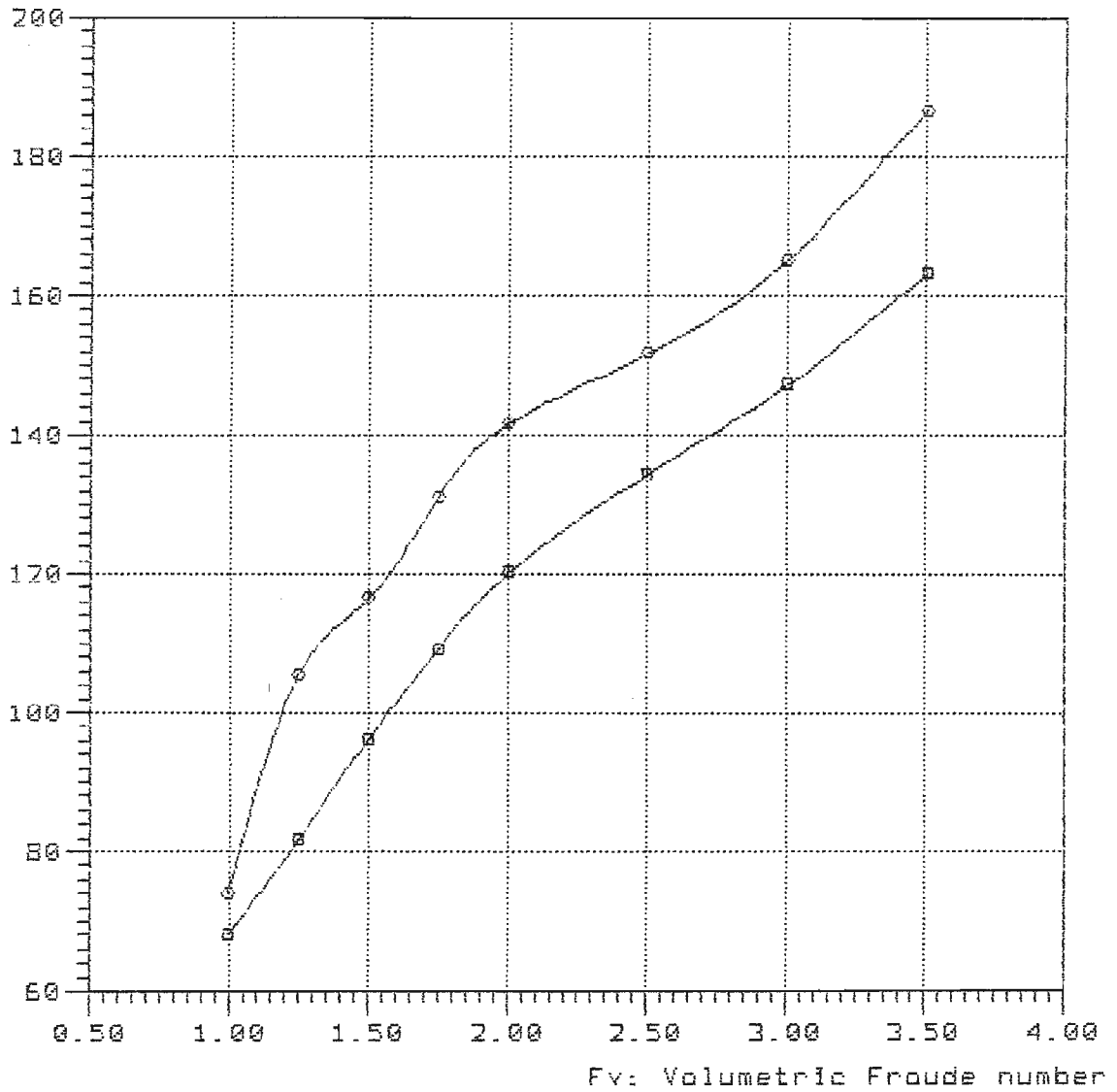
### Volumetric Froude number

File: 8-55-403.mdl

Date: 21 Feb 00

Time: 16:59

Rbare: Bare-hull resistance (lbs)

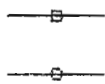
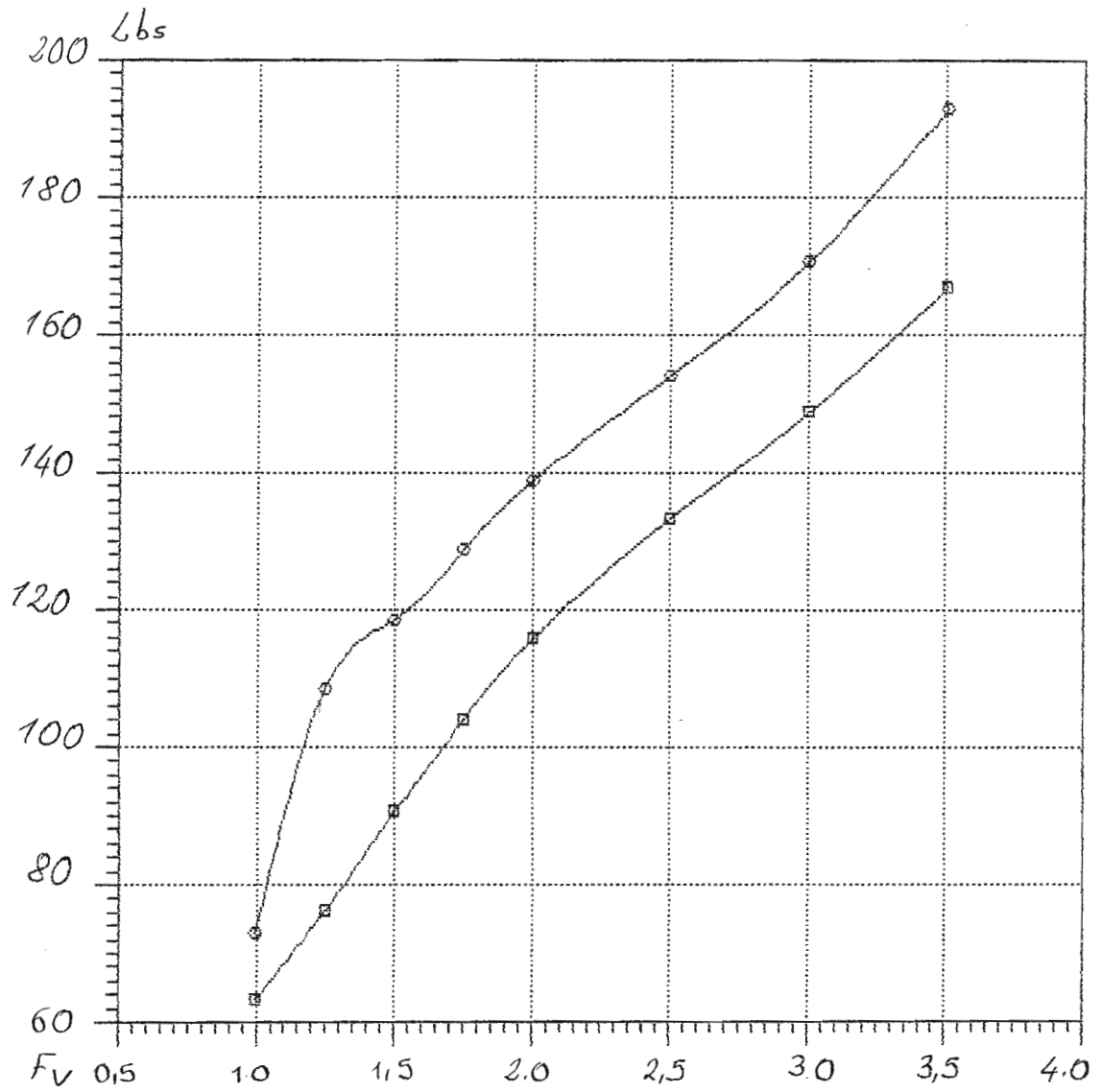


#### Curve legend

—■—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=8.143 Lpx/Ap=3.688 Lcg/Lpx=0.403

8-55-423



NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

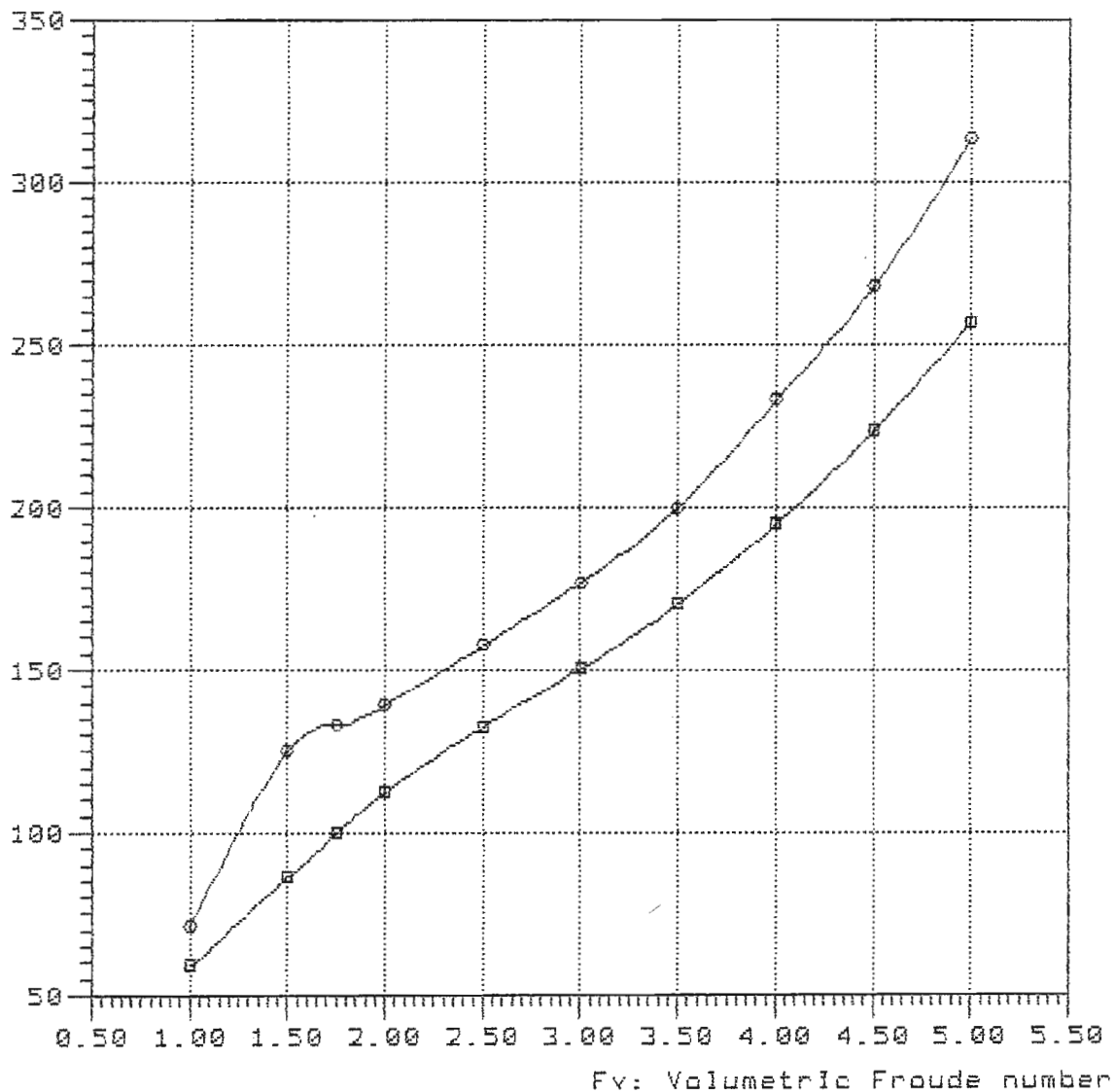
### Volumetric Froude number

File: 8-55-443.mdl

Date: 21 Feb 00

Time: 17:06

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=8.143 Lpx/Ap=3.688 Lcg/Lpx=0.443

NavCad(tm) 3.1d

(c) Copyright 1995

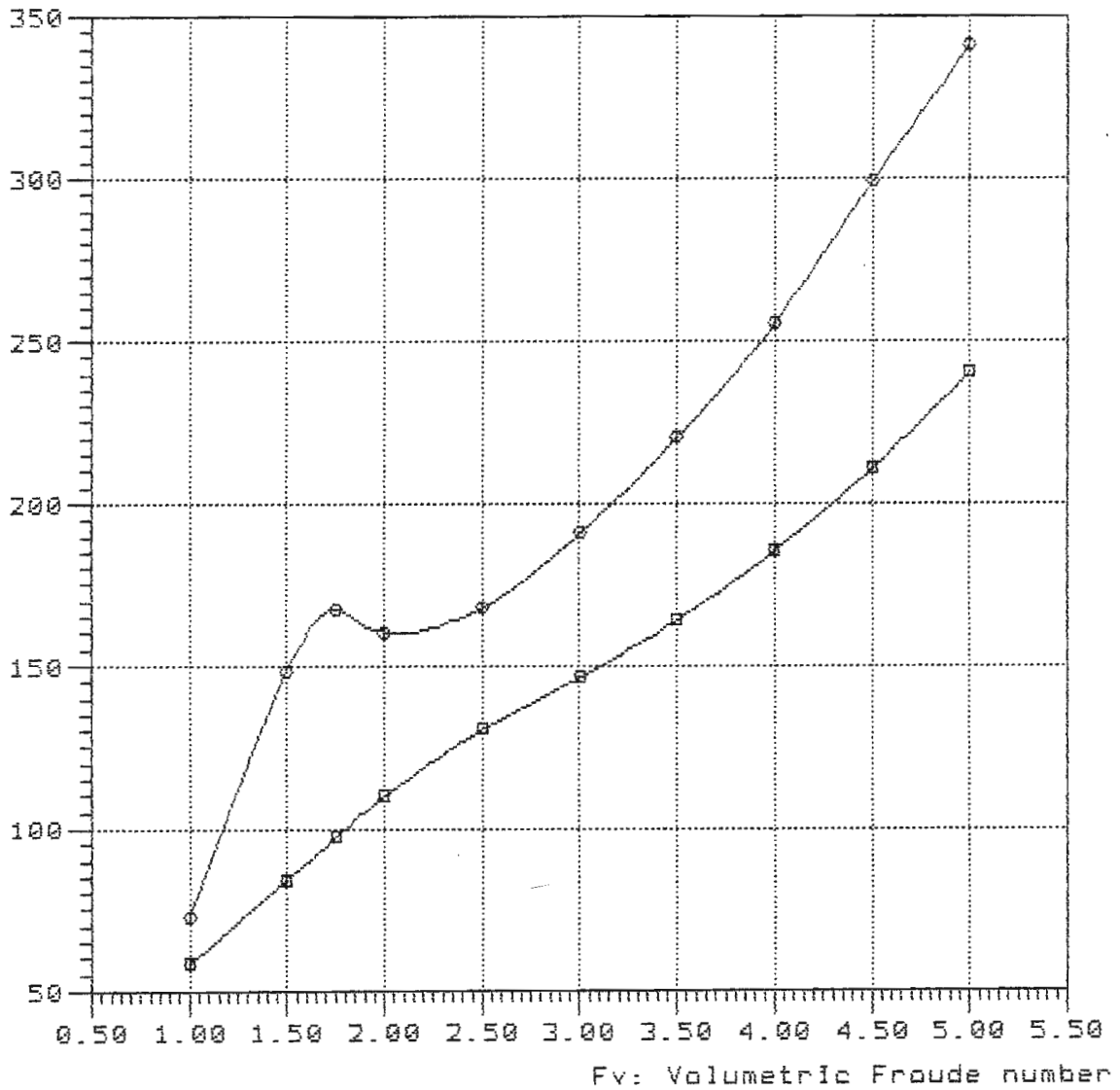
HydroComp, Inc.

File: B-55-483.mdl

Date: 21 Feb 00

Time: 17:09

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4666 Lpx/Bpx=3.06 Ap/Vol=6.779 Lpx/Ap=3.688 Lcg/Lpx=0.483

4667

Model = 4667  
Ref = SNAME  
Friction =ATTC Ca=0.0

Lpx = 8.000 ft  
Lwl = 7.800 ft  
Bpx = 1.956 ft  
Ap = 12.800 sqft  
Disp = 221.10 lb  
Deadrise = 13.00 degree  
Shaft Ang= 10.00 degree  
Vce = -2.15 ft

Lpx/Bpx = 4.090  
Lpx/Ap = 5.000  
Ap /Vol = 5.602  
Lpx/Vol = 5.307

**Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCI DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez, kopya  
veya kopya edilemez ve her ne maksadla  
olsa olsun maksadı dışında  
izinsiz kullanılamaz.**



NavCad(tm) 3.1d

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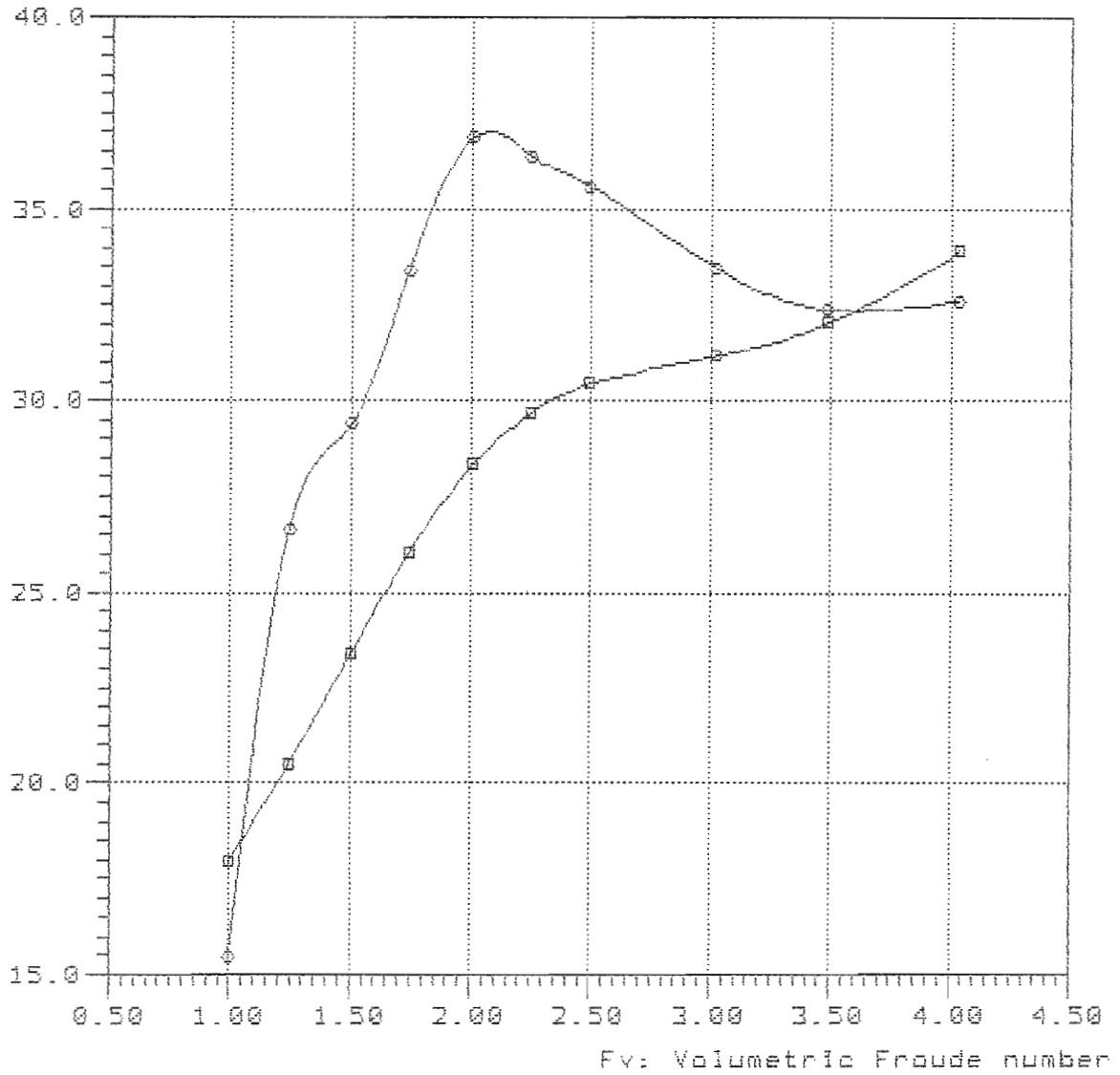
HydroComp, Inc.

File: 5-53-36b.mdl

Date: 21 Feb 00

Time: 18:38

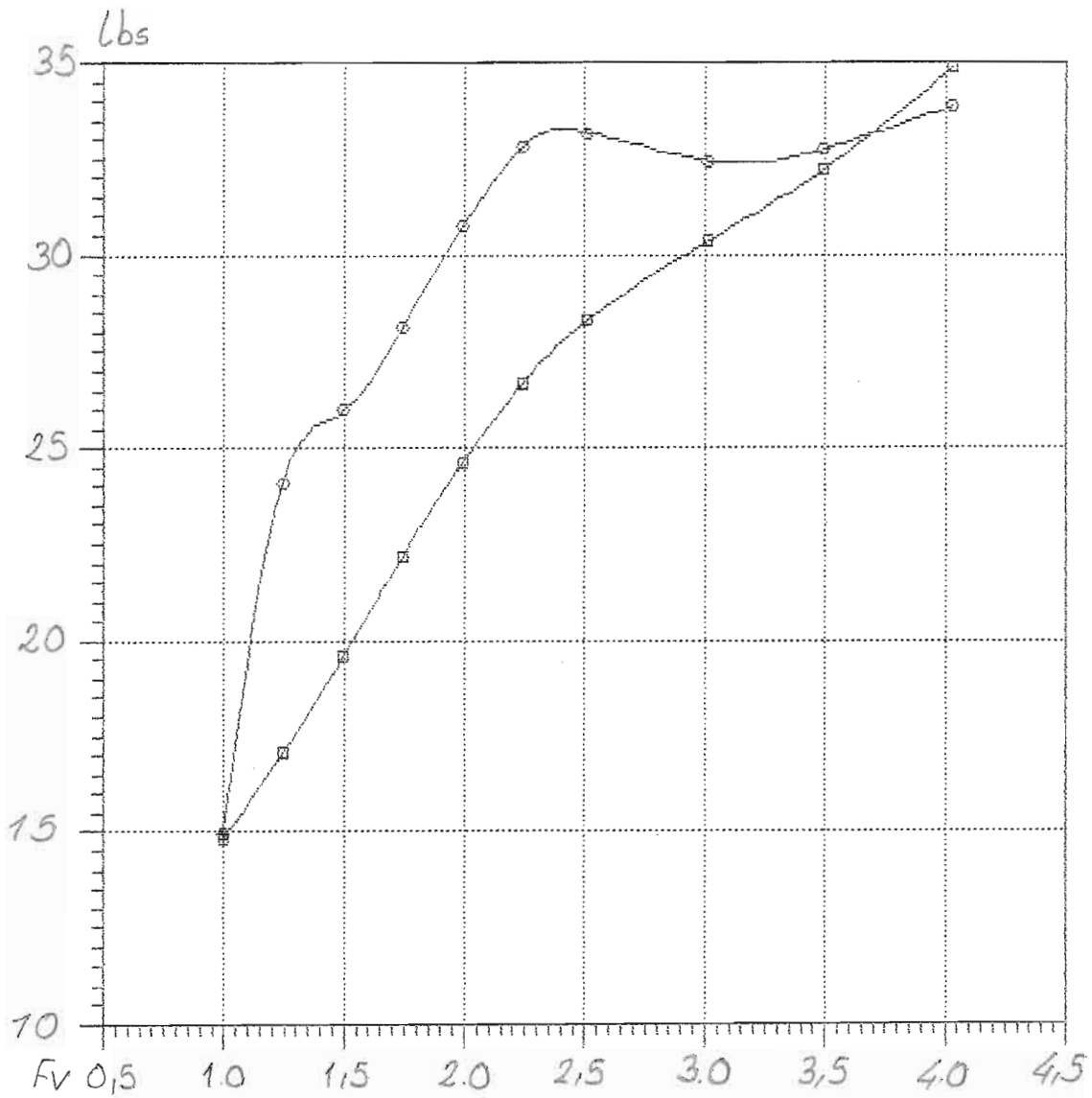
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=5.528 Lpx/Rp=5.000 Lcg/Lpx=0.365

5-53-40b



—□—

—○—

NavCad(tm) 3.1d

### Bare-hull resistance

File: 5-53-40c.mdl

(c) Copyright 1995

vs.

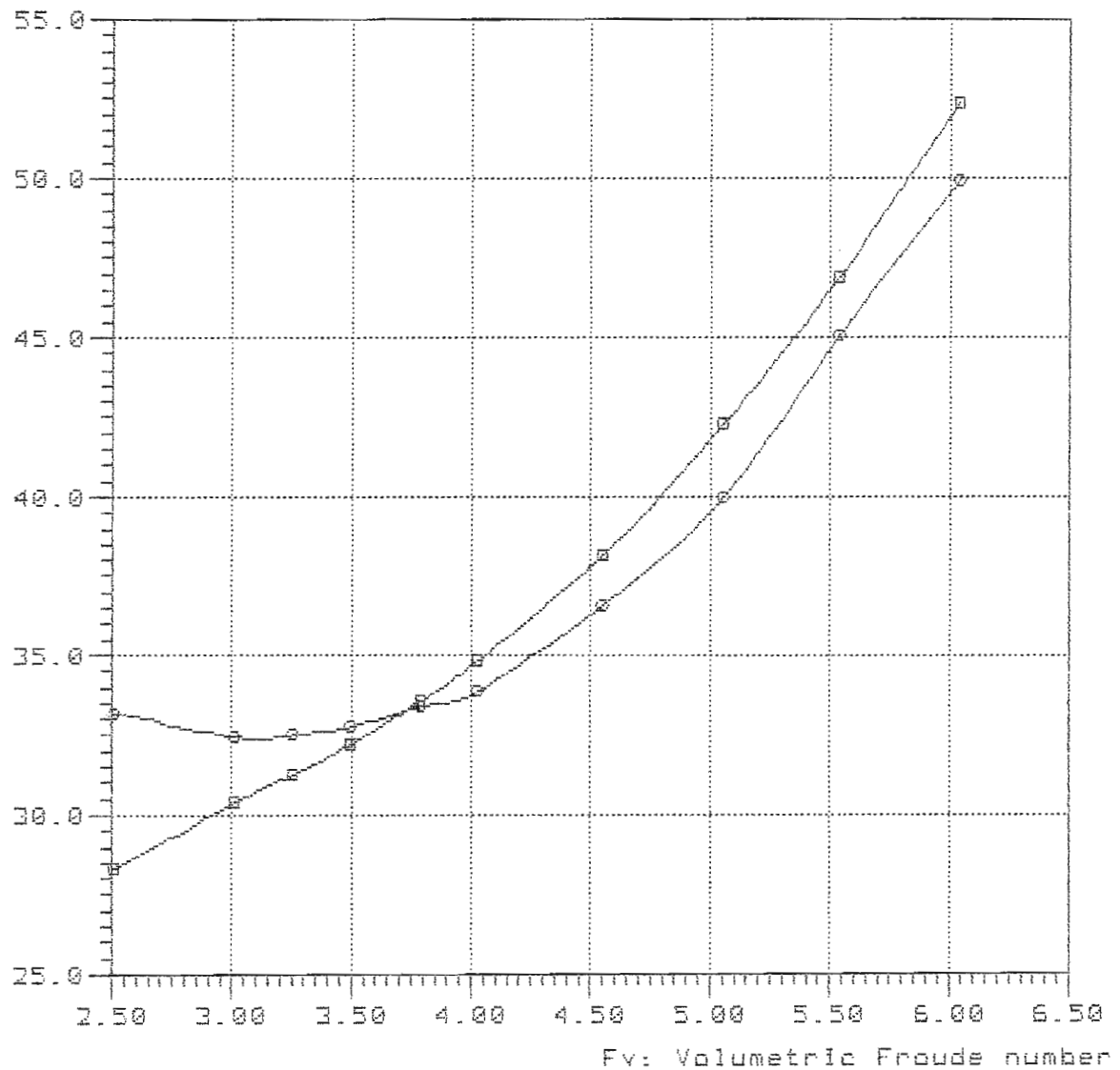
Date: 21 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 18:45

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=5.528 Lpx/Ap=5.000 Lcg/Lpx=0.409

NavCad(tm) 3.1d

(c) Copyright 1995

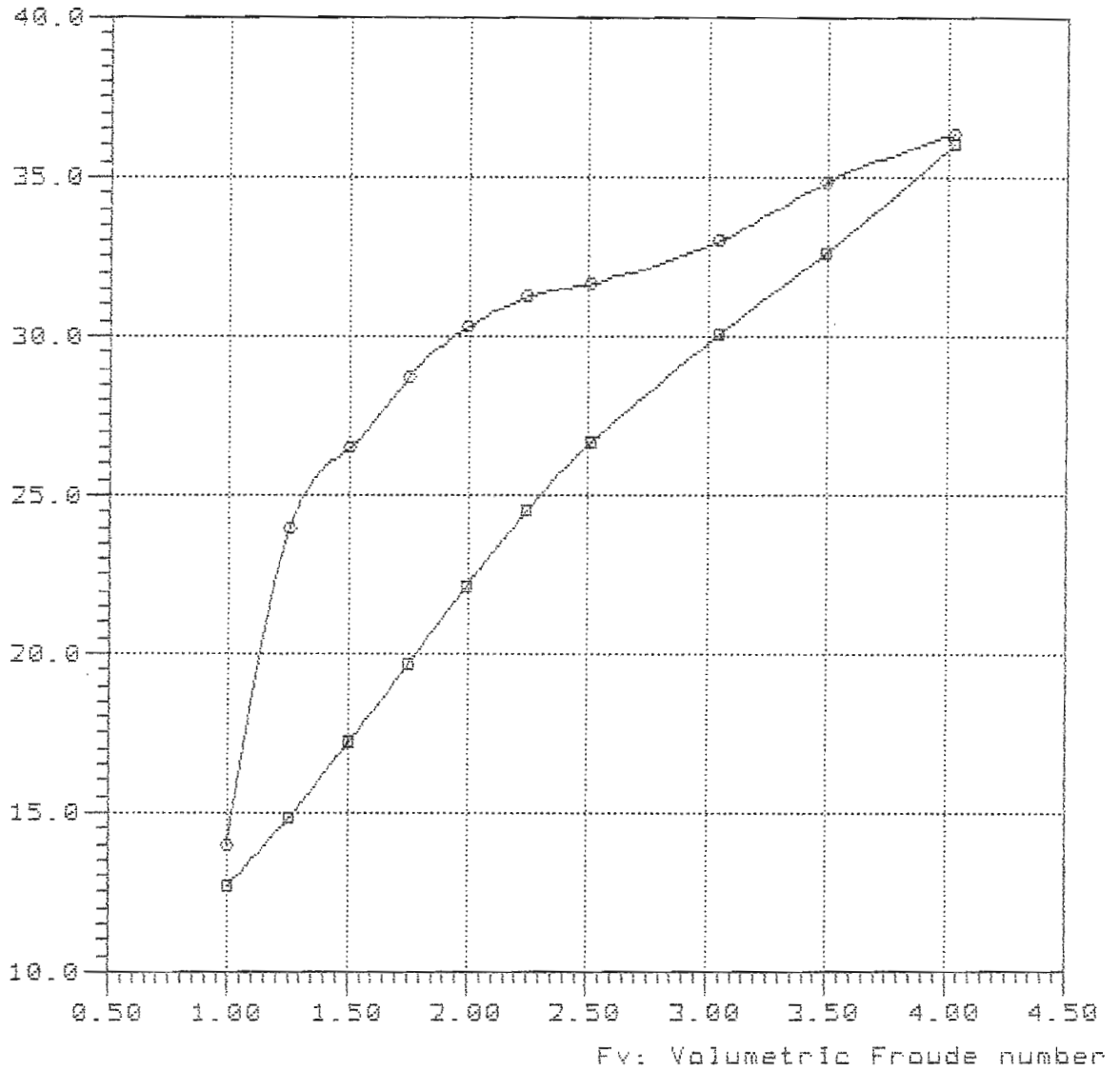
HydroComp, Inc.

File: 5-53-44b.mdl

Date: 21 Feb 00

Time: 18:48

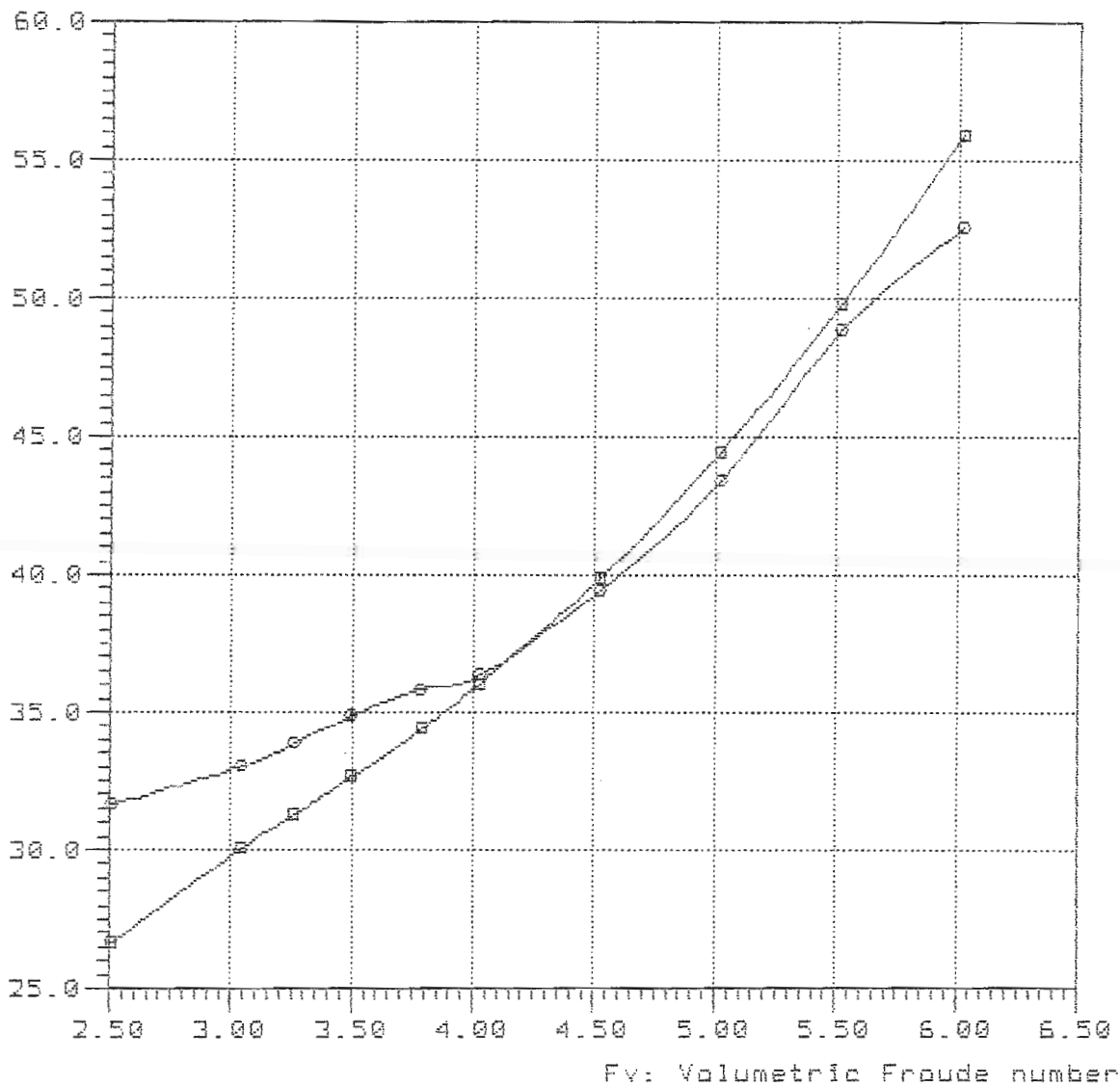
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=5.528 Lpx/Ap=5.000 Log/Lpx=0.449

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=5.528 Lpx/Ap=5.000 Log/Lpx=0.449

Model = 4667  
Ref = SNAME  
Friction =ATTC Ca=0.0

Lpx = 8.000 ft  
Lwl = 7.800 ft  
Bpx = 1.956 ft  
Ap = 12.800 sqft  
Disp = 154.00 lb  
Deadrise = 13.00 degree  
Shaft Ang= 10.00 degree  
Vce = -2.15 ft

Lpx/Bpx = 4.090  
Lpx/Ap = 5.000  
Ap /Vol = 7.129  
Lpx/Vol = 5.987

NavCad(tm) 3.1d

(c) Copyright 1995

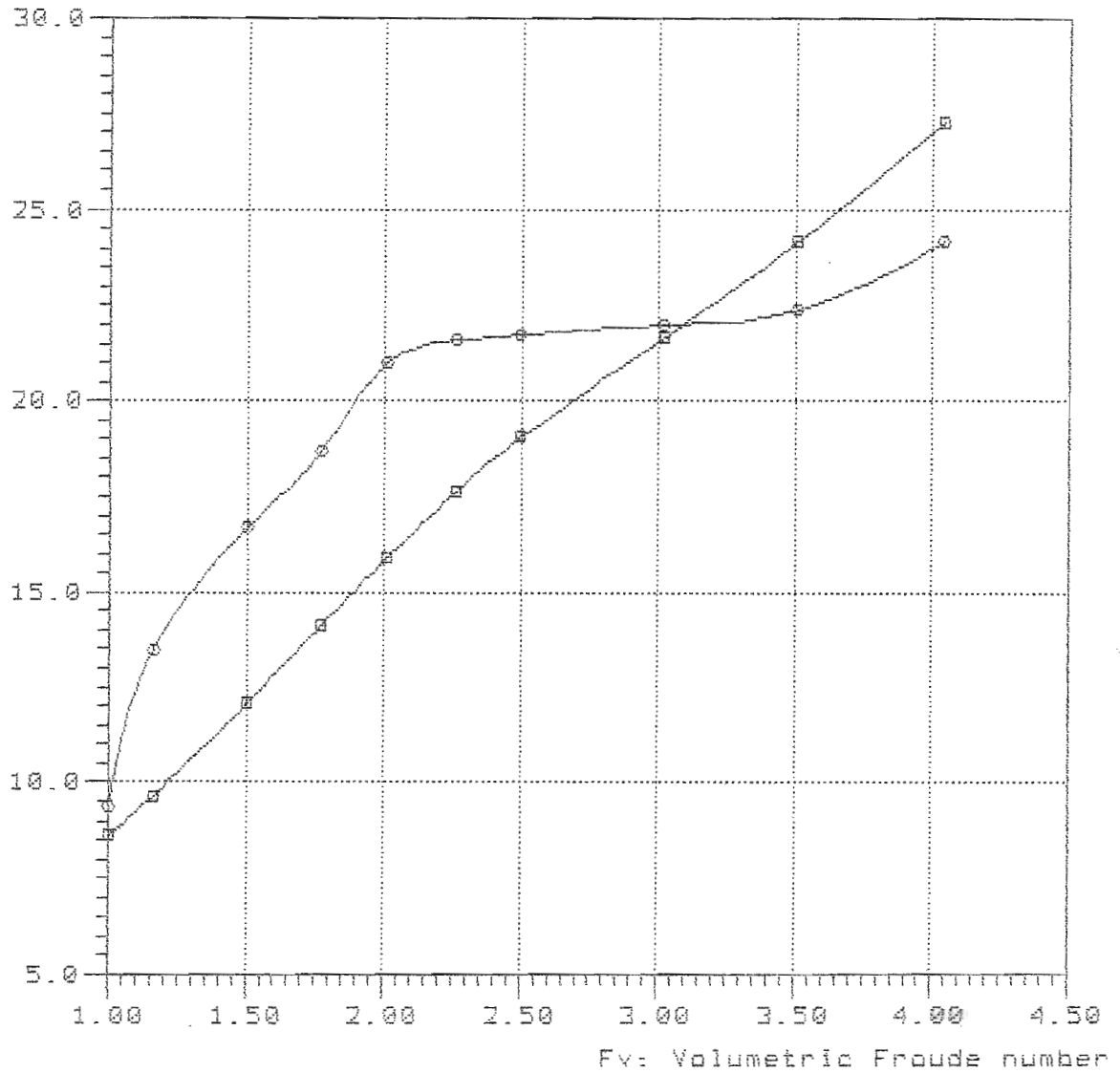
HydroComp, Inc.

File: 7-60-36b.mdl

Date: 22 Feb 00

Time: 9:34

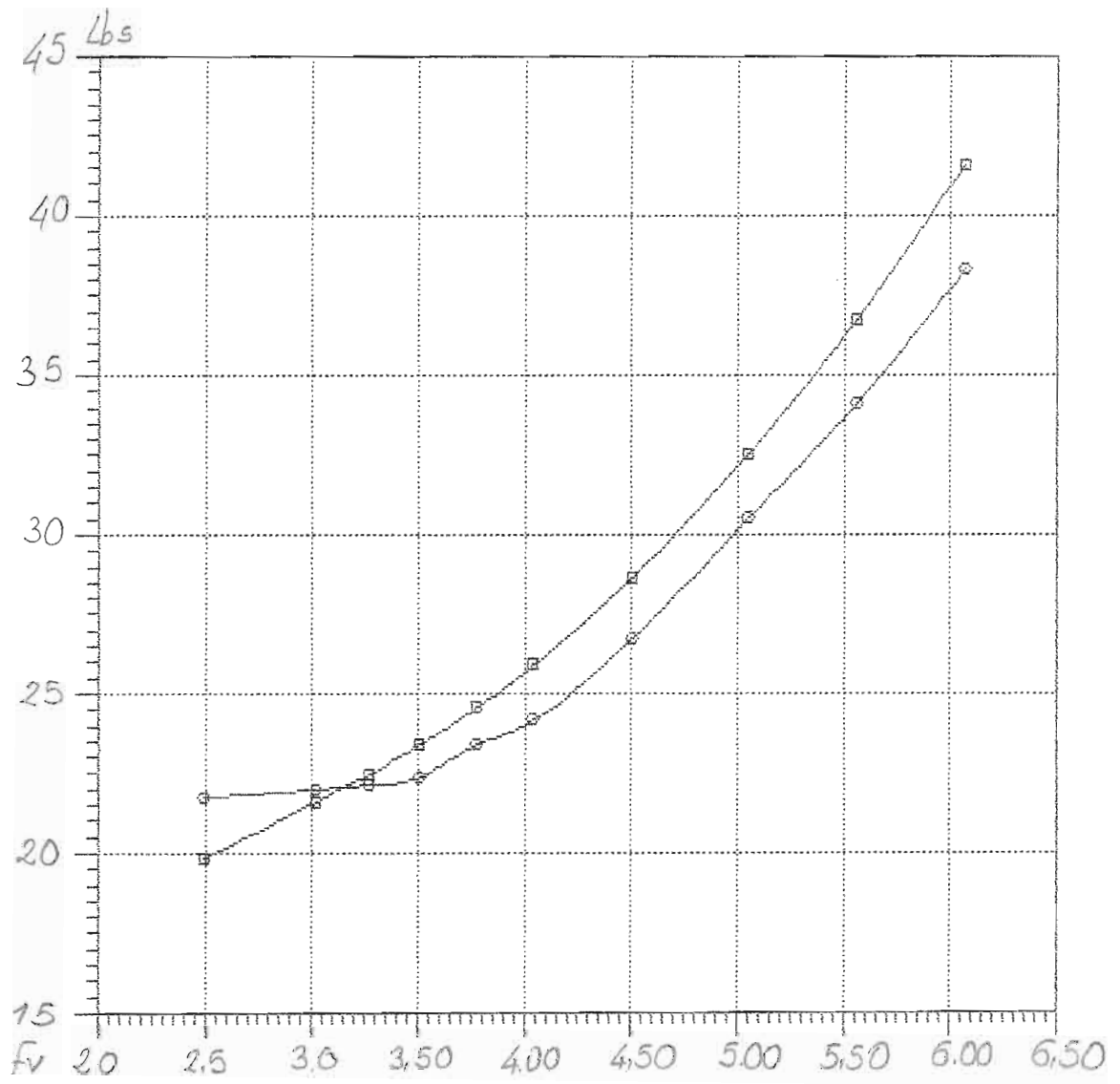
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-4667 Lpx/Bpx=4.09 Ap/Val=7.036 Lpx/Ap=5.000 Log/Lpx=0.409

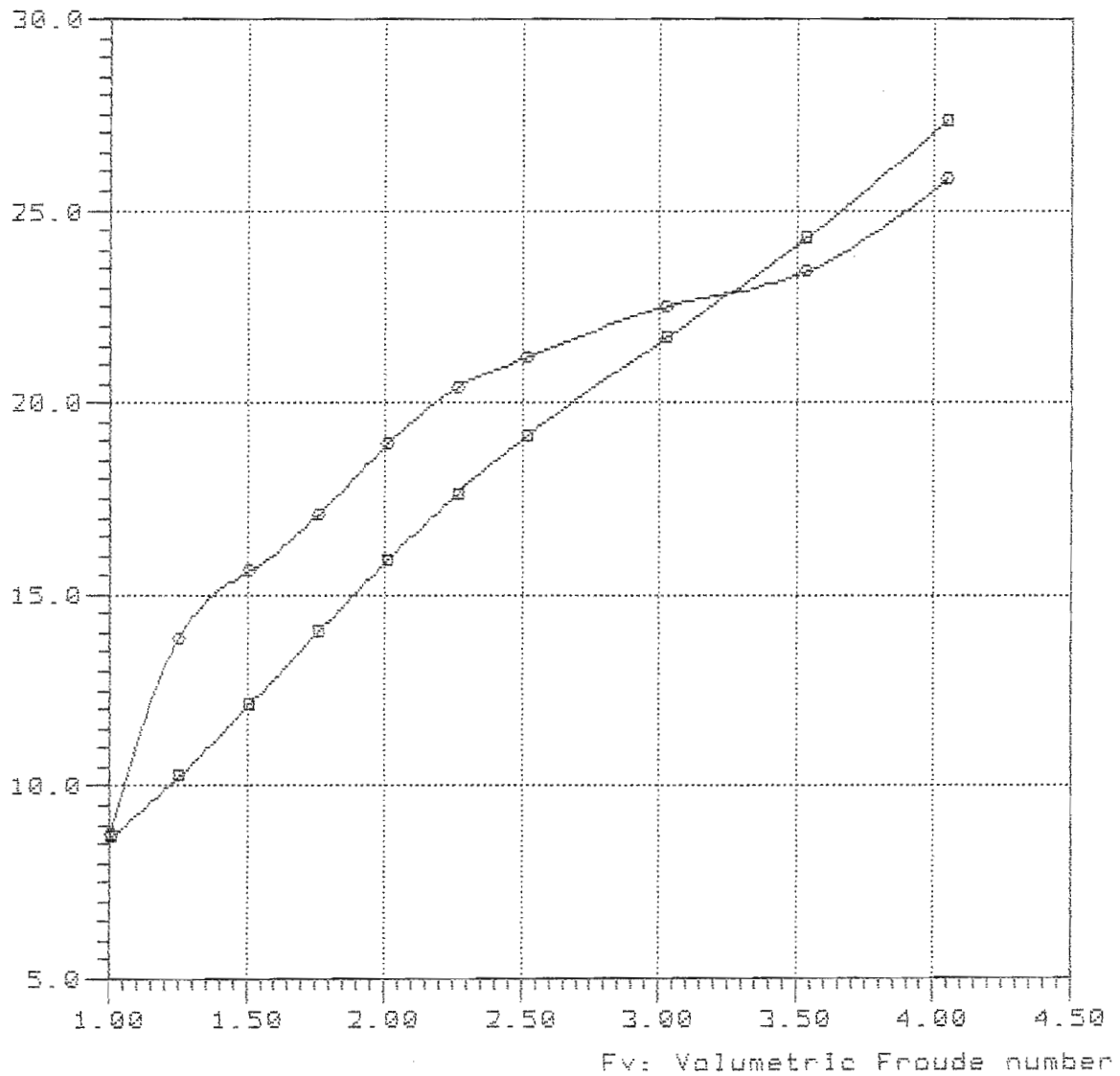
7-60-36c



—□—  
—○—



Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=7.036 Lpx/Ap=5.000 Lcg/Lpx=0.409

NavCad(tm) 3.1d

(c) Copyright 1995

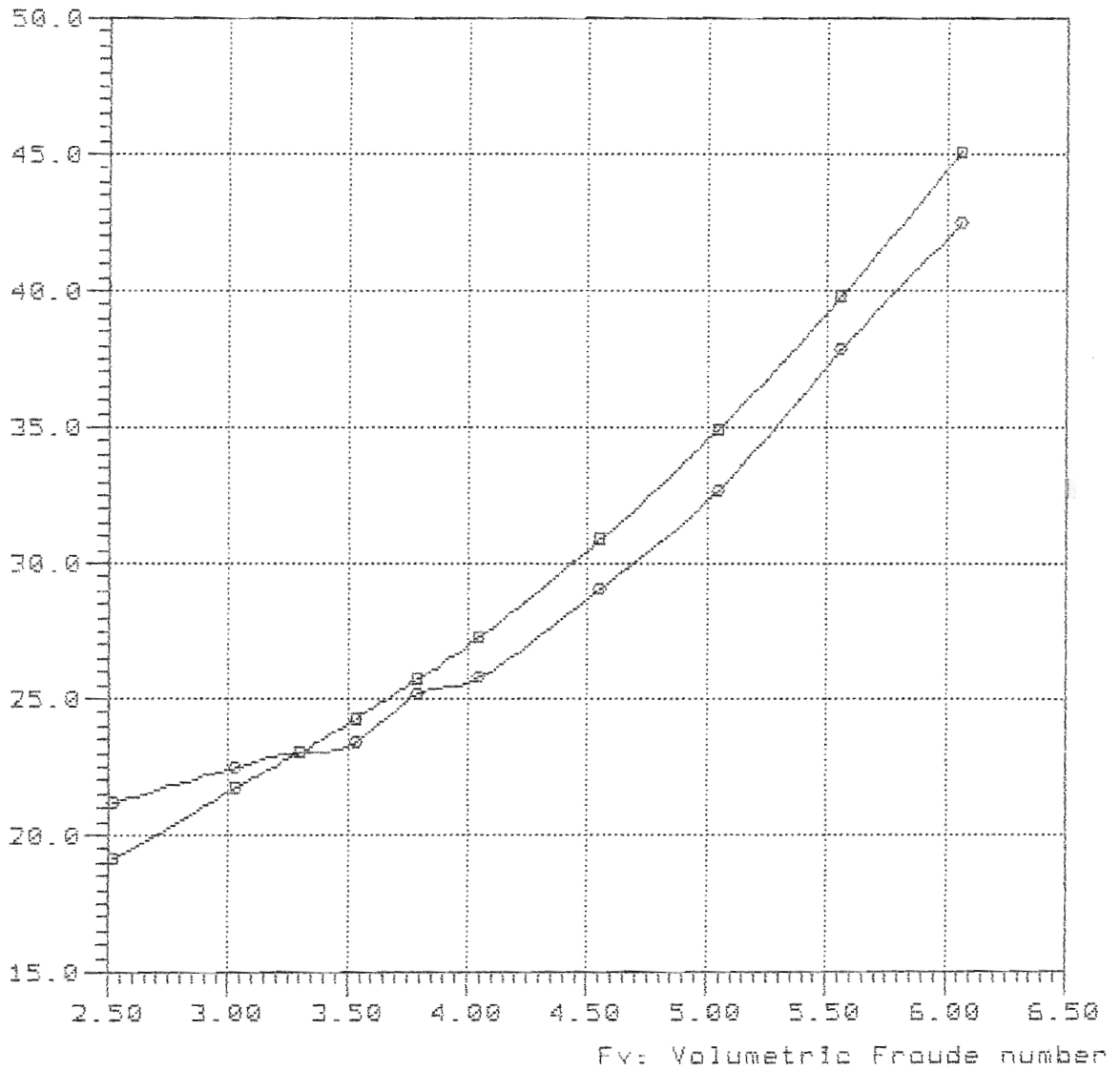
HydroComp, Inc.

File: 7-60-40c.mdl

Date: 22 Feb 00

Time: 9:44

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=7.036 Lpx/Ap=5.000 Lcg/Lpx=0.409

NavCad(tm) 3.1d

(c) Copyright 1995

HydroComp, Inc.

### Bare-hull resistance

vs.

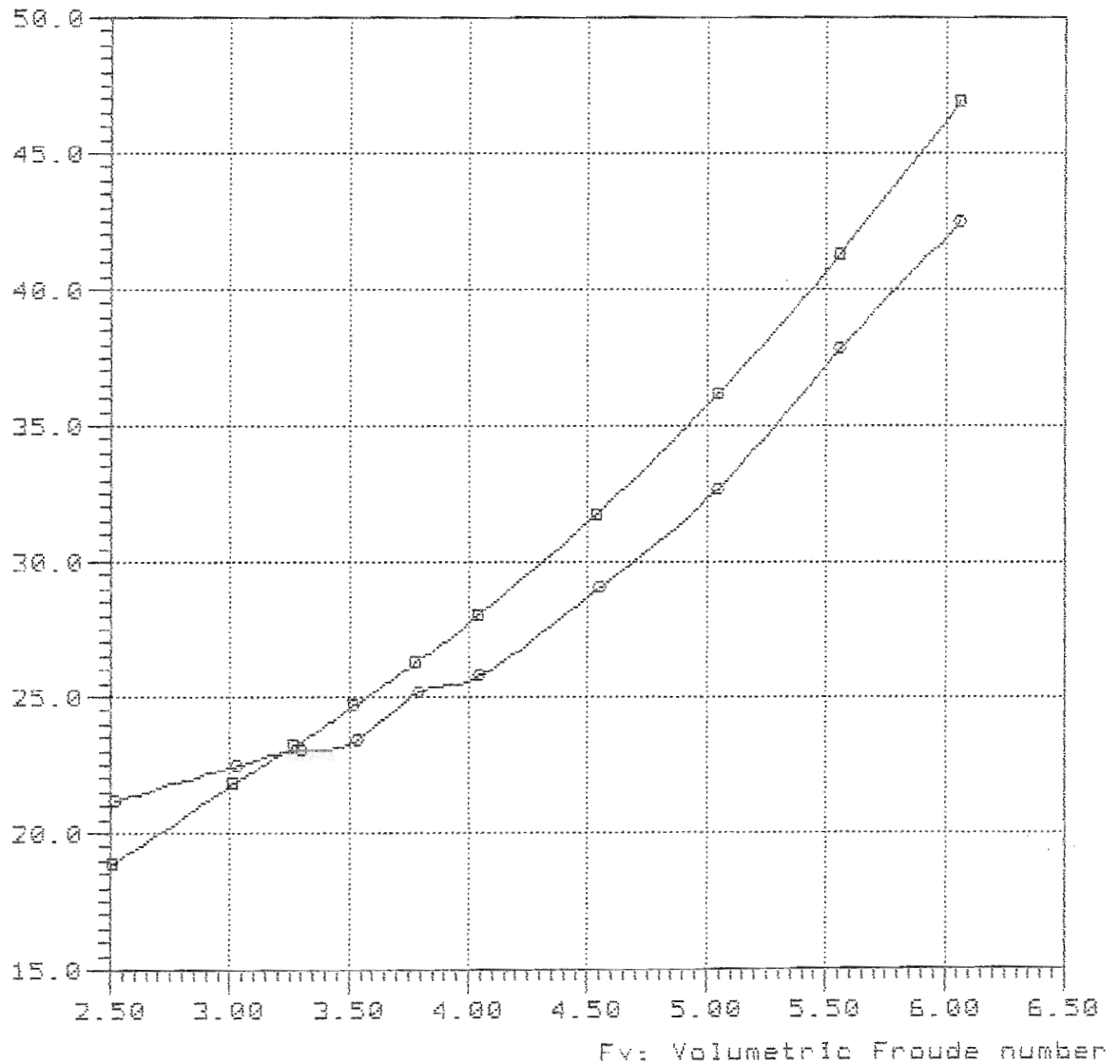
### Volumetric Froude number

File: 7-60-42c.mdl

Date: 22 Feb 00

Time: 9:47

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=7.036 Lpx/Ap=5.000 Lcg/Lpx=0.409

NavCad(tm) 3.1d

(c) Copyright 1985

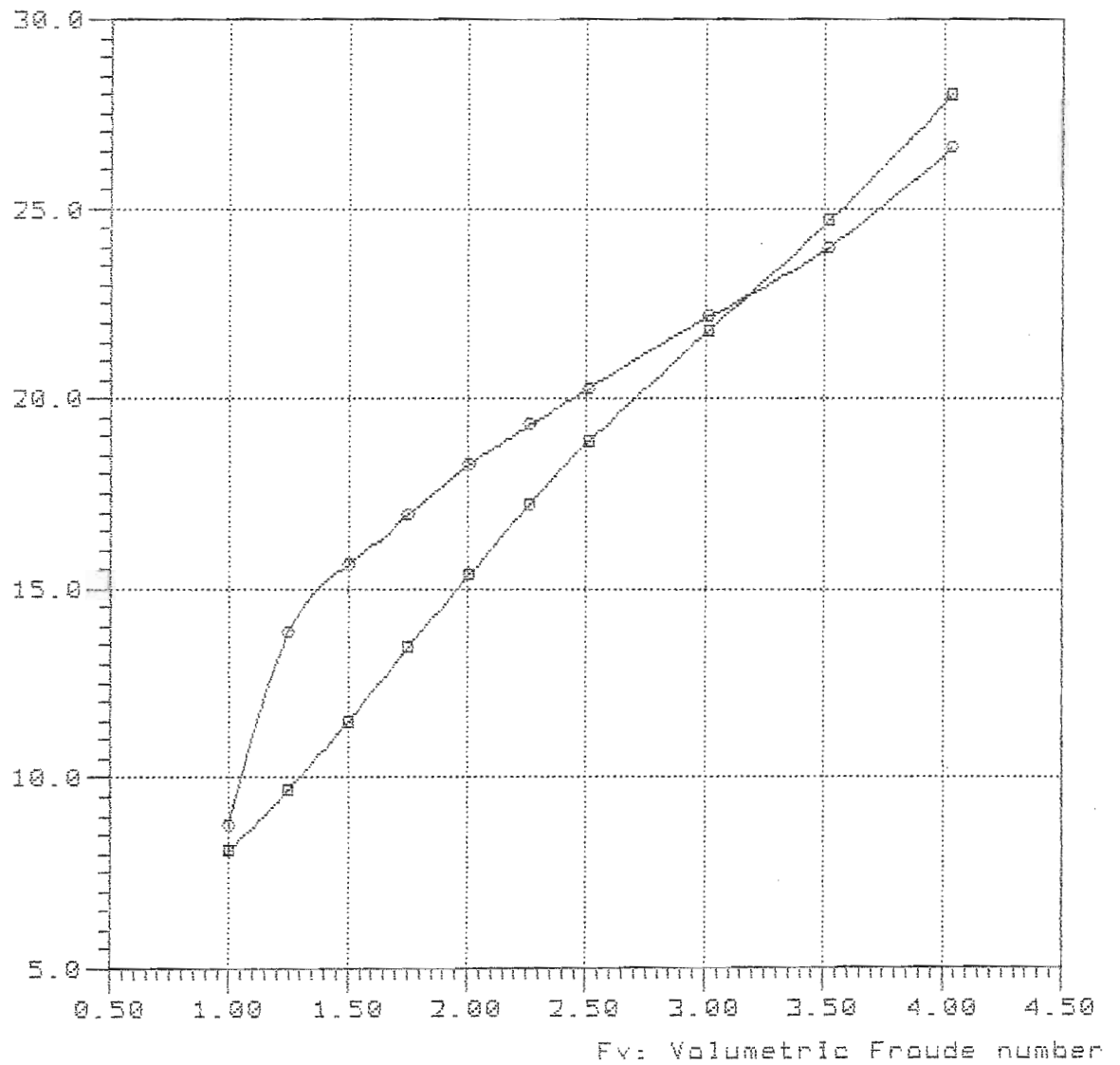
HydroComp, Inc.

File: 7-60-42b.mdl

Date: 22 Feb 80

Time: 9:52

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=7.036 Lpx/Ap=5.000 Log/Lpx=0.429

NavCad(tm) 3.1d

(c) Copyright 1985

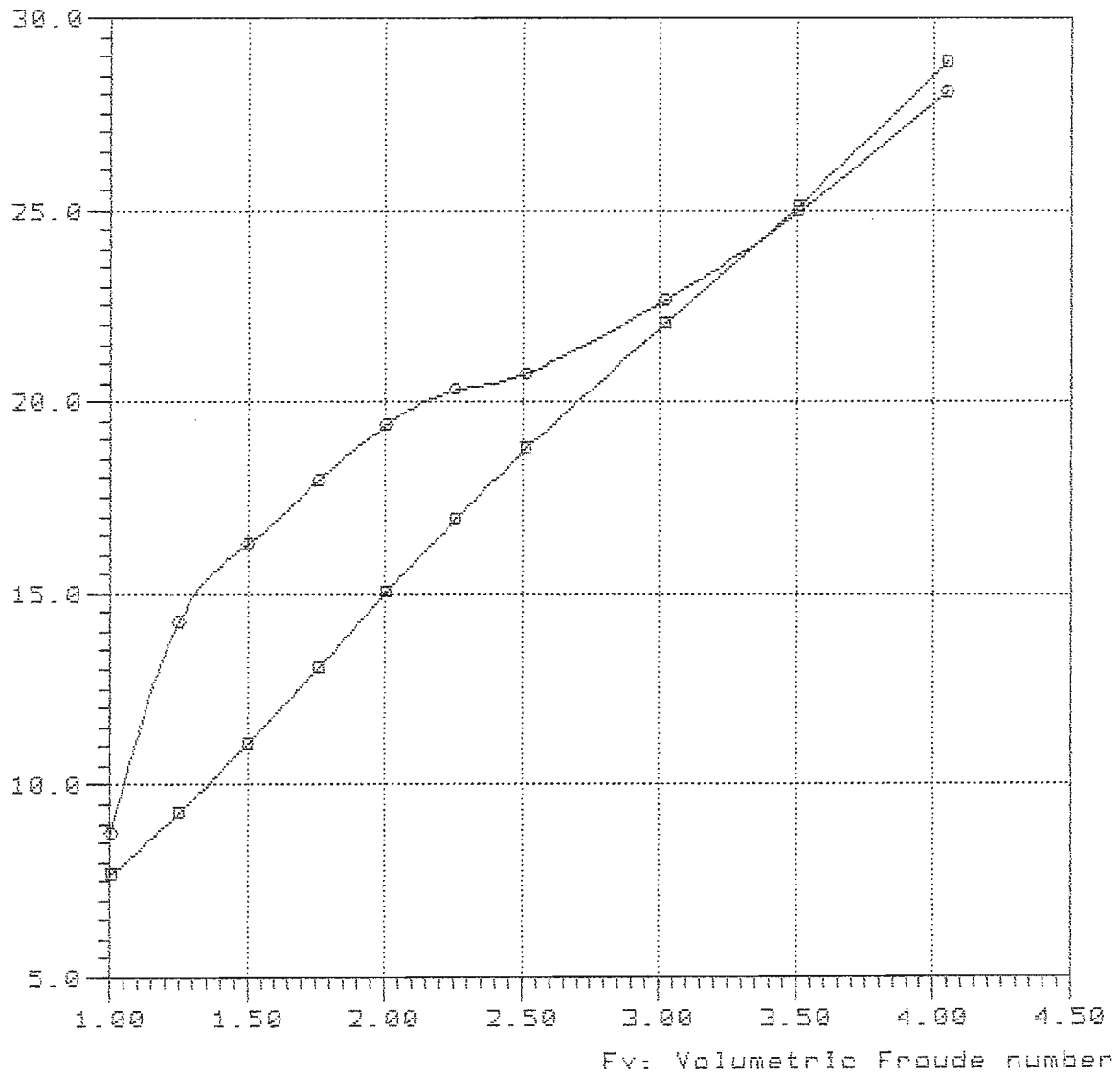
HydroComp, Inc.

File: 7-50-44b.mdl

Date: 22 Feb 88

Time: 9:53

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=7.036 Lpx/Ap=5.000 Log/Lpx=0.449

NavCad(tm) 3.1d

(c) Copyright 1995

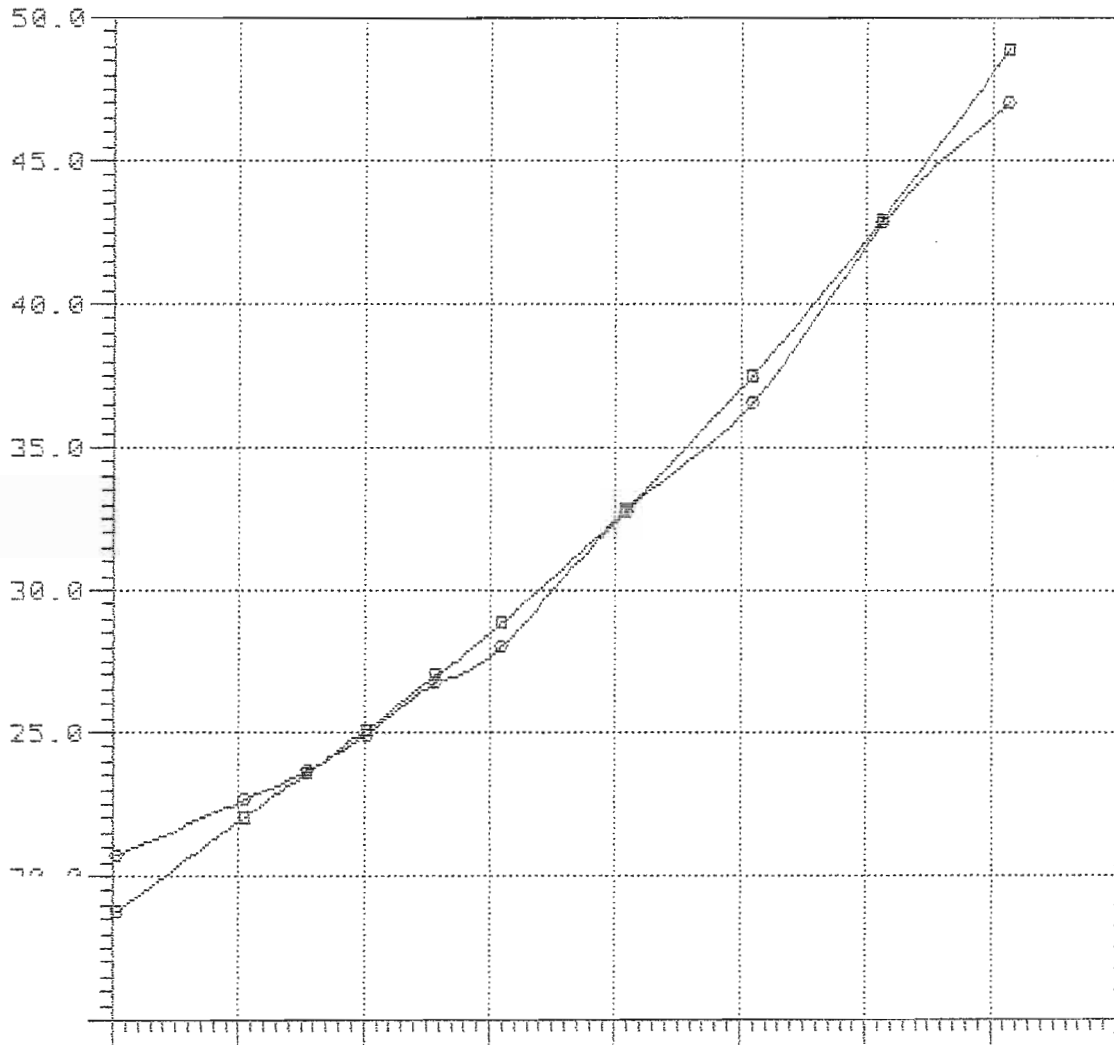
HydroComp, Inc.

File: 7-60-44c.mdl

Date: 22 Feb 00

Time: 10:04

Rbare: Bare-hull resistance (lbs)



—■—

—●—

Model = 4667

Ref = SNAME  
Friction = ATTC Ca=0.0

Lpx = 8.000 ft  
Lwl = 7.800 ft  
Bpx = 1.956 ft  
Ap = 12.800 sqft  
Disp = 115.10 lb  
Deadrise = 13.00 degree  
Shaft Ang = 10.00 degree  
Vce = -2.15 ft

Lpx/Bpx = 4.090  
Lpx/Ap = 5.000  
Ap /Vol = 8.656  
Lpx/Vol = 6.597

NavCad(tm) 3.1d

### Bare-hull resistance

File: 9-66-36c.mdl

(c) Copyright 1995

vs.

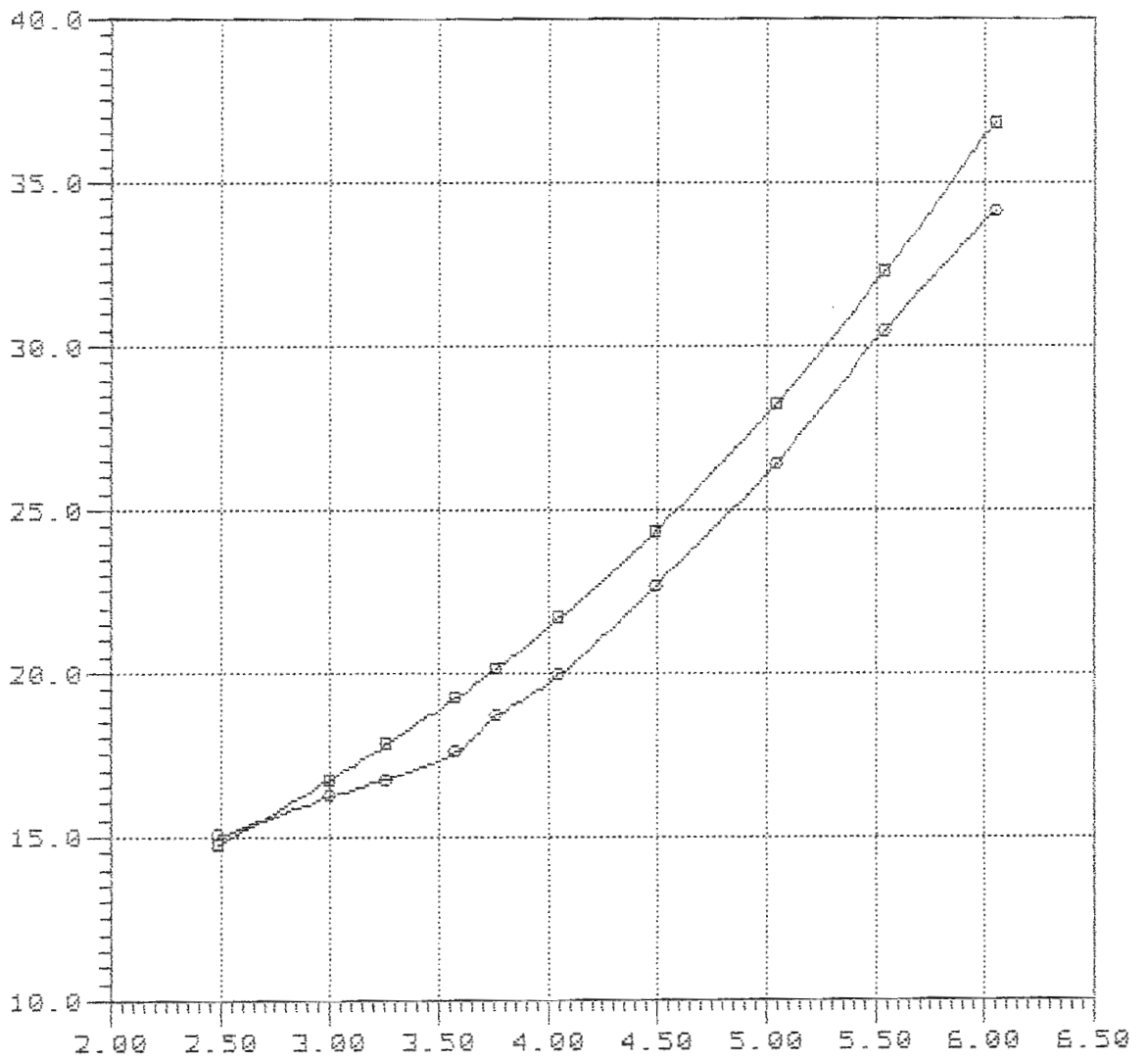
Date: 22 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 10:54

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

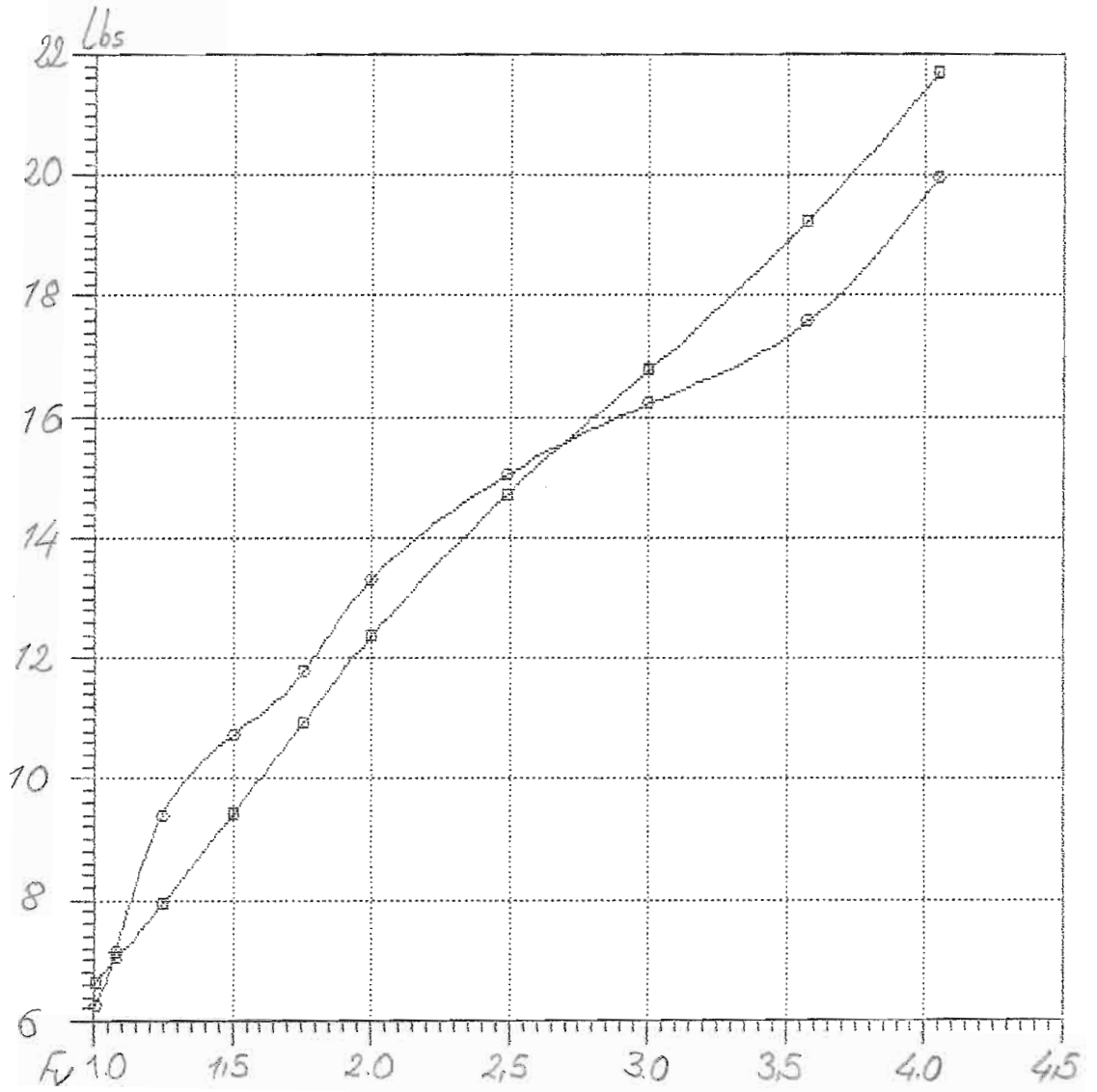
#### Curve legend

—■—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=8.545 Lpx/Ap=5.000 Lcg/Lpx=0.369

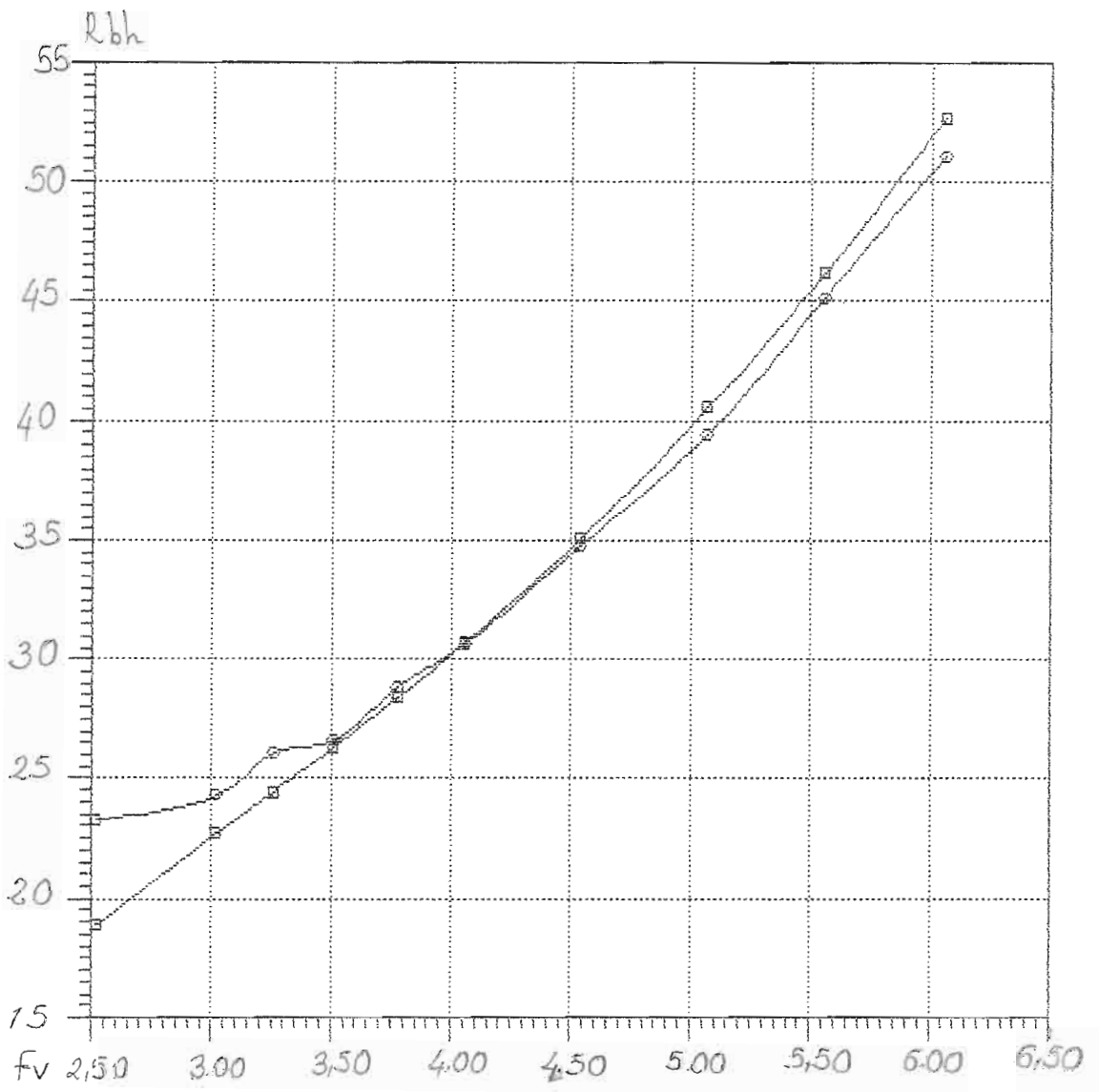


9-66-36b



—□—  
—○—

7-60-48c



—□—  
—○—

NavCad(tm) 3.1d

(c) Copyright 1995

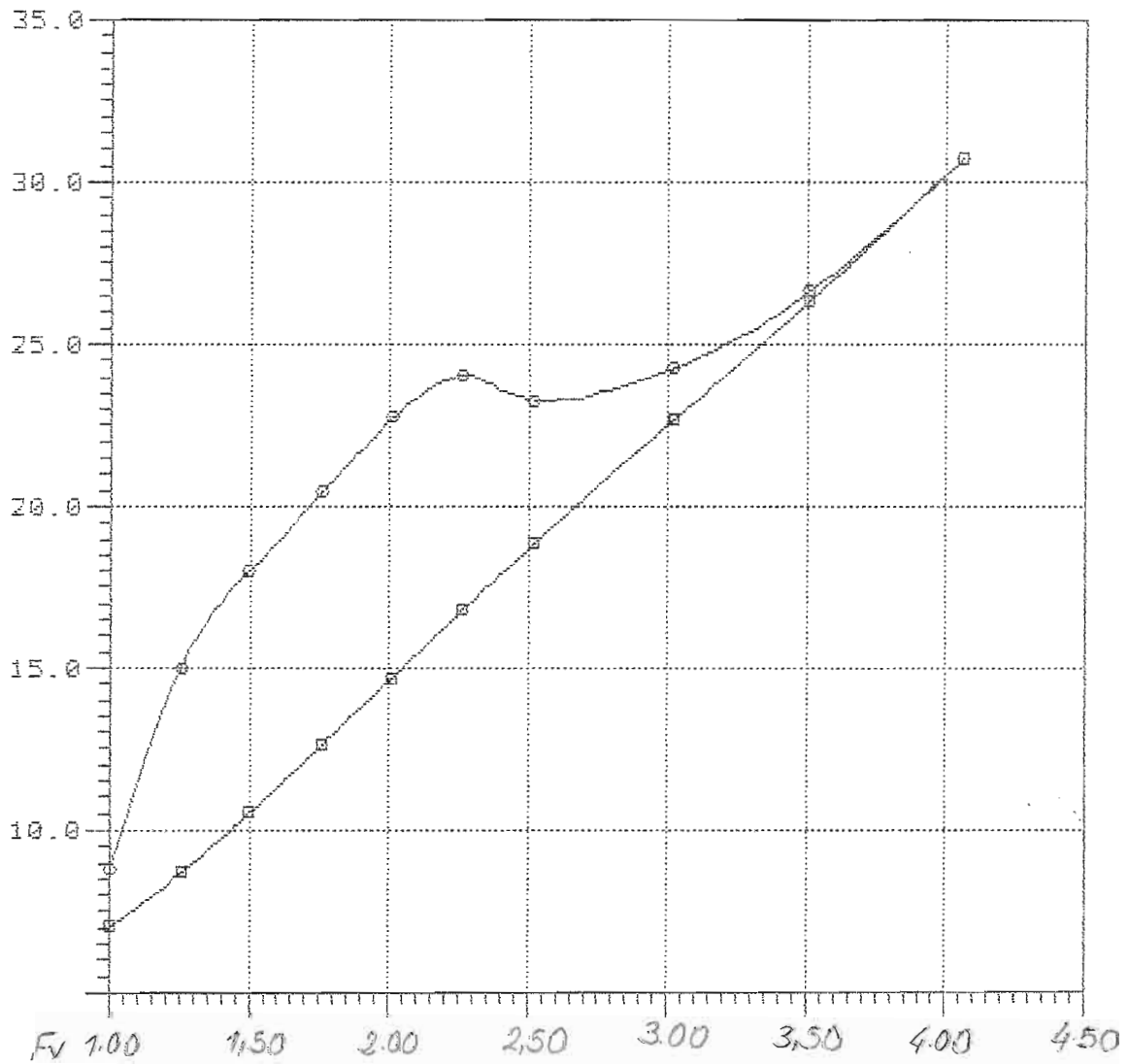
HydroComp, Inc.

File: 7-60-48b.mdl

Date: 22 Feb 00

Time: 10:07

Rbare: Bare-hull resistance (lbs)



—□—

—○—

NavCad(tm) 3.1d

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HydroComp, Inc.

Bare-hull resistance

vs.

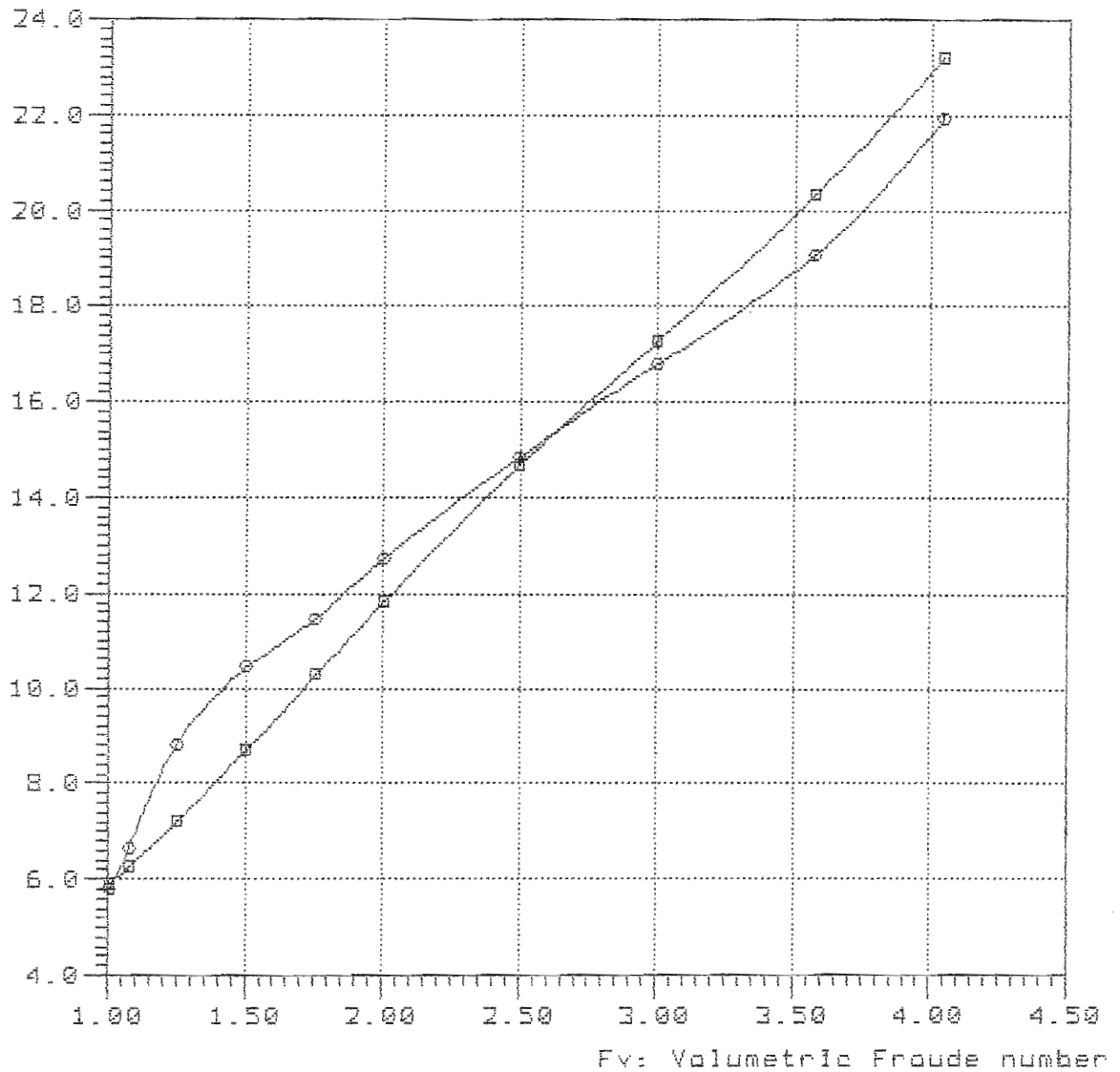
Volumetric Froude number

File: 9-66-40b.mdl

Date: 22 Feb 00

Time: 10:57

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=8.545 Lpx/Ap=5.000 Log/Lpx=0.409

NavCad(tm) 3.1d

(c) Copyright 1995

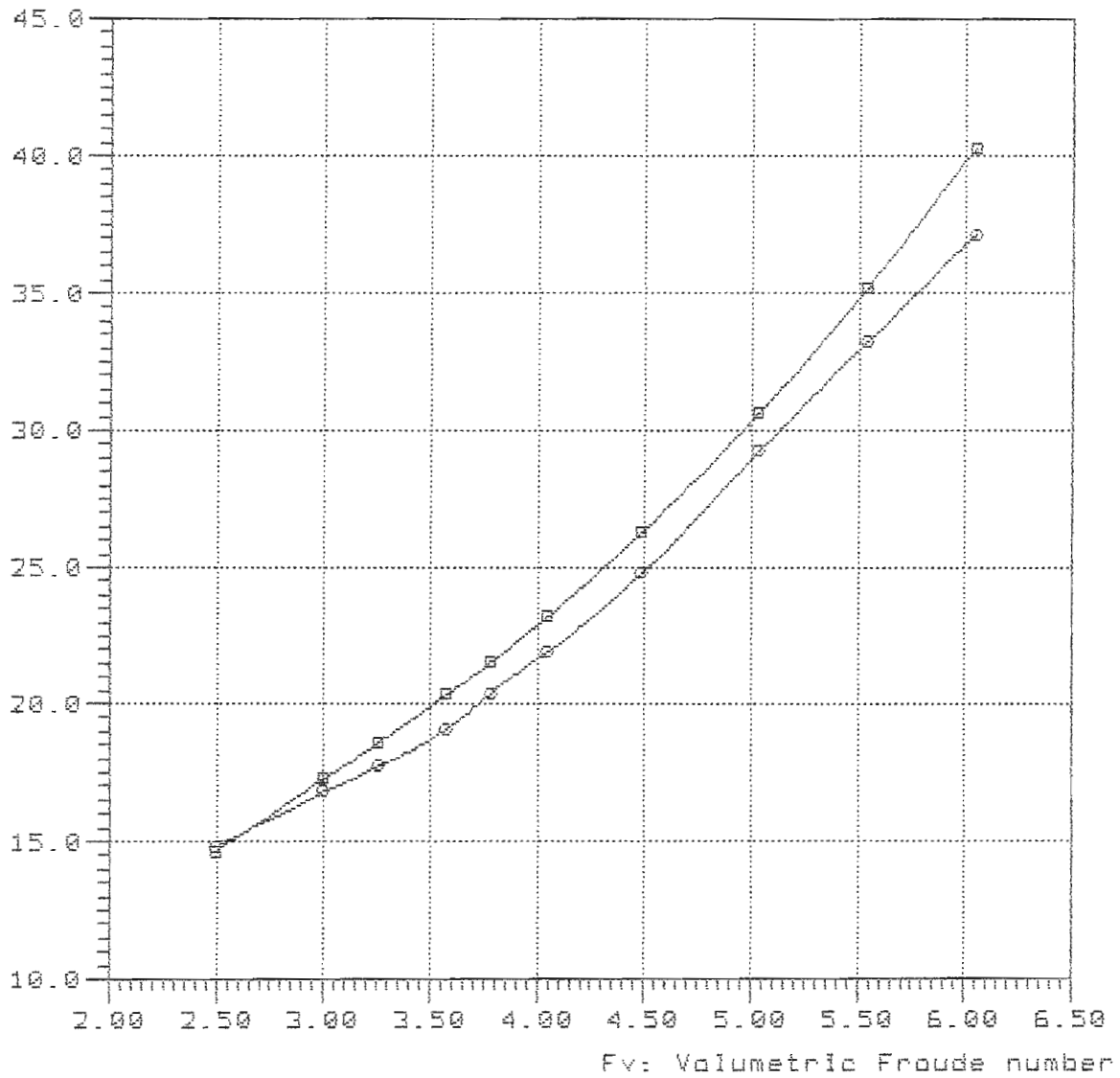
HydroComp, Inc.

File: 9-66-40c.mdl

Date: 22 Feb 00

Time: 11:01

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Val=6.545 Lpx/Ap=5.000 Log/Lpx=0.409

NavCad(tm) 3.1d

(c) Copyright 1995

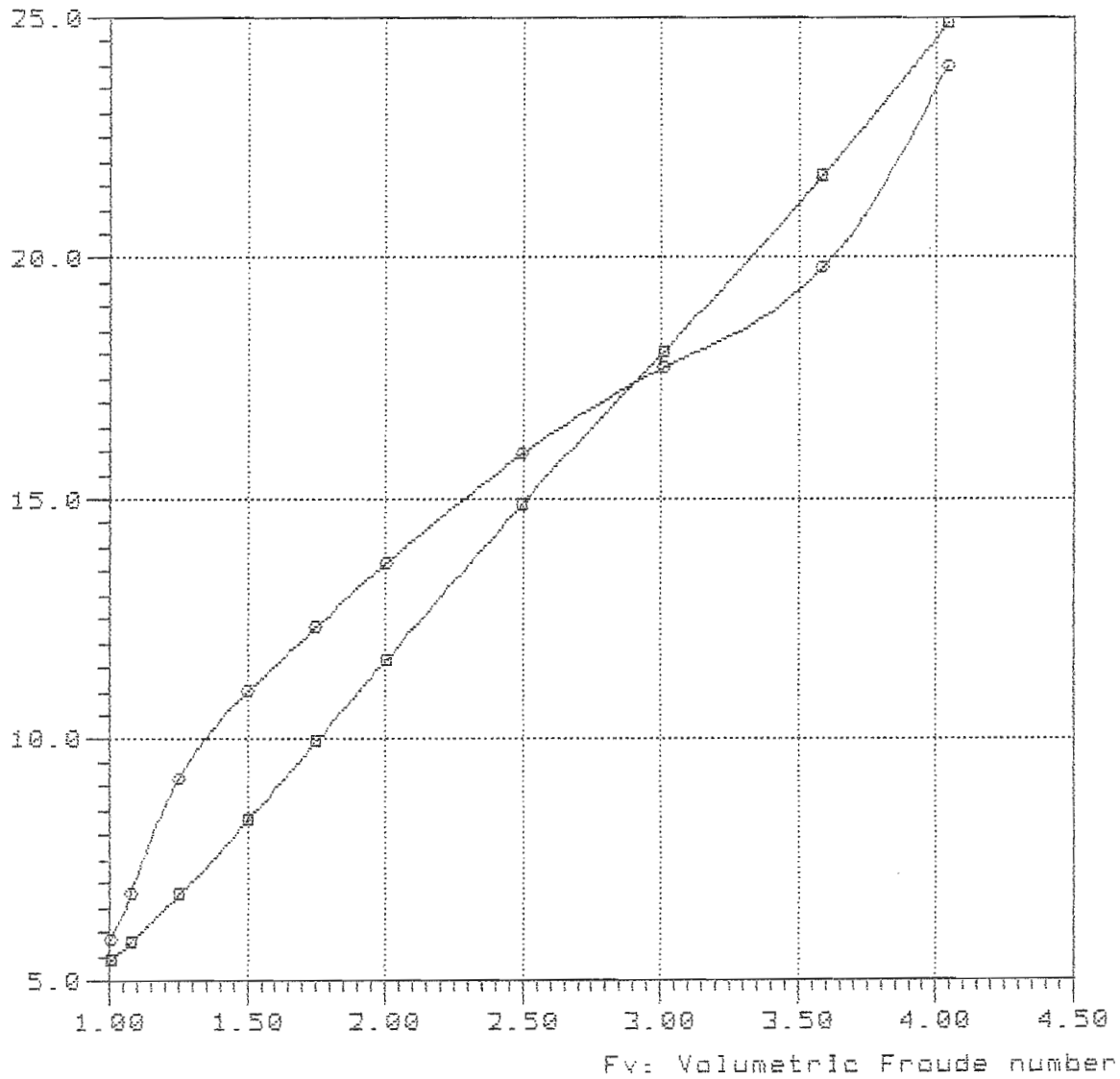
HydroComp, Inc.

File: 9-66-44b.mdl

Date: 22 Feb 00

Time: 11:04

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=8.545 Lpx/Ap=5.000 Log/Lpx=0.449

NavCad(tm) 3.1d

(c) Copyright 1995

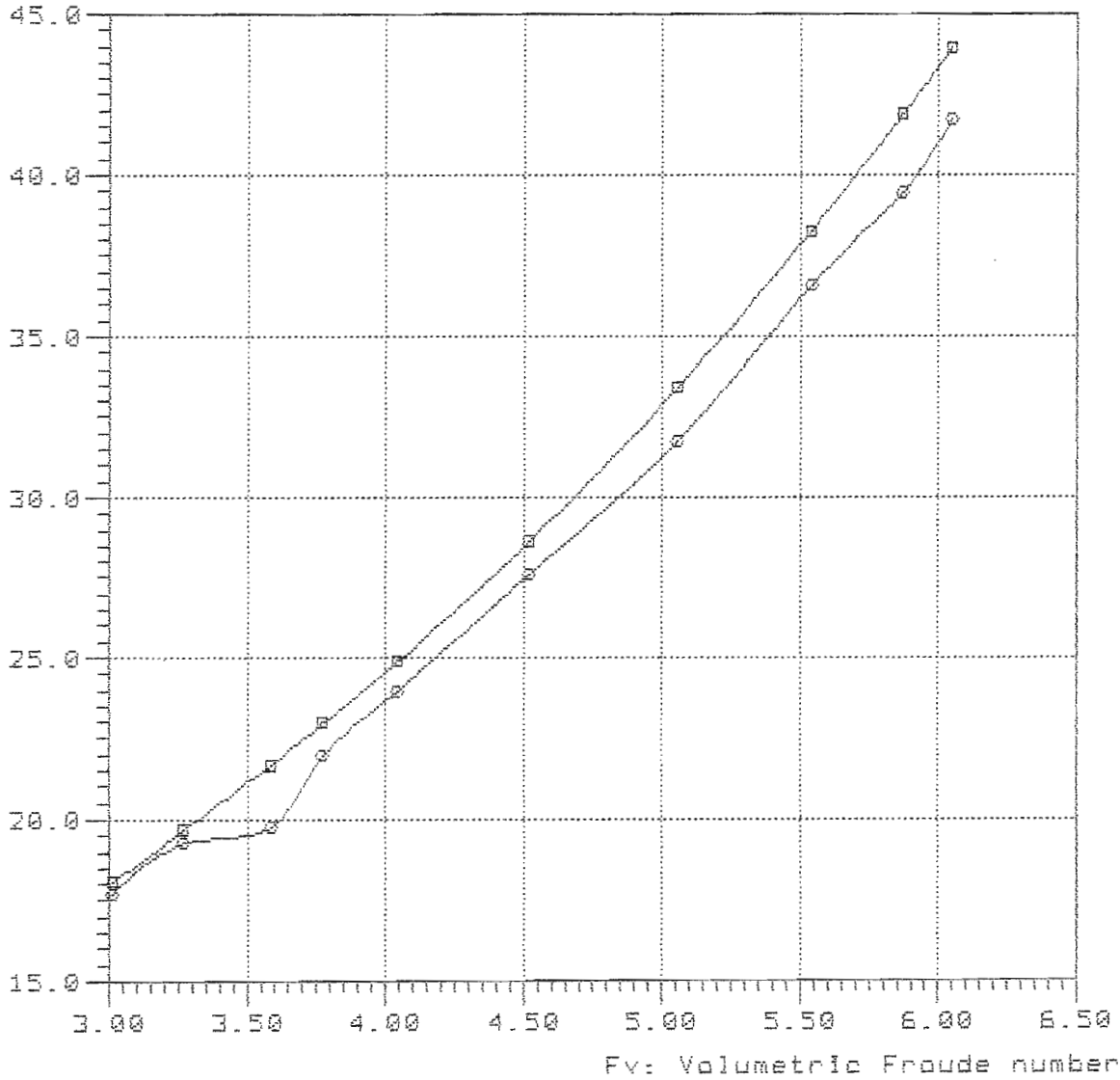
HydroComp, Inc.

File: 9-66-44c.mdl

Date: 22 Feb 00

Time: 11:08

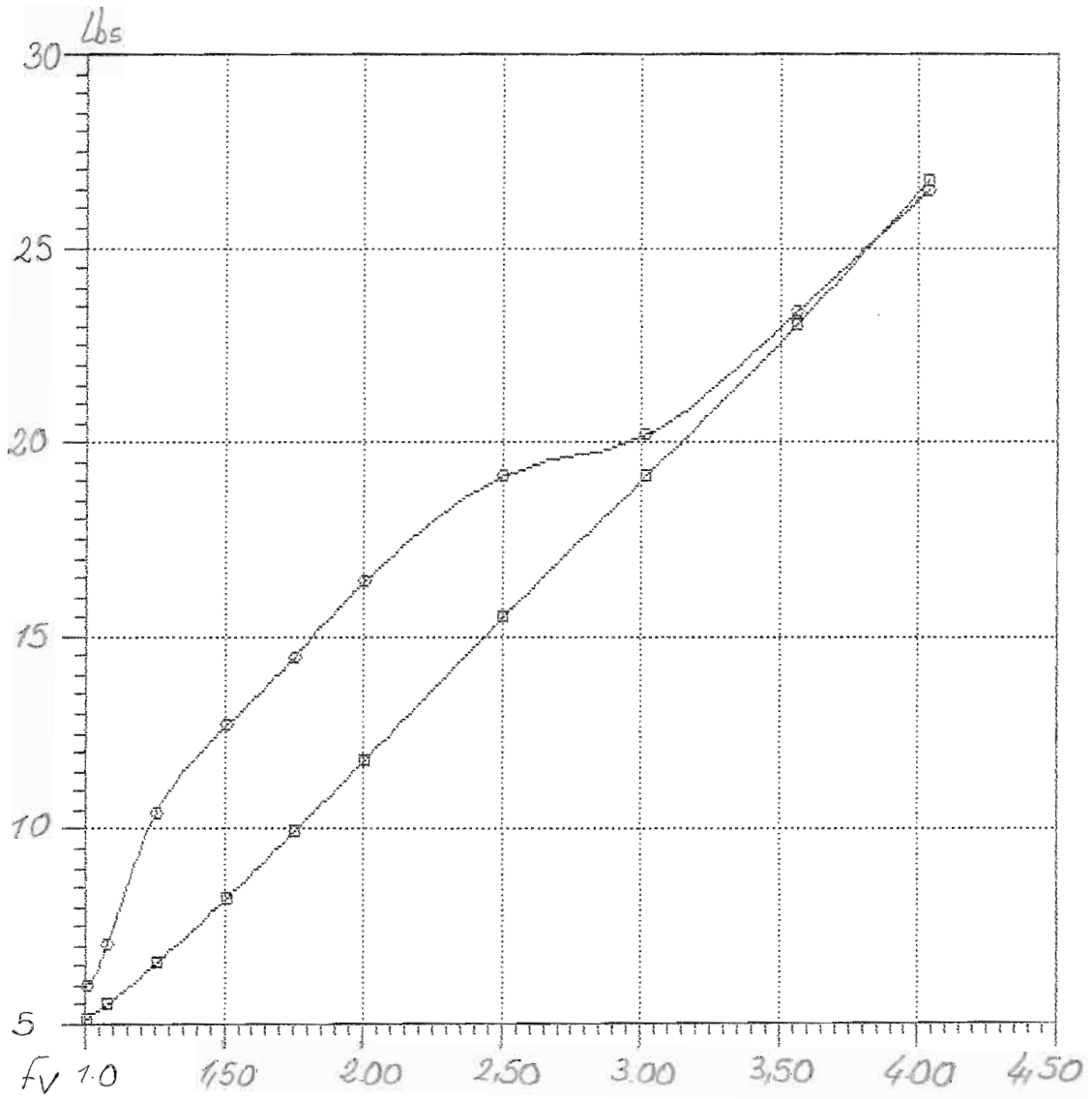
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=8.545 Lpx/Ap=5.000 Log/Lpx=0.449

9-66-486





NavCad(tm) 3.1d

(c) Copyright 1995

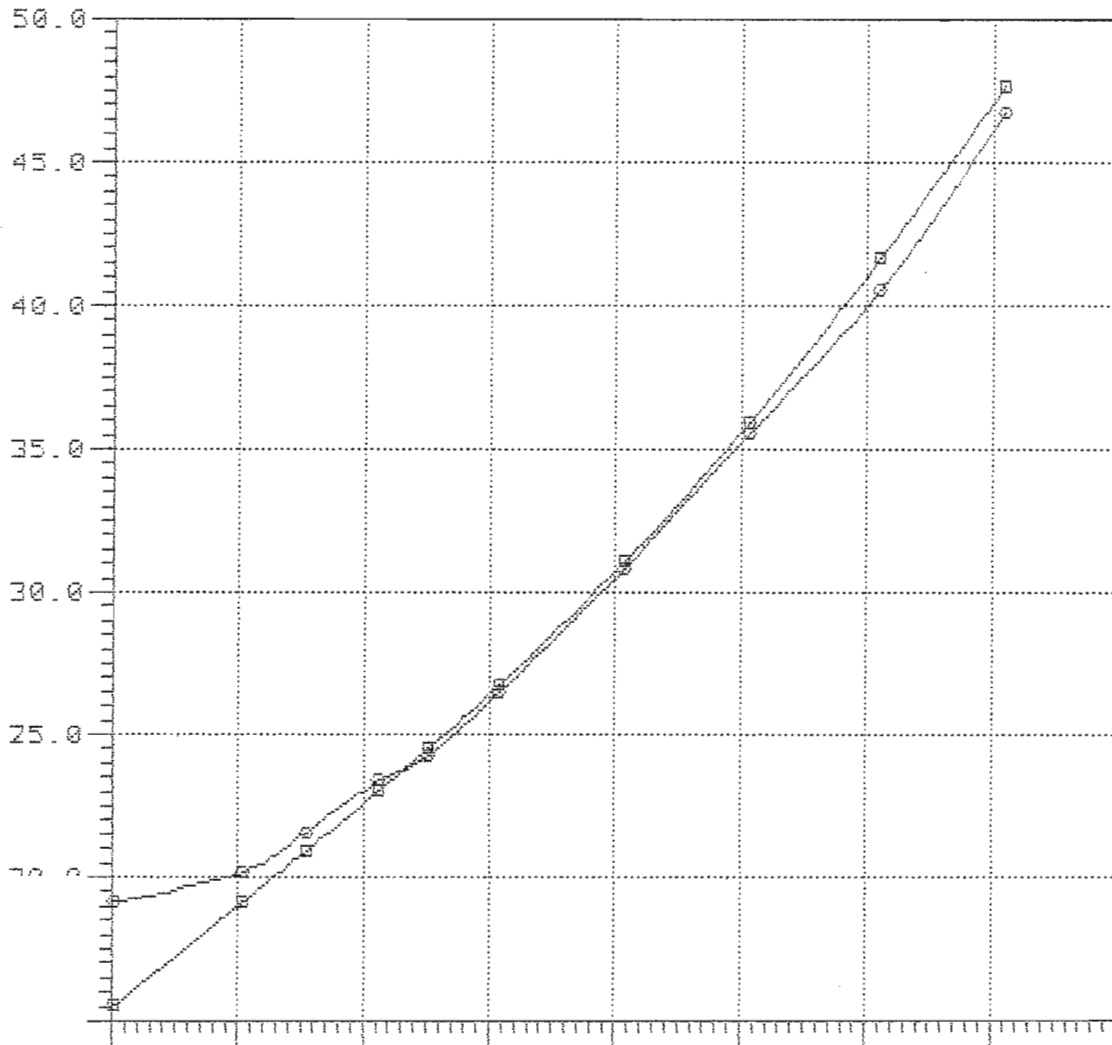
HydroComp, Inc.

File: 9-66-48c.mdl

Date: 22 Feb 00

Time: 11:14

Rbare: Bare-hull resistance (lbs)



—■—

—●—

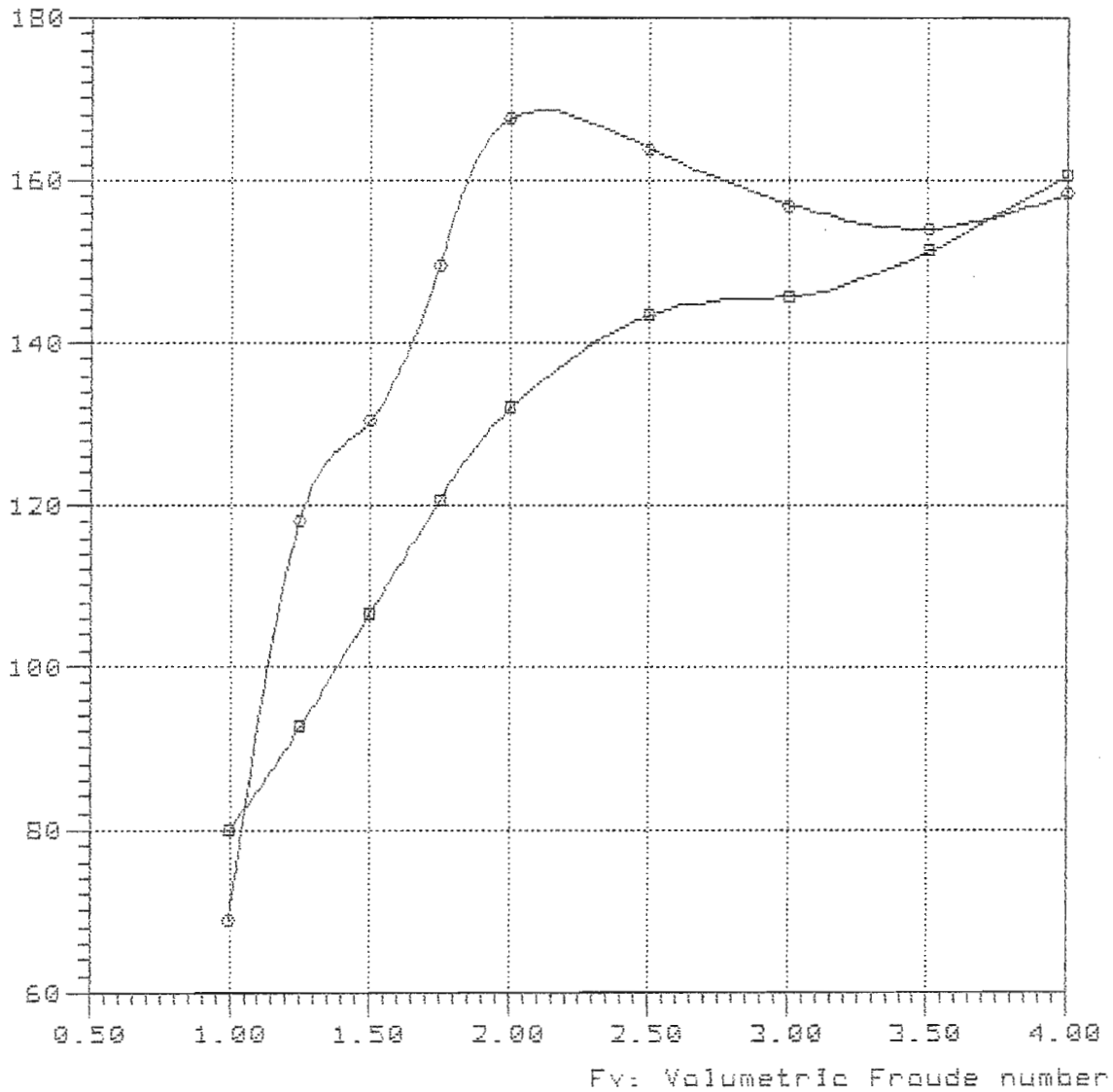
Model = 4667  
Ref = NSRDC  
Friction = ~~A~~ TTC Ca=4e-4

Lpx = 13.700 ft  
Lwl = 13.536 ft  
Bpx = 3.350 ft  
Ap = 37.538 sqft  
Disp = 1000.00 lb  
Deadrise = 13.00 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 ft

Lpx/Bpx = 4.090  
Lpx/Ap = 5.000  
Ap /Vol = 6.006  
Lpx/Vol = 5.496

NavCad(tm) 3.1d	<b>Bare-hull resistance</b>	File: 6-55-369.mdl
(c) Copyright 1995	vs.	Date: 21 Feb 00
HydroComp, Inc.	<b>Volumetric Froude number</b>	Time: 18:55

Rbare: Bare-hull resistance (lbs)



**Curve legend**

- 
- TMB-4667 Lpx/Bpx=4.09 Ap/Vol=6.006 Lpx/Ap=5.000 Lcg/Lpx=0.369

NavCad(tm) 3.1d

(c) Copyright 1995

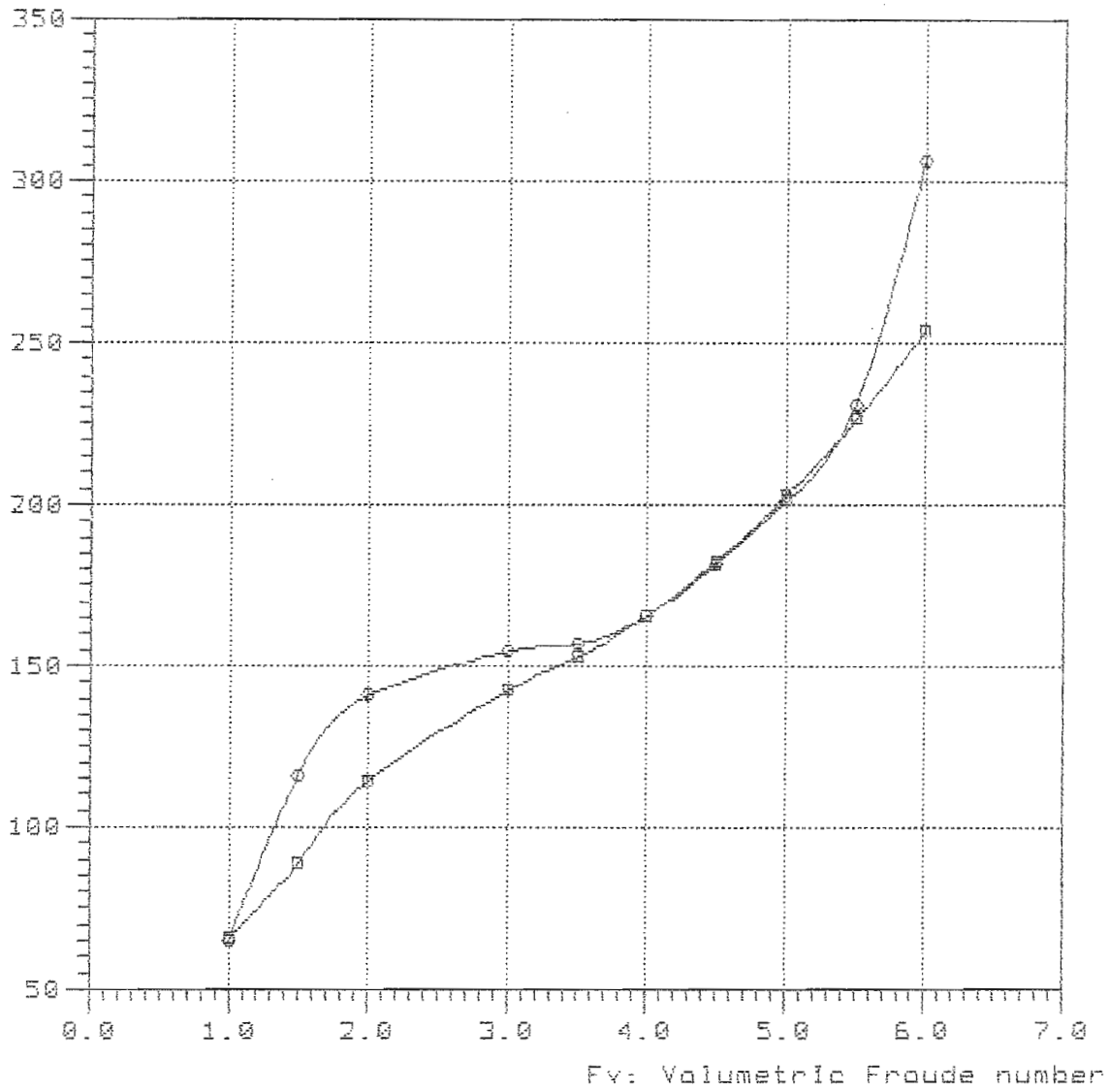
HydroComp, Inc.

File: 6-55-409.mdl

Date: 22 Feb 00

Time: 8:45

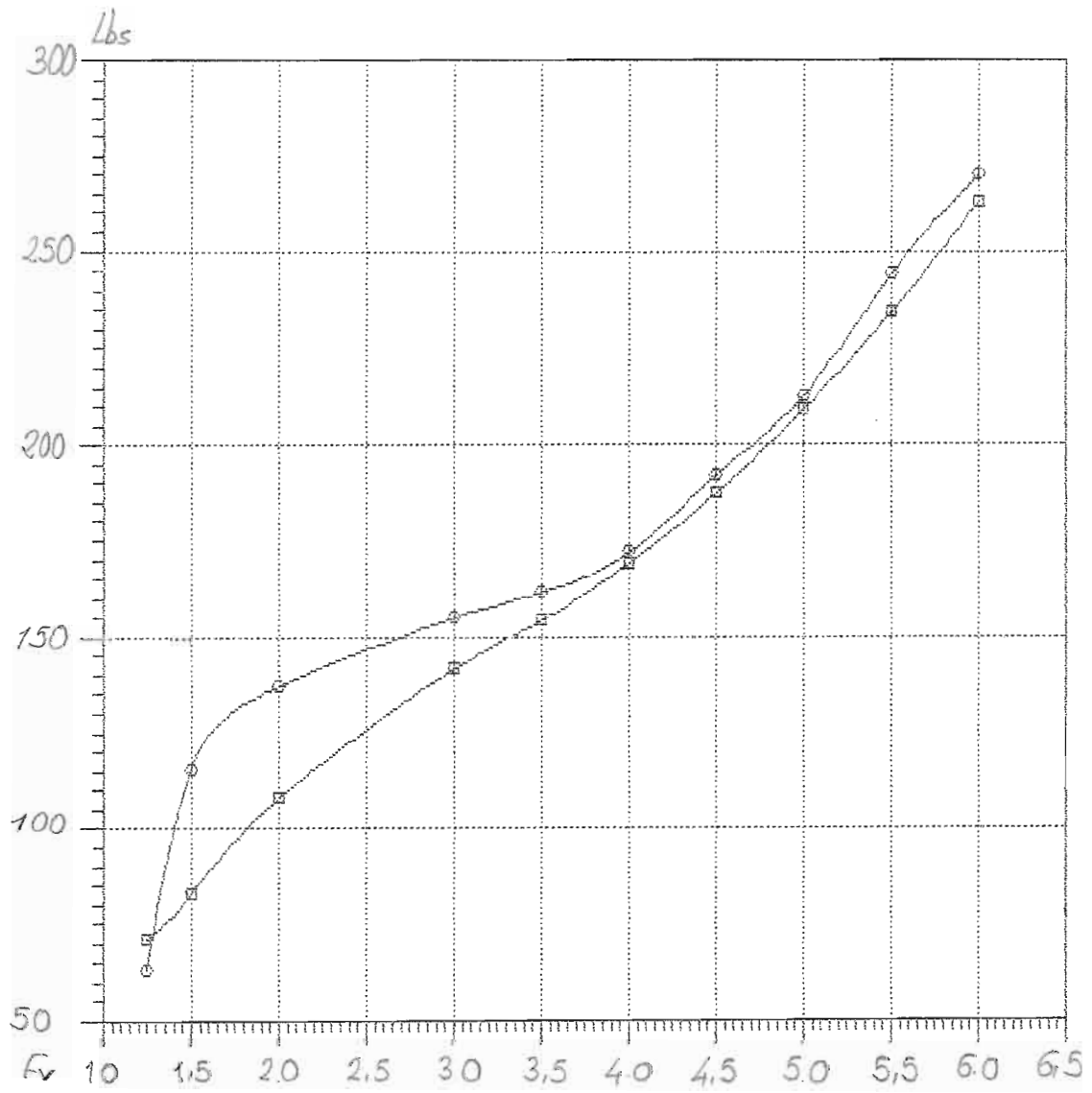
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Val=6.006 Lpx/Ap=5.000 Lcg/Lpx=0.409

6-55-429



—○—  
—□—

NavCad(tm) 3.1d

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HydroComp, Inc.

### Bare-hull resistance

vs.

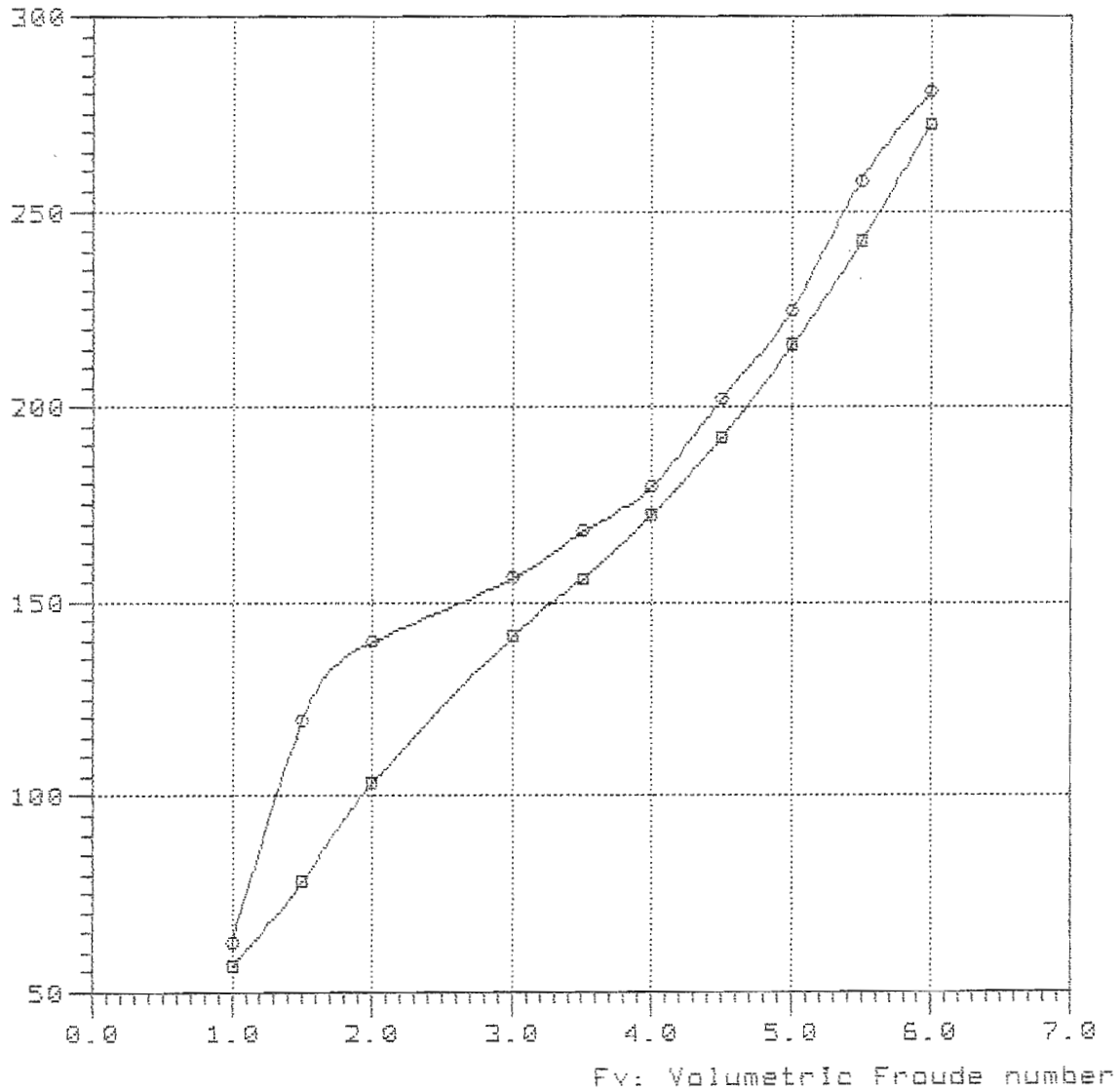
### Volumetric Froude number

File: 6-55-449.mdl

Date: 22 Feb 00

Time: 8:52

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=6.006 Lpx/Rp=5.000 Lcg/Lpx=0.445

Model = 4667  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 15.000 ft  
Lwl = 14.820 ft  
Bpx = 3.668 ft  
Ap = 45.000 sqft  
Disp = 1000.00 lb  
Deadrise = 13.00 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 ft

Lpx/Bpx = 4.089  
Lpx/Ap = 5.000  
Ap /Vol = 7.200  
Lpx/Vol = 6.018

NavCad(tm) 3.1d

(c) Copyright 1995

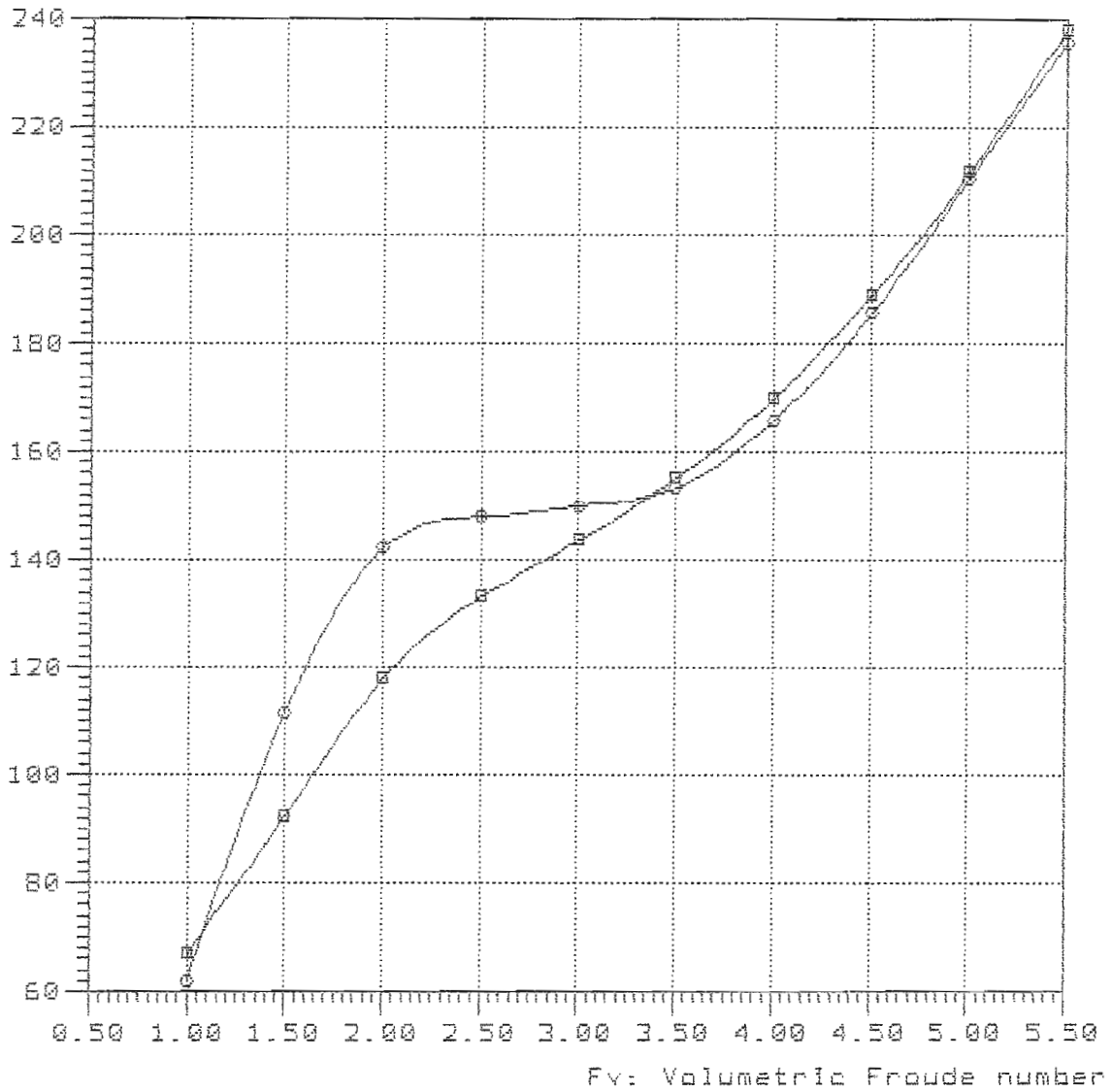
HydroComp, Inc.

File: 7-61-369.mdl

Date: 22 Feb 00

Time: 10:16

Rbare: Bare-hull resistance (lbs)

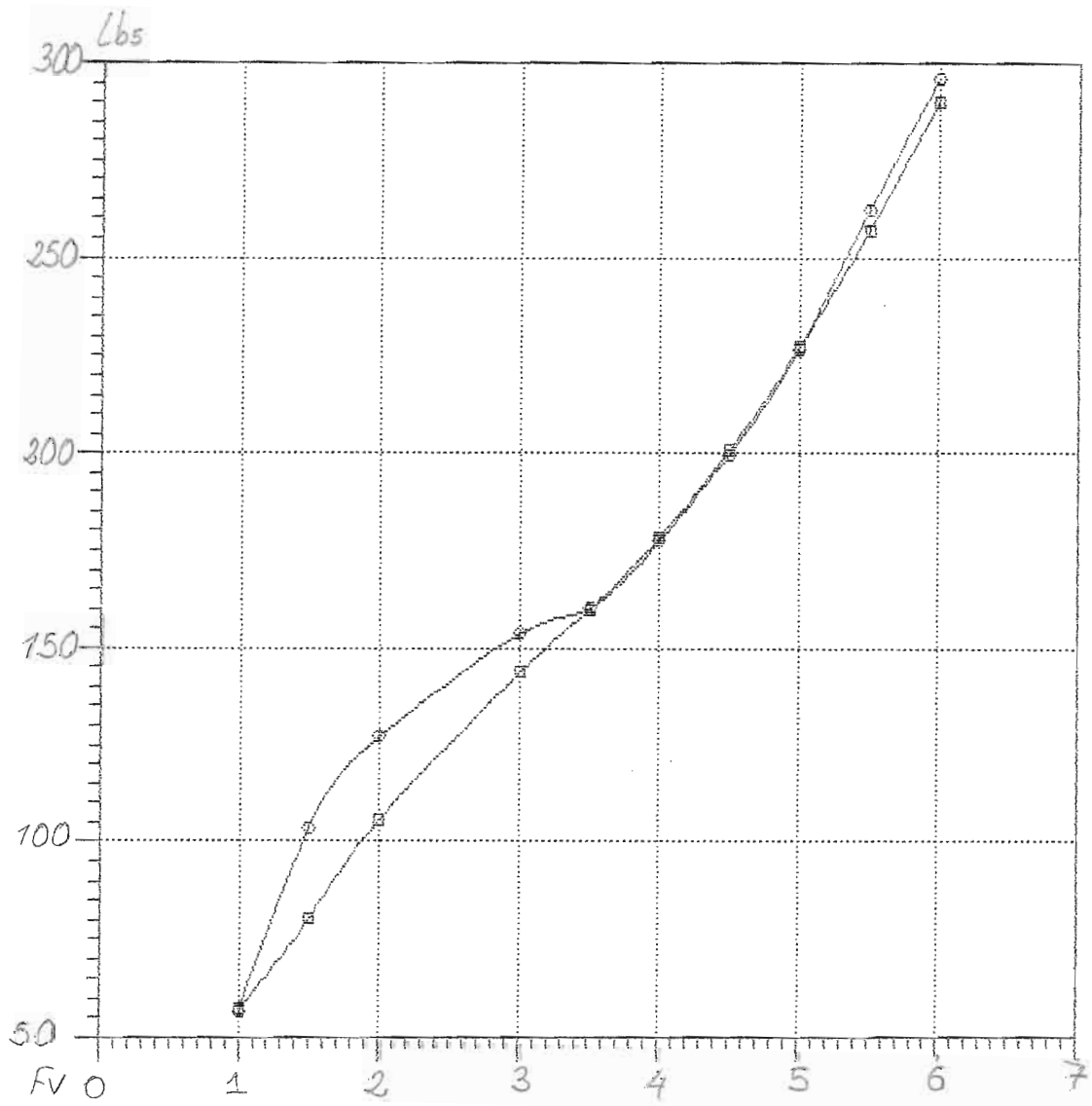


—■—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=7.200 Lpx/Ap=5.000 Log/Lpx=0.369



7-61-409



NavCad(tm) 3.1d

### Bare-hull resistance

File: 7-61-429.mdl

(c) Copyright 1995

vs.

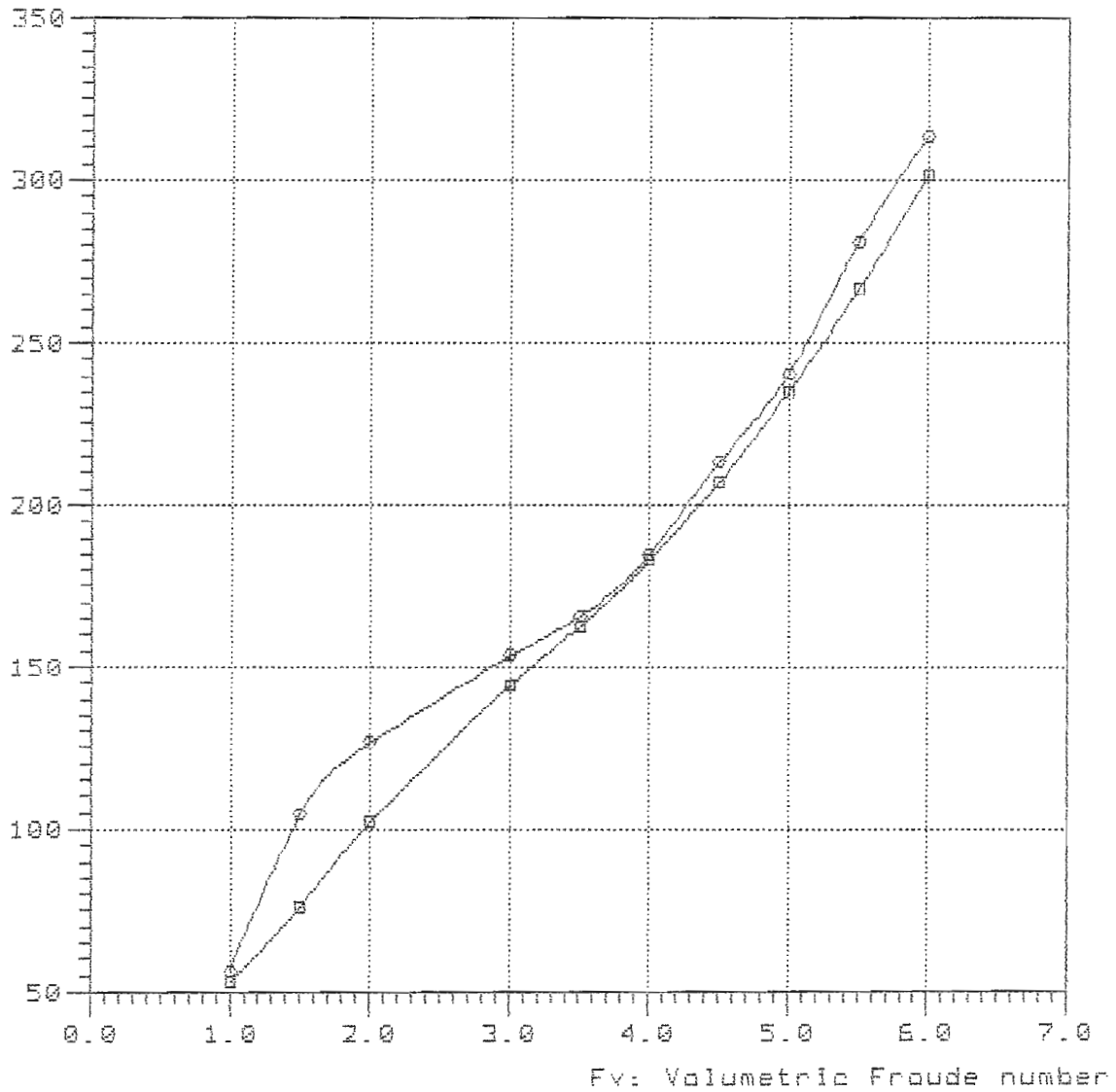
Date: 22 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 10:22

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=7.200 Lpx/Ap=5.000 Lcg/Lpx=0.429

NavCad(tm) 3.1d

(c) Copyright 1995

HydroComp, Inc.

### Bare-hull resistance

vs.

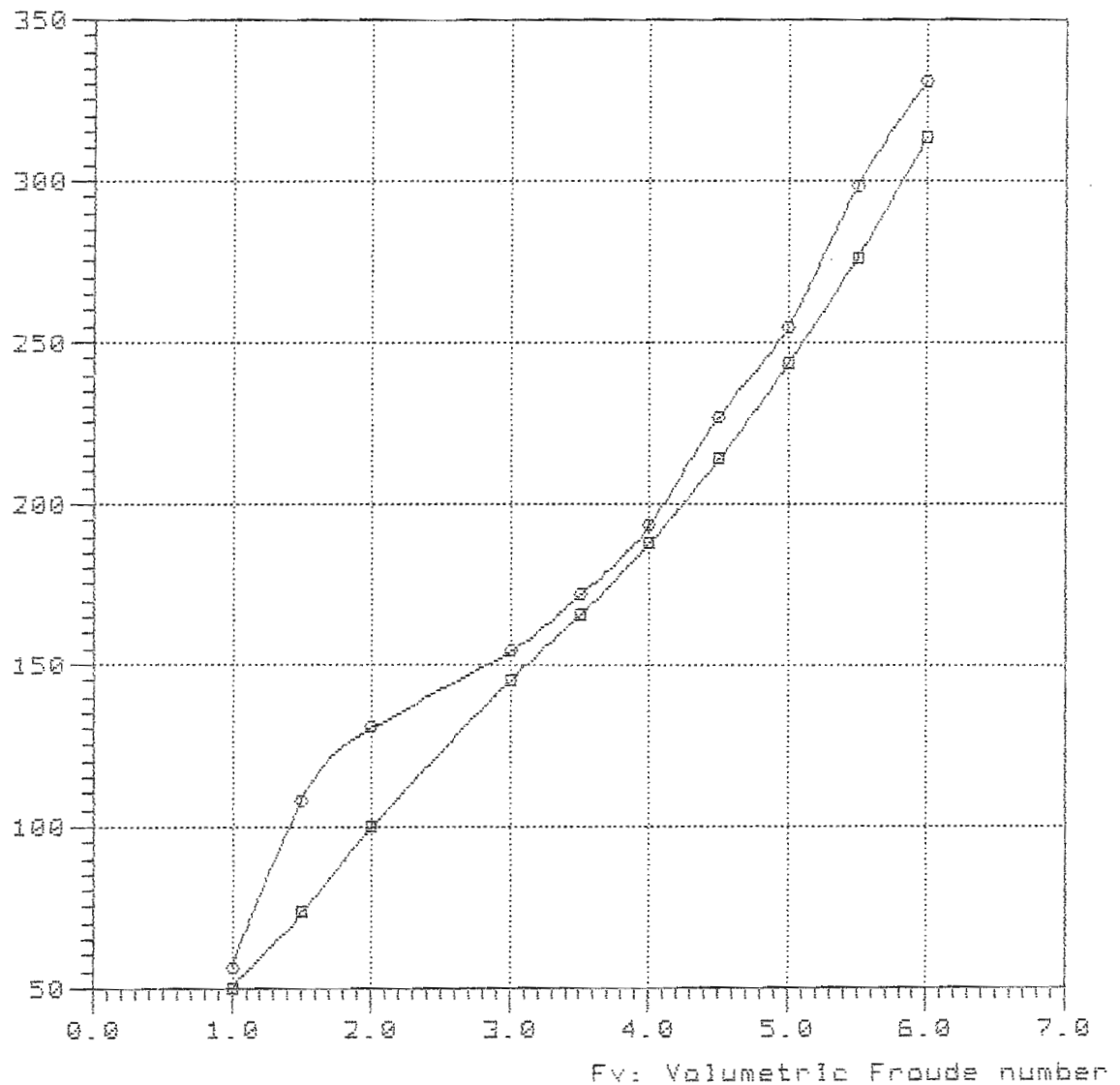
### Volumetric Froude number

File: 7-61-449.mdl

Date: 22 Feb 00

Time: 10:26

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Val=7.200 Lpx/Ap=5.000 Lcg/Lpx=0.449

NavCad(tm) 3.1d

(c) Copyright 1985

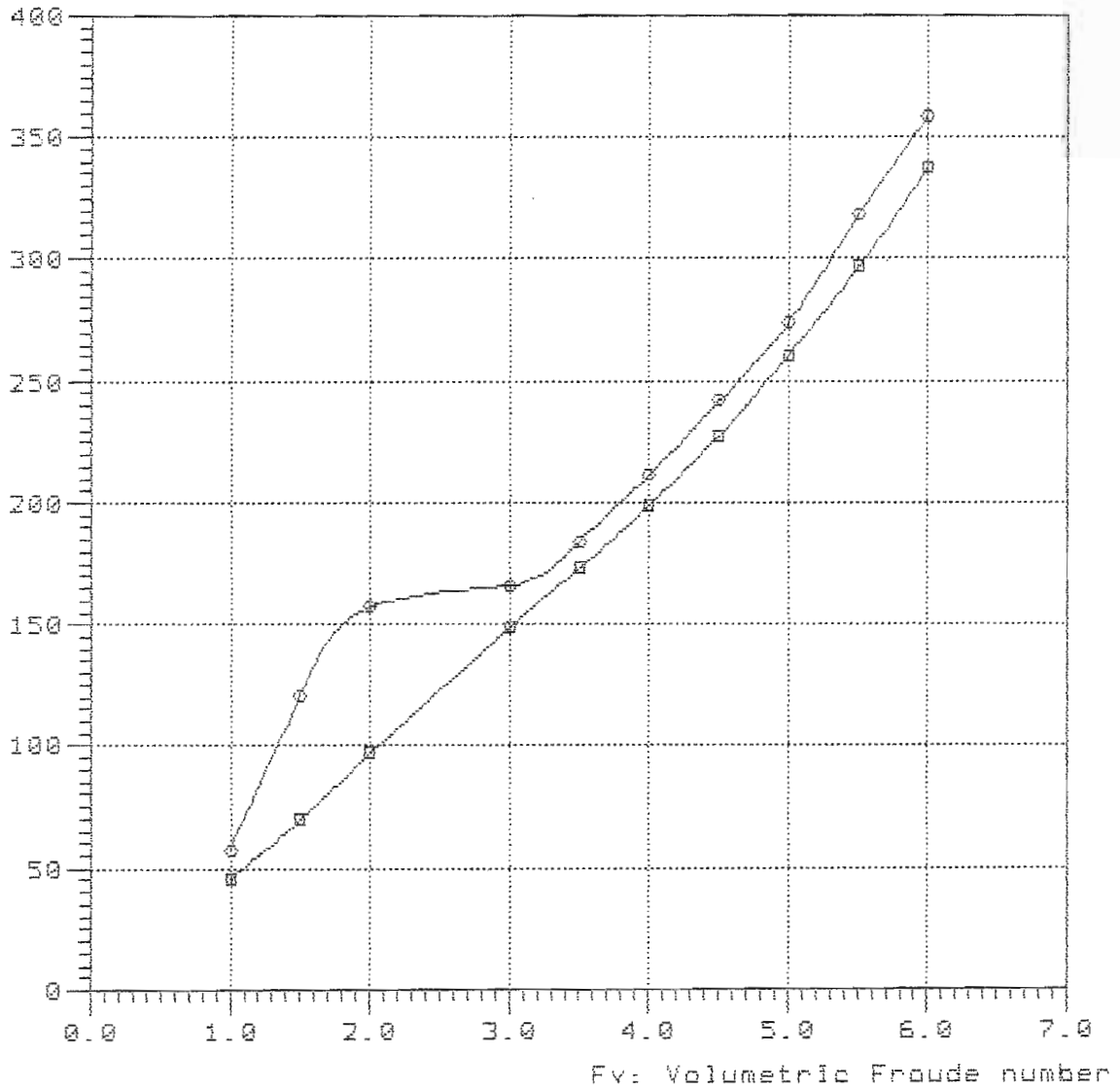
HydroComp, Inc.

File: 7-61-489.mdl

Date: 22 Feb 00

Time: 10:29

Rbare: Bare-hull resistance (lba)



—■—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=7.200 Lpx/Ap=5.000 Log/Lpx=0.489

Model = 4667

Ref = NSRDC

Friction = ~~A~~TTC  $Ca=4e-4$

Lpx = 16.200 ft

Lwl = 16.006 ft

Bpx = 3.961 ft

Ap = 52.488 sqft

Disp = 1000.00 lb

Deadrise = 13.00 degree

Shaft Ang = 0.00 degree

Vce = 0.00 ft

Lpx/Bpx = 4.090

Lpx/Ap = 5.000

Ap /Vol = 8.398

Lpx/Vol = 6.499

NavCad(tm) 3.1d

(c) Copyright 1995

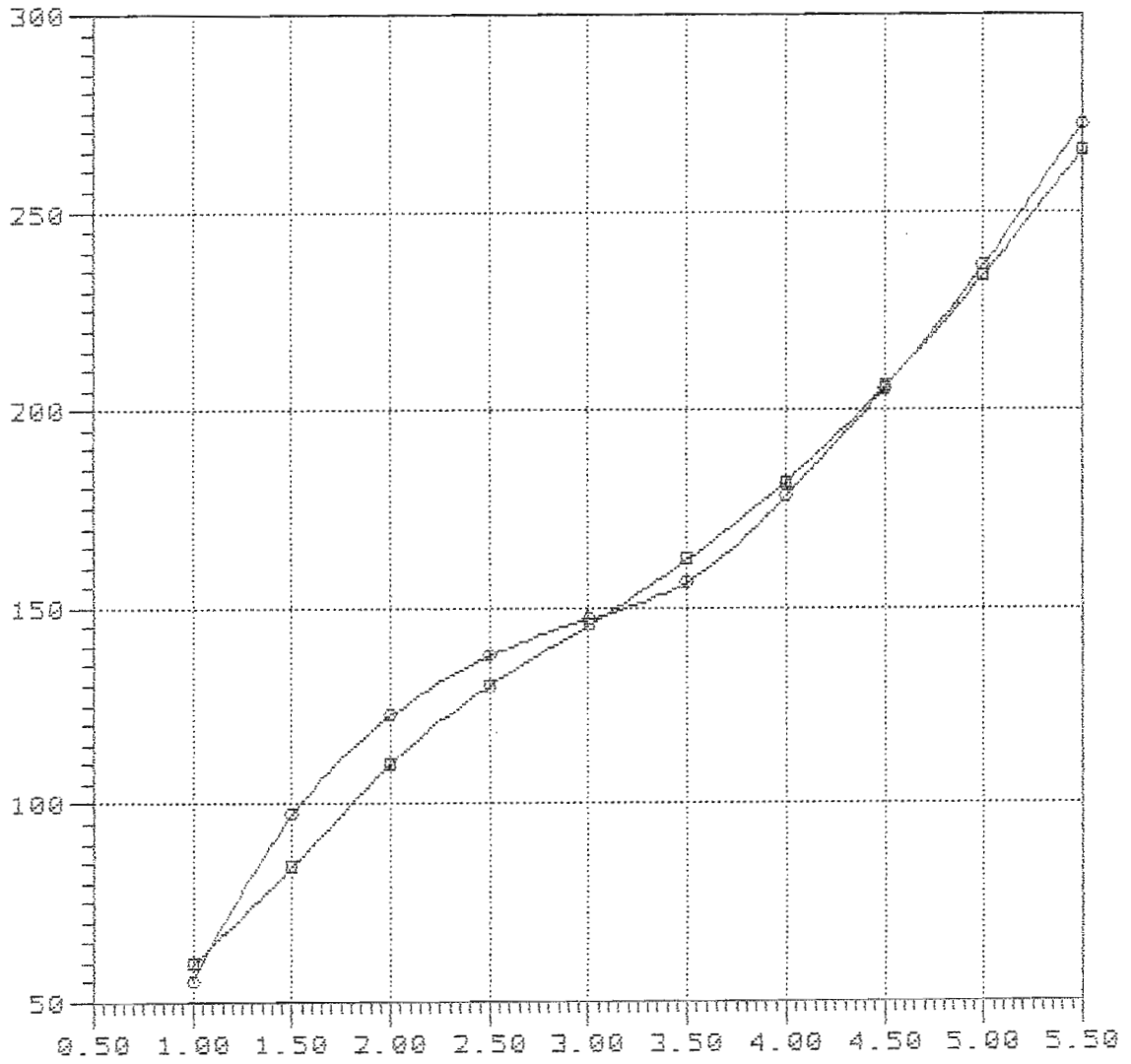
HydroComp, Inc.

File: 8-65-369.mdl

Date: 22 Feb 00

Time: 10:32

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—□—

—○— THB-4667 Lpx/Bpx=4.09 Ap/Vol=8.398 Lpx/Ap=5.000 Lcg/Lpx=0.369

NavCad(tm) 3.1d

(c) Copyright 1995

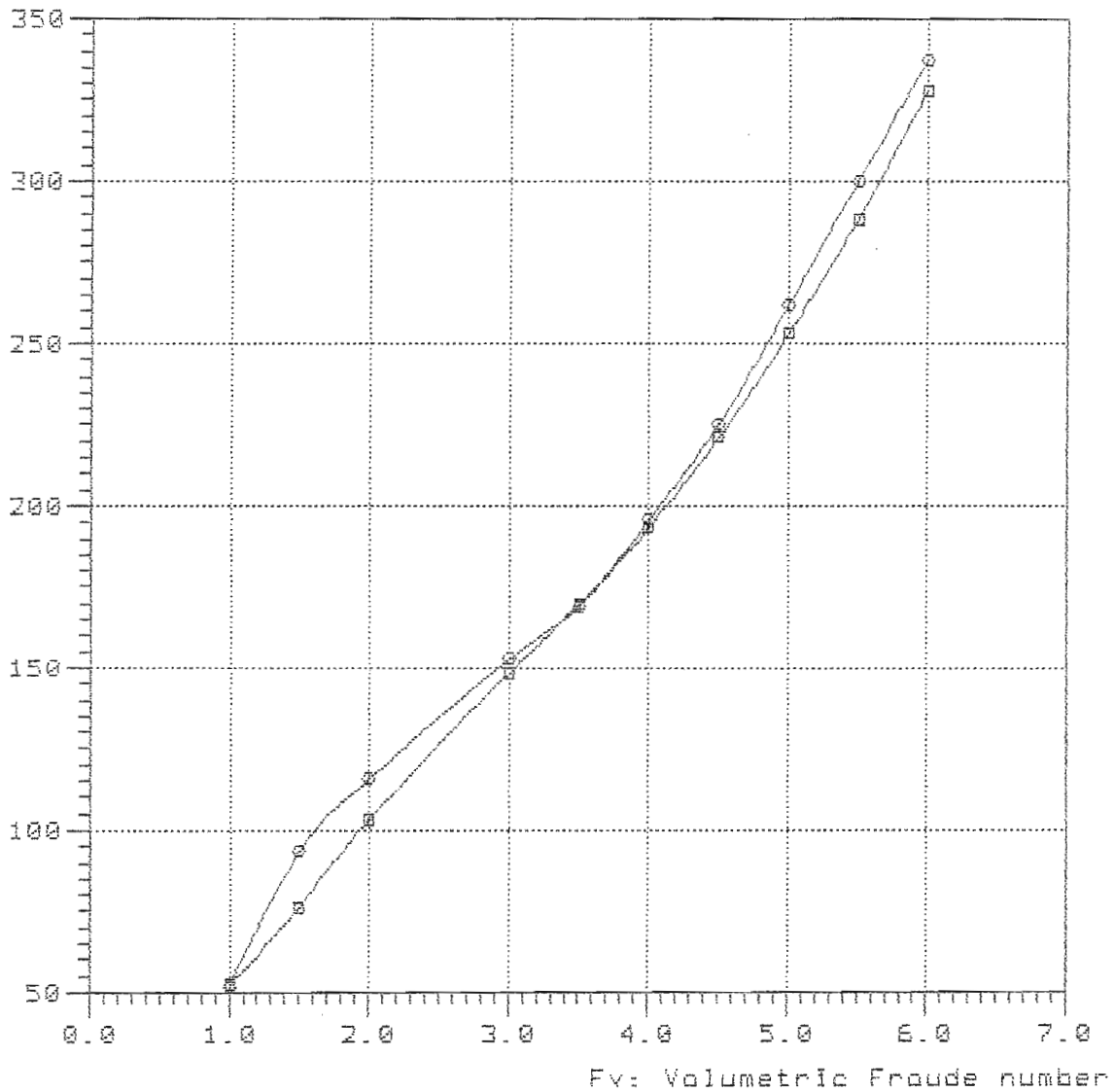
HydroComp, Inc.

File: 8-65-409.mdl

Date: 22 Feb 00

Time: 10:36

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Val=8.398 Lpx/Ap=5.000 Log/Lpx=0.409

NavCad(tm) 3.1d

(c) Copyright 1995

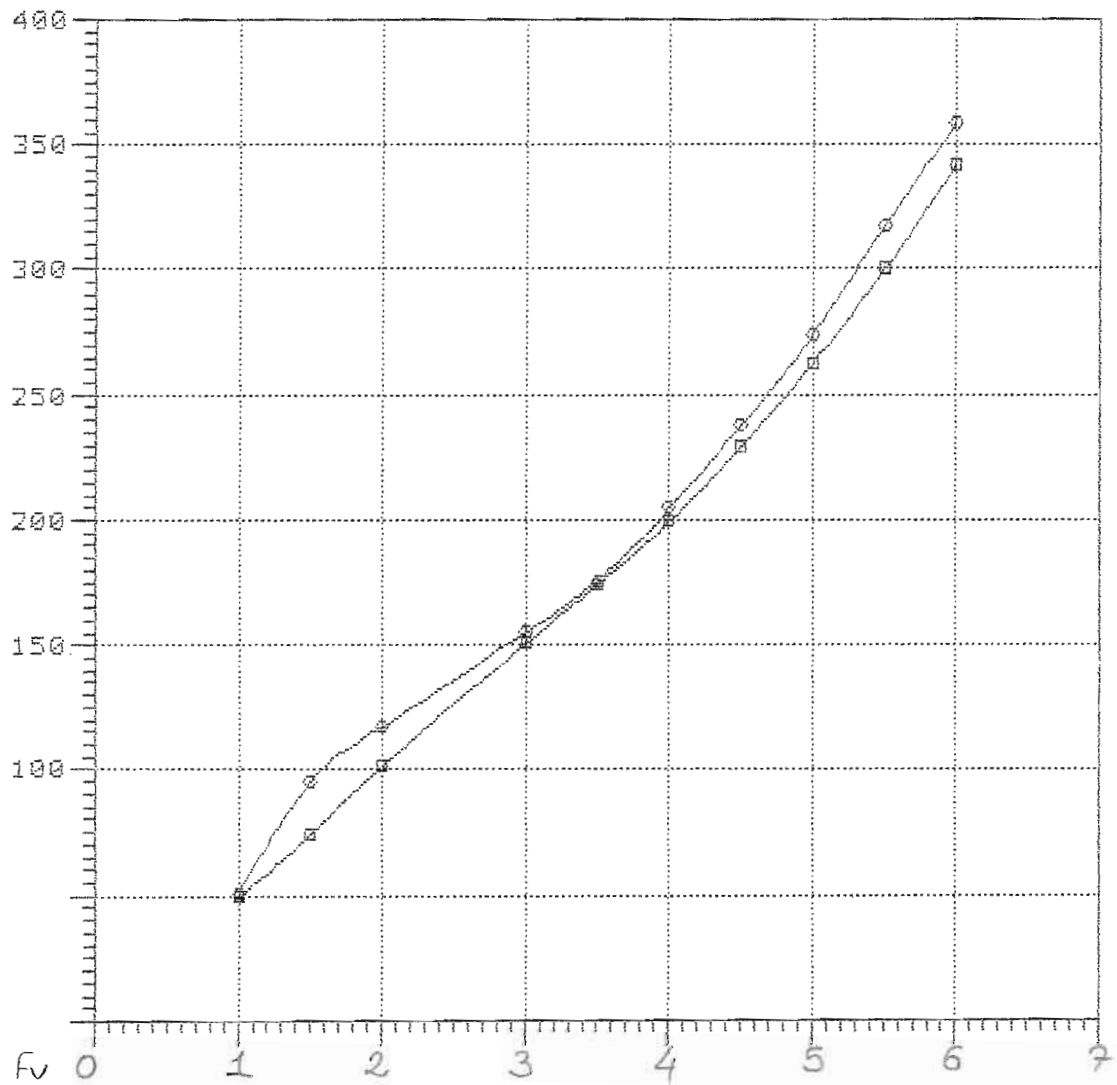
HydroComp, Inc.

File: 8-65-429.mdl

Date: 22 Feb 00

Time: 10:39

Rbare: Bare-hull resistance (lbs)





NavCad(tm) 3.1d

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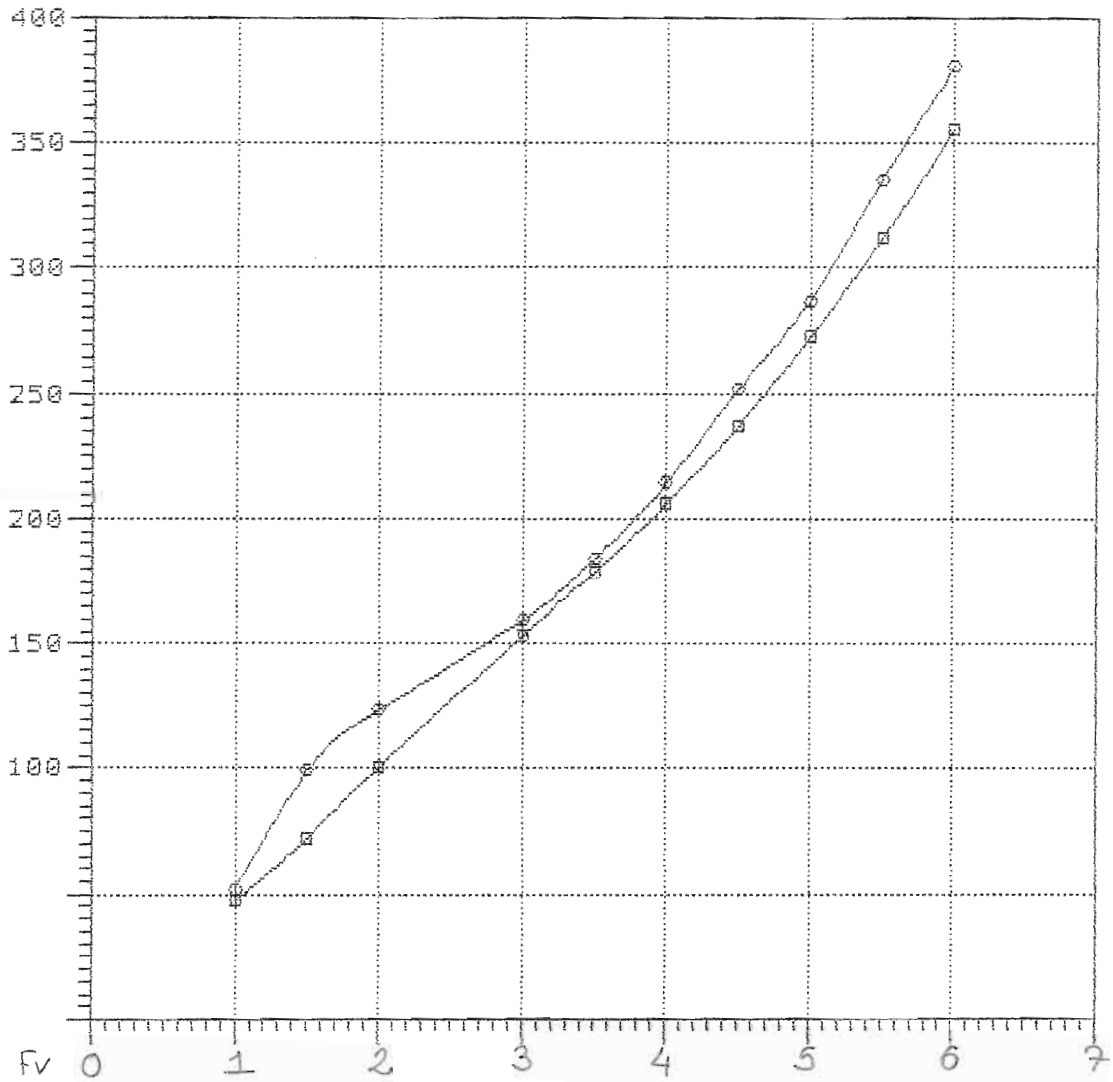
HydroComp, Inc.

File: B-65-449.mdl

Date: 22 Feb 00

Time: 10:42

Rbare: Bare-hull resistance (lbs)



—■—

—○—

NavCad(tm) 3.1d

(c) Copyright 1995

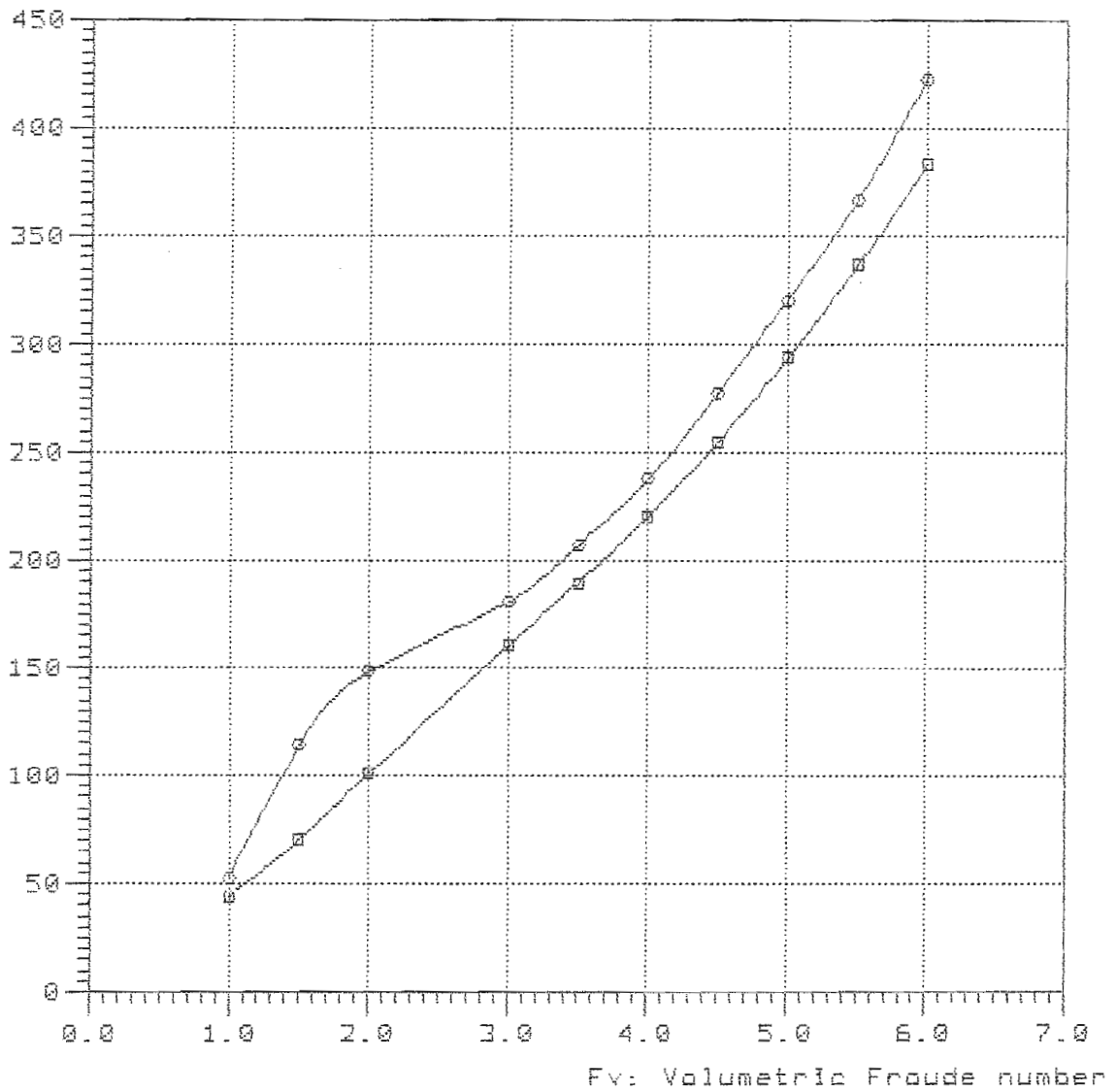
HydroComp, Inc.

File: 8-65-489.mdl

Date: 22 Feb 00

Time: 10:47

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4667 Lpx/Bpx=4.09 Ap/Vol=8.398 Lpx/Ap=5.000 Log/Lpx=0.489

4668

Model = 4668

Ref = SNAME  
Friction = ATTC Ca=0.0

Lpx = 8.000 ft  
Lwl = 7.862 ft  
Bpx = 1.455 ft  
Ap = 9.518 sqft  
Disp = 141.80 lb  
Deadrise = 13.00 degree  
Shaft Ang= 7.30 degree  
Vce = -1.60 ft

Lpx/Bpx = 5.498  
Lpx/Ap = 6.724  
Ap /Vol = 5.601  
Lpx/Vol = 6.154

**Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCİ DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez, kopya  
veya kopya edilemez ve her ne maksadla  
olsun, olursa olsun maksadı dışında  
izinsiz kullanılamaz.**

NavCad(tm) 3.1d

(c) Copyright 1995

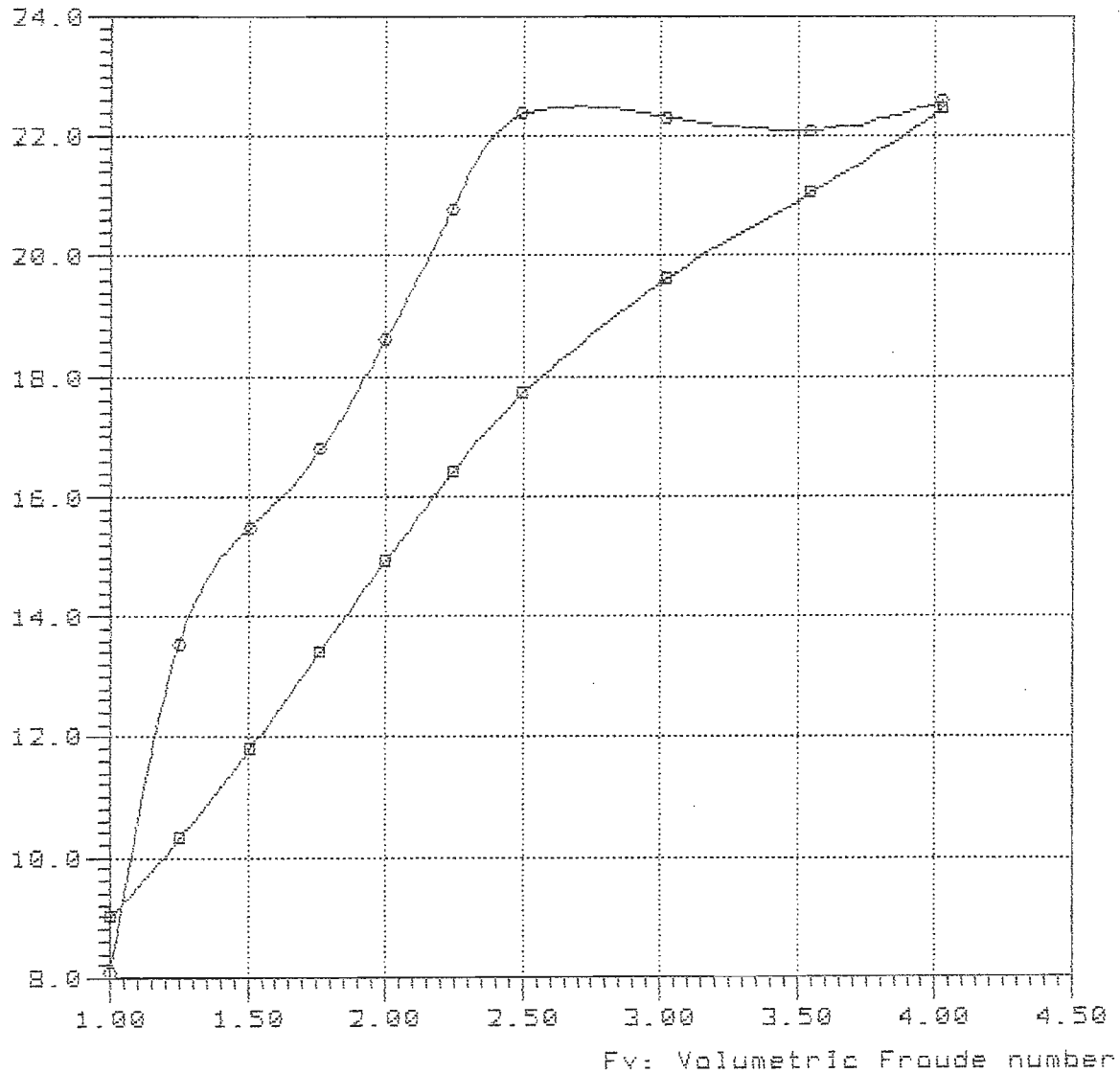
HydroComp, Inc.

File: 5-61-36b.mdl

Date: 22 Feb 00

Time: 11:25

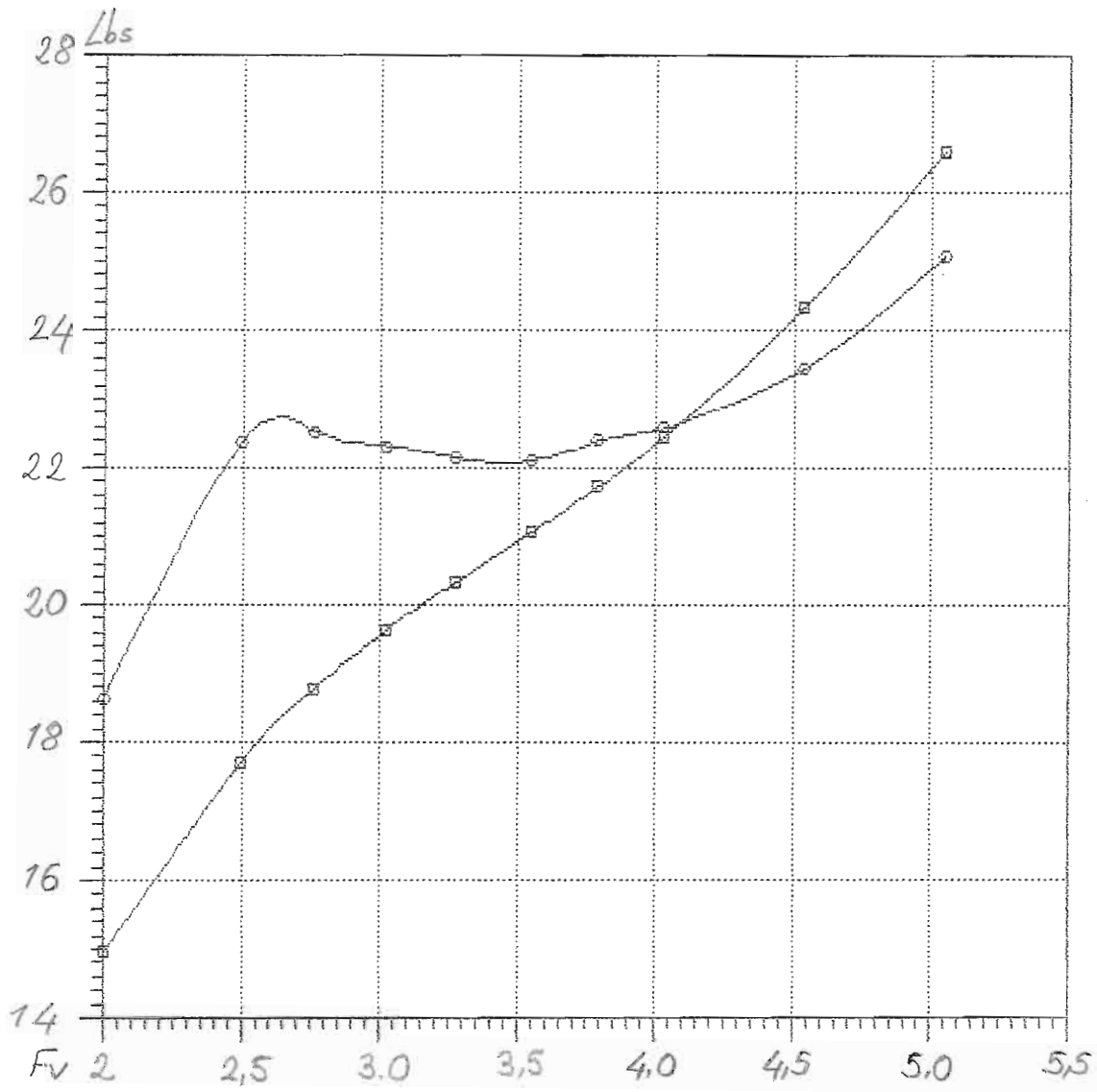
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4668 Lpx/Bpx=5.500 Ap/Vol=5.498 Lpx/Ap=6.724 Log/Lpx=0.369

5-61-36c



—□—  
—○—

NavCad(tm) 3.1d

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HydroComp, Inc.

### Bare-hull resistance

vs.

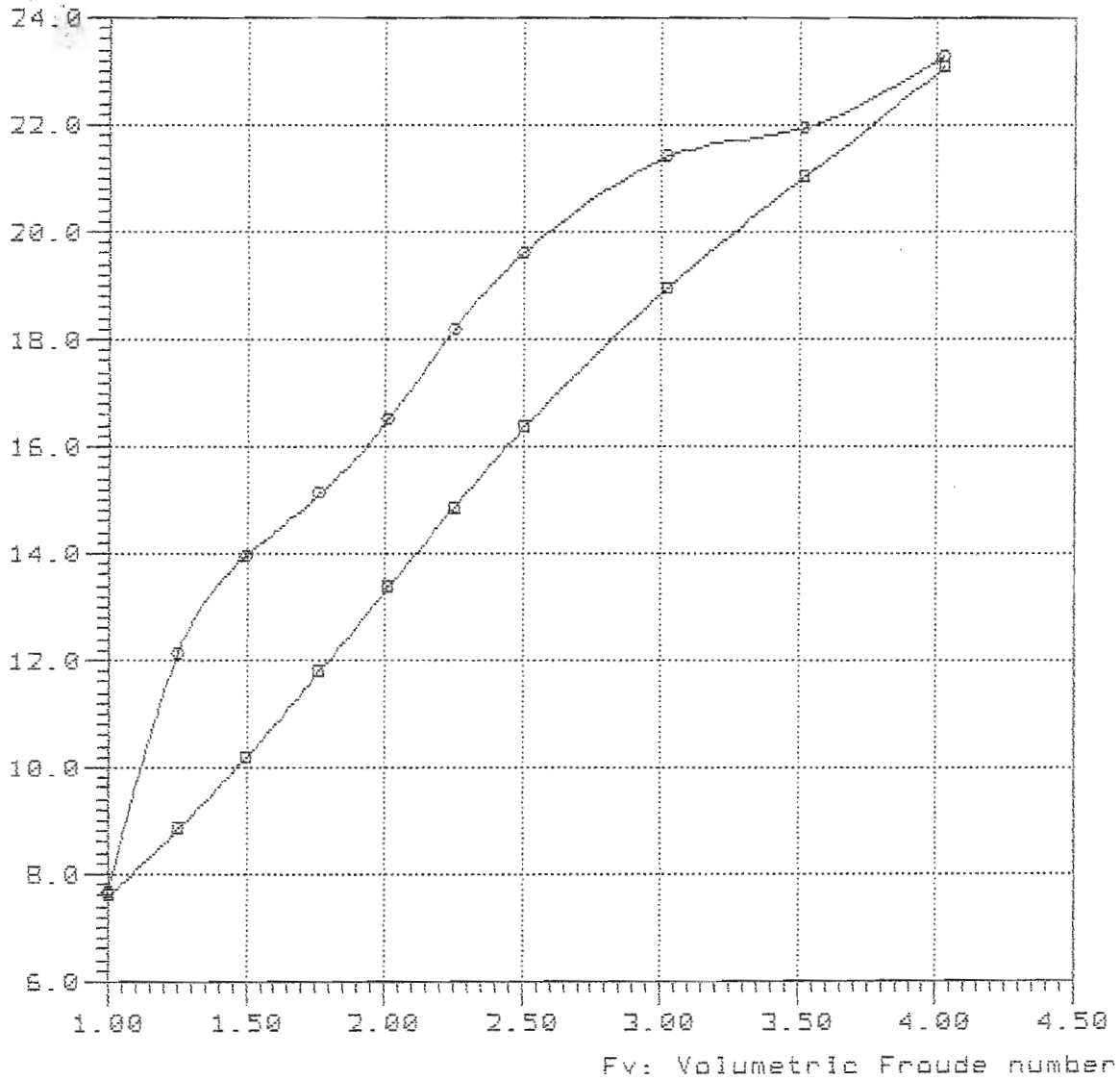
### Volumetric Froude number

File: 5-61-40b.mdl

Date: 22 Feb 00

Time: 11:47

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-4668 Lpx/Bpx=5.500 Ap/Vol=5.498 Lpx/Ap=6.724 Lcg/Lpx=0.409

NavCad(tm) 3.1d

### Bare-hull resistance

File: 5-61-40c.mdl

(c) Copyright 1985

vs.

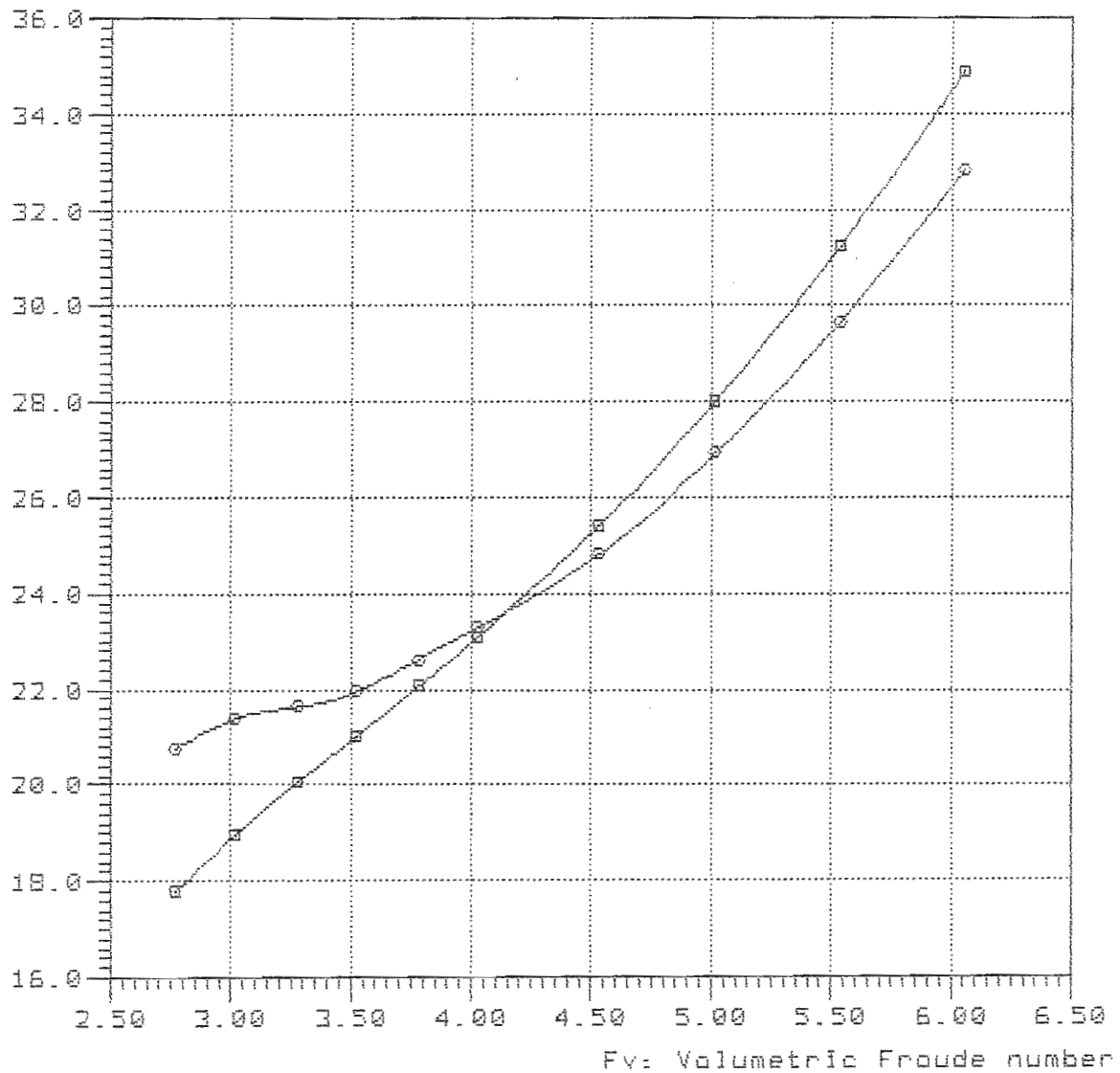
Date: 22 Feb 88

HydroComp, Inc.

### Volumetric Froude number

Time: 11:51

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-4668 Lpx/Bpx=5.500 Ap/Vol=5.498 Lpx/Ap=6.724 Lcg/Lpx=0.409



NavCad(tm) 3.1d

(c) Copyright 1995

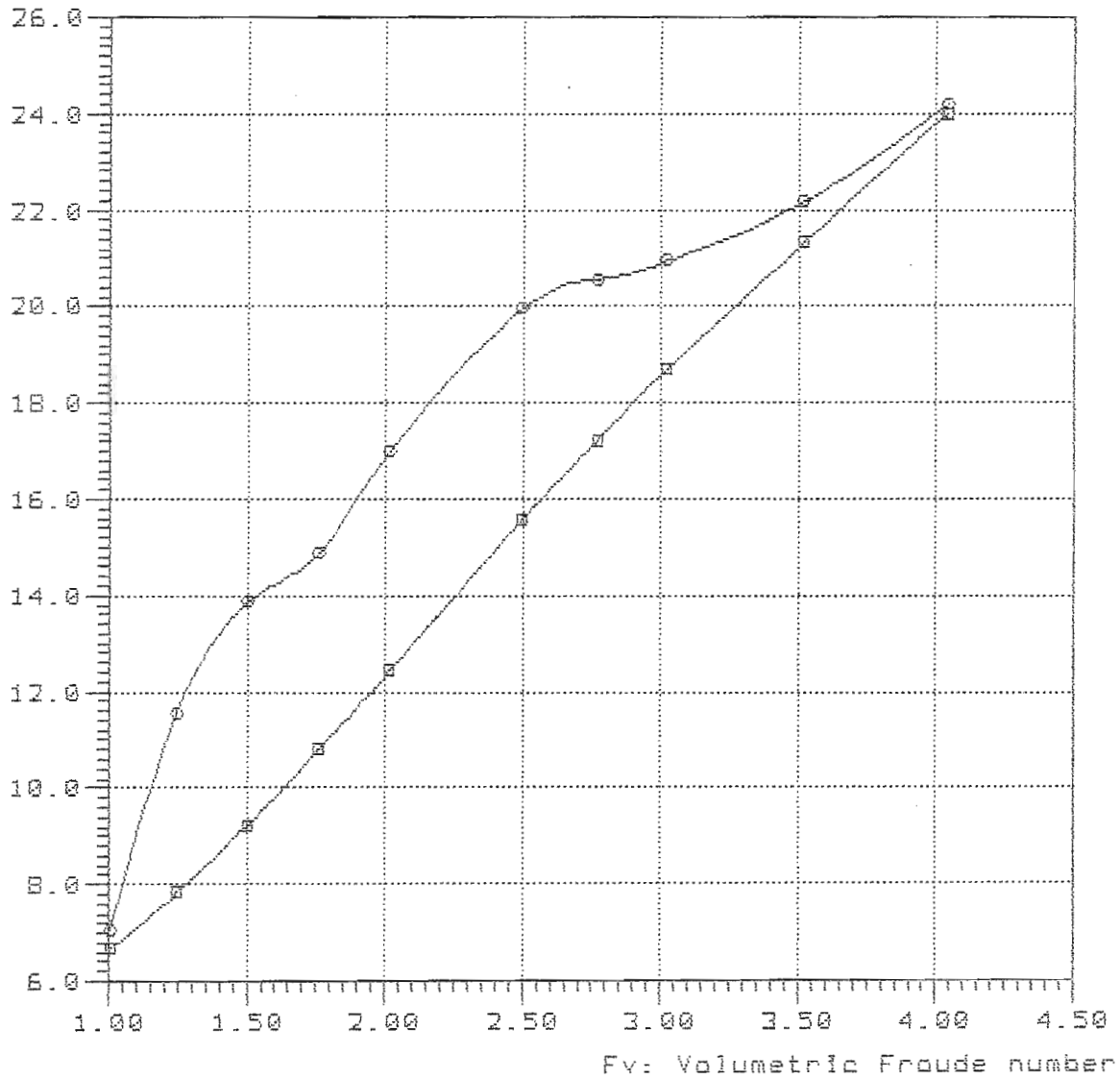
HydroComp, Inc.

File: 5-61-44b.mdl

Date: 22 Feb 00

Time: 11:54

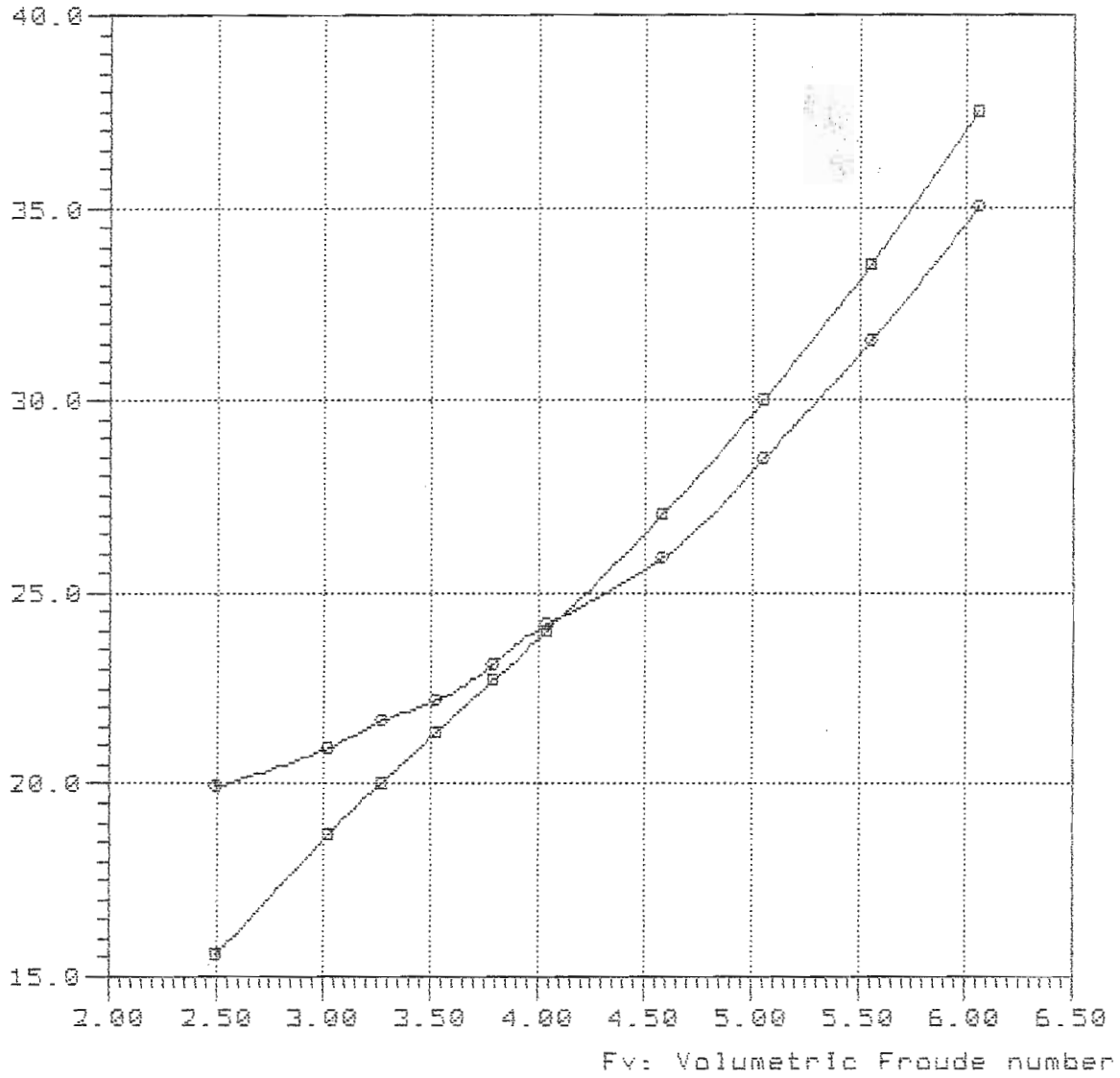
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-466B Lpx/Bpx=5.500 Ap/Vol=5.498 Lpx/Ap=6.724 Log/Lpx=0.449

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-4668 Lpx/Bpx=5.500 Ap/Vol=5.498 Lpx/Ap=6.724 Lcg/Lpx=0.449

NavCad(tm) 3.1d

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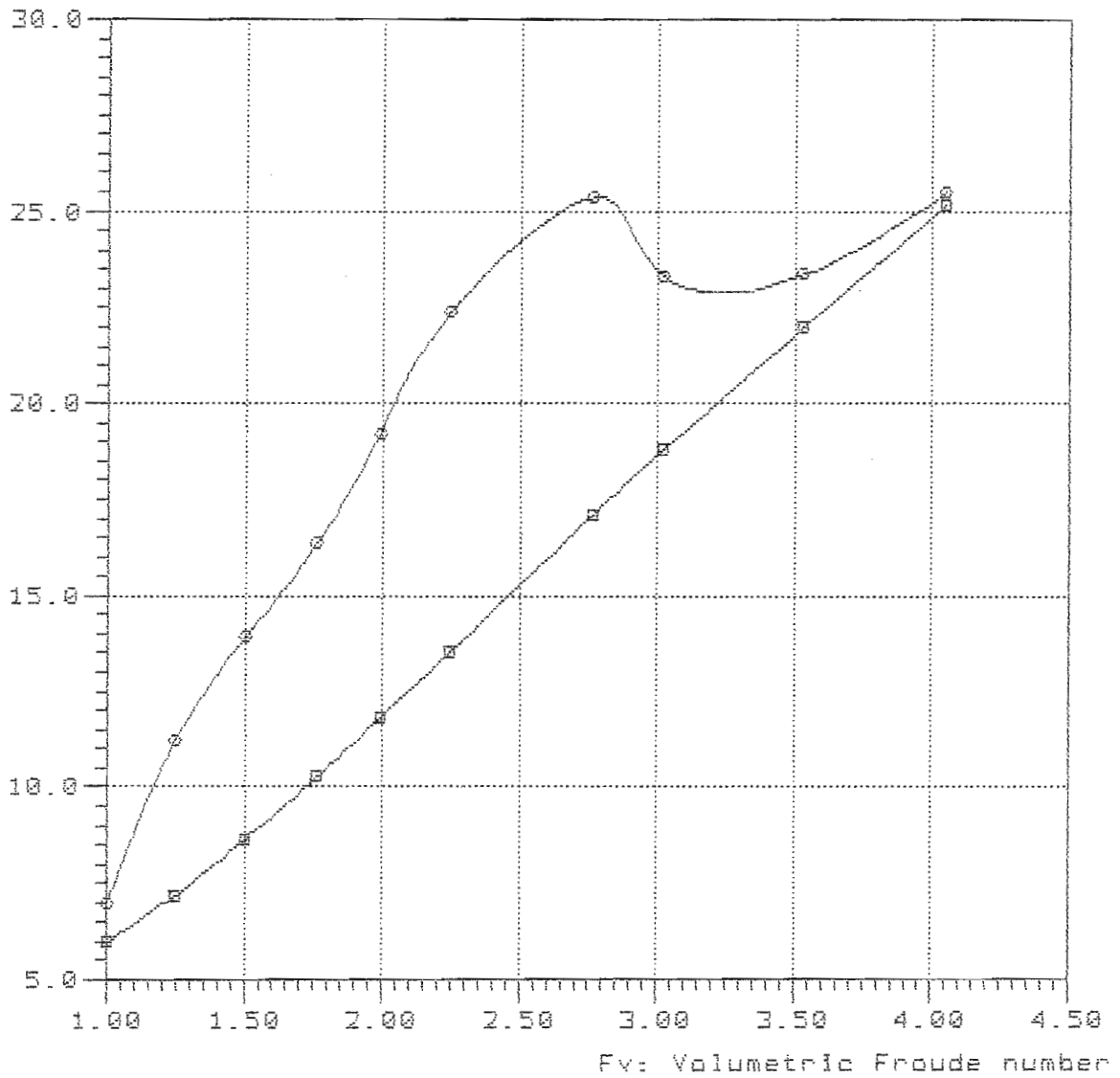
HydroComp, Inc.

File: 5-61-48b.mdl

Date: 22 Feb 00

Time: 12:00

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4668 Lpx/Bpx=5.500 Ap/Vol=5.498 Lpx/Rp=6.724 Leg/Lpx=0.489

NavCad(tm) 3.1d

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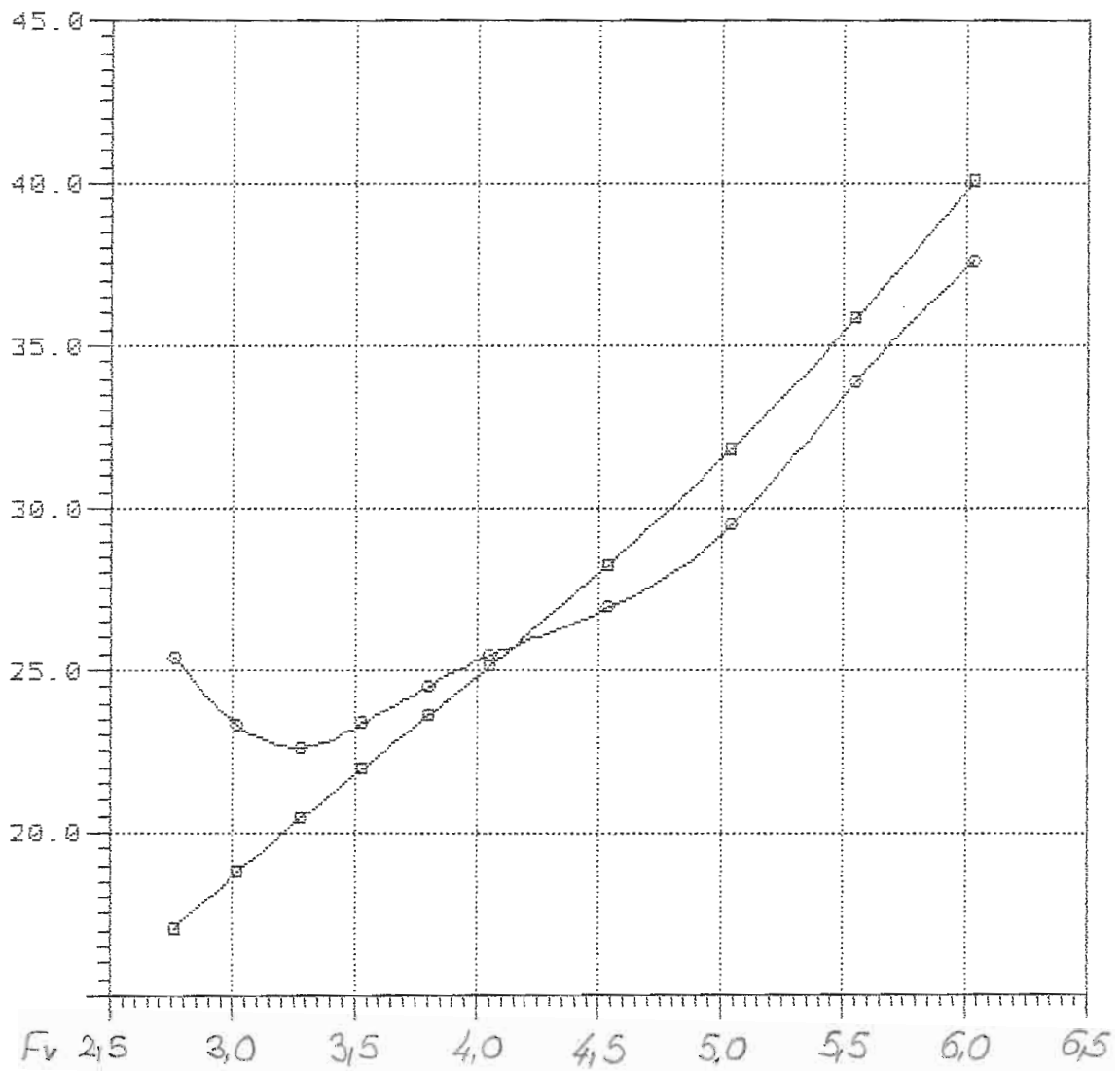
HydroComp, Inc.

File: 5-61-48c.mdl

Date: 22 Feb 00

Time: 12:04

Rbare: Bare-hull resistance (lbs)



—■—  
—●—

Model = 4668  
Ref = SNAME  
Friction = ATTC Ca=0.0

Lpx = 8.000 ft  
Lwl = 7.862 ft  
Bpx = 1.455 ft  
Ap = 9.518 sqft  
Disp = 98.70 lb  
Deadrise = 13.00 degree  
Shaft Ang= 7.30 degree  
Vce = -1.60 ft

Lpx/Bpx = 5.498  
Lpx/Ap = 6.724  
Ap /Vol = 7.131  
Lpx/Vol = 6.944

NavCad(tm) 3.1d

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HydroComp, Inc.

### Bare-hull resistance

vs.

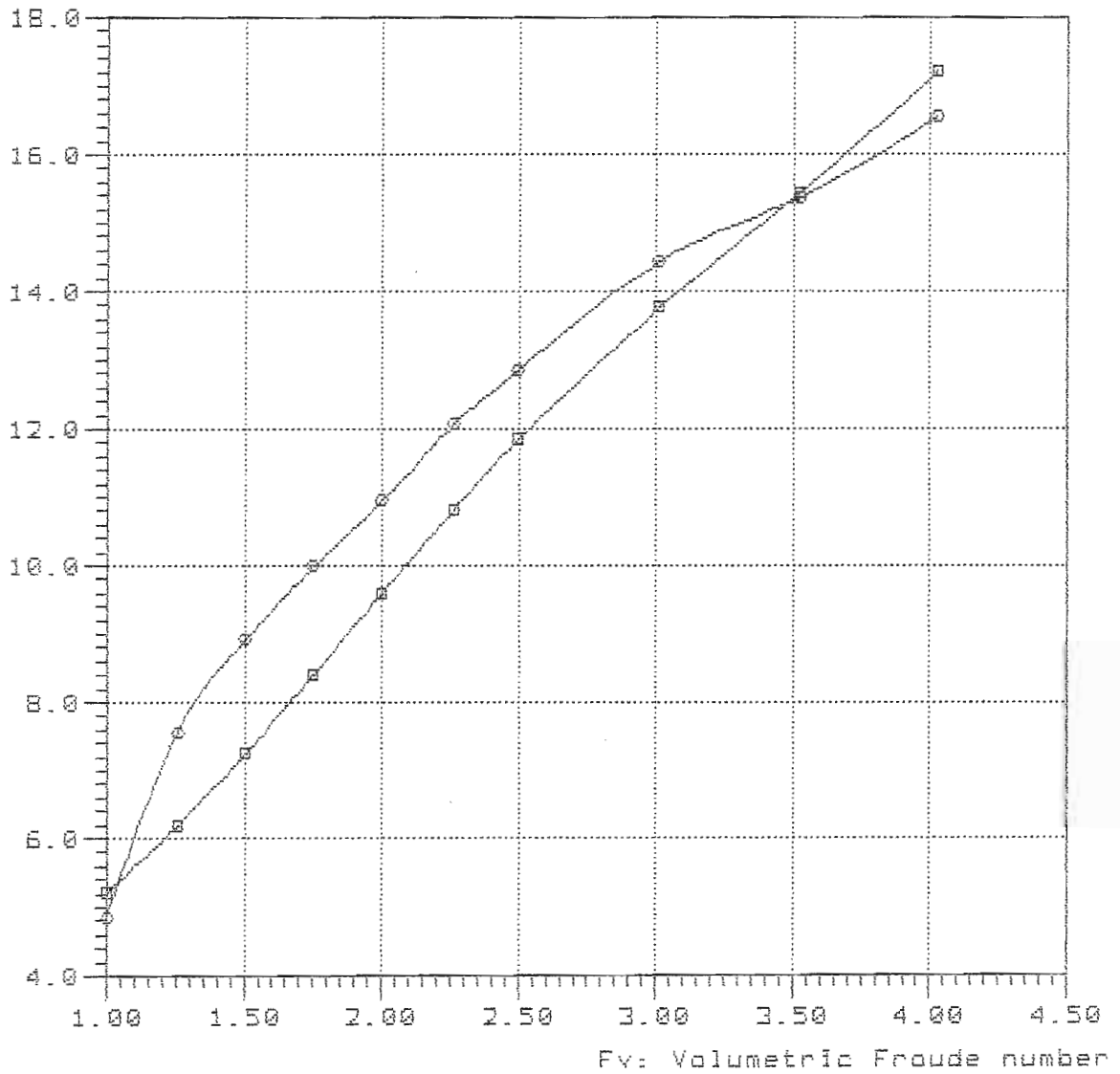
### Volumetric Froude number

File: 7-69-36b.mdl

Date: 22 Feb 00

Time: 12:23

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-4668 Lpx/Bpx=5.500 Ap/Vol=7.002 Lpx/Ap=6.724 Log/Lpx=0.369

NavCad(tm) 3.1d

(c) Copyright 1995

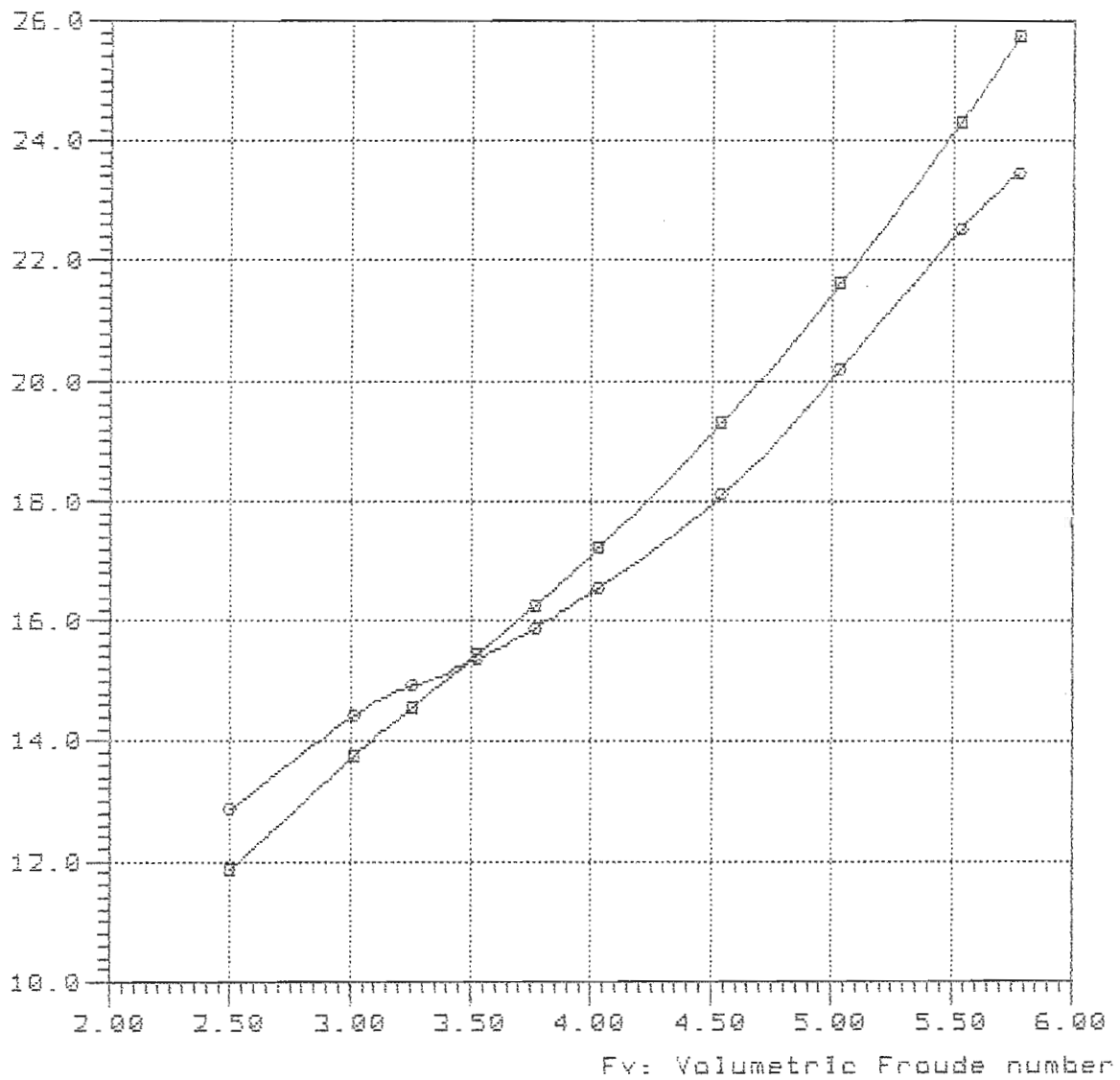
HydroComp, Inc.

File: 7-89-36c.mdl

Date: 22 Feb 00

Time: 12:26

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-466B Lpx/Bpx=5.500 Ap/Vol=7.002 Lpx/Ap=6.724 Log/Lpx=0.369

NavCad(tm) 3.1d

(c) Copyright 1995

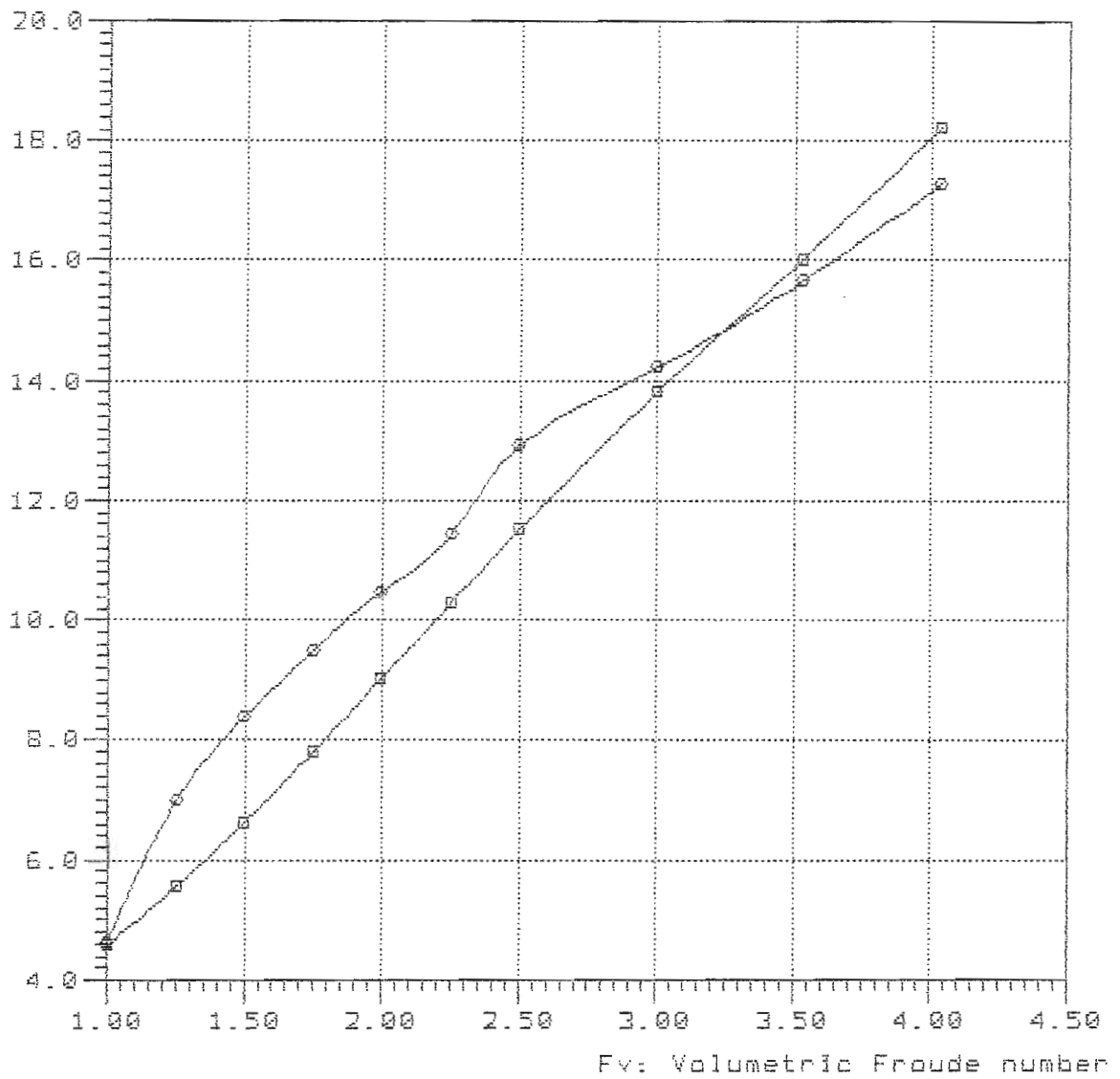
HydroComp, Inc.

File: 7-69-40b.mdl

Date: 22 Feb 00

Time: 12:29

Rbare: Bare-hull resistance (lbs)

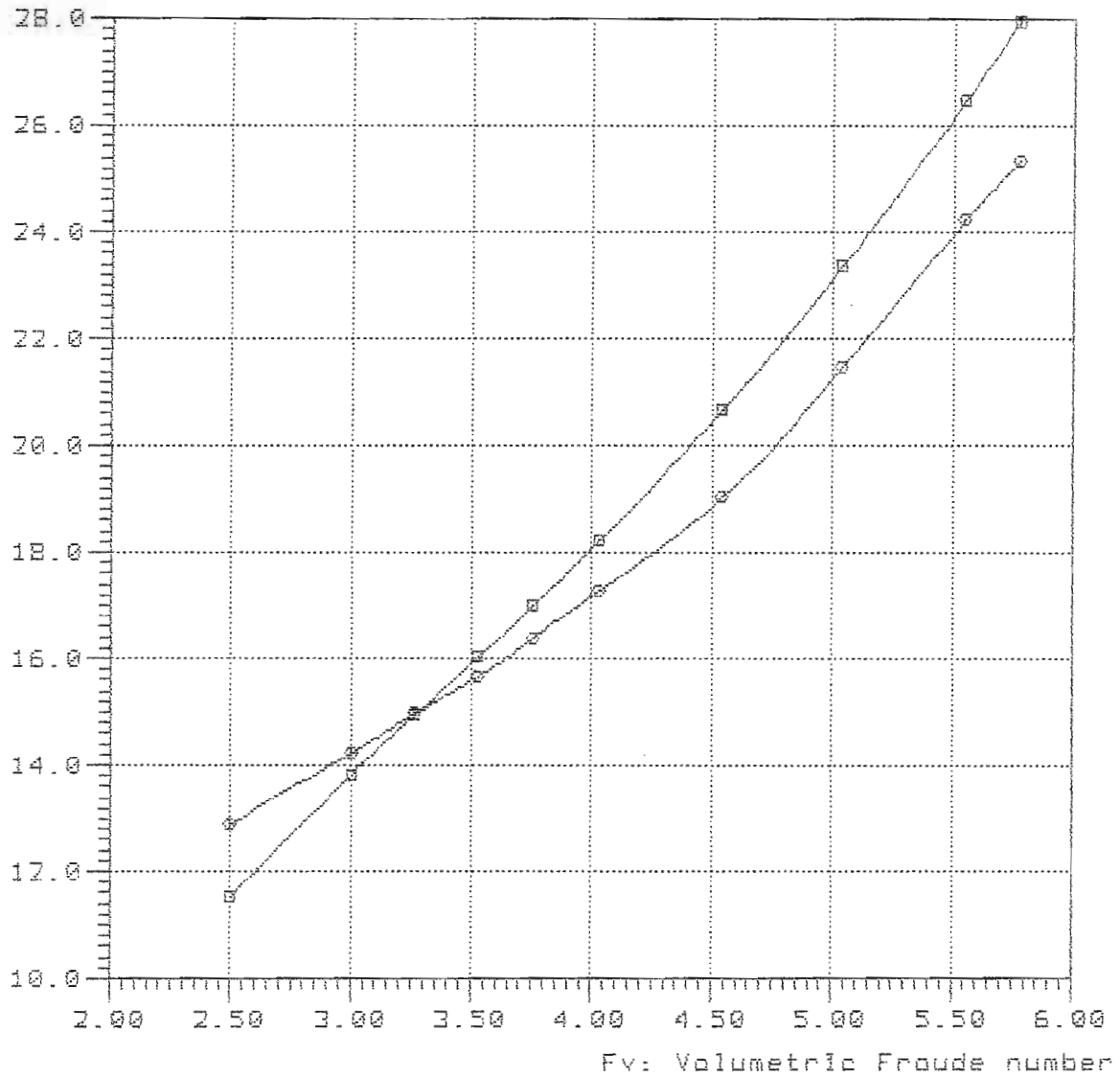


—■—

—●— TMB-466B Lpx/Bpx=5.500 Ap/Vol=7.002 Lpx/Ap=6.724 Lcg/Lpx=0.409



Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-466B Lpx/Bpx=5.500 Ap/Vol=7.002 Lpx/Ap=6.724 Lcg/Lpx=0.409

NavCad(tm) 3.1d

(c) Copyright 1995

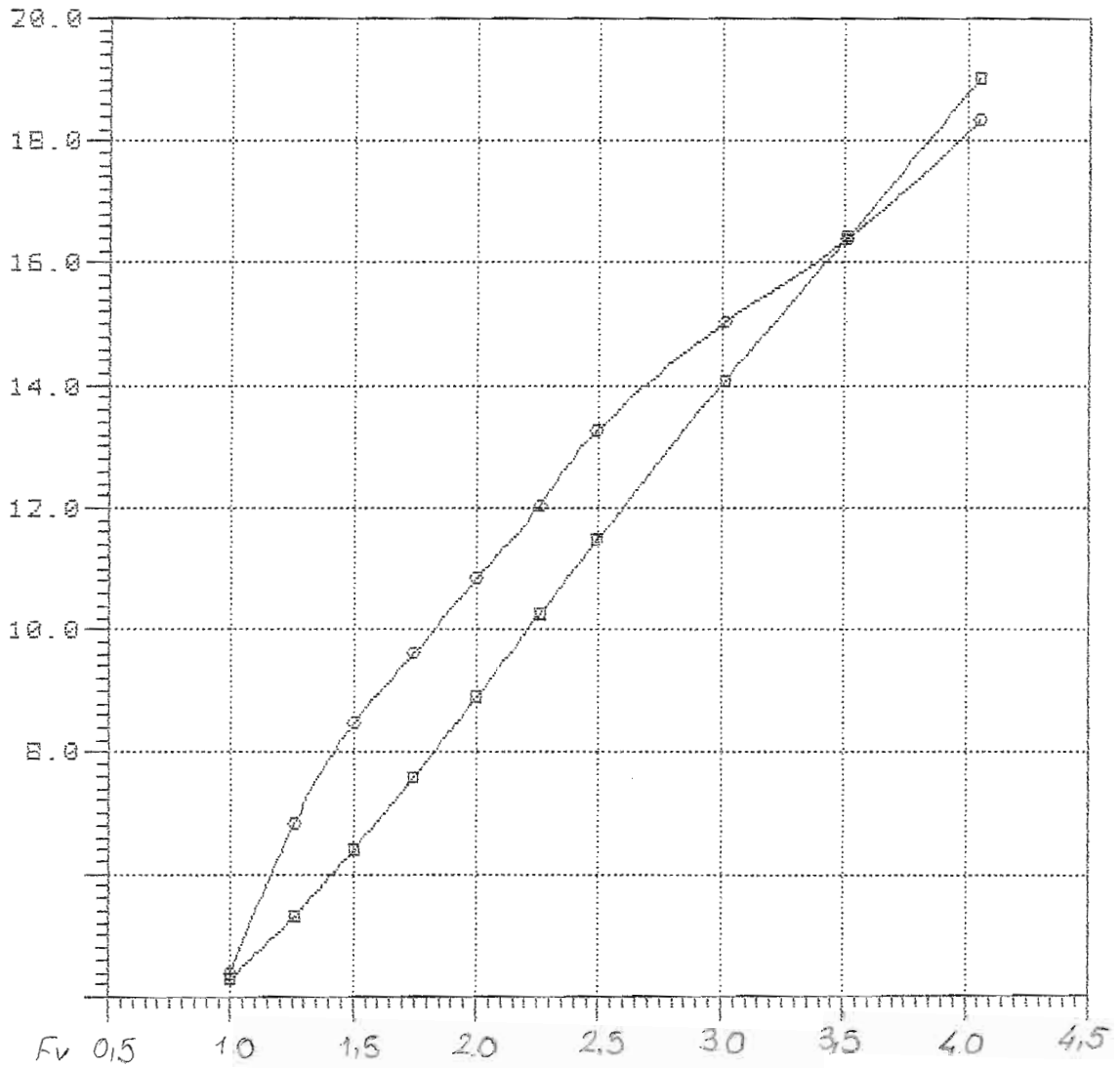
HydroComp, Inc.

File: 7-69-43b.mdl

Date: 22 Feb 00

Time: 12:36

Rbare: Bare-hull resistance (lbs)



—□—

—○—

NavCad(tm) 3.1d

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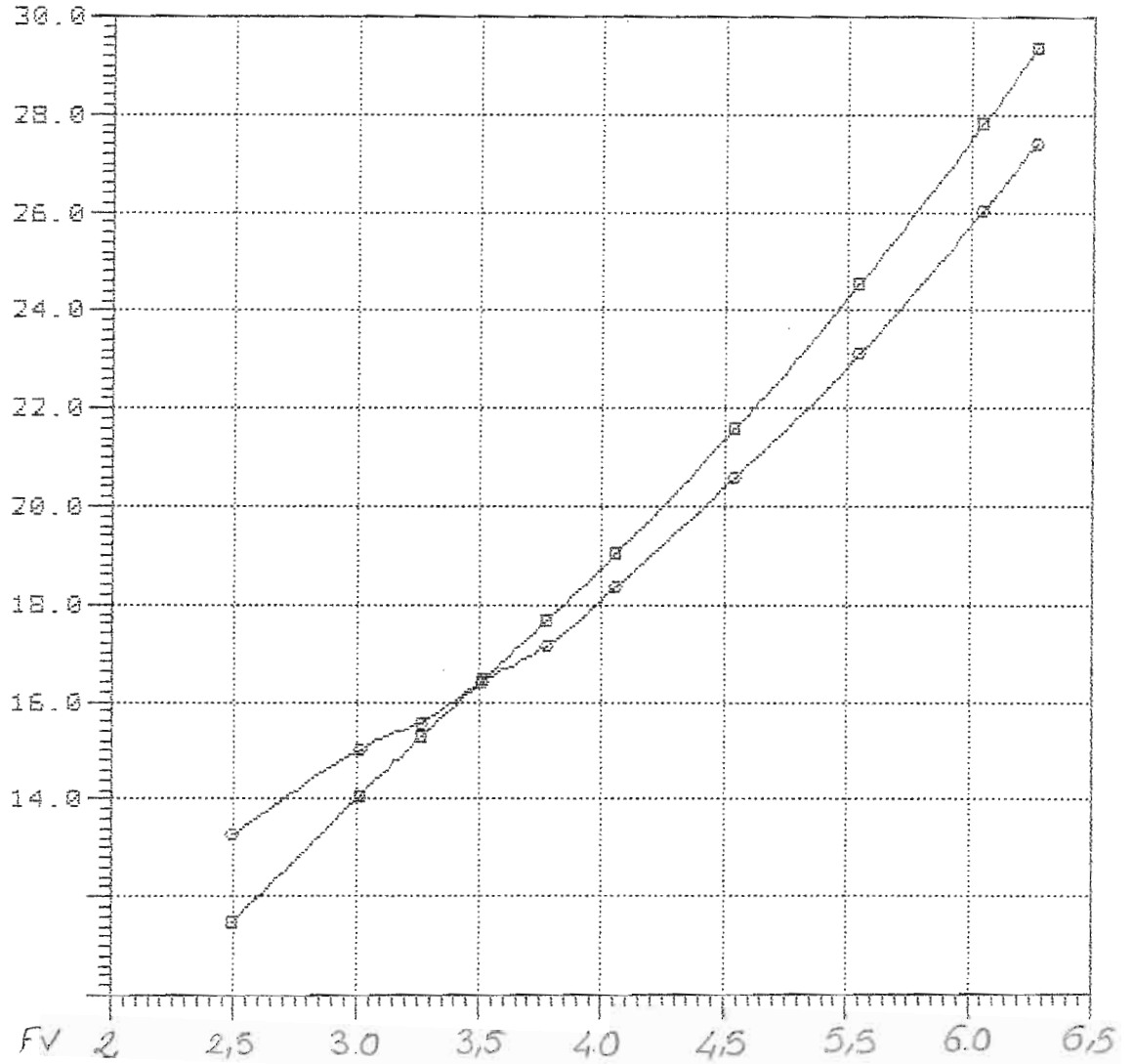
HydroComp, Inc.

File: 7-69-43c.mdl

Date: 22 Feb 00

Time: 12:40

Rbare: Bare-hull resistance (lbs)



—■—

—○—

NavCad(tm) 3.1d

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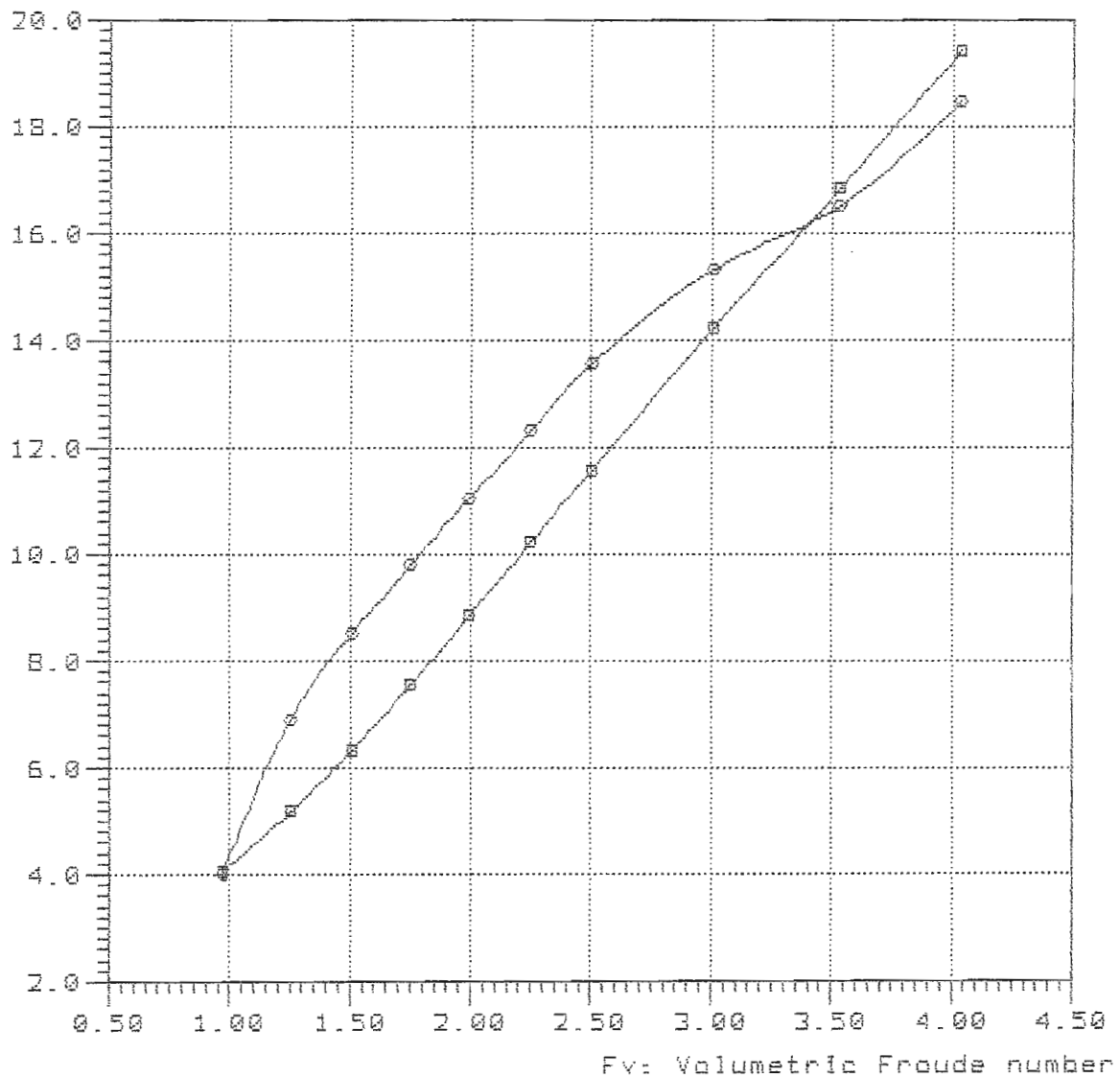
HydroComp, Inc.

File: 7-69-44b.mdl

Date: 22 Feb 00

Time: 13:15

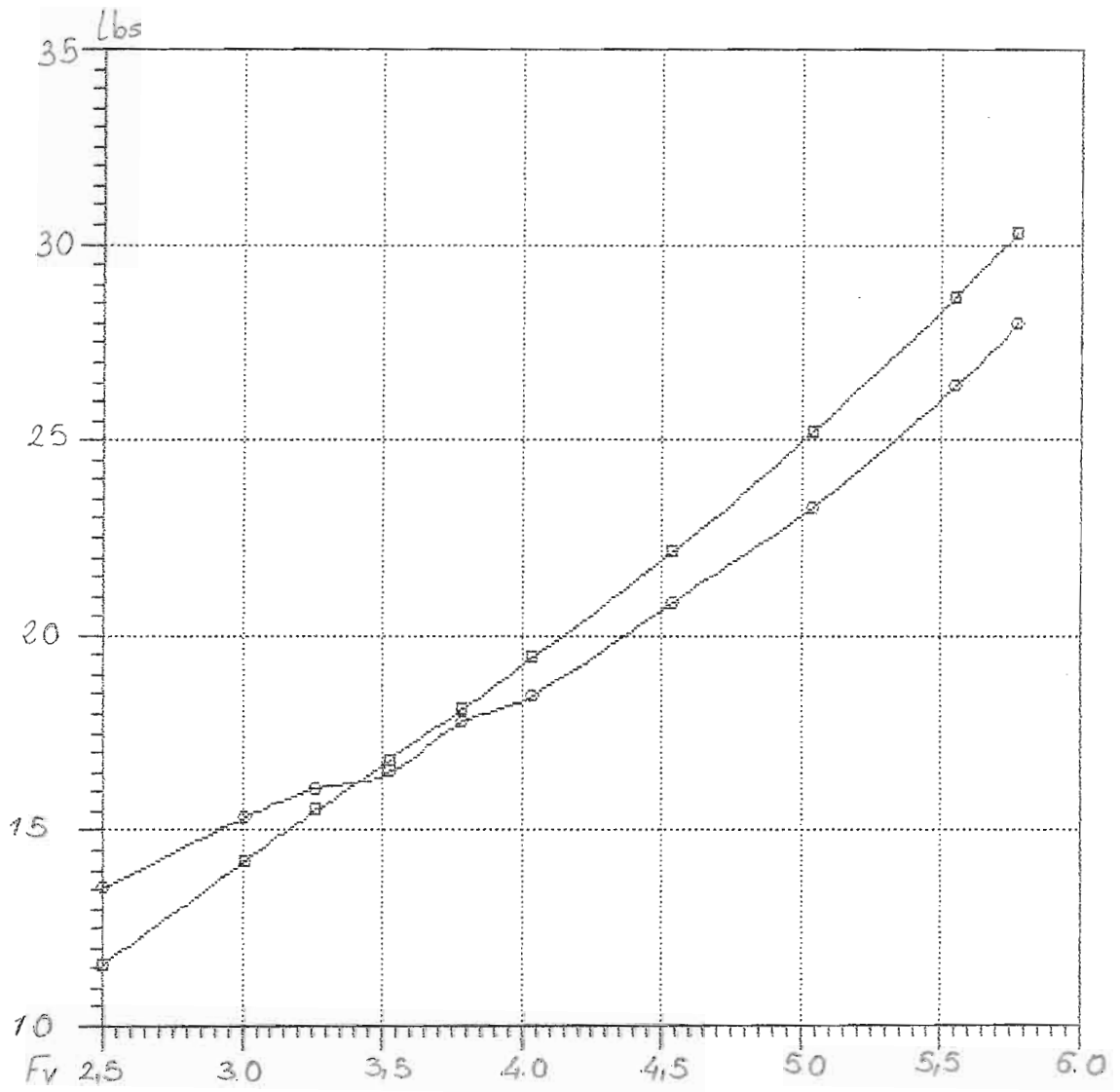
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4668 Lpx/Bpx=5.500 Ap/Vol=7.002 Lpx/Ap=6.724 Log/Lpx=0.449

7-69-44c



NavCad(tm) 3.1d

### Bare-hull resistance

File: 7-69-48b.mdl

(c) Copyright 1995

vs.

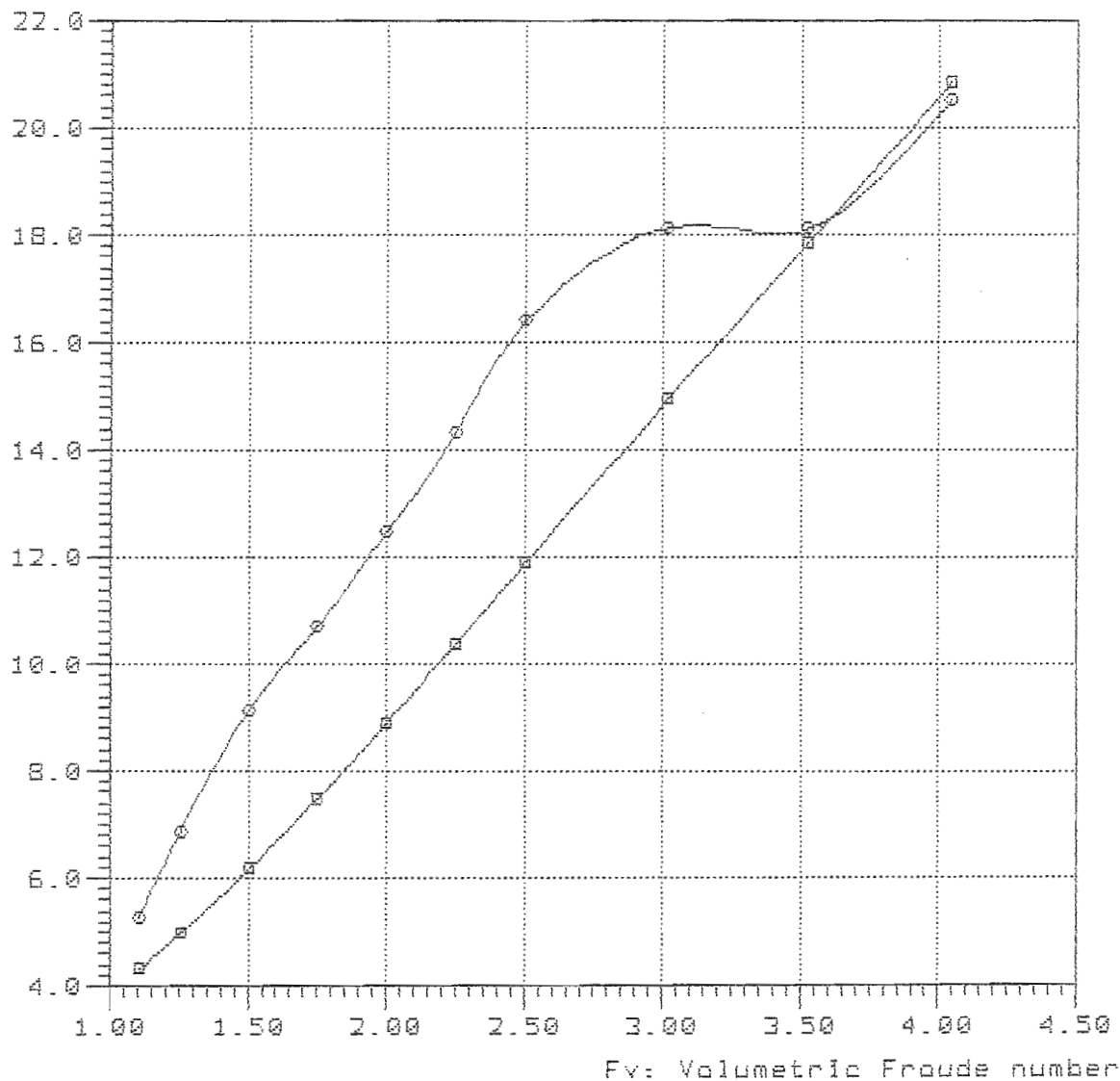
Date: 22 Feb 88

HydroComp, Inc.

### Volumetric Froude number

Time: 13:22

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

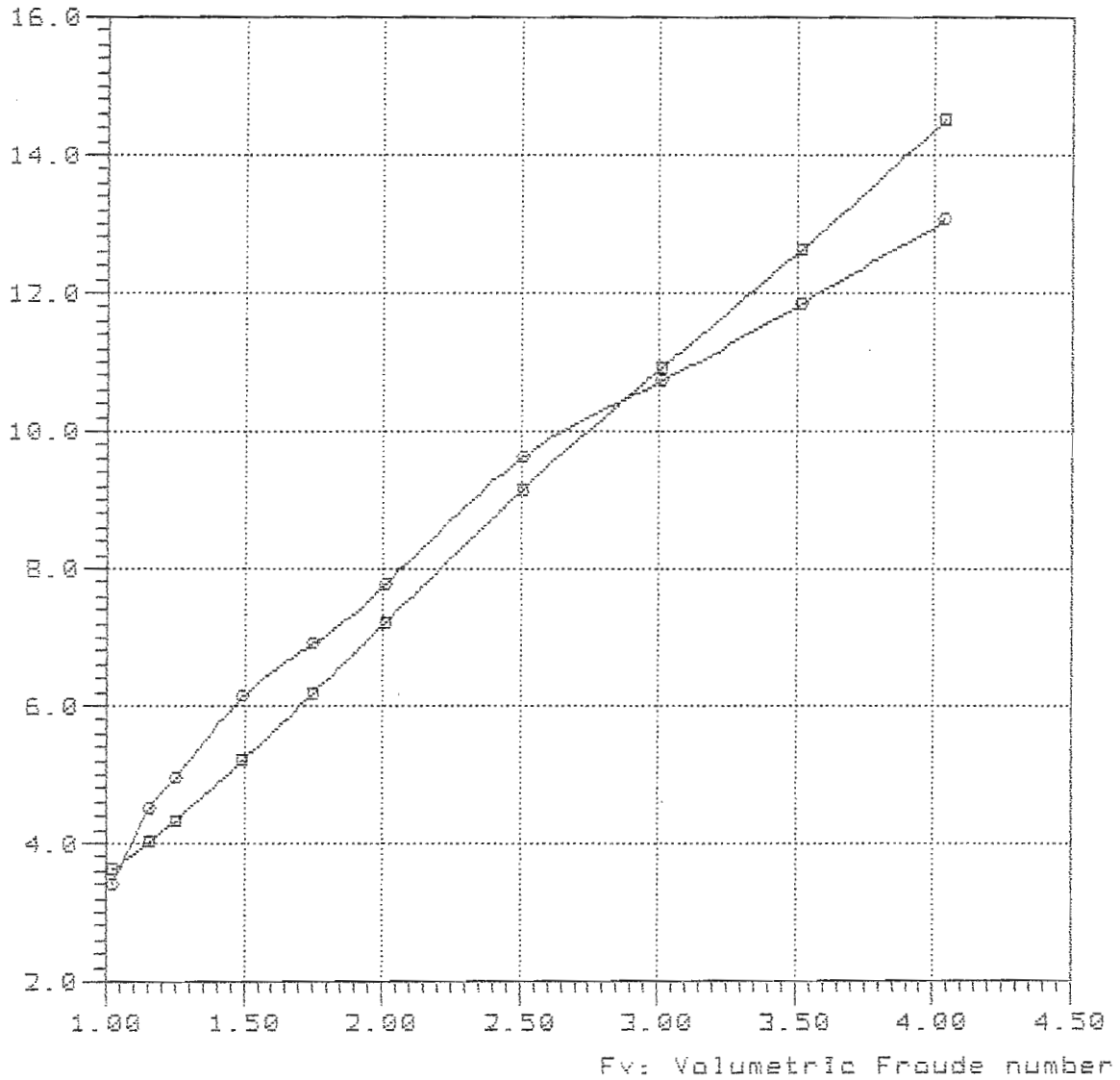
—○— TMB-4668 Lpx/Epx=5.500 Ap/Vol=7.002 Lpx/Ap=6.724 Lcg/Lpx=0.489

Model = 4668  
Ref = SNAME  
Friction = ATTC Ca=0.0

Lpx = 8.000 ft  
Lwl = 7.862 ft  
Bpx = 1.455 ft  
Ap = 9.518 sqft  
Disp = 73.80 lb  
Deadrise = 13.00 degree  
Shaft Ang= 7.30 degree  
Vce = -1.60 ft

Lpx/Bpx = 5.498  
Lpx/Ap = 6.724  
Ap /Vol = 8.657  
Lpx/Vol = 7.651

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4668 Lpx/Bpx=5.500 Ap/Vol=8.500 Lpx/Ap=6.724 Log/Lpx=0.369



NavCad(tm) 3.1d

(c) Copyright 1995

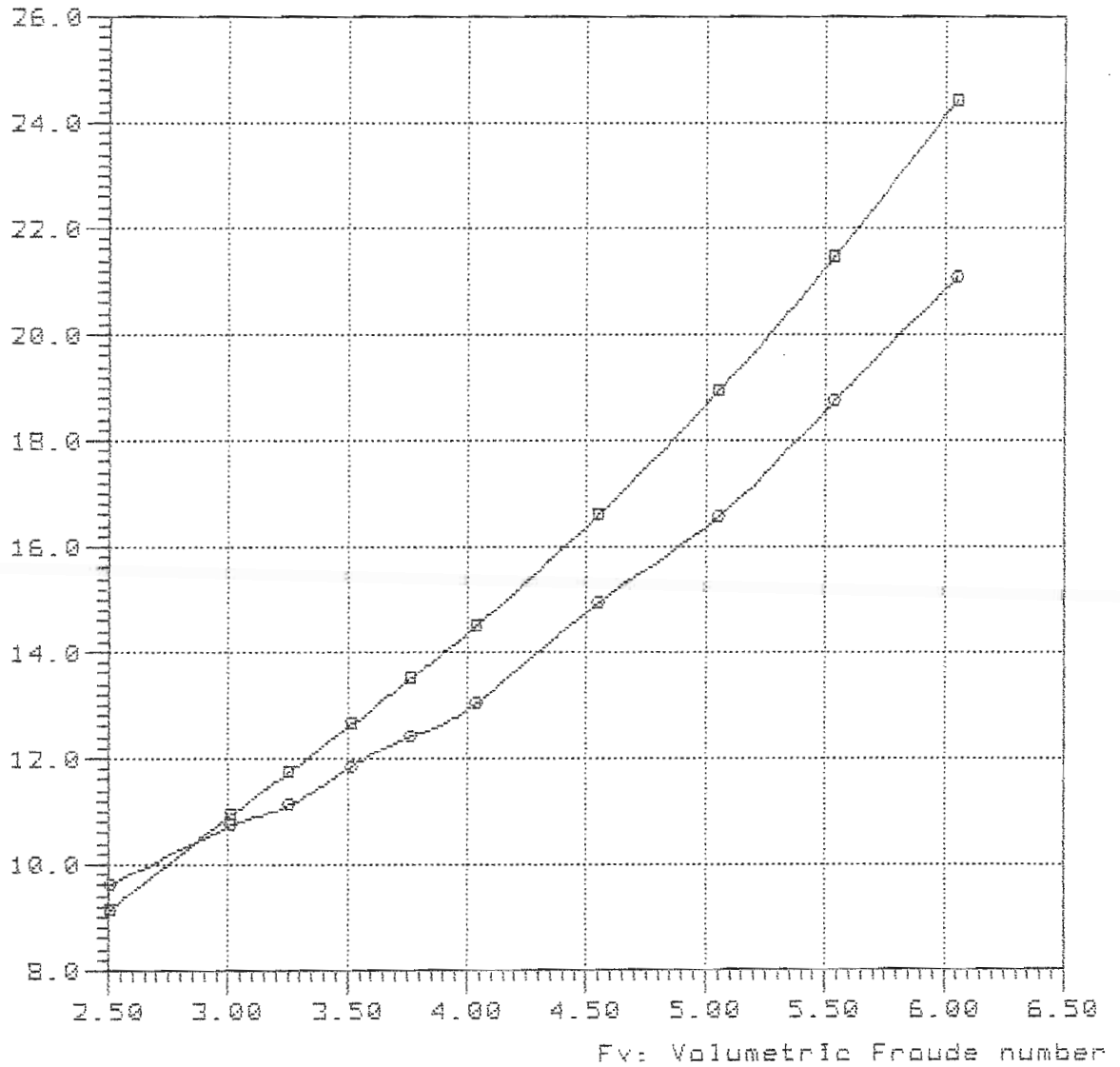
HydroComp, Inc.

File: 9-76-36c.mdl

Date: 22 Feb 00

Time: 14:08

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4668 Lpx/Bpx=5.500 Ap/Vol=8.500 Lpx/Ap=6.724 Lcg/Lpx=0.369

NavCad(tm) 3.1d

(c) Copyright 1995

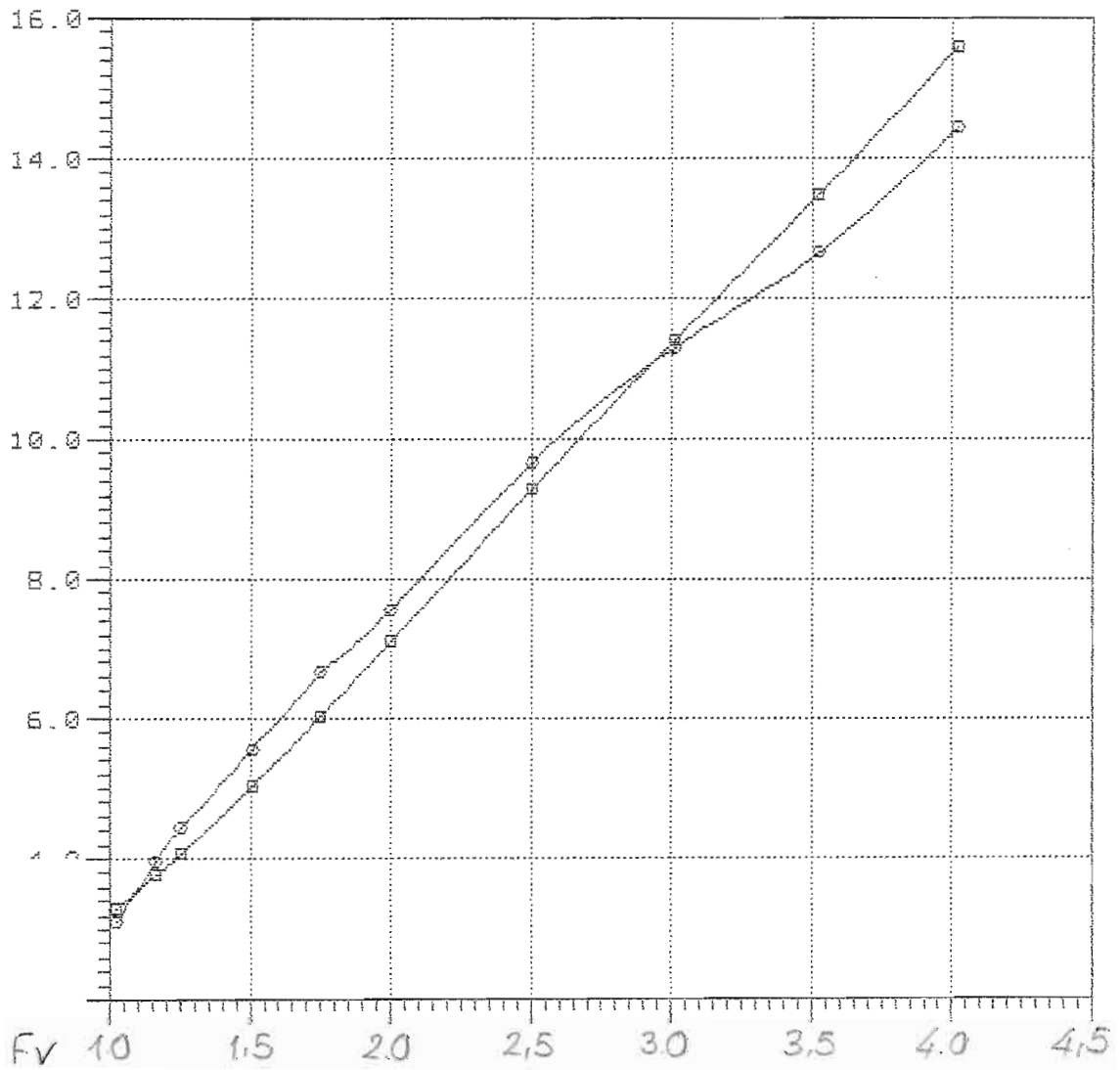
HydroComp, Inc.

File: 9-76-40b.mdl

Date: 22 Feb 00

Time: 14:12

Rbare: Bare-hull resistance (lbs)



—■—

—○—

NavCad(tm) 3.1d

(c) Copyright 1995

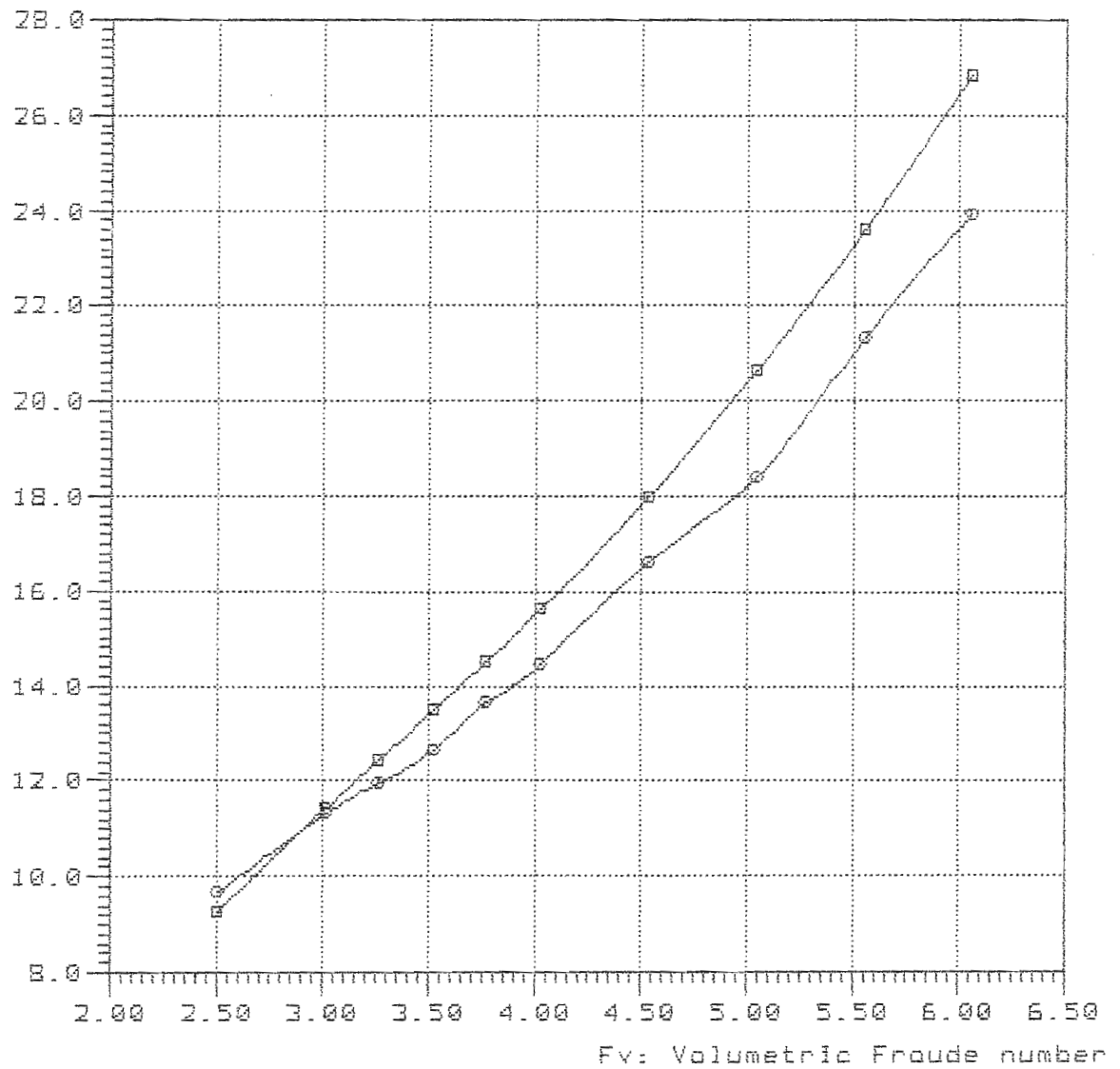
HydroComp, Inc.

File: 9-76-40c.mdl

Date: 22 Feb 00

Time: 14:17

Rbare: Bare-hull resistance (lbs)



—■—

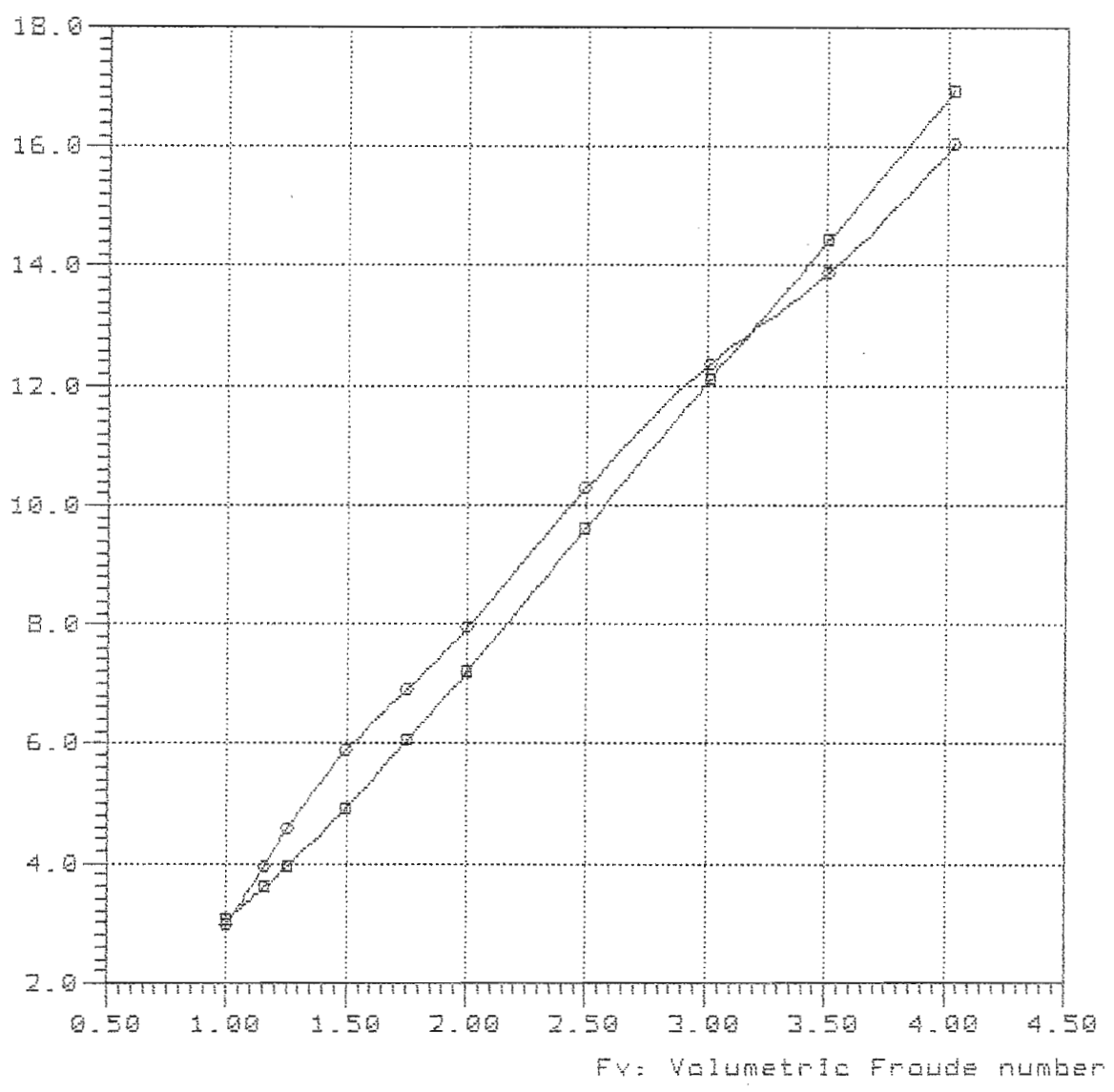
—●— TMB-4668 Lpx/Bpx=5.500 Ap/Vol=8.500 Lpx/Rp=6.724 Lcg/Lpx=0.409

NavCad(tm) 3.1d  
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 HydroComp, Inc.

Bare-hull resistance  
 vs.  
 Volumetric Froude number

File: 9-76-44b.mdl  
 Date: 22 Feb 00  
 Time: 14:20

Rbare: Bare-hull resistance (lbs)



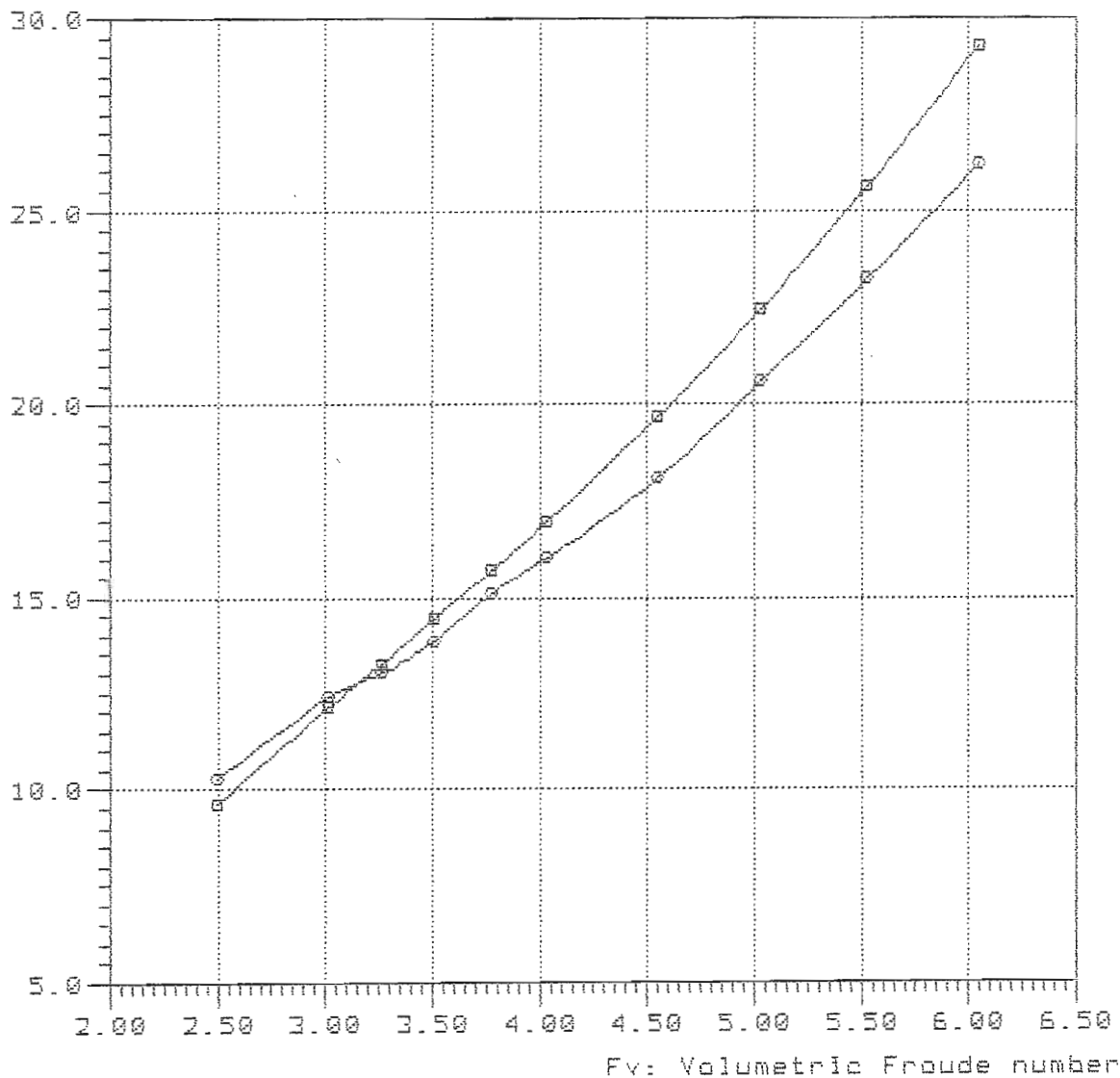
Curve legend

- 
- TMB-4658 Lpx/Bpx=5.500 Ap/Vol=8.500 Lpx/Ap=6.724 Lcg/Lpx=0.449

NavCad(tm) 3.1d  
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HydroComp, Inc.

File: 9-76-44c.mdl  
Date: 22 Feb 00  
Time: 14:23

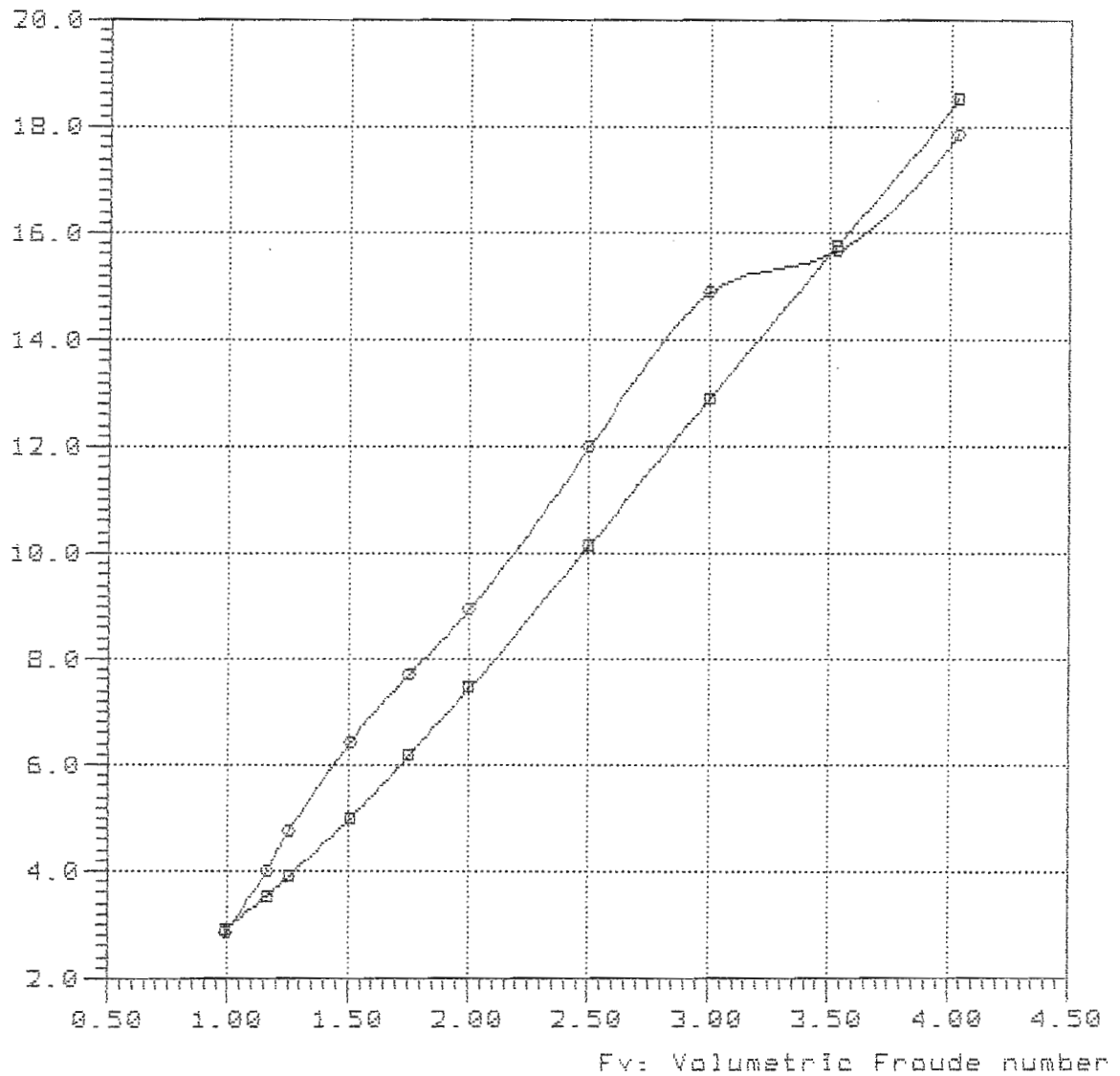
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4668 Lpx/Bpx=5.500 Ap/Vol=8.500 Lpx/Ap=6.724 Log/Lpx=0.449

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-4668 Lpx/Bpx=5.500 Ap/Val=8.500 Lpx/Ap=6.724 Lcg/Lpx=0.489

NavCad(tm) 3.1d

(c) Copyright 1995

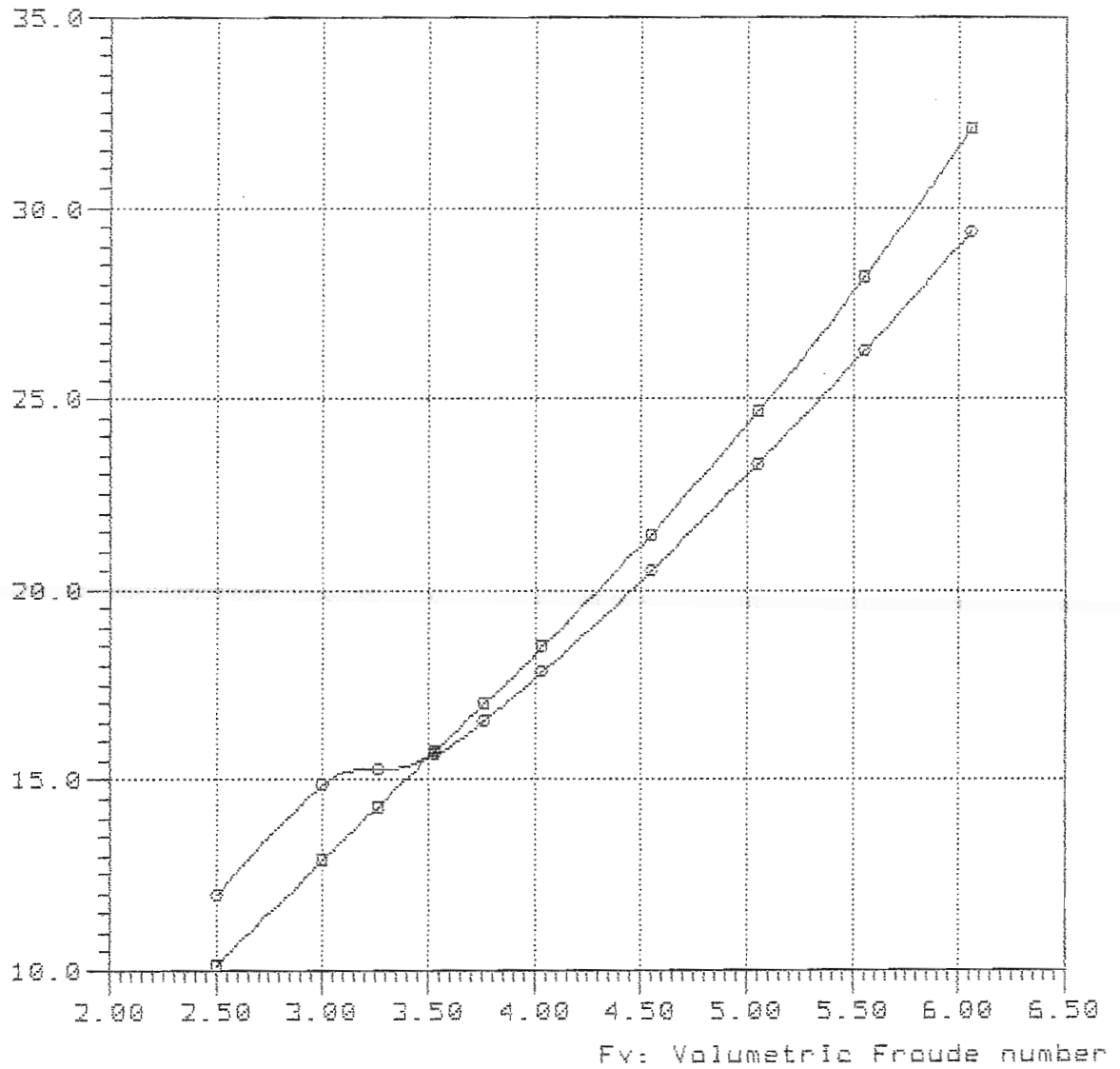
HydroComp, Inc.

File: 9-76-48c.mdl

Date: 22 Feb 00

Time: 14:30

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-466B Lpx/Bpx=5.500 Ap/Vol=8.500 Lpx/Ap=6.724 Lcg/Lpx=0.489

Model = 4668

Ref = NSRDC

Friction = ~~A~~TTC Ca=4e-4

Lpx = 16.200 ft

Lwl = 16.006 ft

Bpx = 2.946 ft

Ap = 39.036 sqft

Disp = 1000.00 lb

Deadrise = 13.00 degree

Shaft Ang= 0.00 degree

Vce = 0.00 ft

Lpx/Bpx = 5.499

Lpx/Ap = 6.723

Ap /Vol = 6.246

Lpx/Vol = 6.499



NavCad(tm) 3.1d

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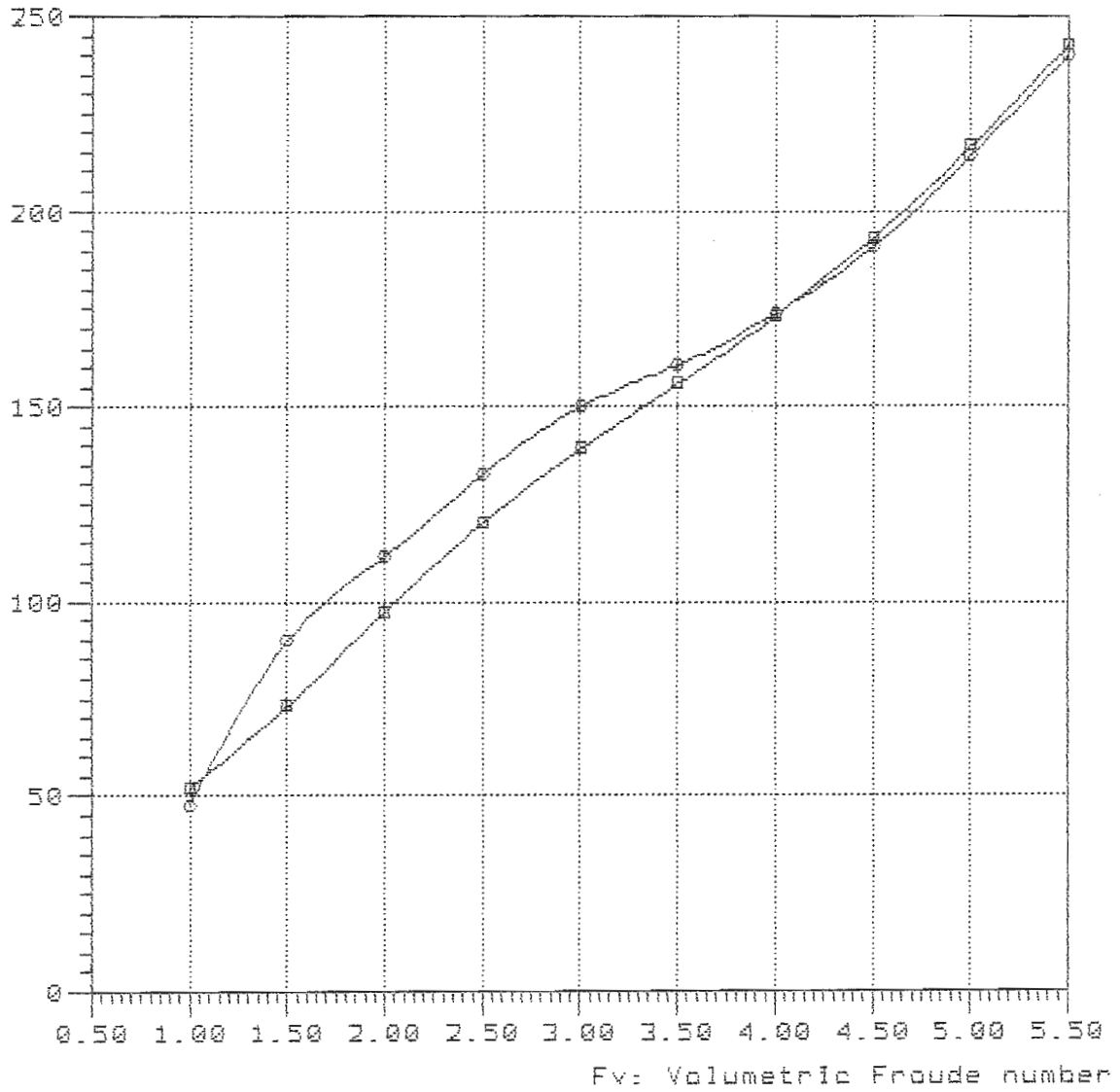
HydroComp, Inc.

File: 7-70-369.mdl

Date: 22 Feb 00

Time: 13:26

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-4668 Lpx/Bpx=5.50 Ap/Vol=7.288 Lpx/Ap=6.723 Log/Lpx=0.369

NavCad(tm) 3.1d

(c) Copyright 1995

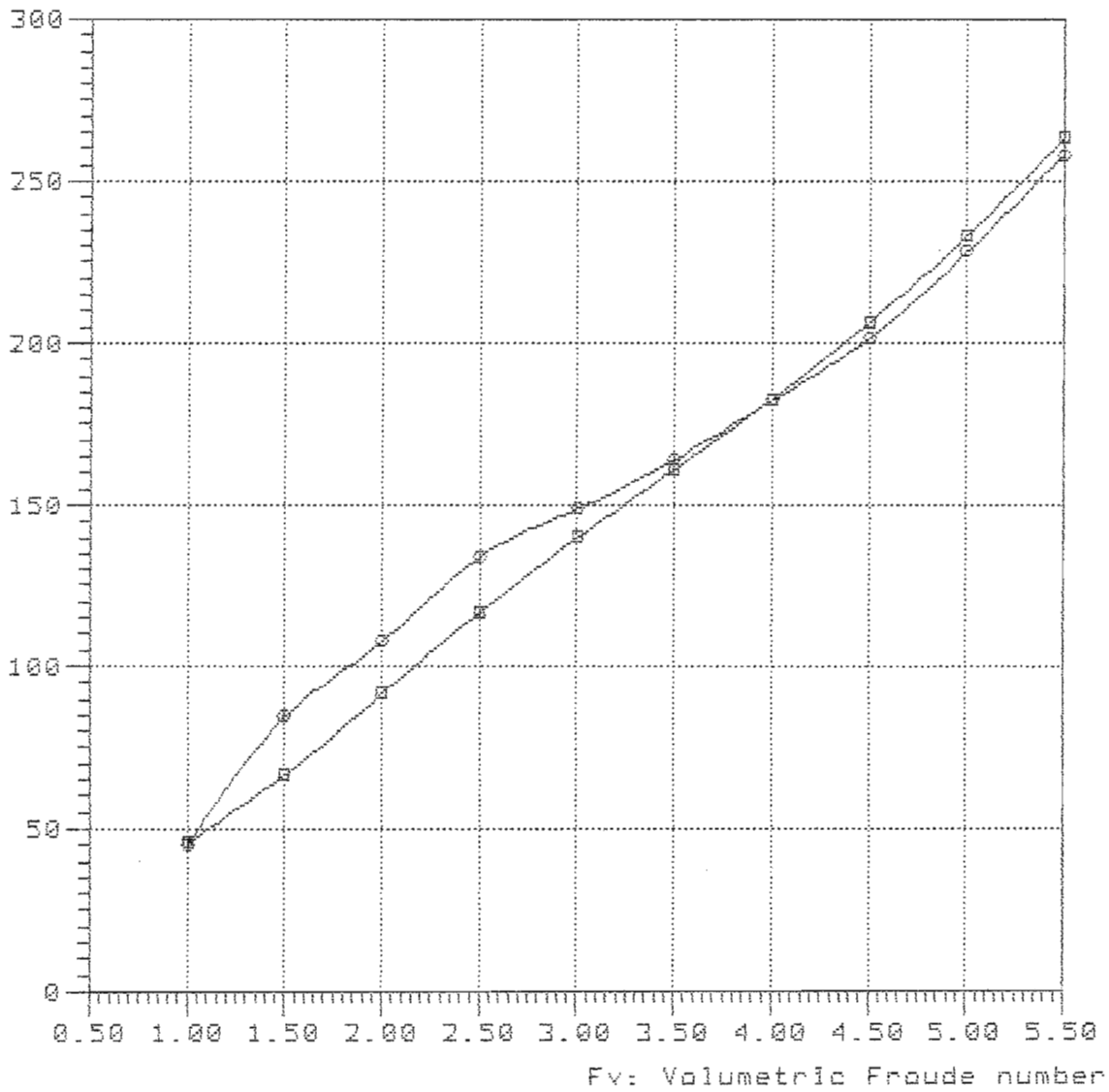
HydroComp, Inc.

File: 7-70-409.mdl

Date: 22 Feb 00

Time: 13:29

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-4668 Lpx/Bpx=5.50 Ap/Vol=7.288 Lpx/Ap=6.723 Lcg/Lpx=0.409

NavCad(tm) 3.1d

(c) Copyright 1995

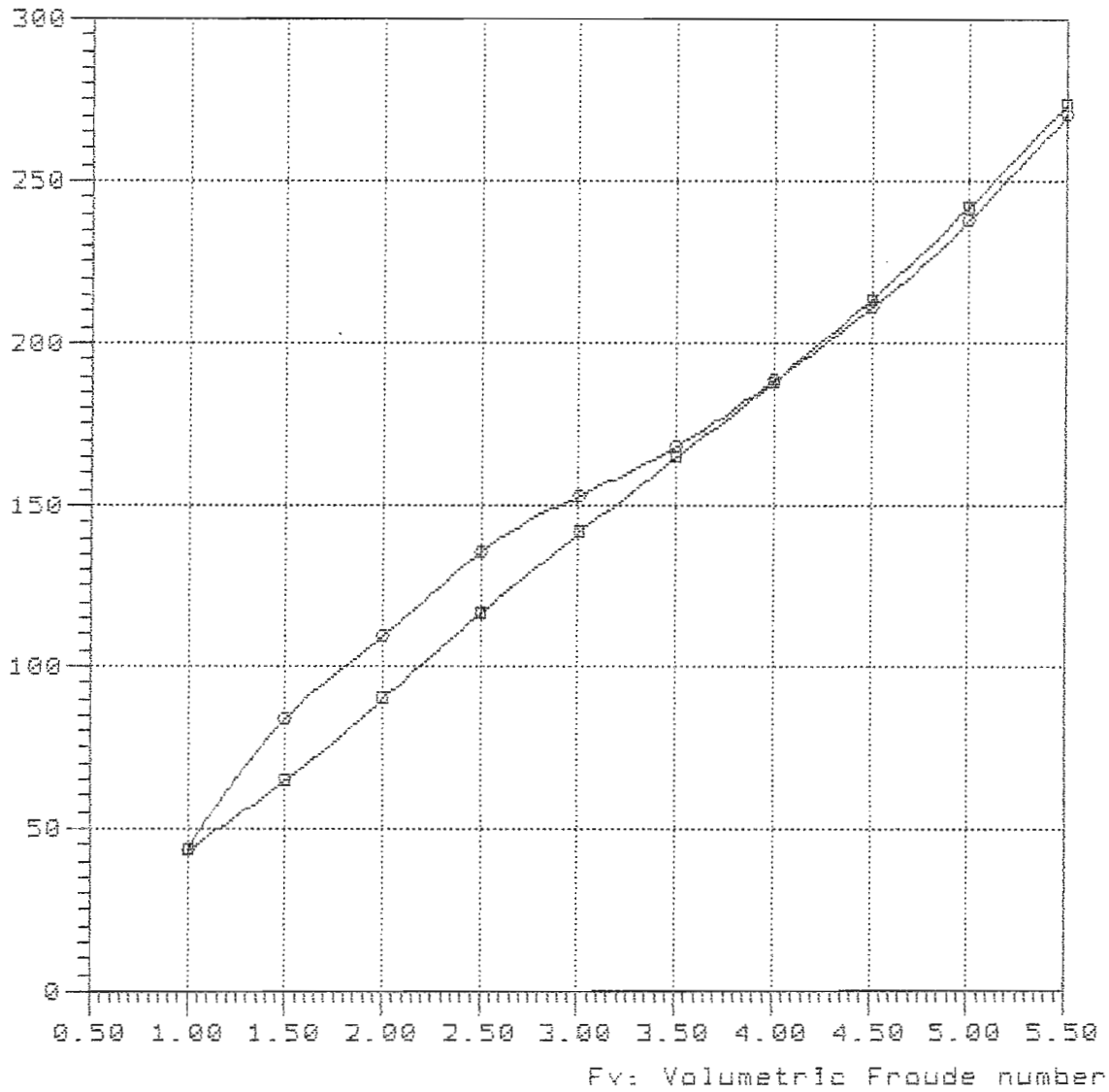
HydroComp, Inc.

File: 7-70-429.mdl

Date: 22 Feb 00

Time: 13:32

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4668 Lpx/Bpx=5.50 Ap/Val=7.288 Lpx/Ap=6.723 Log/Lpx=0.429

NavCad(tm) 3.1d

(c) Copyright 1995

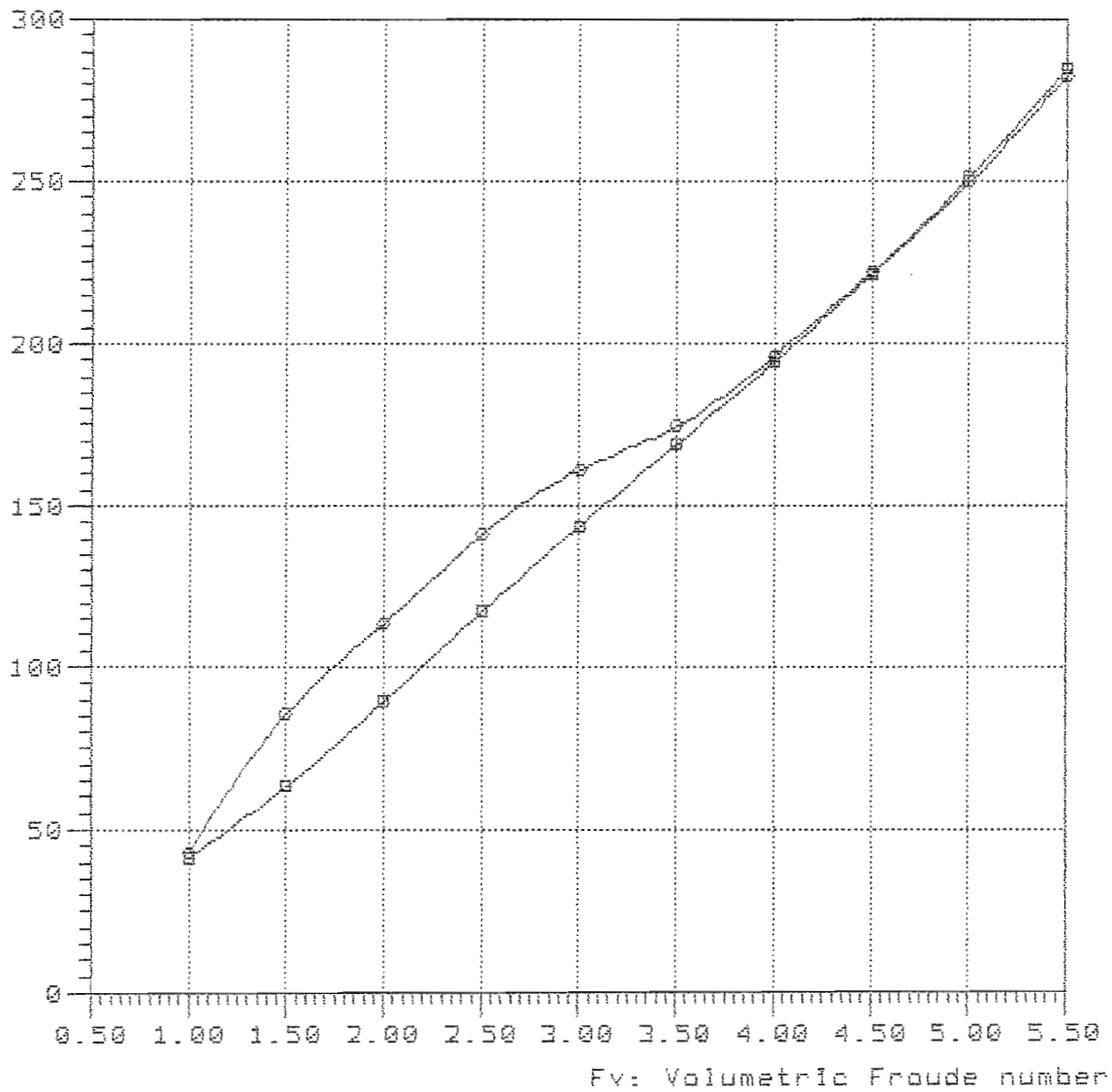
HydroComp, Inc.

File: 7-70-449.mdl

Date: 22 Feb 00

Time: 13:39

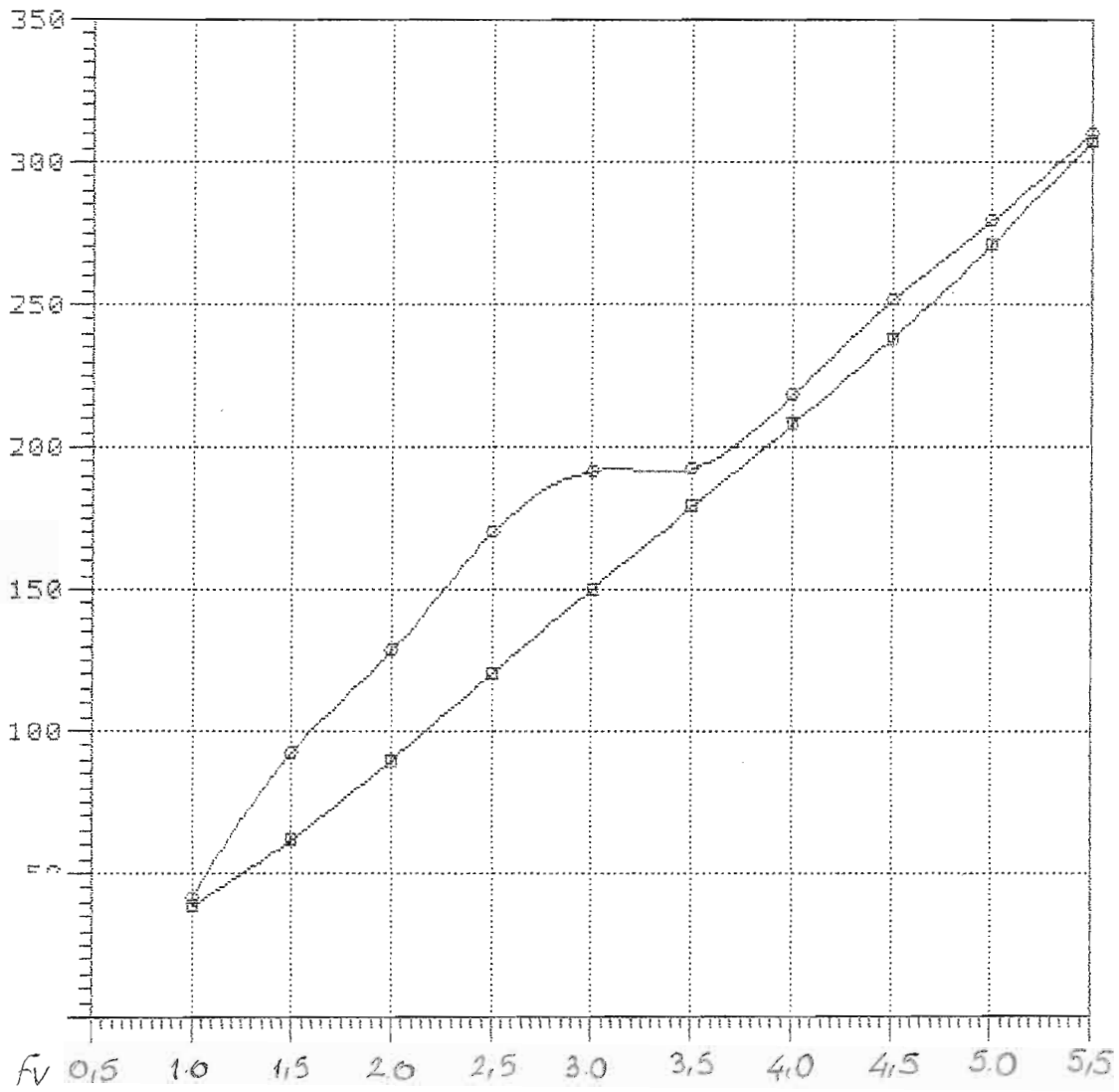
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-4668 Lpx/Bpx=5.50 Ap/Val=7.268 Lpx/Ap=6.723 Lcg/Lpx=0.449

Rbare: Bare-hull resistance (lbs)



Model = 4668  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 17.500 ft  
Lwl = 17.291 ft  
Bpx = 3.182 ft  
Ap = 45.553 sqft  
Disp = 1000.00 lb  
Deadrise = 13.00 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 ft

Lpx/Bpx = 5.500  
Lpx/Ap = 6.723  
Ap /Vol = 7.289  
Lpx/Vol = 7.021

NavCad(tm) 3.1d

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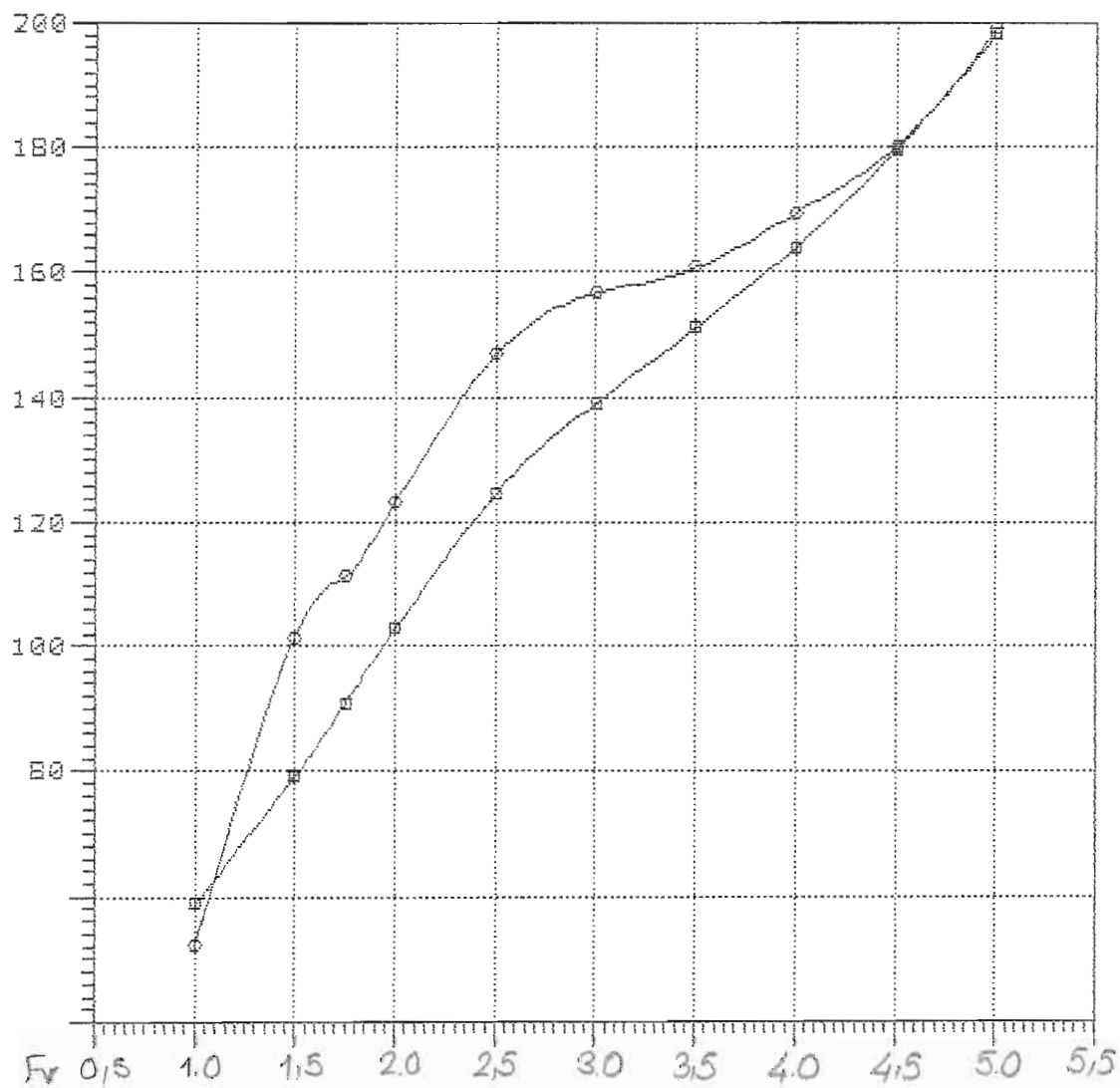
HydroComp, Inc.

File: 6-65-369.mdl

Date: 22 Feb 00

Time: 12:07

Rbare: Bare-hull resistance (lbs)



—□—

—○—

NavCad(tm) 3.1d

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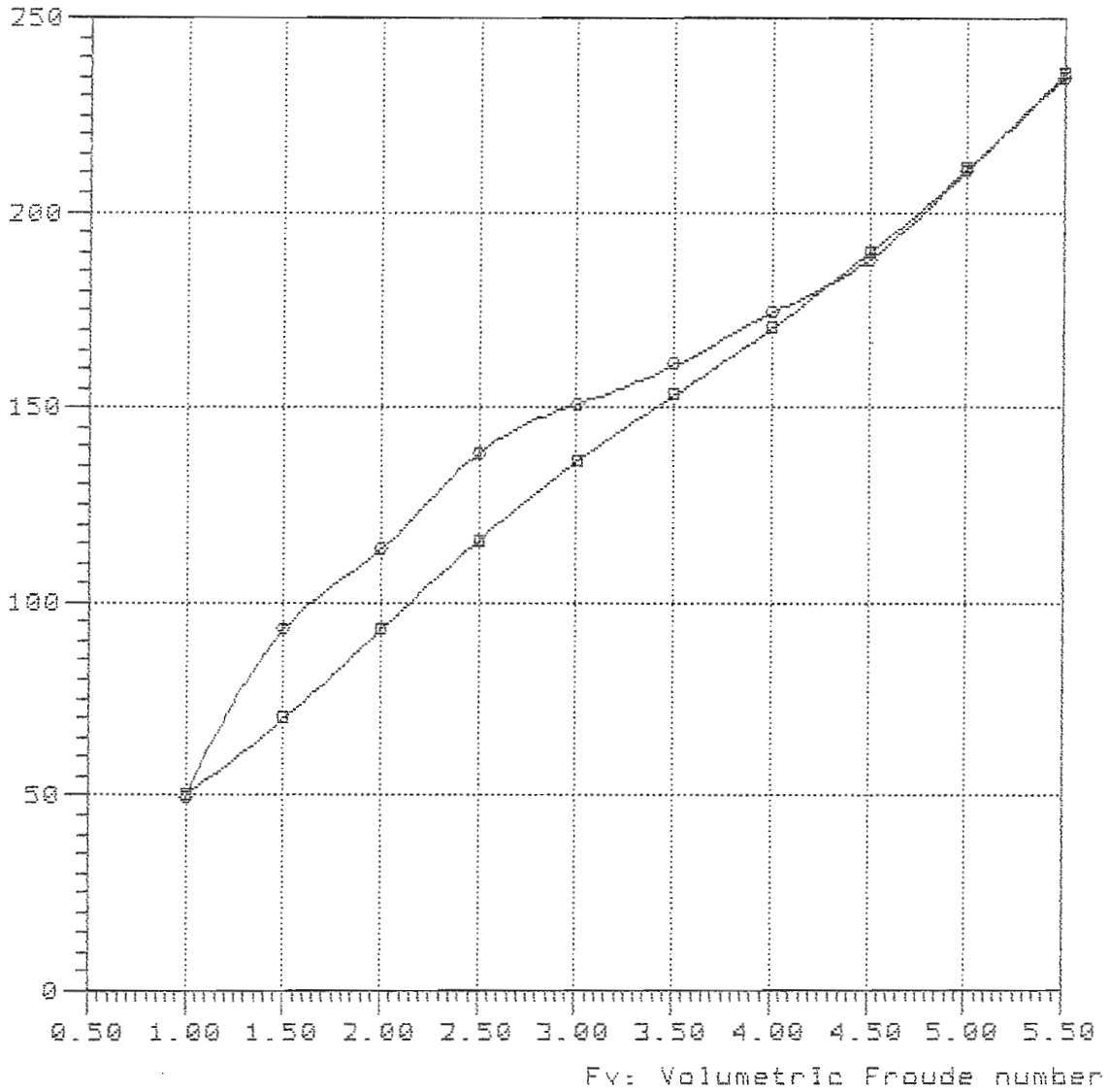
HydroComp, Inc.

File: 6-65-409.mdl

Date: 22 Feb 00

Time: 12:13

Rbare: Bare-hull resistance (lbs)

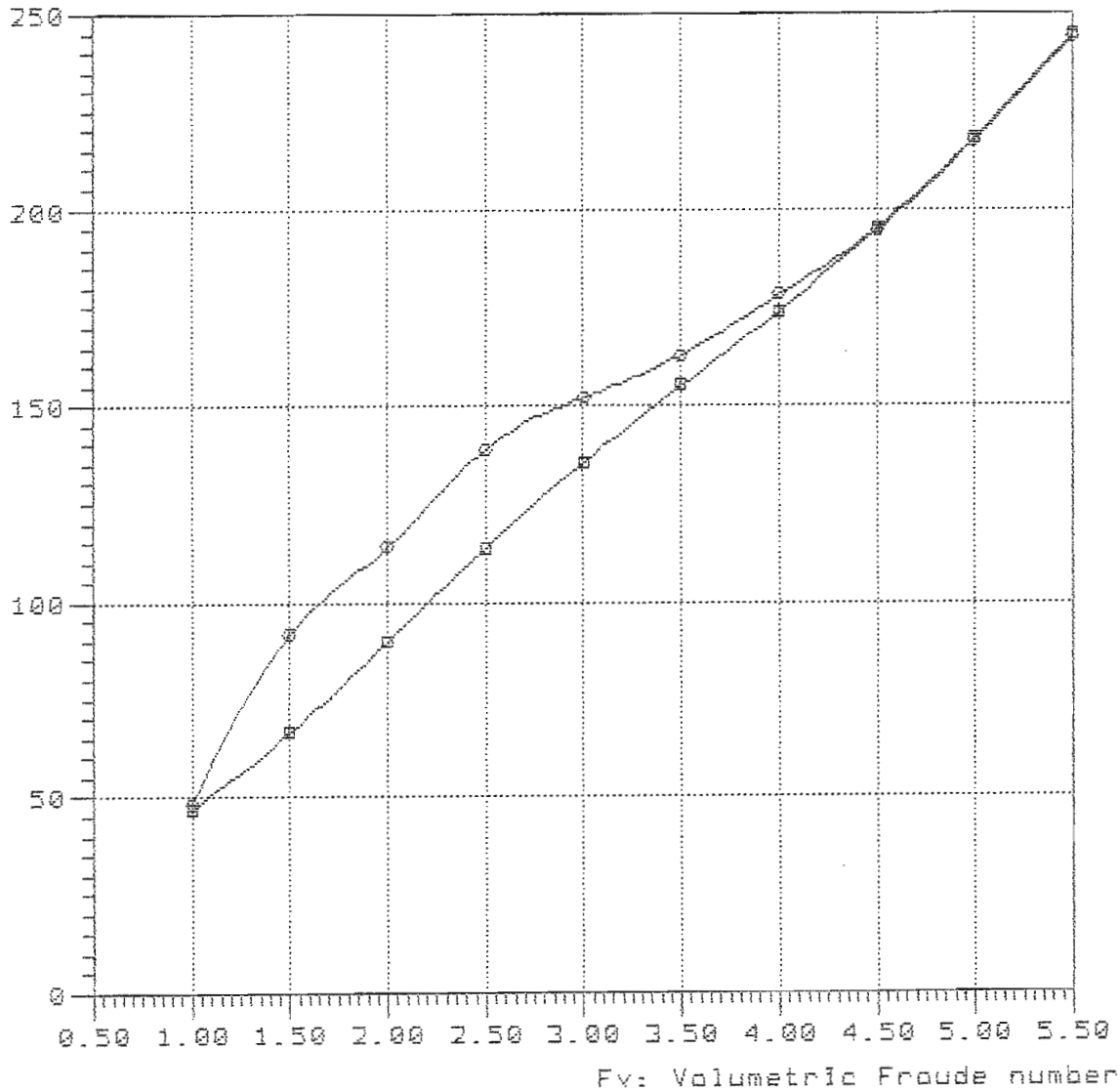


—■—

—●— TMB-4668 Lpx/Bpx=4.09 Ap/Vol=6.246 Lpx/Ap=5.000 Lcg/Lpx=0.409



Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-466B Lpx/Bpx=4.09 Ap/Vol=6.246 Lpx/Ap=5.000 Lcg/Lpx=0.429

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

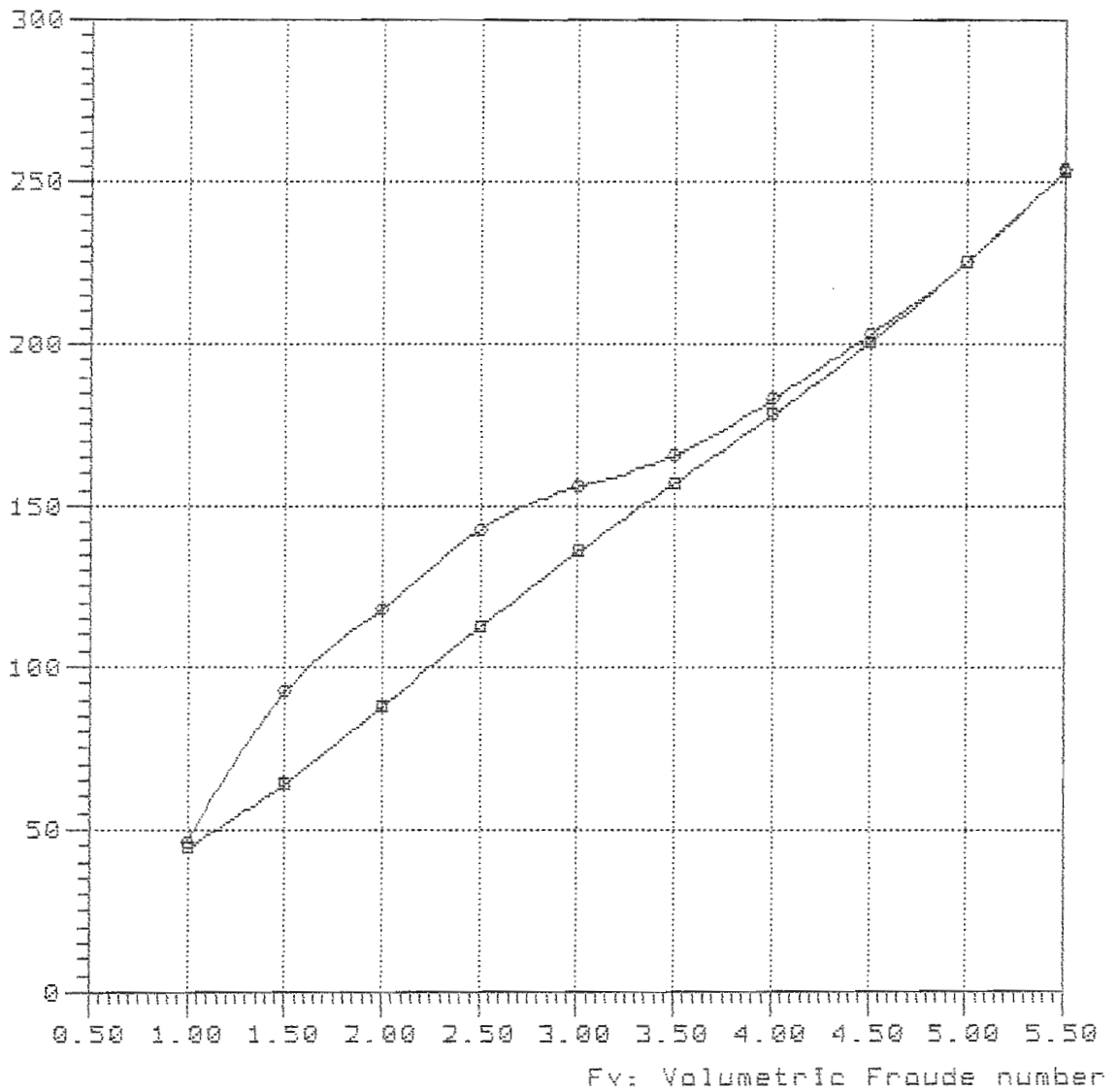
### Volumetric Froude number

File: 6-65-449.mdl

Date: 22 Feb 00

Time: 12:19

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-466B Lpx/Bpx=4.09 Ap/Vol=6.246 Lpx/Ap=5.000 Lcg/Lpx=0.449

Model = 4668  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 18.700 ft  
Lwl = 18.476 ft  
Bpx = 3.400 ft  
Ap = 52.014 sqft  
Disp = 1000.00 lb  
Deadrise = 13.00 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 ft

Lpx/Bpx = 5.500  
Lpx/Ap = 6.723  
Ap /Vol = 8.323  
Lpx/Vol = 7.502

NavCad(tm) 3.1d

(c) Copyright 1995

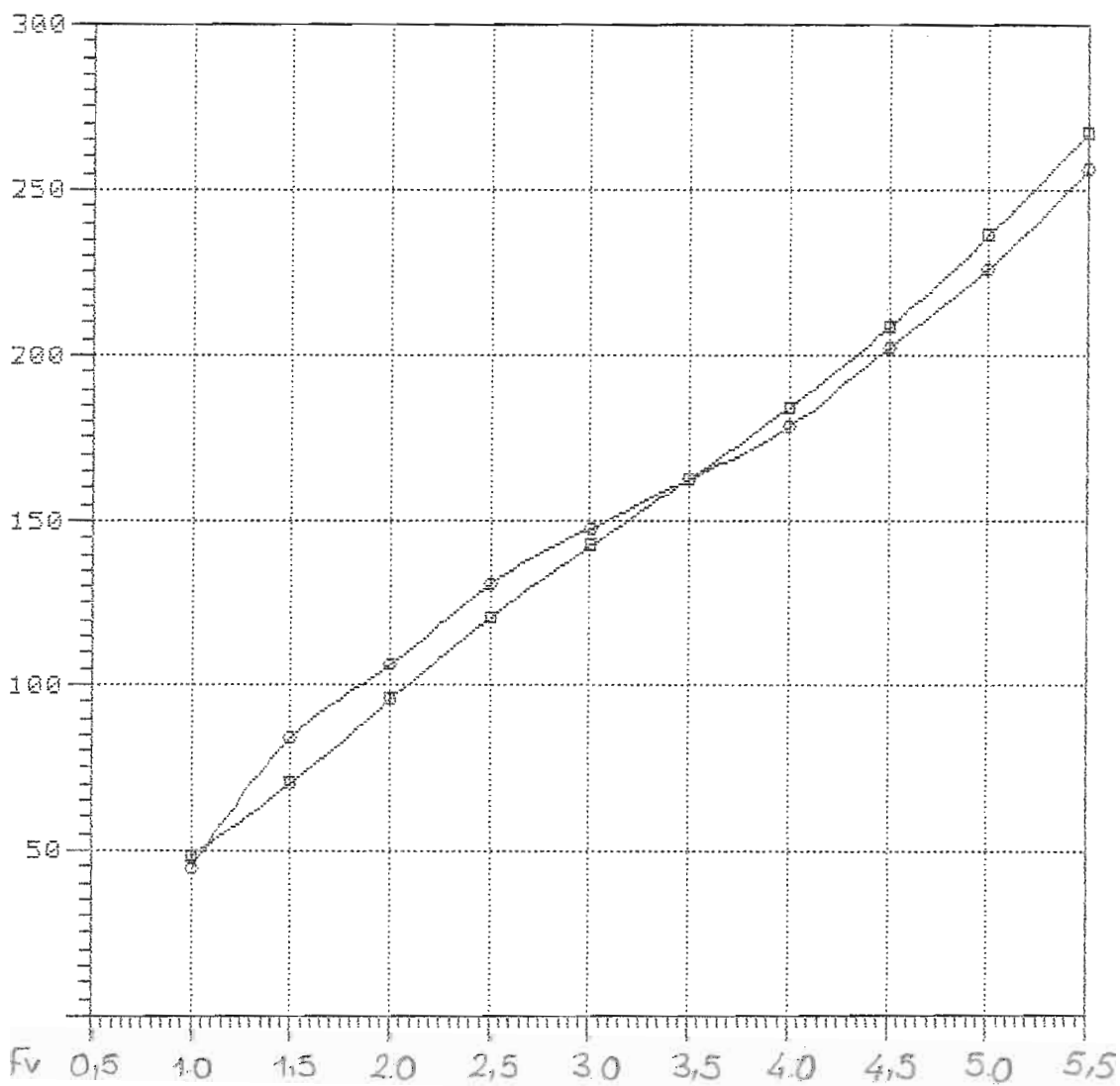
HydroComp, Inc.

File: B-75-369.mdl

Date: 22 Feb 00

Time: 13:45

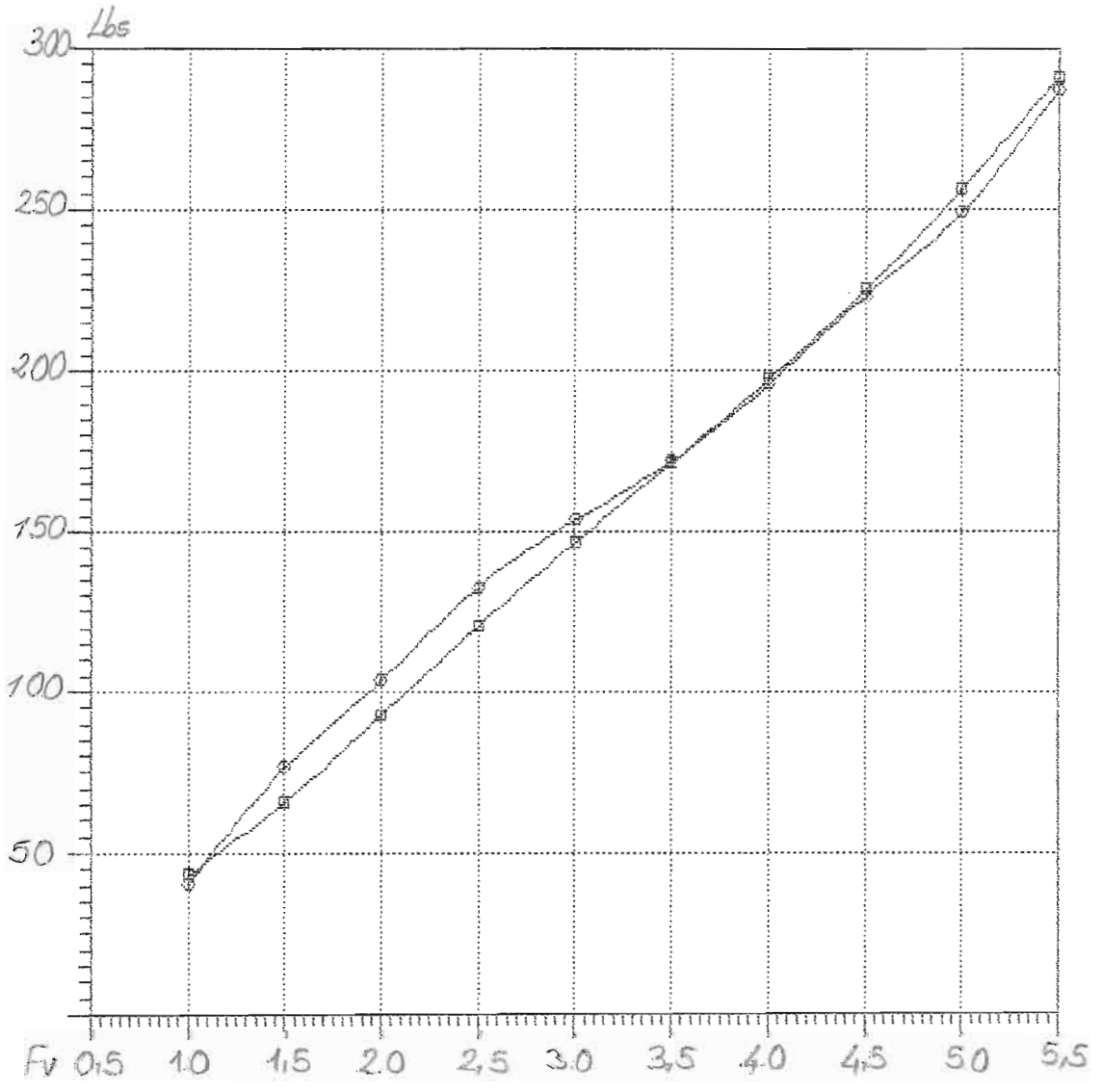
Rbare: Bare-hull resistance (lbs)



—■—

—○—

8-75-409



—○—  
—□—

NavCad(tm) 3.1d

### Bare-hull resistance

File: 8-75-429.mdl

(c) Copyright 1995

vs.

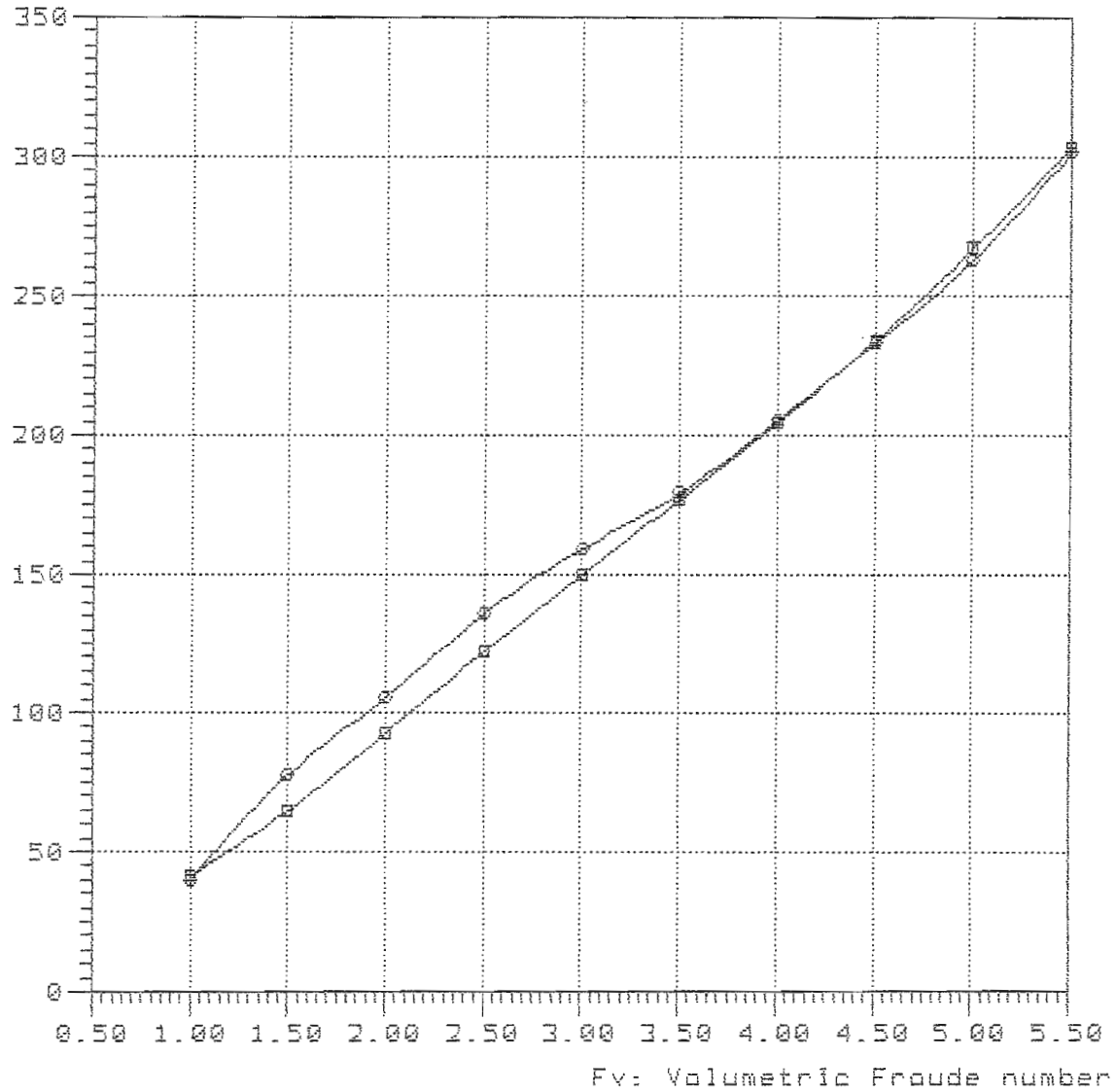
Date: 22 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 13:55

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-4668 Lpx/Bpx=5.50 Ap/Vol=8.322 Lpx/Ap=6.723 Log/Lpx=0.429

NavCad(tm) 3.1d

### Bare-hull resistance

File: 8-75-449.mdl

(c) Copyright 1995

vs

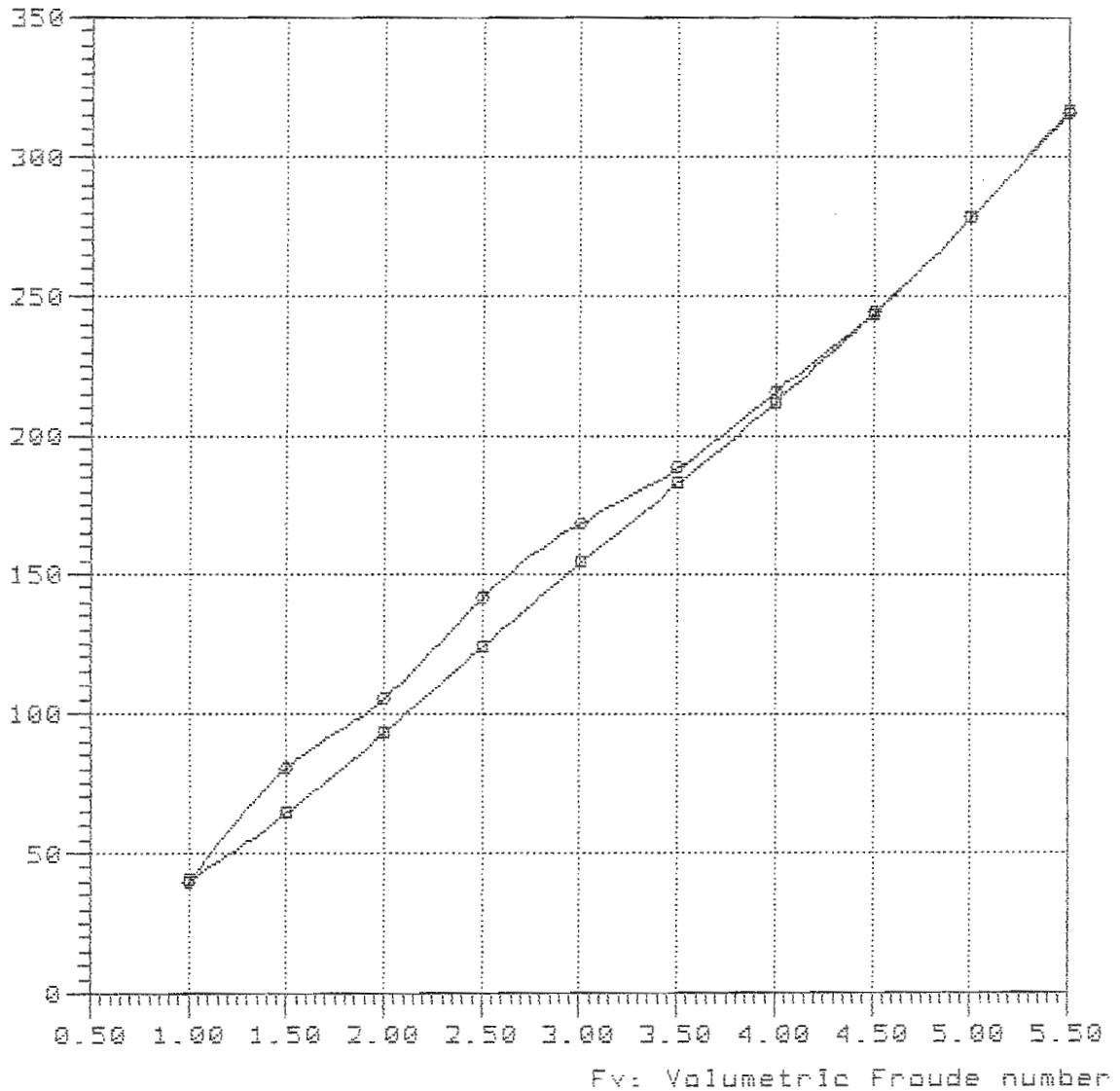
Date: 22 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 13:58

Rbare: Bare-hull resistance (lbs)

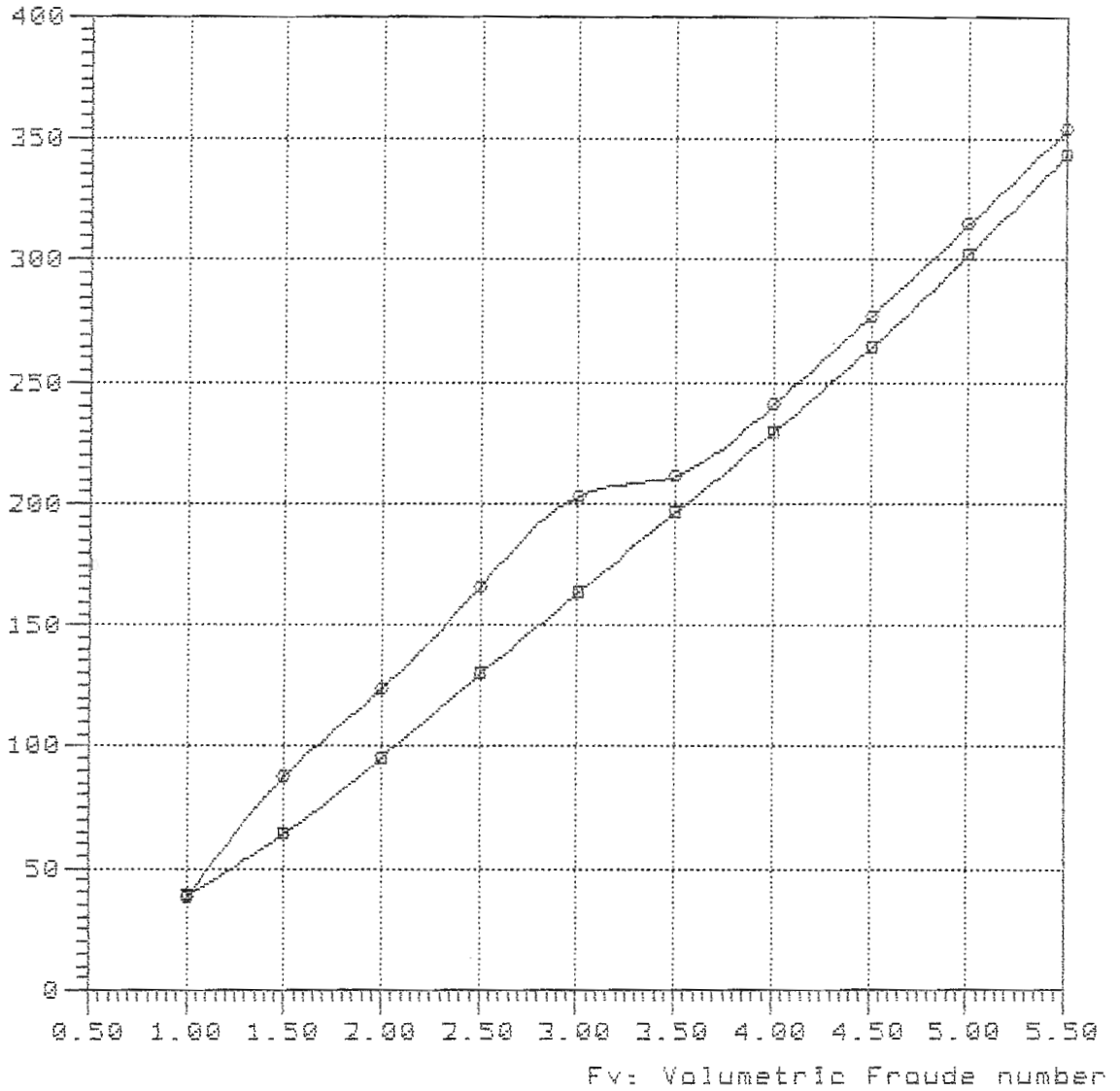


#### Curve legend

—■—

—○— TMB-4668 Lpx/Bpx=5.50 Ap/Vol=8.322 Lpx/Ap=6.723 Lcg/Lpx=0.449

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-4668 Lpx/Bpx=5.50 Ap/Vol=8.322 Lpx/Rp=6.723 Lcg/Lpx=0.489



4669

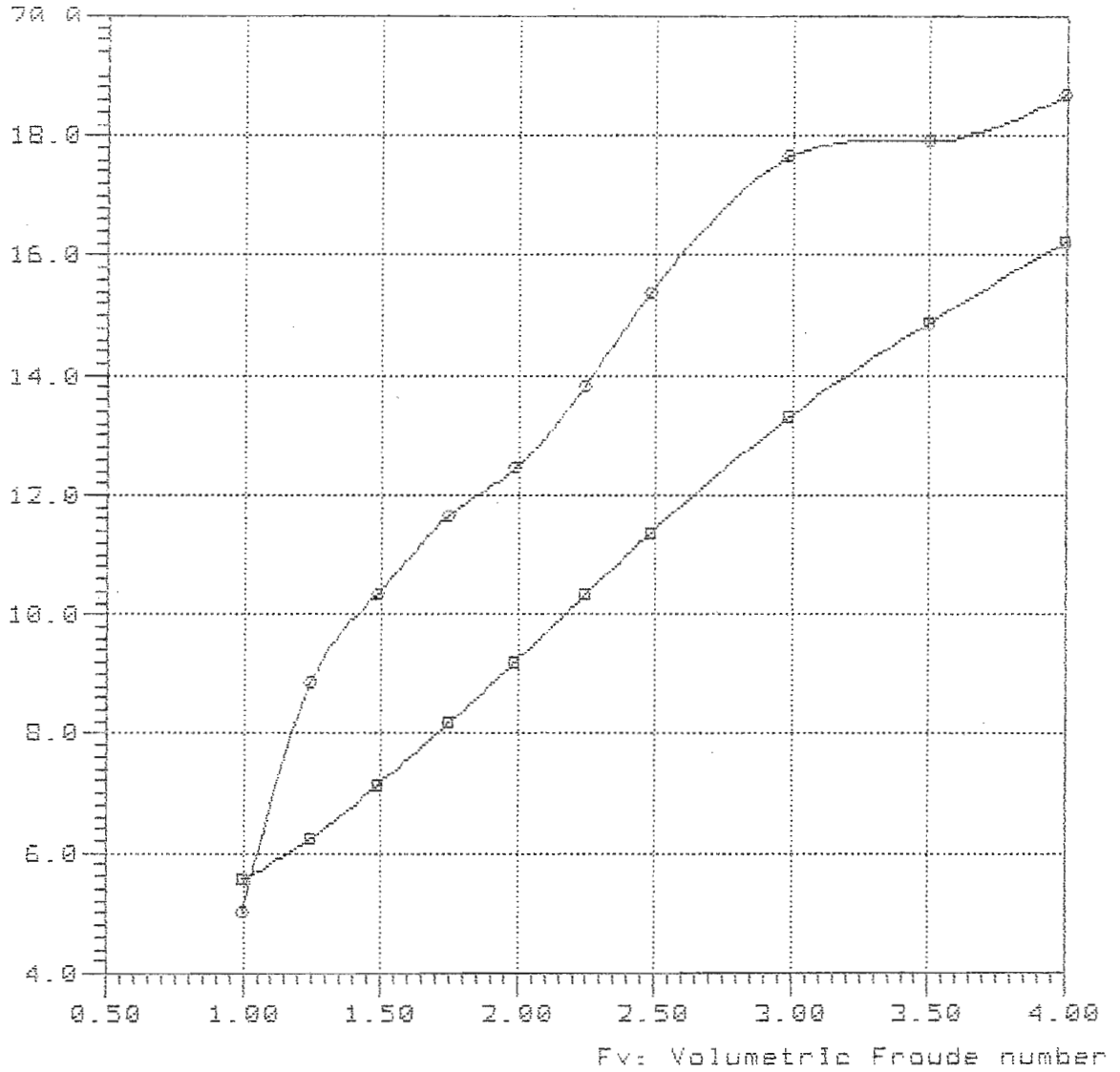
Model = 4669  
Ref = DTMB  
Friction = ATTC Ca=0.0

Lpx = 8.000 ft  
Lwl = 7.933 ft  
Bpx = 1.143 ft  
Ap = 7.479 sqft  
Disp = 101.80 Lb  
Deadrise = 13.00 degree  
Shaft Ang= 5.75 degree  
Vce = 12.50 ft

Lpx/Bpx = 6.999  
Lpx/Ap = 8.557  
Ap /Vol = 5.488  
Lpx/Vol = 6.873

**Bu çizimler dizaya ve bunlarla ilgili hakların telif hakları MÜHÜRÜ DENİZCİLİĞE Aittir. Bu doküman veya bunun bir kısmı üçüncü şahıslara verilemez, kopya veya kopya edilemez ve her ne amaçla olursa olsun maksada dışında izinsiz kullanılamaz.**

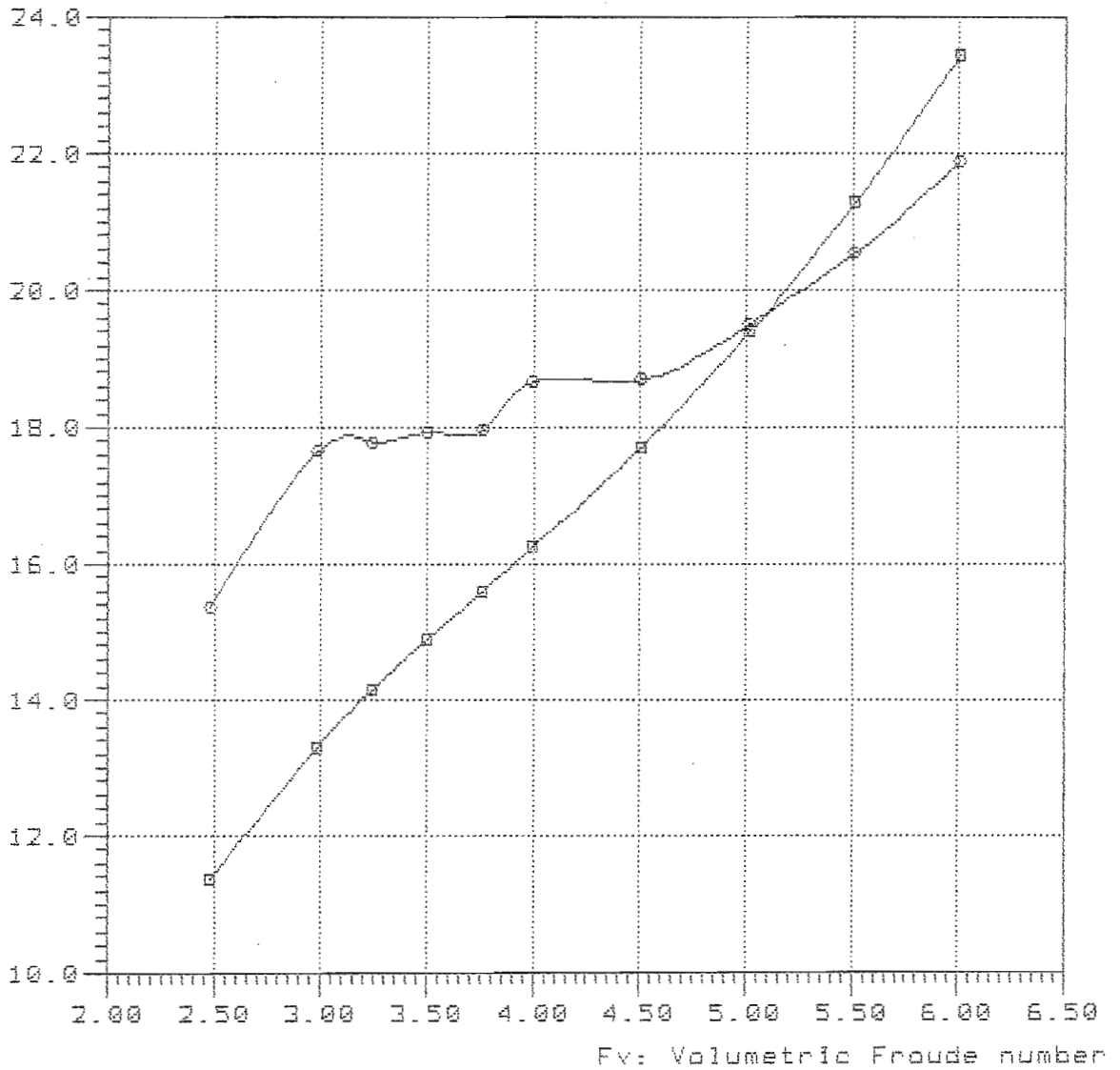
Kbare: Bare-hull resistance (lbs)



—■—

—●— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=5.391 Lpx/Ap=8.557 Lcg/Lpx=0.489

Rbare: Bare-hull resistance (lbs)



—○—

—□— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=5.391 Lpx/Ap=8.557 Log/Lpx=0.489

NavCad(tm) 3.1d

### Bare-hull resistance

File: 5-69-40b.mdl

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vs.

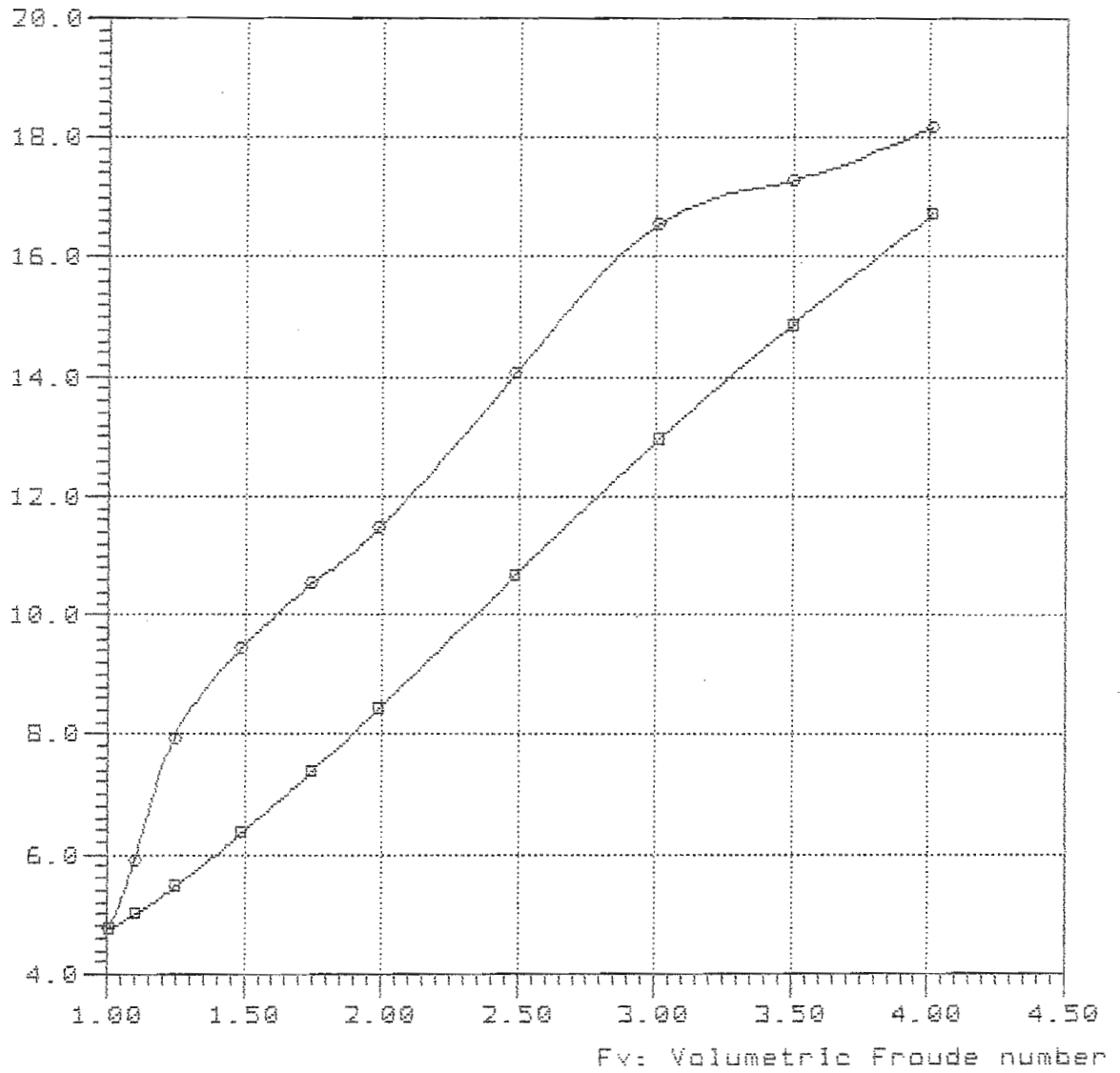
Date: 22 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 18:37

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=5.391 Lpx/Ap=8.557 Lcg/Lpx=0.409

NavCad(tm) 3.1d

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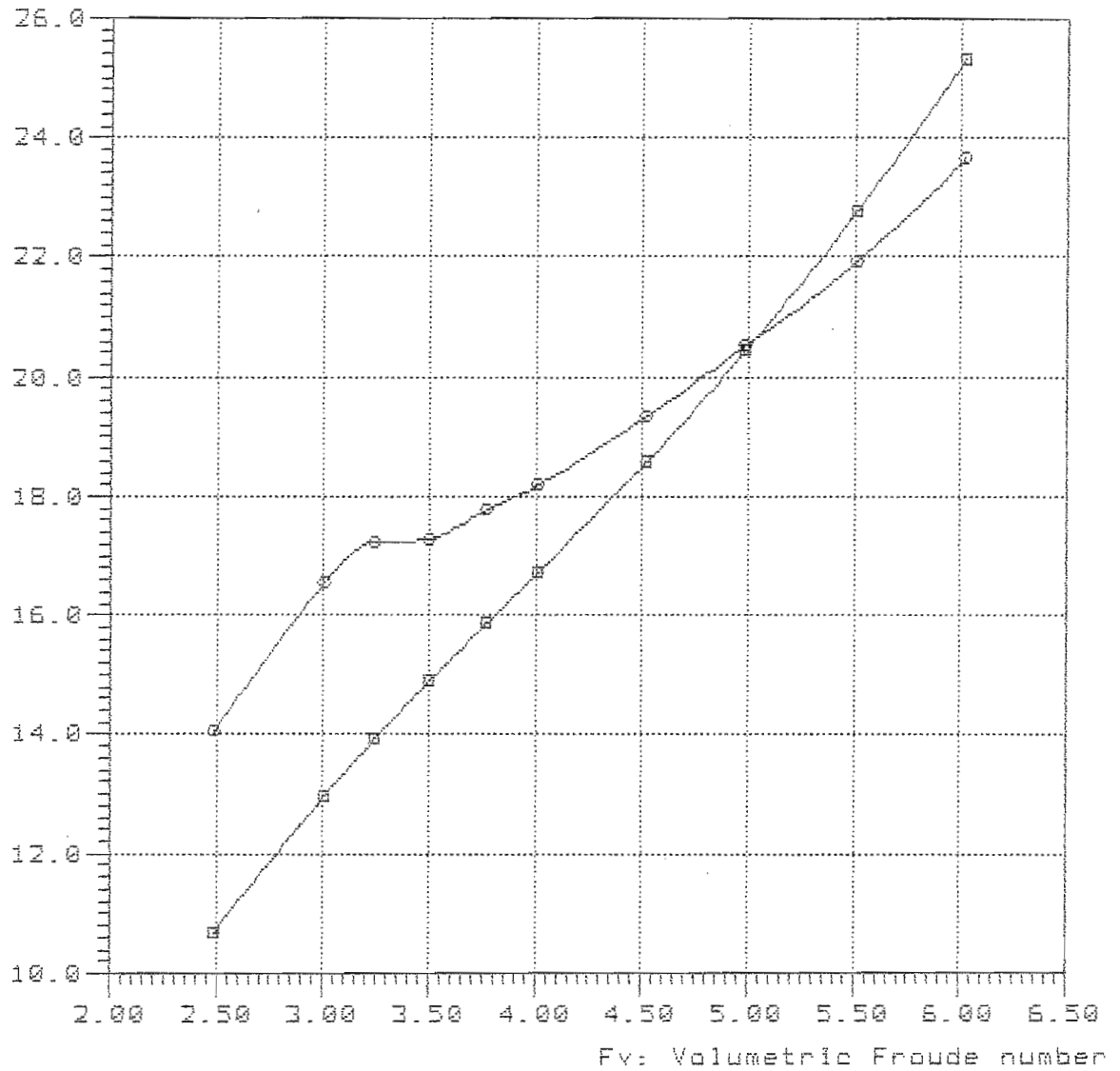
HydroComp, Inc.

File: 5-69-40c.mdl

Date: 22 Feb 00

Time: 18:40

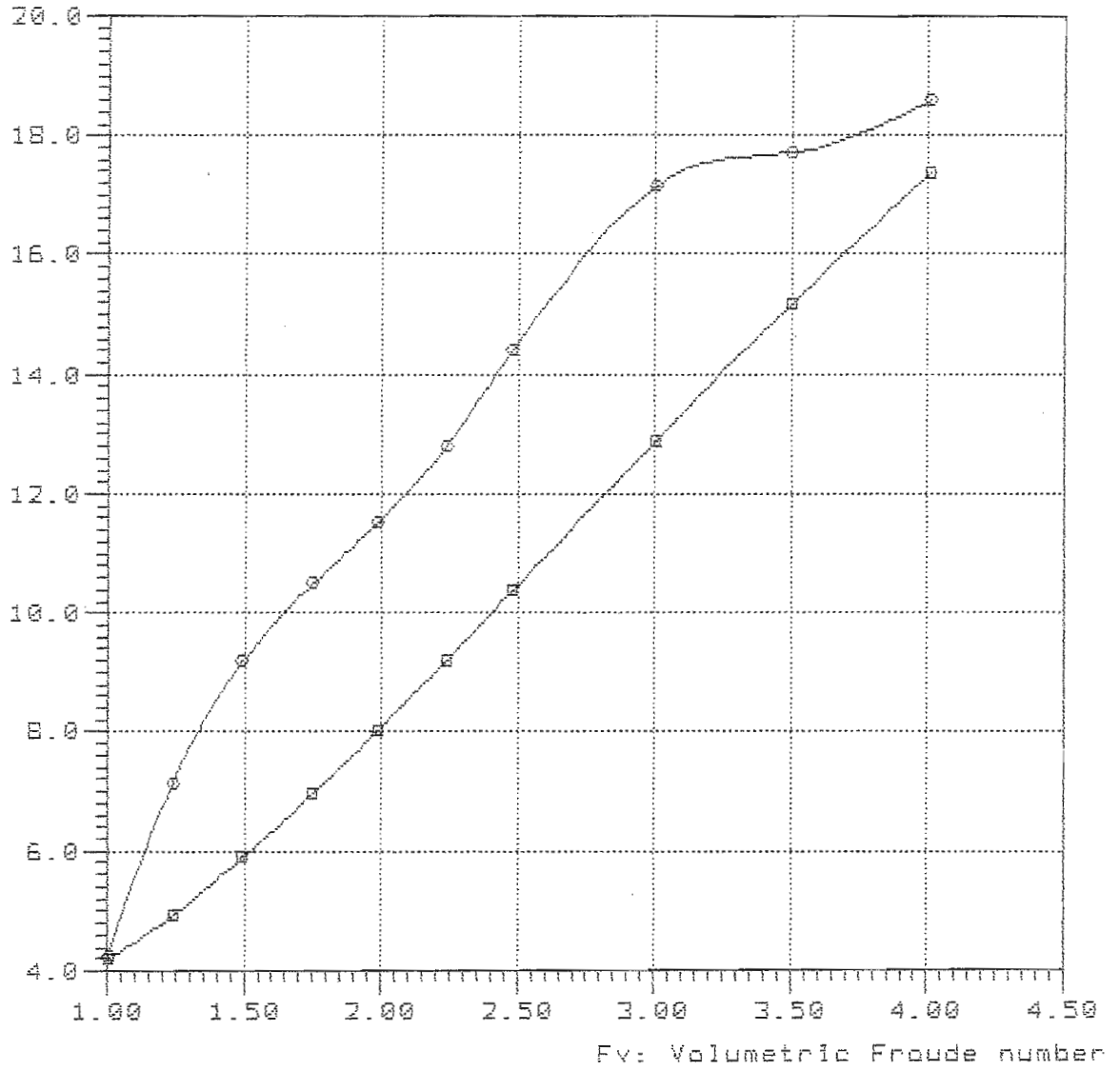
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=5.391 Lpx/Ap=8.557 Lcg/Lpx=0.403

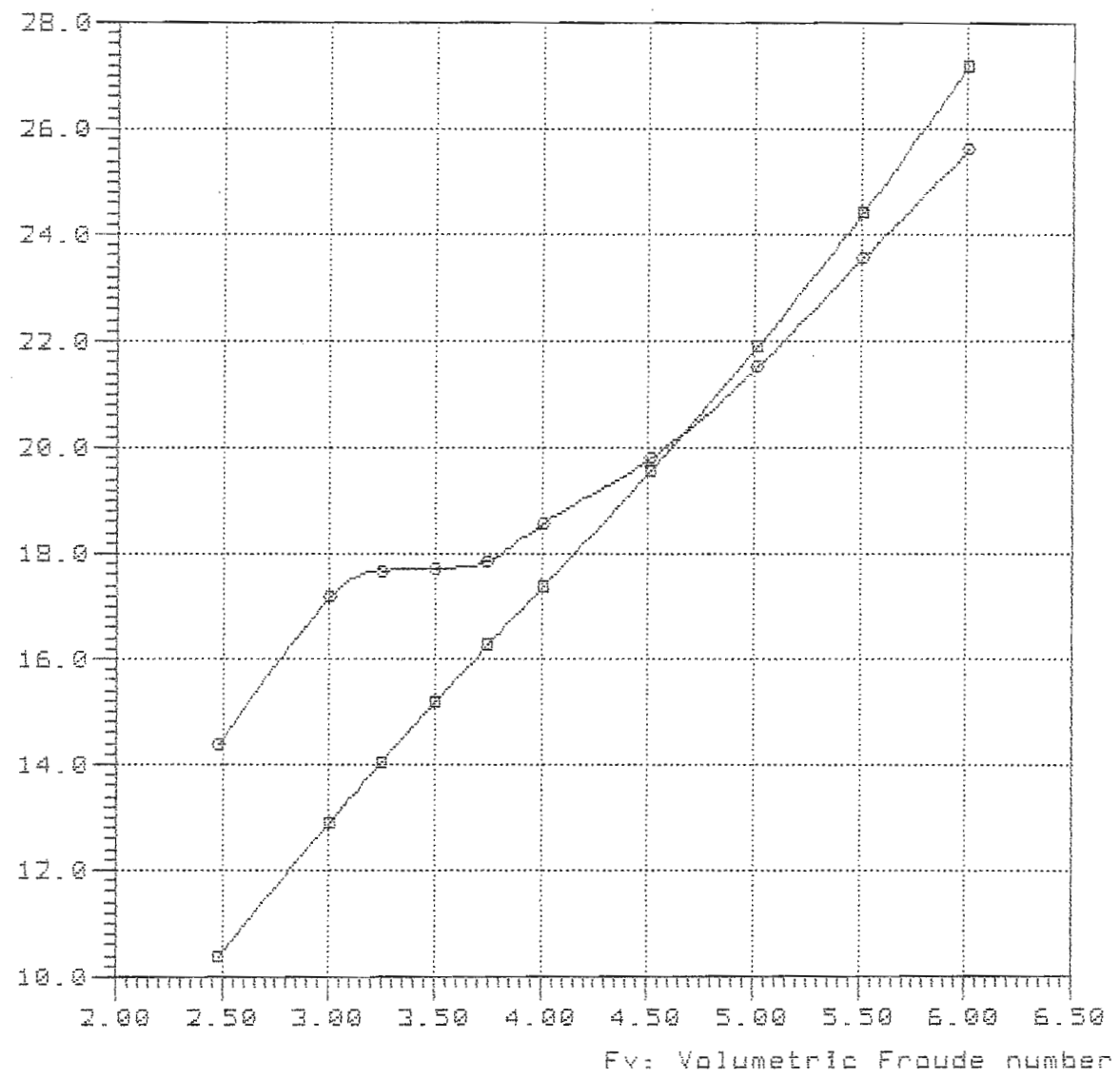
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=5.391 Lpx/Ap=8.557 Log/Lpx=0.449

Rbare: Bare-hull resistance (lbs)



—■—  
—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=5.391 Lpx/Ap=8.557 Log/Lpx=0.445



Model = 4669  
Ref = DTMB  
Friction = ATTC Ca=0.0

Lpx = 8.000 ft  
Lwl = 7.933 ft  
Bpx = 1.143 ft  
Ap = 7.479 sqft  
Disp = 68.80 Lb  
Deadrise = 13.00 degree  
Shaft Ang = 5.75 degree  
Vce = -12.50 inç

Lpx/Bpx = 6.999  
Lpx/Ap = 8.557  
Ap /Vol = 7.126  
Lpx/Vol = 7.832

NavCad(tm) 3.1d

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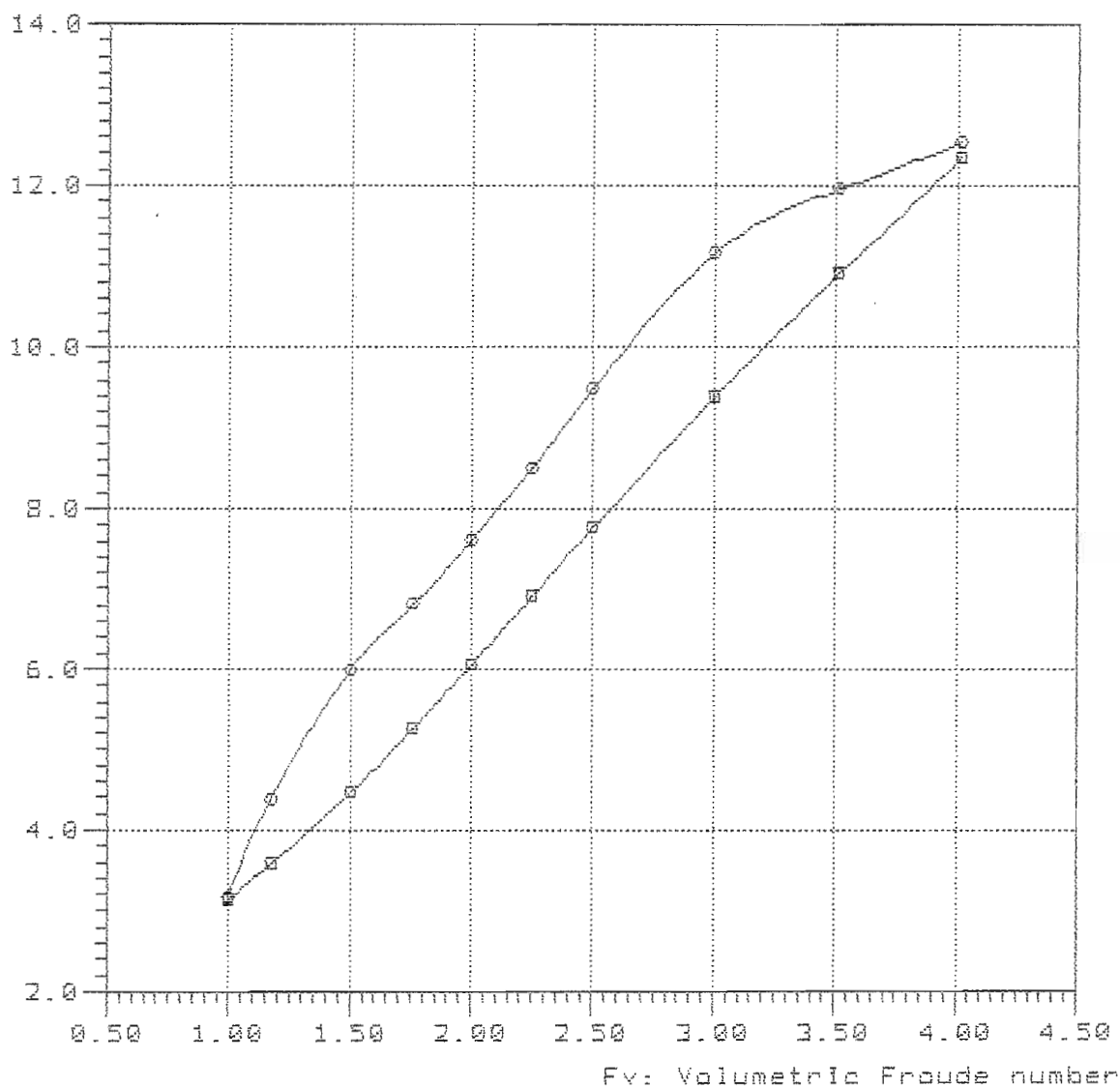
HydroComp, Inc.

File: 7-78-36b.mdl

Date: 23 Feb 00

Time: 8:55

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4659 Lpx/Bpx=7.000 Ap/Vol=7.002 Lpx/Ap=8.557 Log/Lpx=0.369

NavCad(tm) 3.1d

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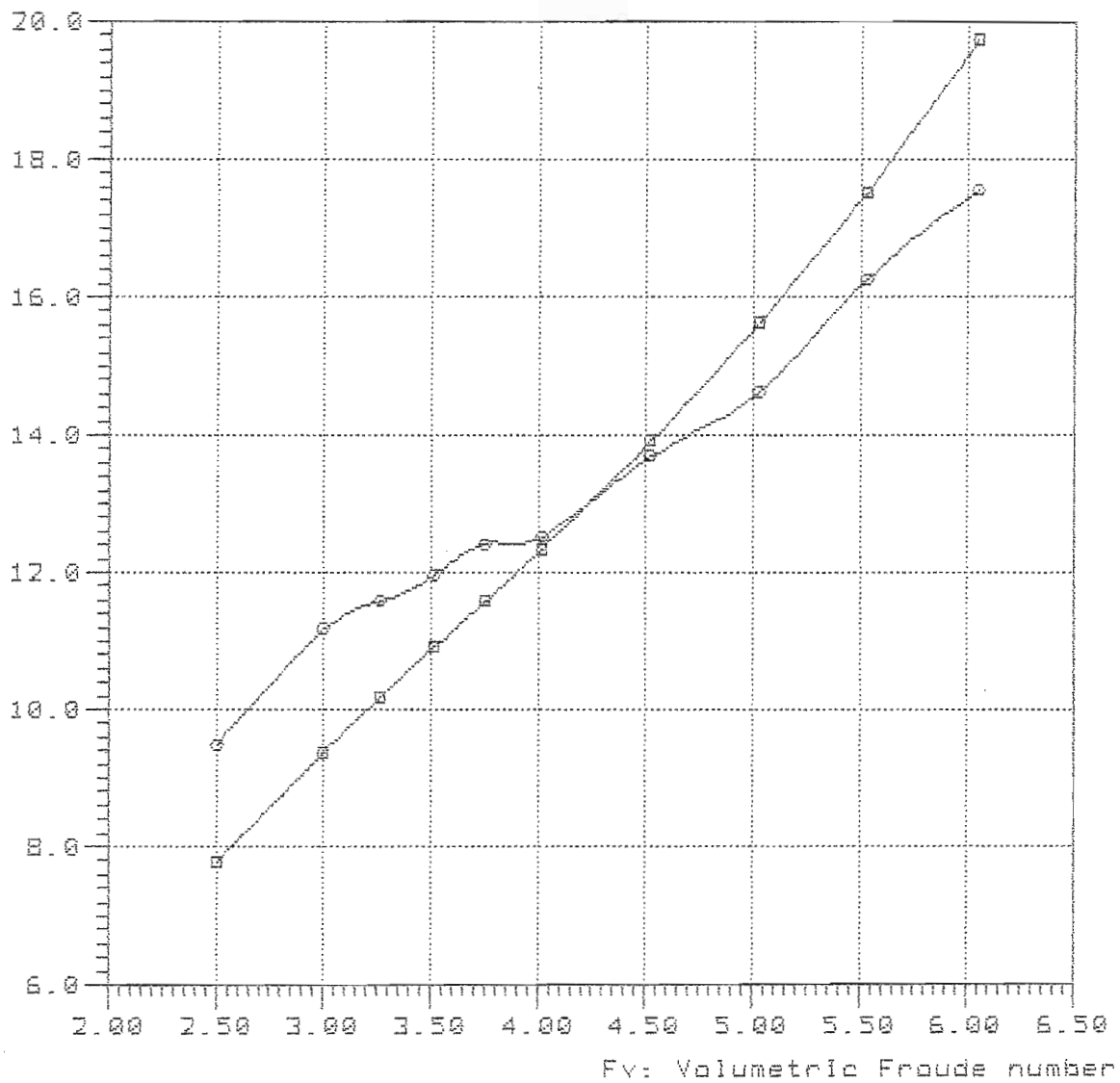
HydroComp, Inc.

File: 7-78-36c.mdl

Date: 23 Feb 00

Time: 8:58

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=7.002 Lpx/Ap=6.557 Log/Lpx=0.369

NavCad(tm) 3.1d

(c) Copyright 1995

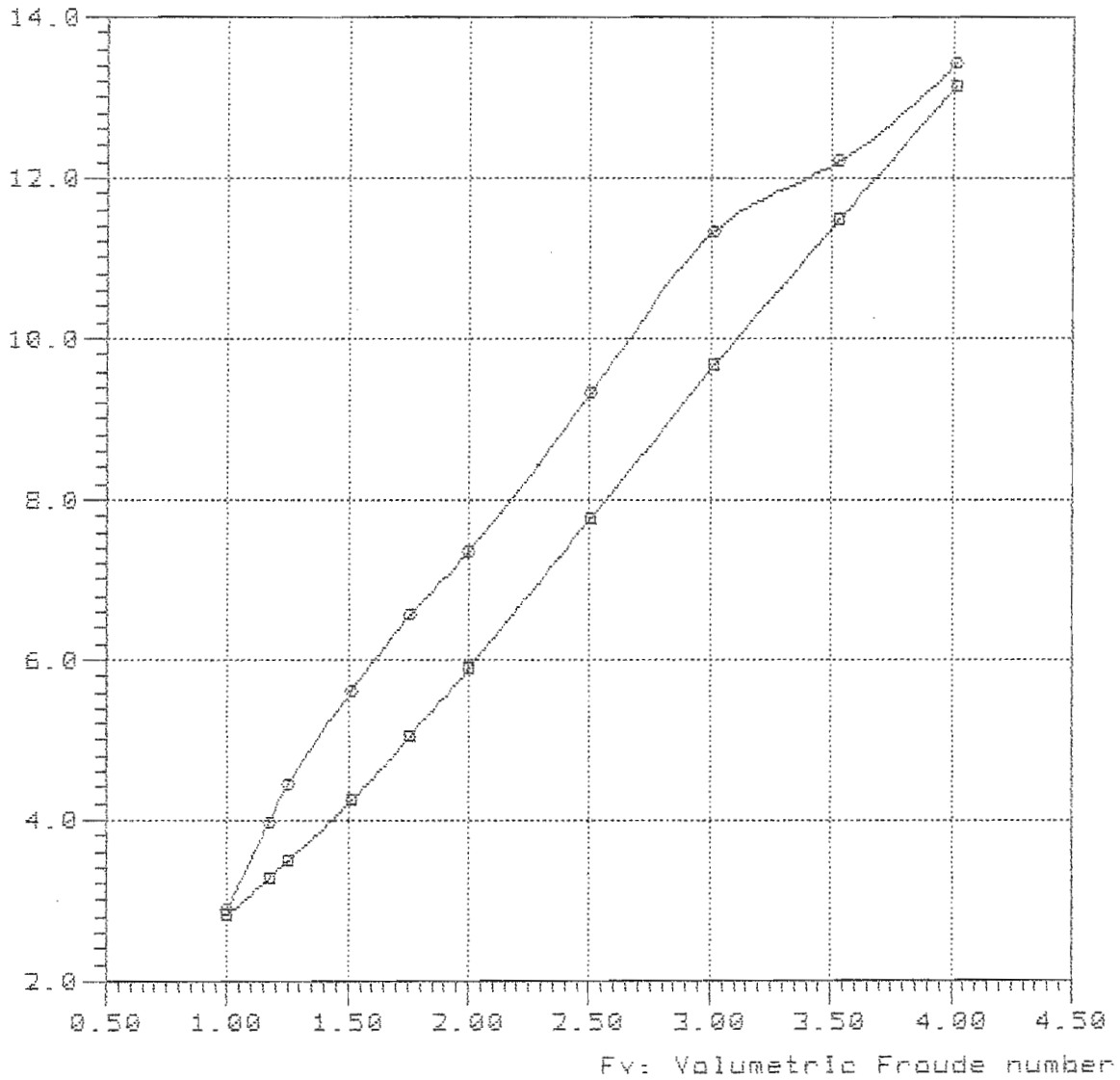
HydroComp, Inc.

File: 7-78-40b.mdl

Date: 23 Feb 00

Time: 9:02

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=7.002 Lpx/Ap=8.557 Lcg/Lpx=0.405

NavCad(tm) 3.1d

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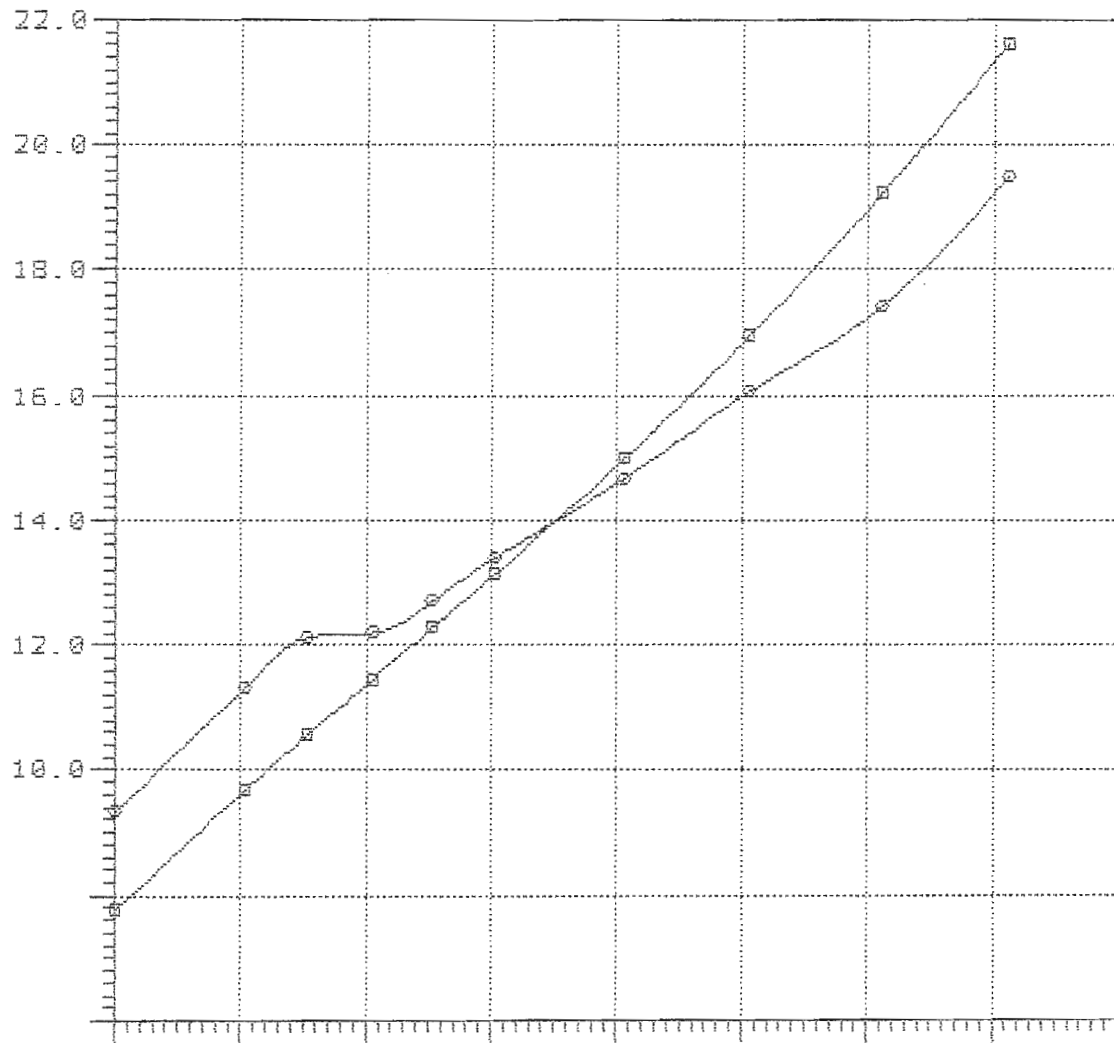
HydroComp, Inc.

File: 7-78-40c.mdl

Date: 23 Feb 00

Time: 9:05

Rbare: Bare-hull resistance (lbs)



—■—

—○—

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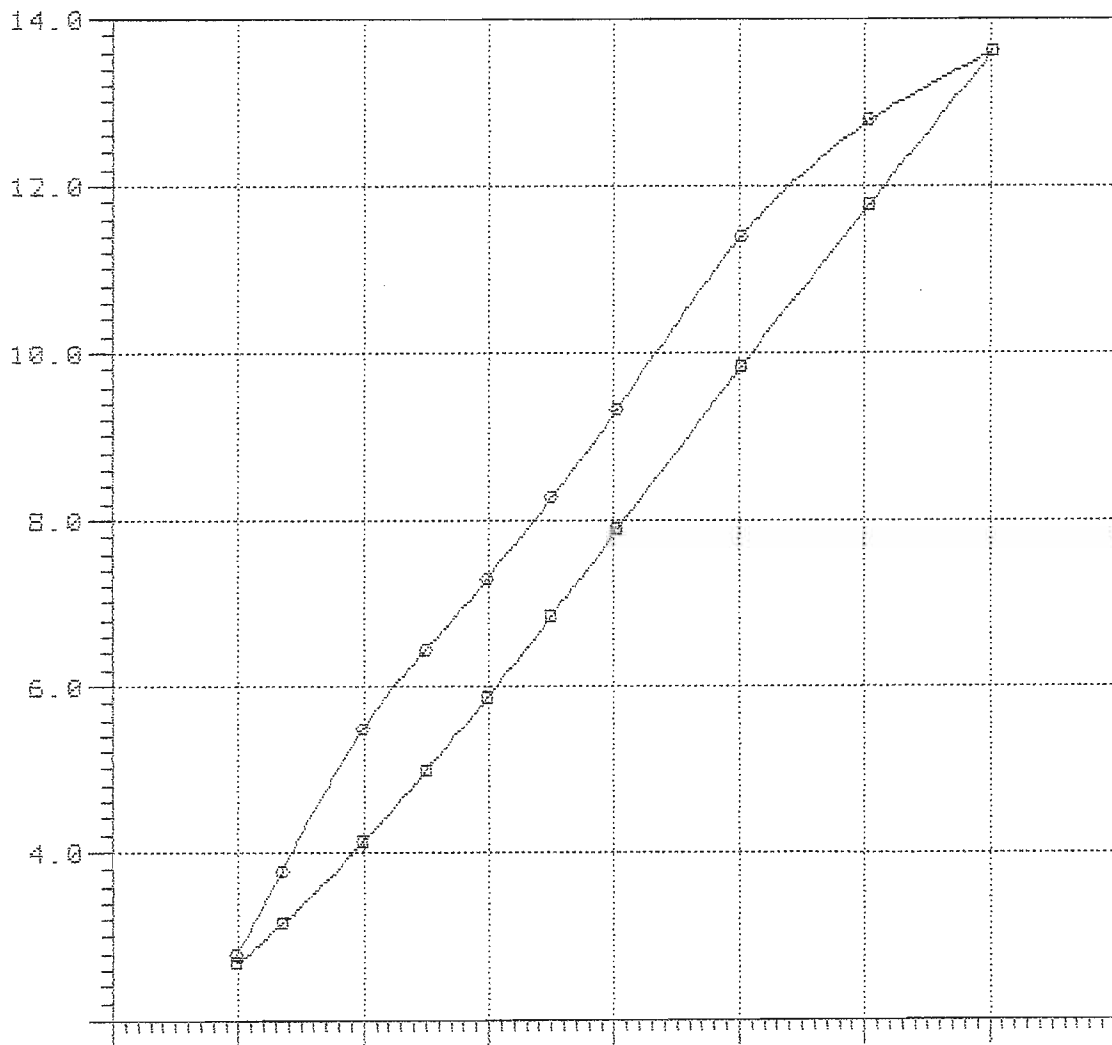
HydroComp, Inc.

File: 7-78-42b.mdl

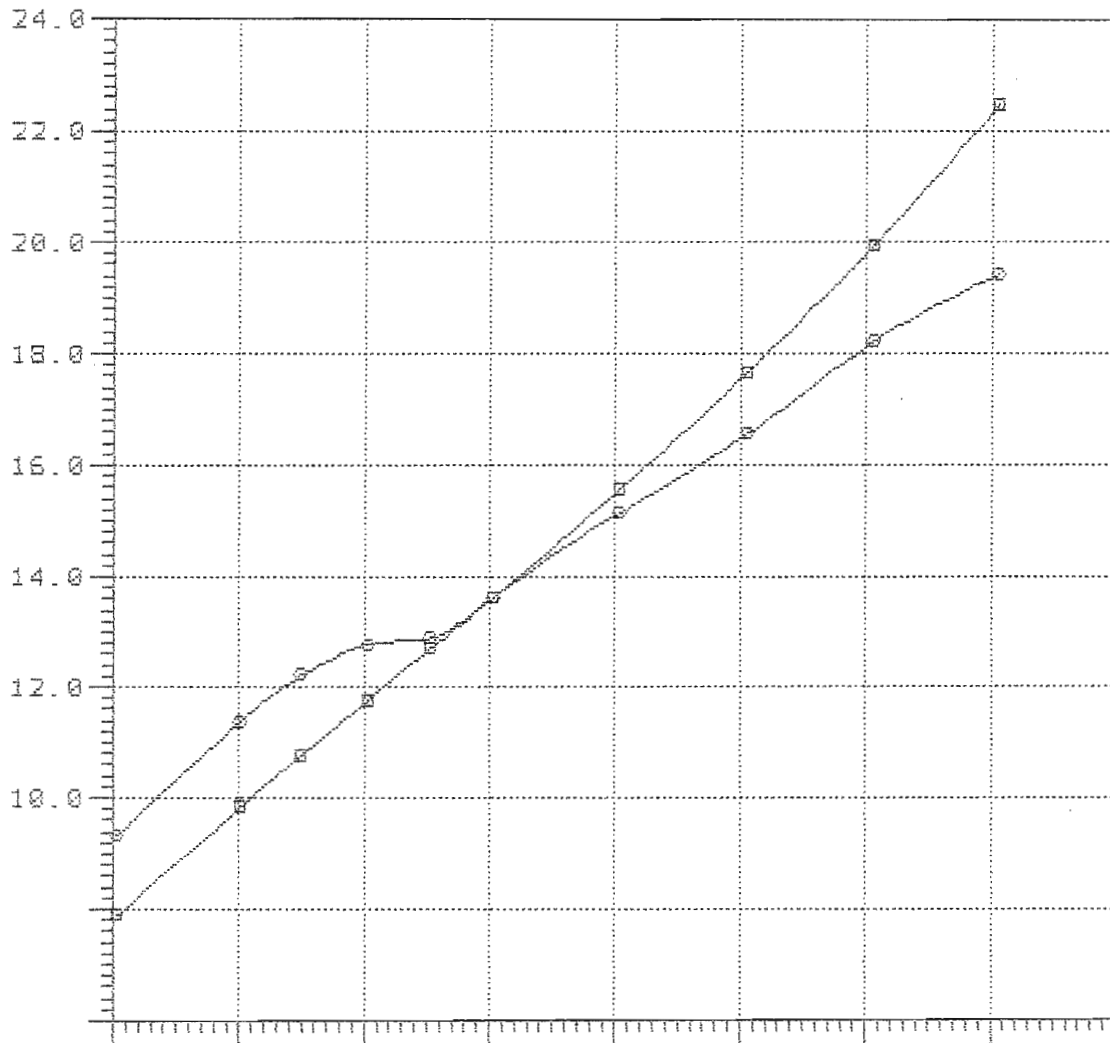
Date: 23 Feb 00

Time: 9:08

Rbare: Bare-hull resistance (lbs)

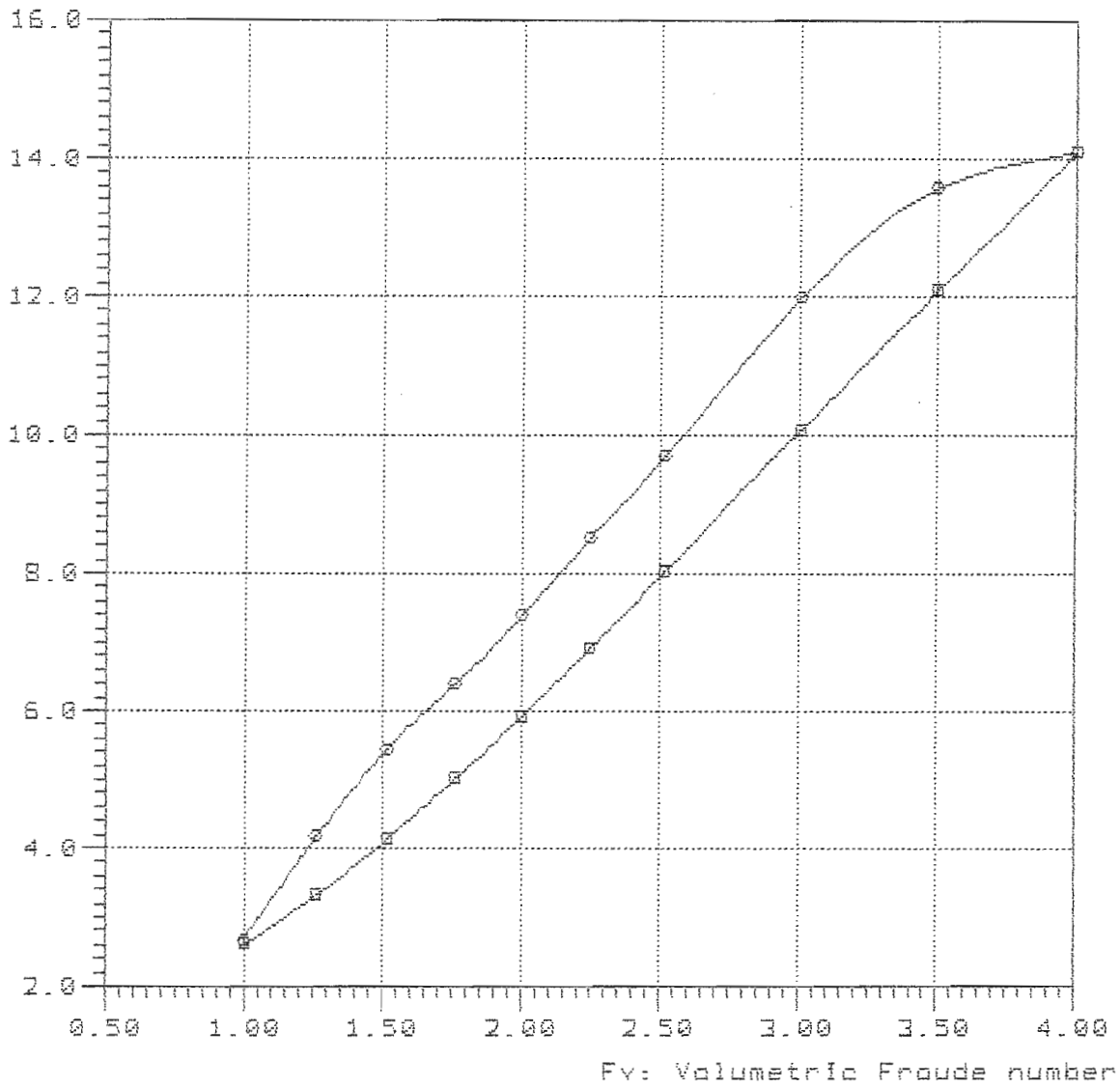


Rbare: Bare-hull resistance (lbs)



—□—  
—○—

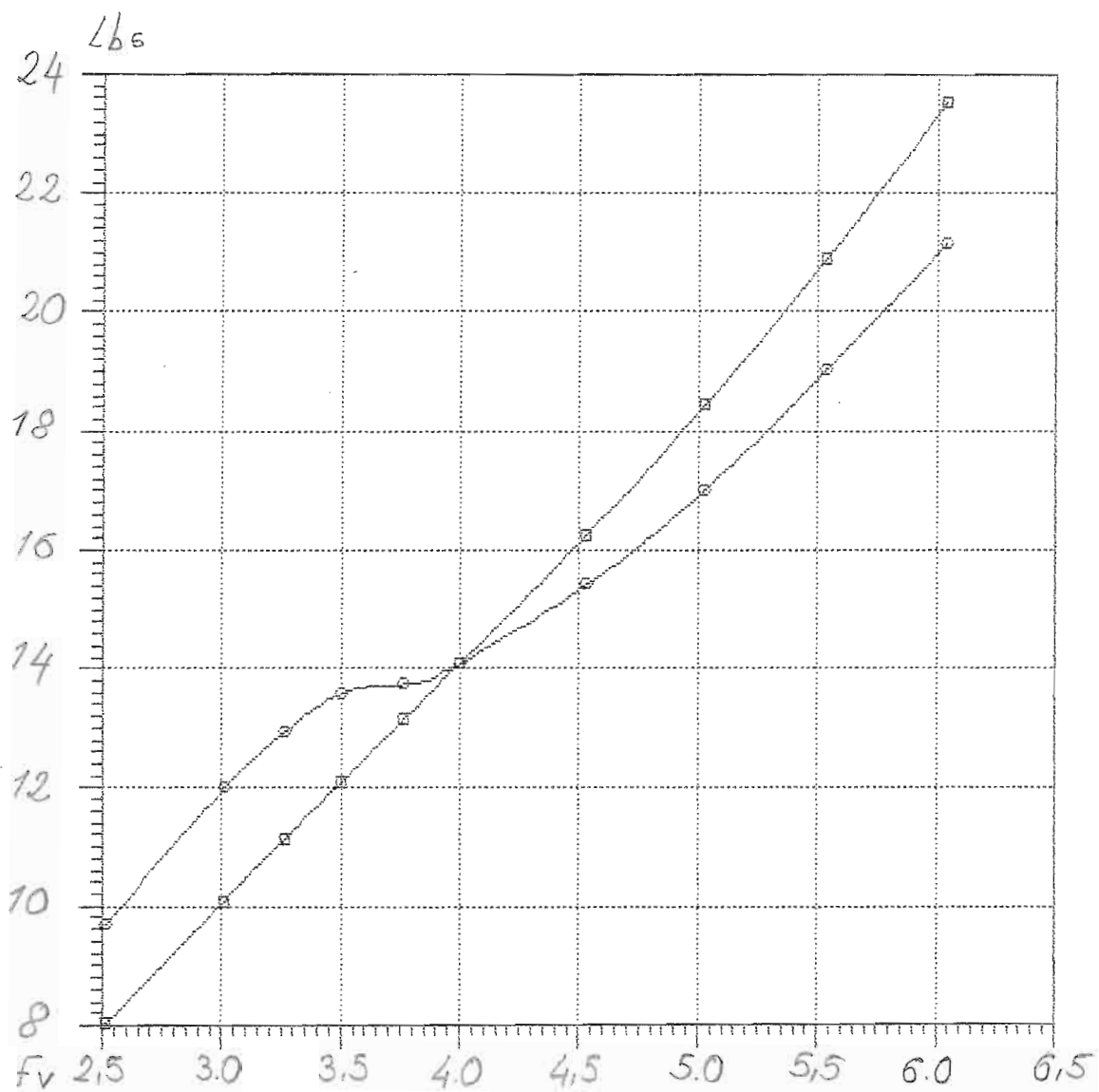
Rbare: Bare-hull resistance (lbs)



—■—  
—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=7.002 Lpx/Ap=8.557 Log/Lpx=0.449



7-78-44C



—□—

—○—

NavCad(tm) 3.1d

### Bare-hull resistance

File: 7-78-48b.mdl

(c) Copyright 1995

vs.

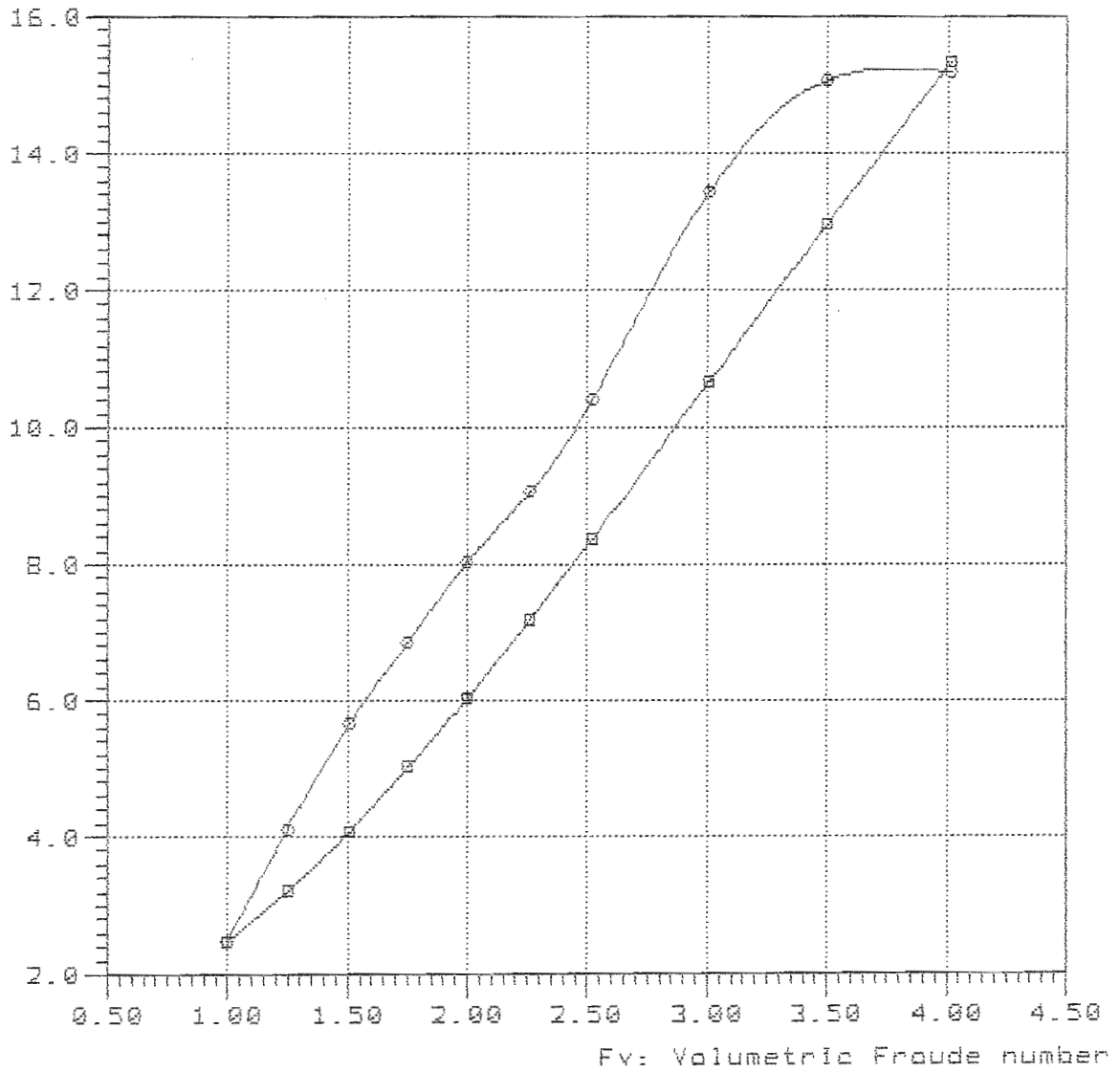
Date: 23 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 9:23

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=7.002 Lpx/Ap=8.557 Lcg/Lpx=0.489

NavCad(tm) 3.1d

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Bare-hull resistance

vs.

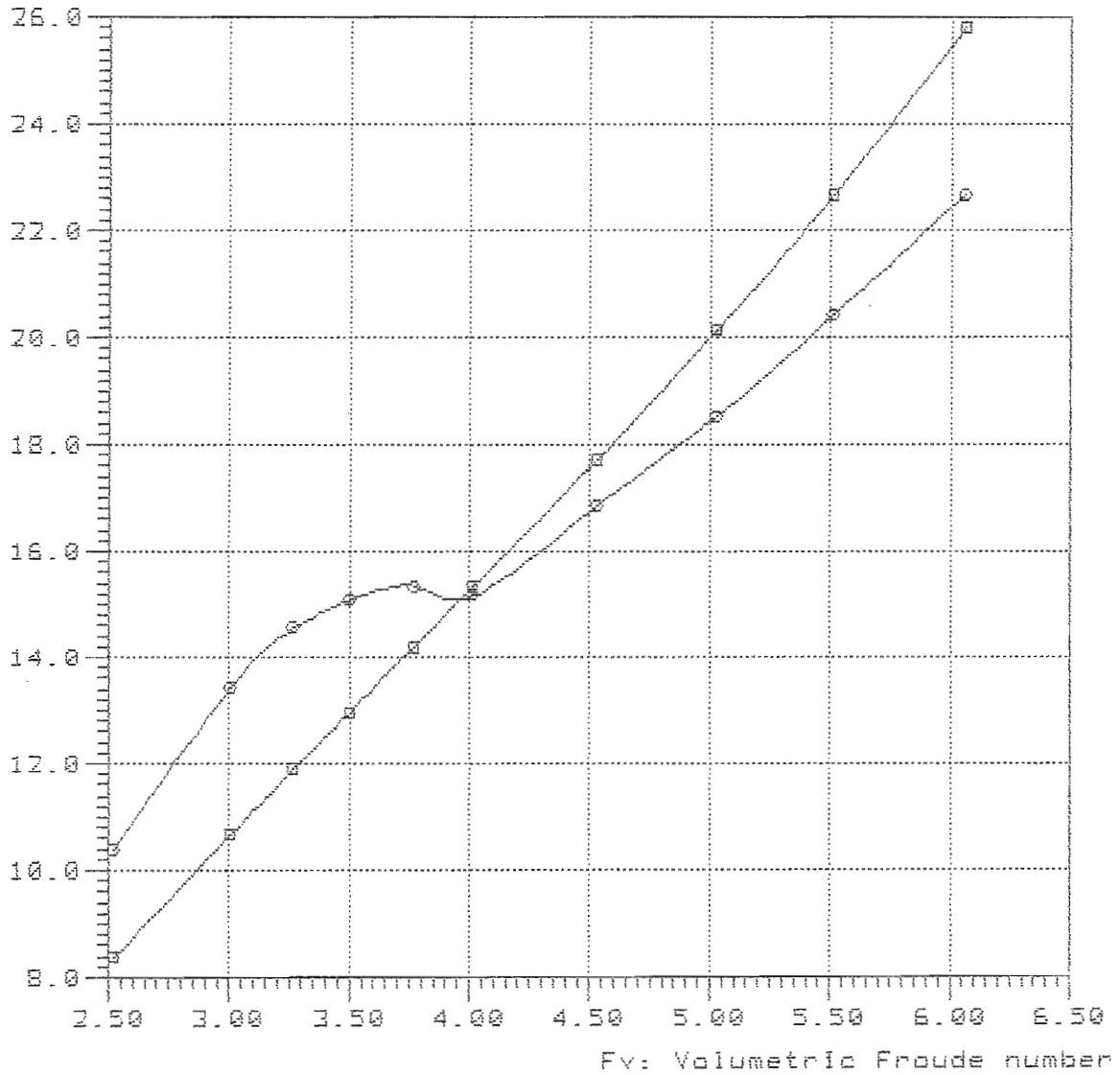
Volumetric Froude number

File: 7-78-48c.mdl

Date: 23 Feb 00

Time: 3:27

Rbare: Bare-hull resistance (lbs)



Curve legend

—□—

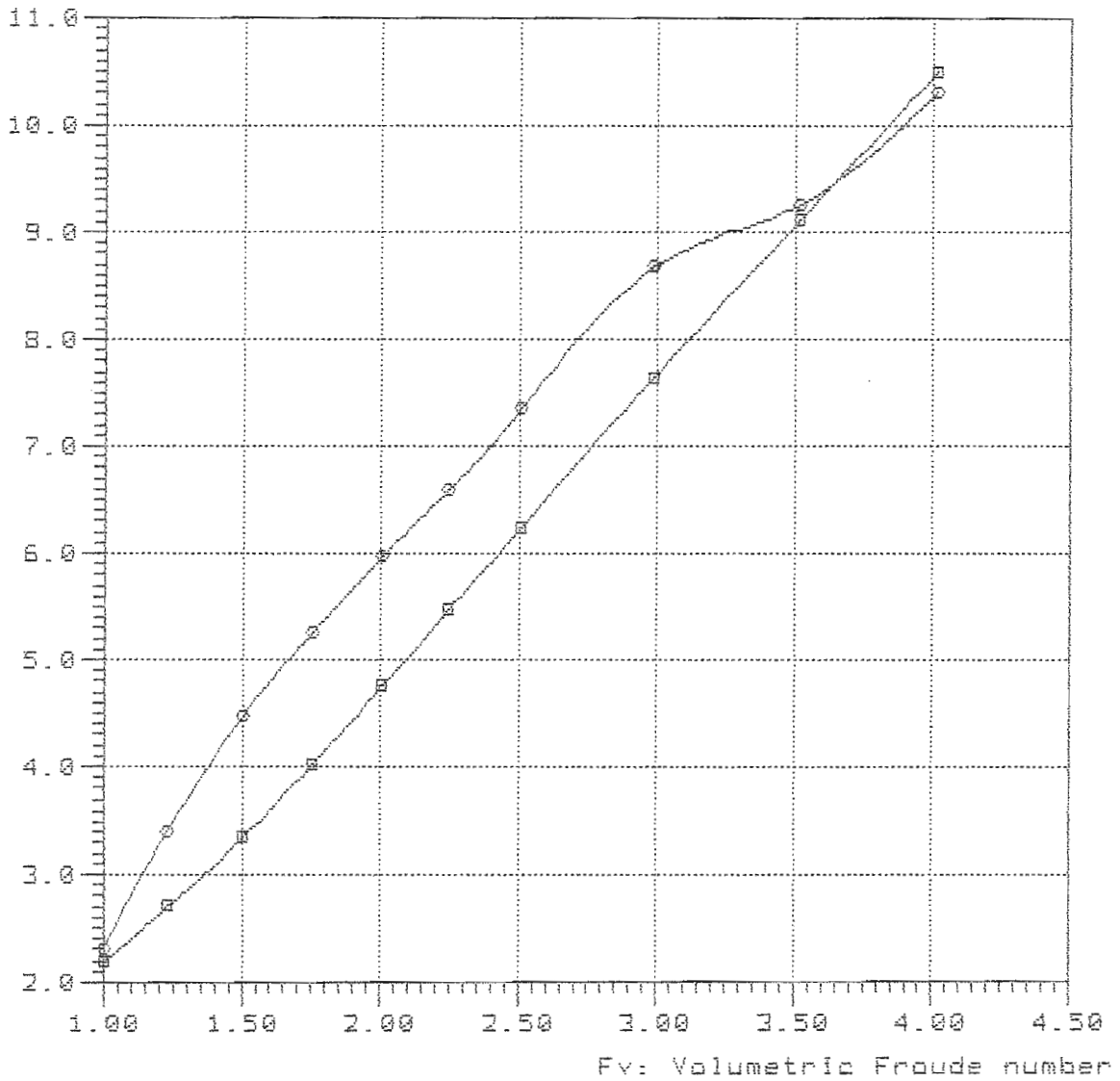
—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=7.002 Lpx/Ap=8.557 Log/Lpx=0.489

Model = 4669  
Ref = DTMB  
Friction = ATTC Ca=0.0

Lpx = 8.000 ft  
Lwl = 7.933 ft  
Bpx = 1.143 ft  
Ap = 7.479 sqft  
Disp = 51.40 Lb  
Deadrise = 13.00 degree  
Shaft Ang= 5.75 degree  
Vce = -12.50 inç

Lpx/Bpx = 6.999  
Lpx/Ap = 8.557  
Ap /Vol = 8.655  
Lpx/Vol = 8.631

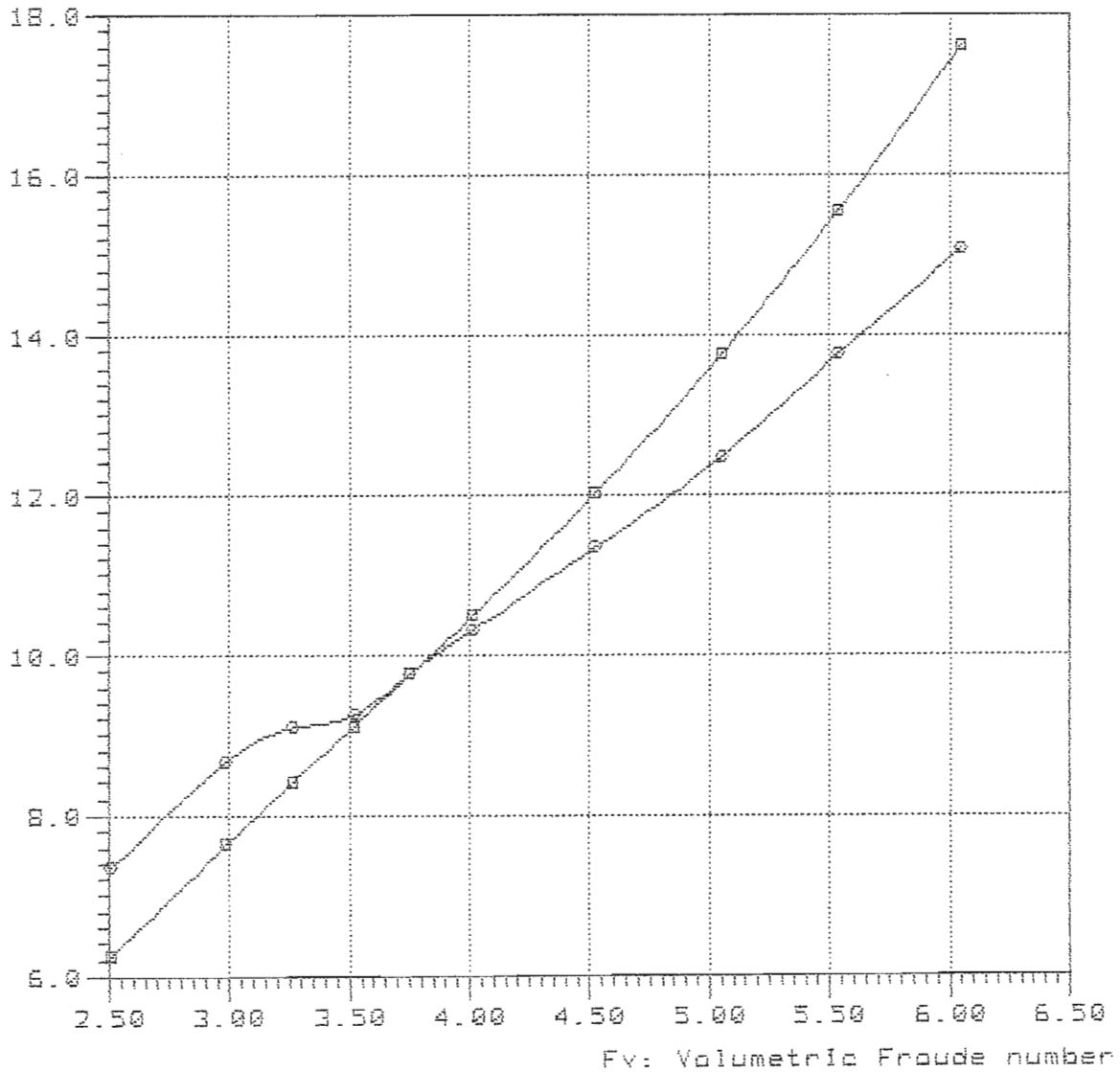
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4669 Lpx/Bpx=7.000 Ap/Val=8.505 Lpx/Ap=8.557 Lcg/Lpx=0.369

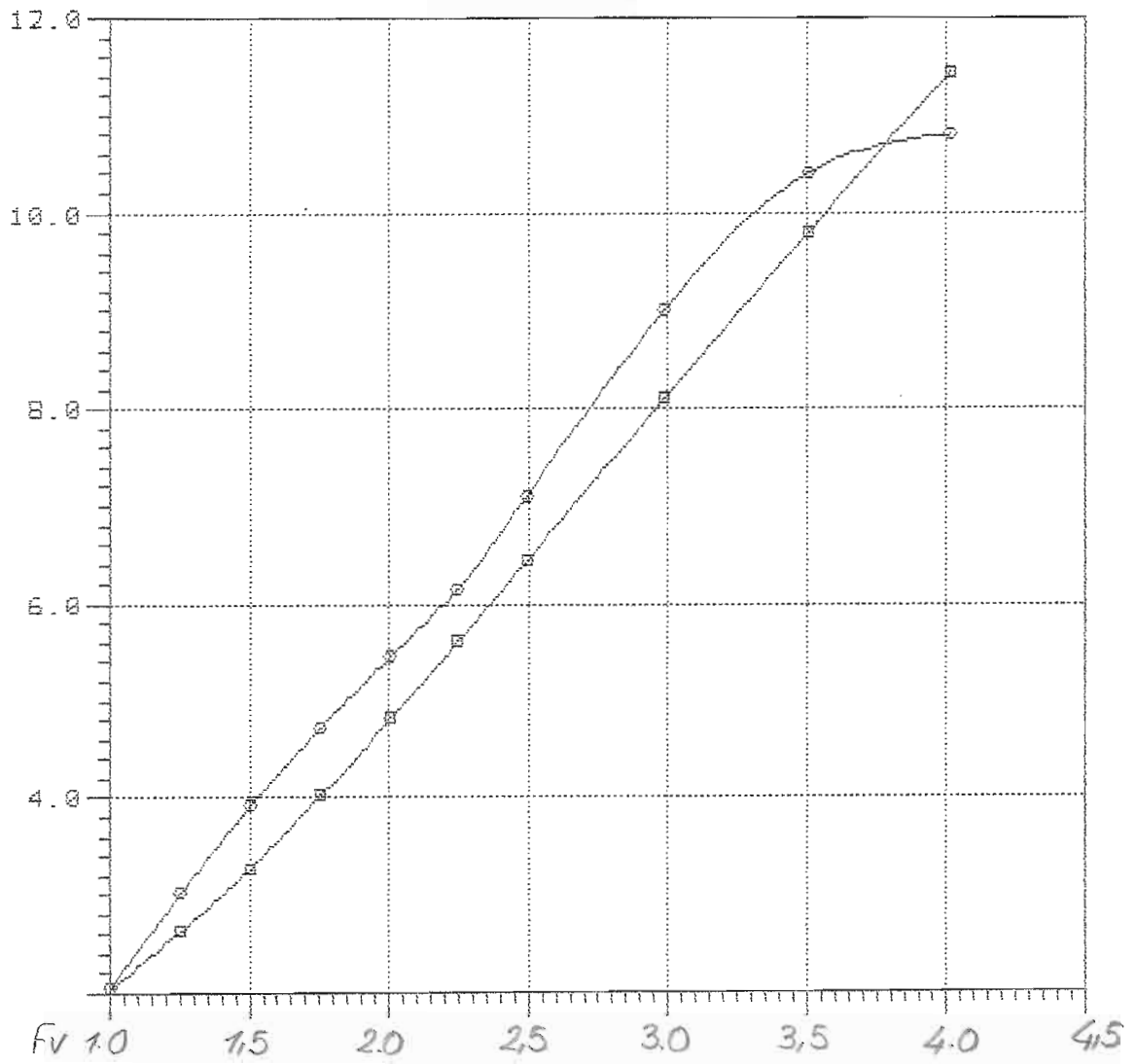
Rbare: Bare-hull resistance (lbs)



—■—

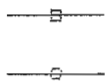
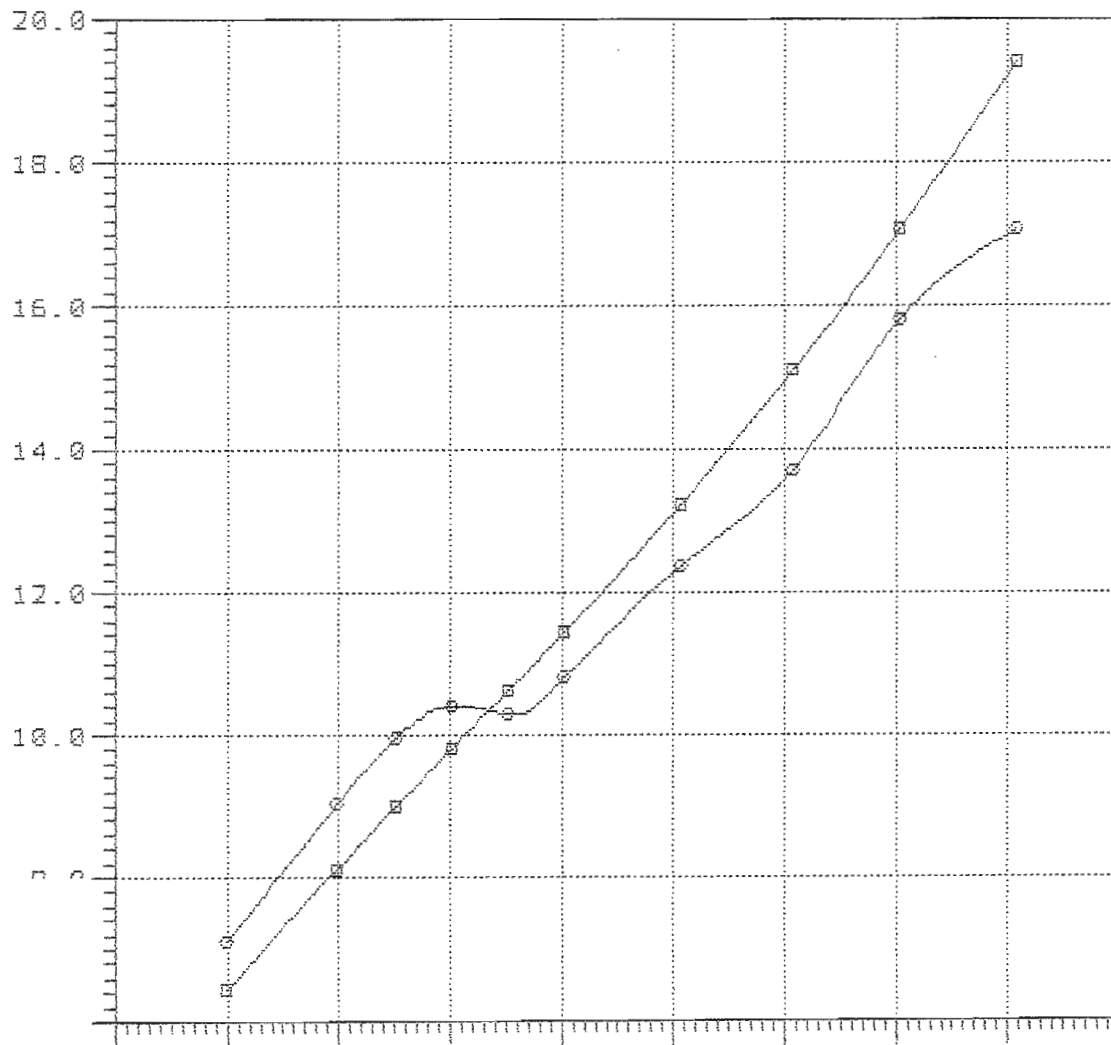
—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=8.505 Lpx/Ap=8.557 Lcg/Lpx=0.369

Rbare: Bare-hull resistance (lbs)



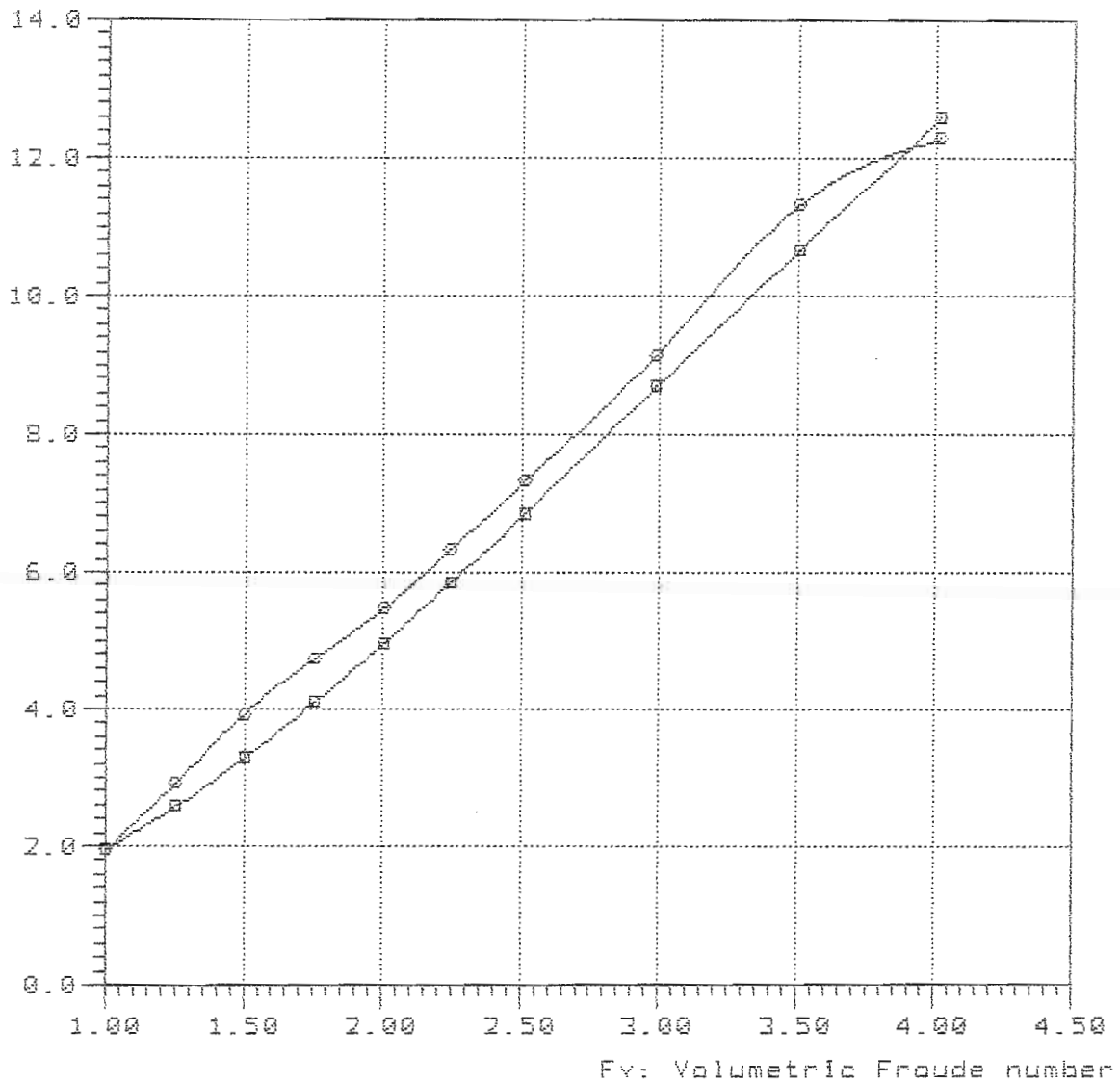
— □ —  
— ○ —

Rbare: Bare-hull resistance (lbs)





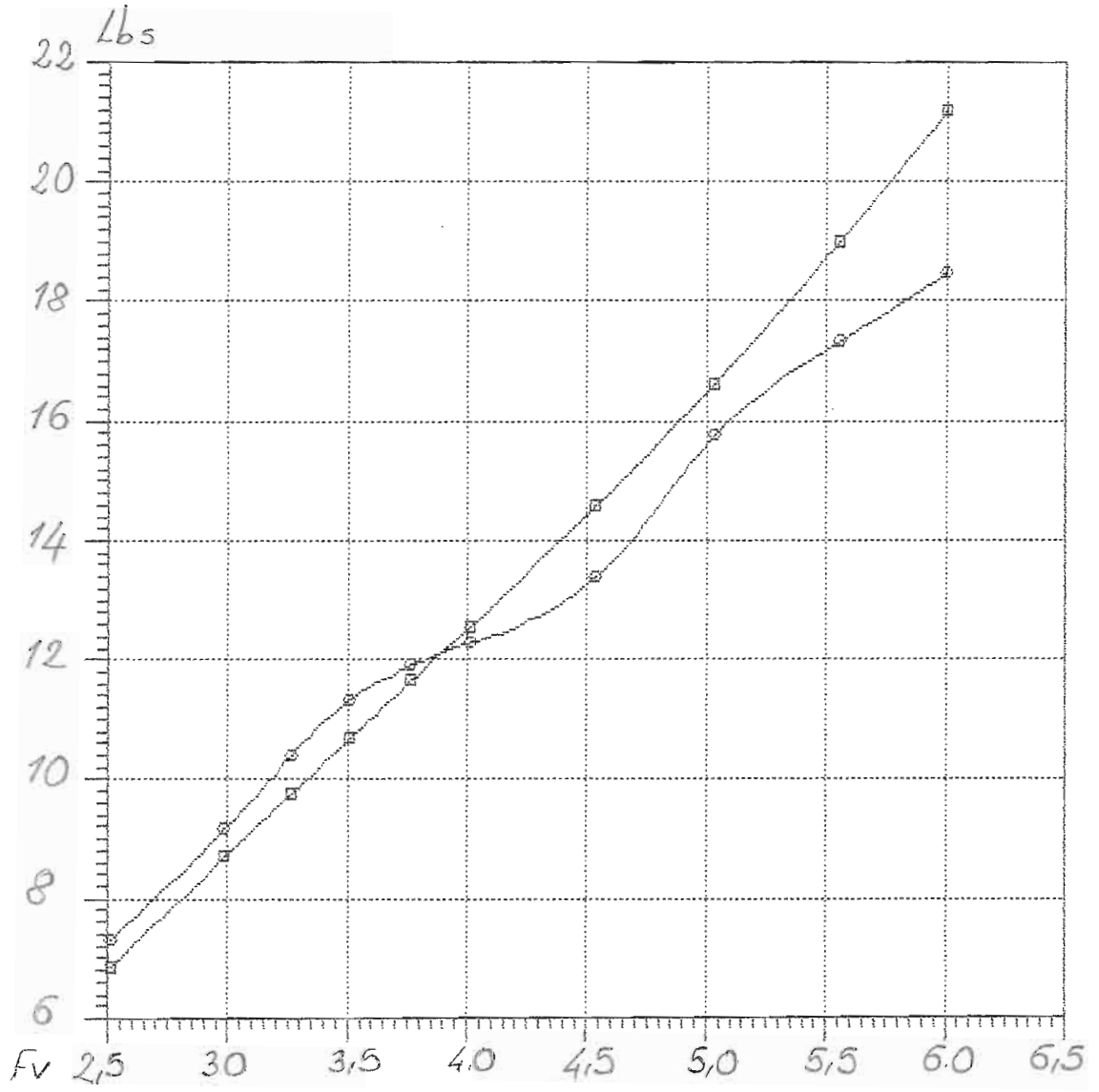
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4669 Lpx/Bpx=7.000 Ap/Val=8.585 Lpx/Ap=8.557 Lcg/Lpx=0.449

9-86-44c



— □ —  
— ○ —

NavCad(tm) 3.1d

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Bare-hull resistance

vs.

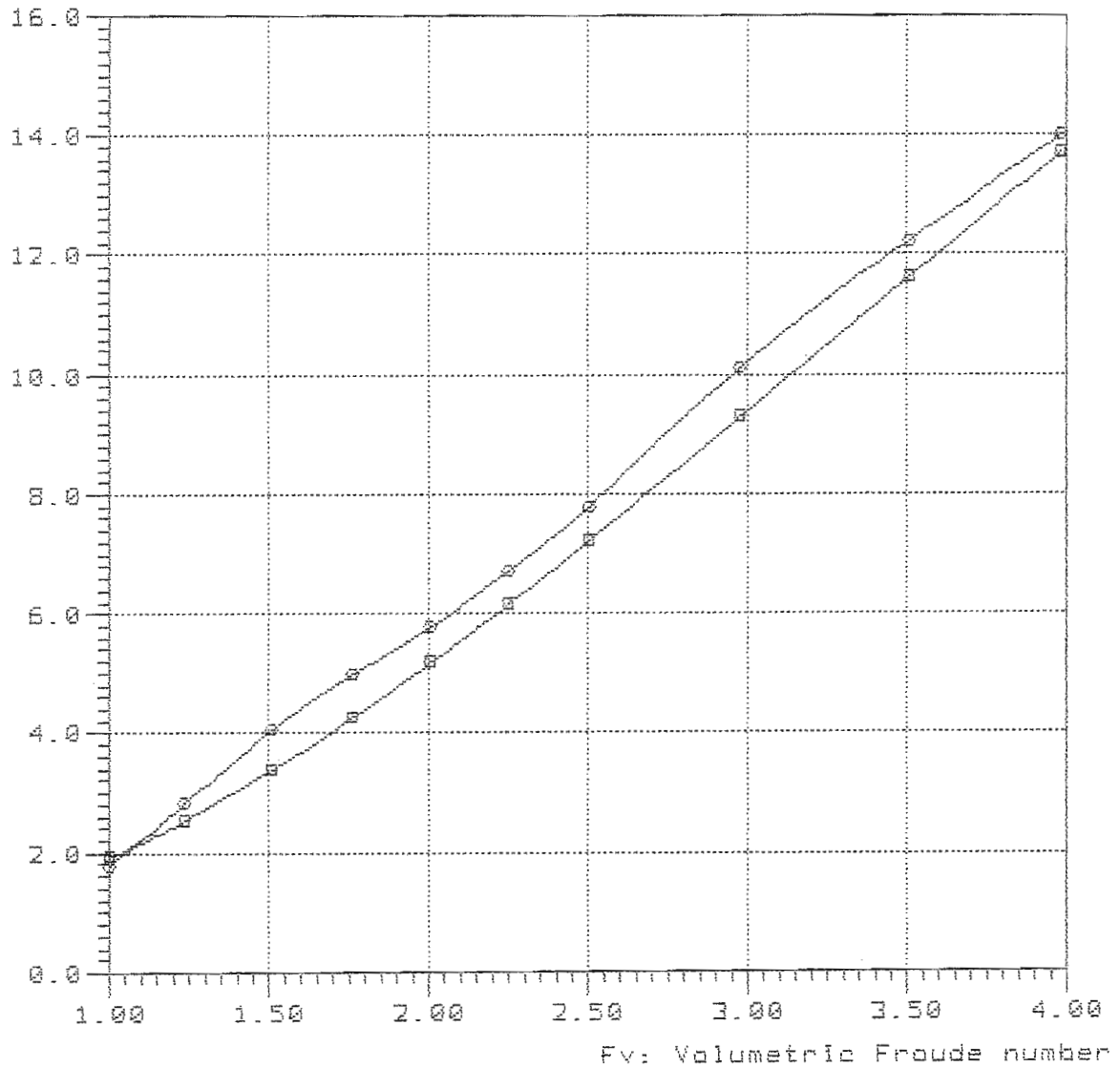
Volumetric Froude number

File: 9-86-48b.mdl

Date: 23 Feb 00

Time: 10:31

Rbare: Bare-hull resistance (lbs)



Curve legend

—□—

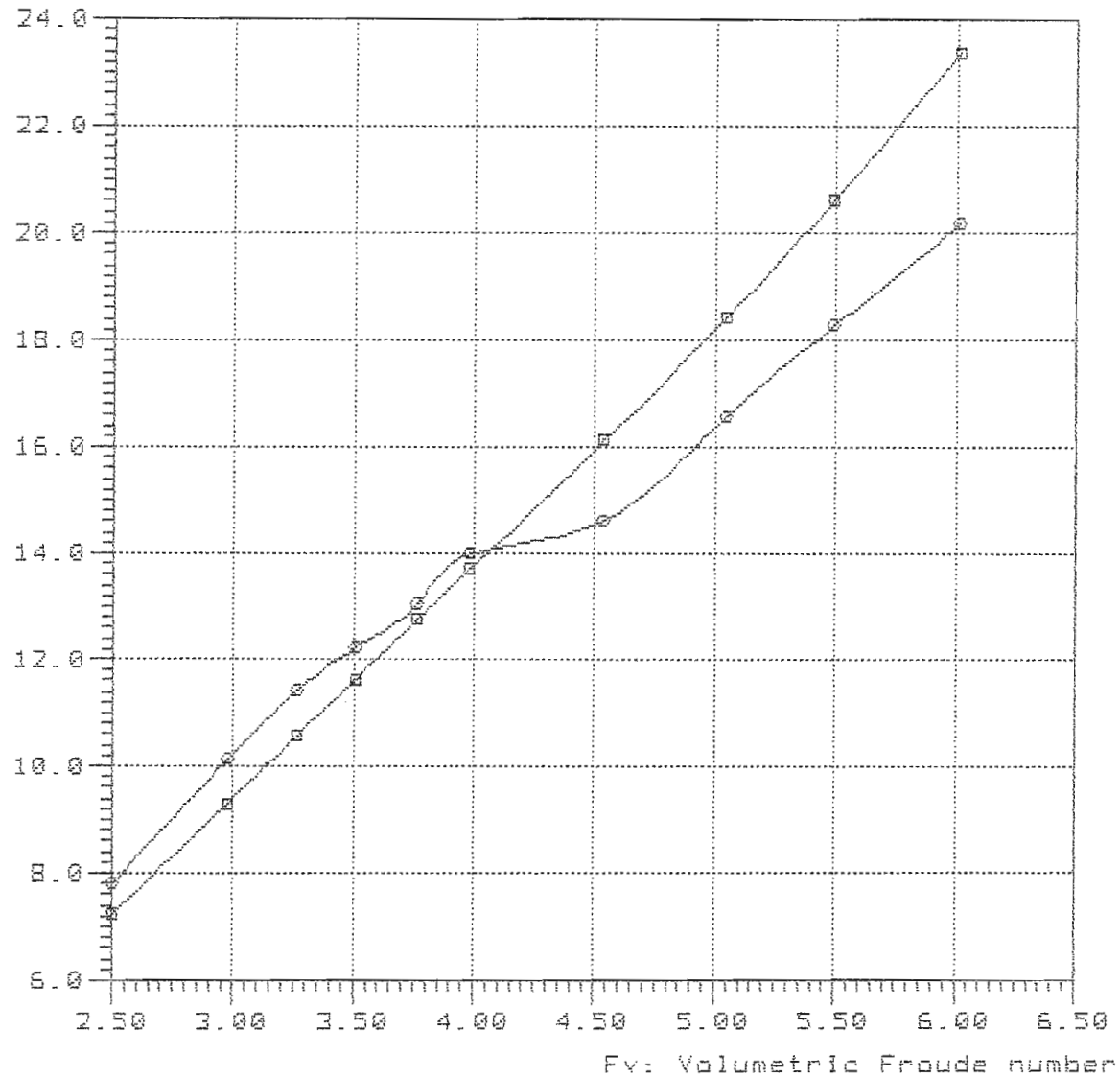
—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=8.505 Lpx/Ap=8.557 Log/Lpx=0.489

NavCad(tm) 3.1d  
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HydroComp, Inc.

**Bare-hull resistance**  
vs.  
**Volumetric Froude number**

File: 9-86-48c.mdl  
Date: 23 Feb 88  
Time: 10:35

Rbare: Bare-hull resistance (lbs)



**Curve legend**

—□—

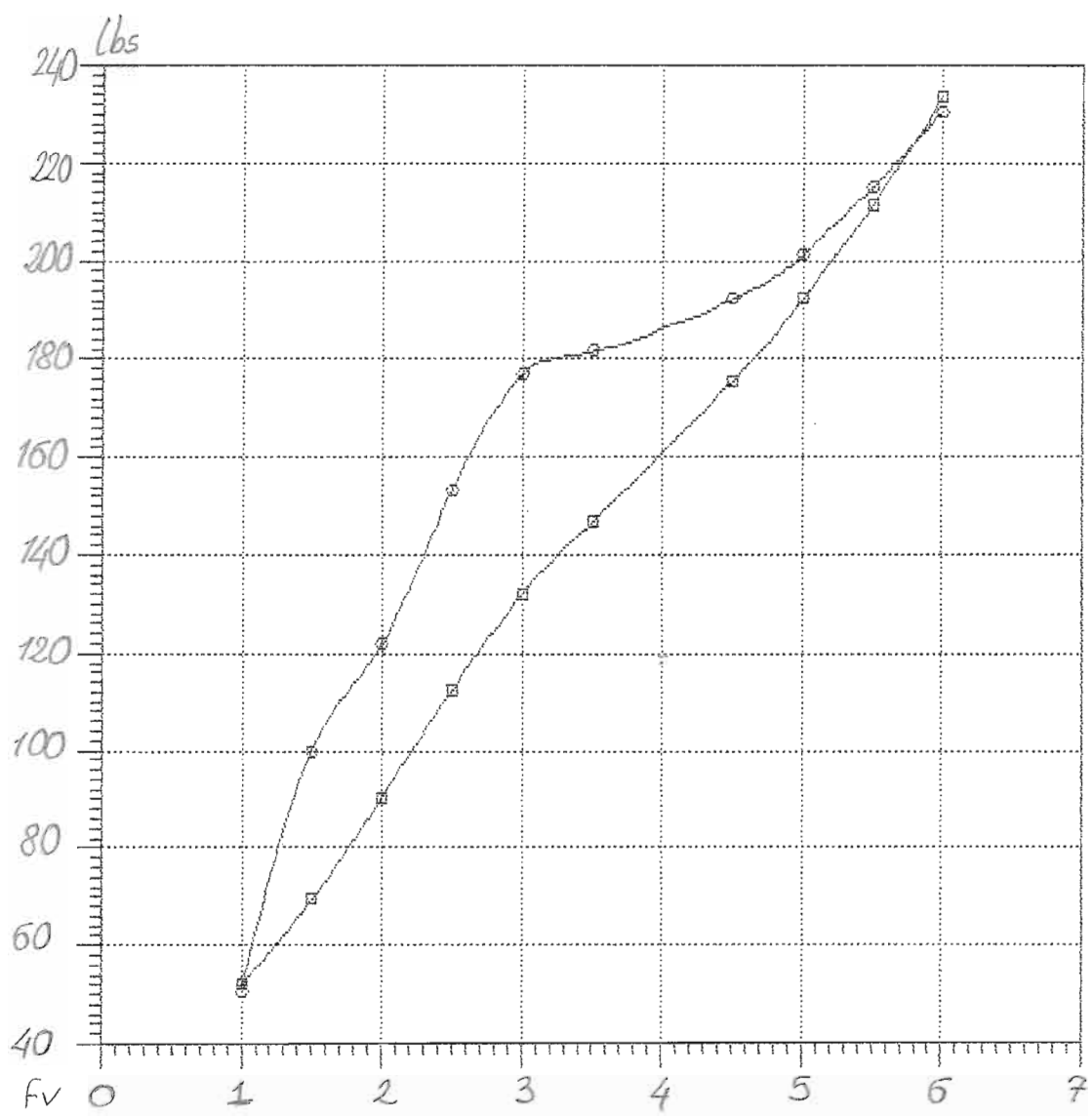
—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=8.505 Lpx/Ap=8.557 Lcg/Lpx=0.489

Model = 4669  
Ref = NSRDC  
Friction = ATTC  $Ca=4e-4$

Lpx = 17.500 ft  
Lwl = 17.290 ft  
Bpx = 2.500 ft  
Ap = 35.794 sqft  
Disp = 1000.00 Lb  
Deadrise = 13.00 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 7.000  
Lpx/Ap = 8.556  
Ap /Vol = 5.726  
Lpx/Vol = 7.021

6-70-369



—□—  
—○—

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

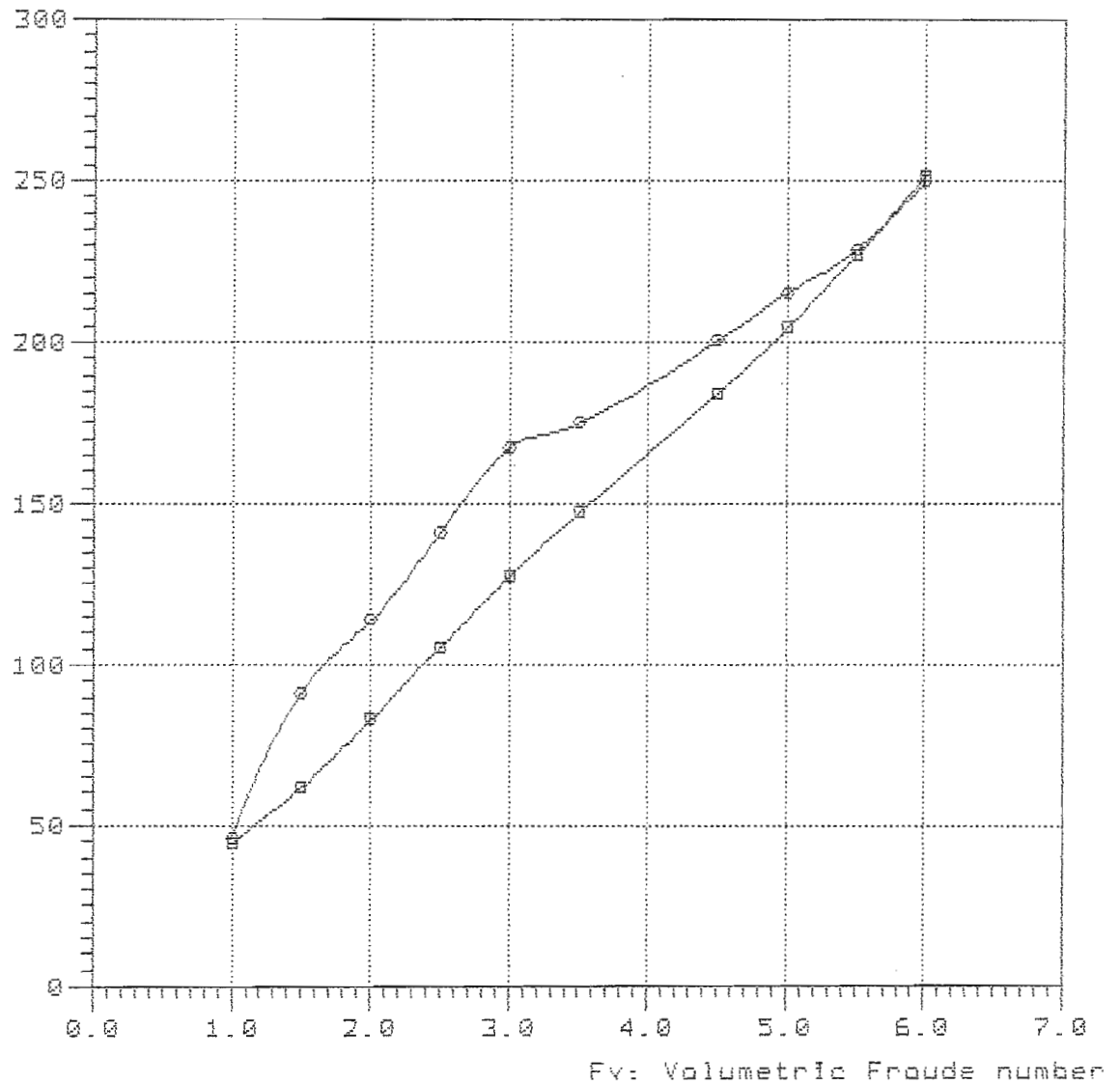
### Volumetric Froude number

File: 6-70-409.mdl

Date: 22 Feb 00

Time: 18:53

Rbare: Bare-hull resistance (lbs)

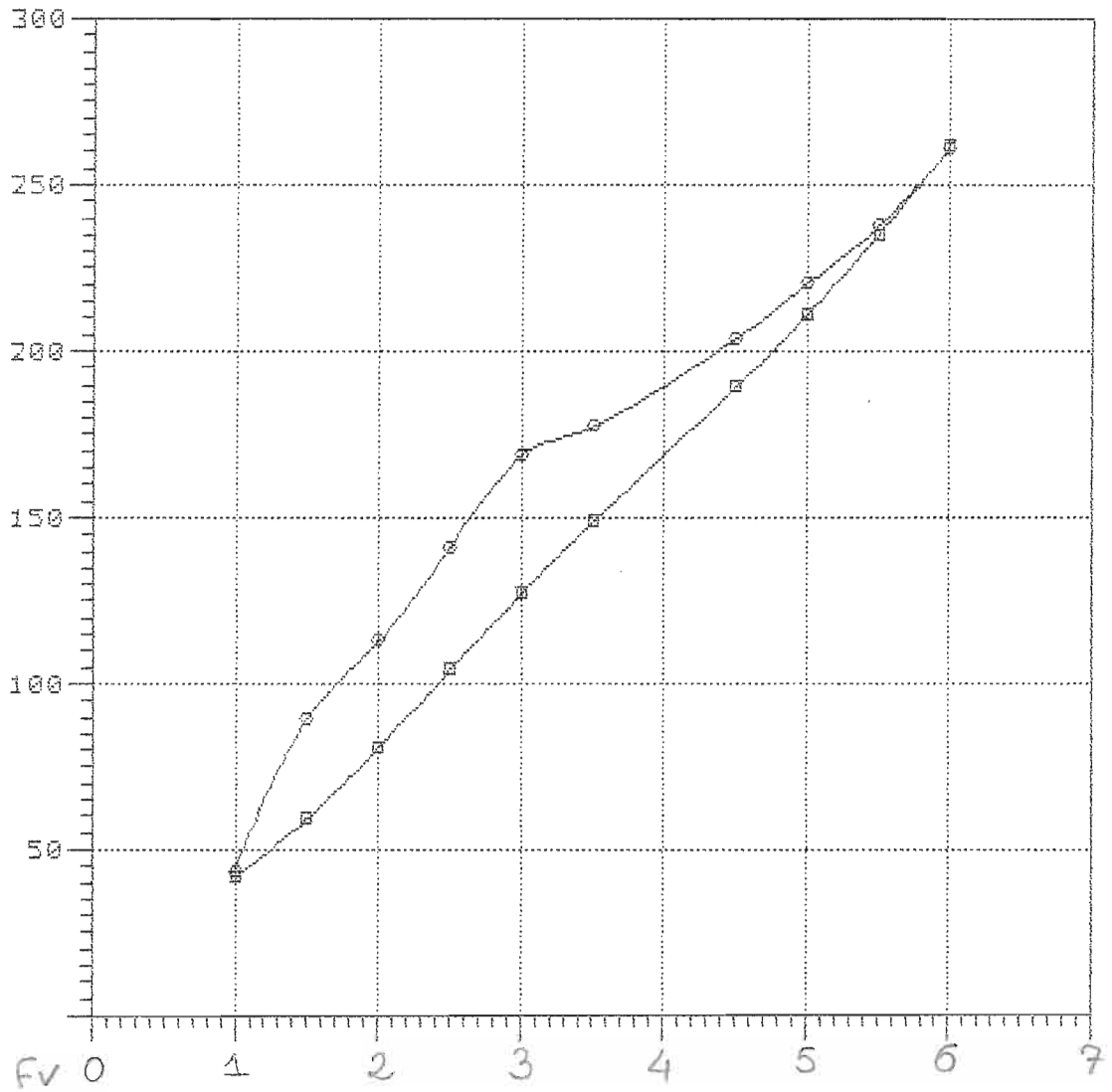


#### Curve legend

—■—

—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=5.727 Lpx/Ap=8.557 Log/Lpx=0.409

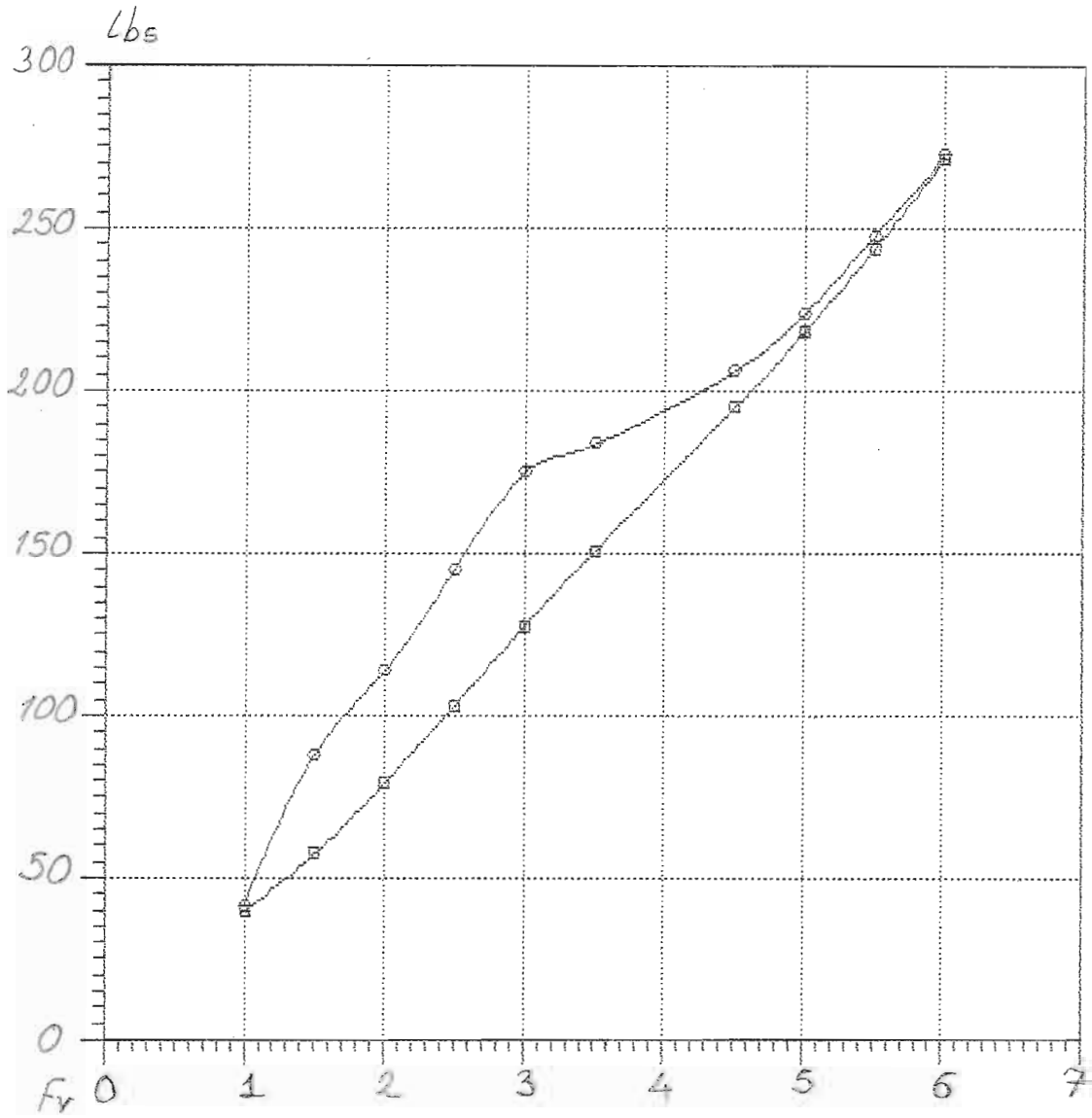
Rbare: Bare-hull resistance (lbs)



—■—  
—○—



6-70-449



—□—

—○—

Model = 4669  
Ref = NSRDC  
Friction = ATTC  $Ca=4e-4$

Lpx = 18.700 ft  
Lwl = 18.476 ft  
Bpx = 2.671 ft  
Ap = 40.871 sqft  
Disp = 1000.00 Lb  
Deadrise = 13.00 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 7.001  
Lpx/Ap = 8.556  
Ap /Vol = 6.539  
Lpx/Vol = 7.502

NavCad(tm) 3.1d

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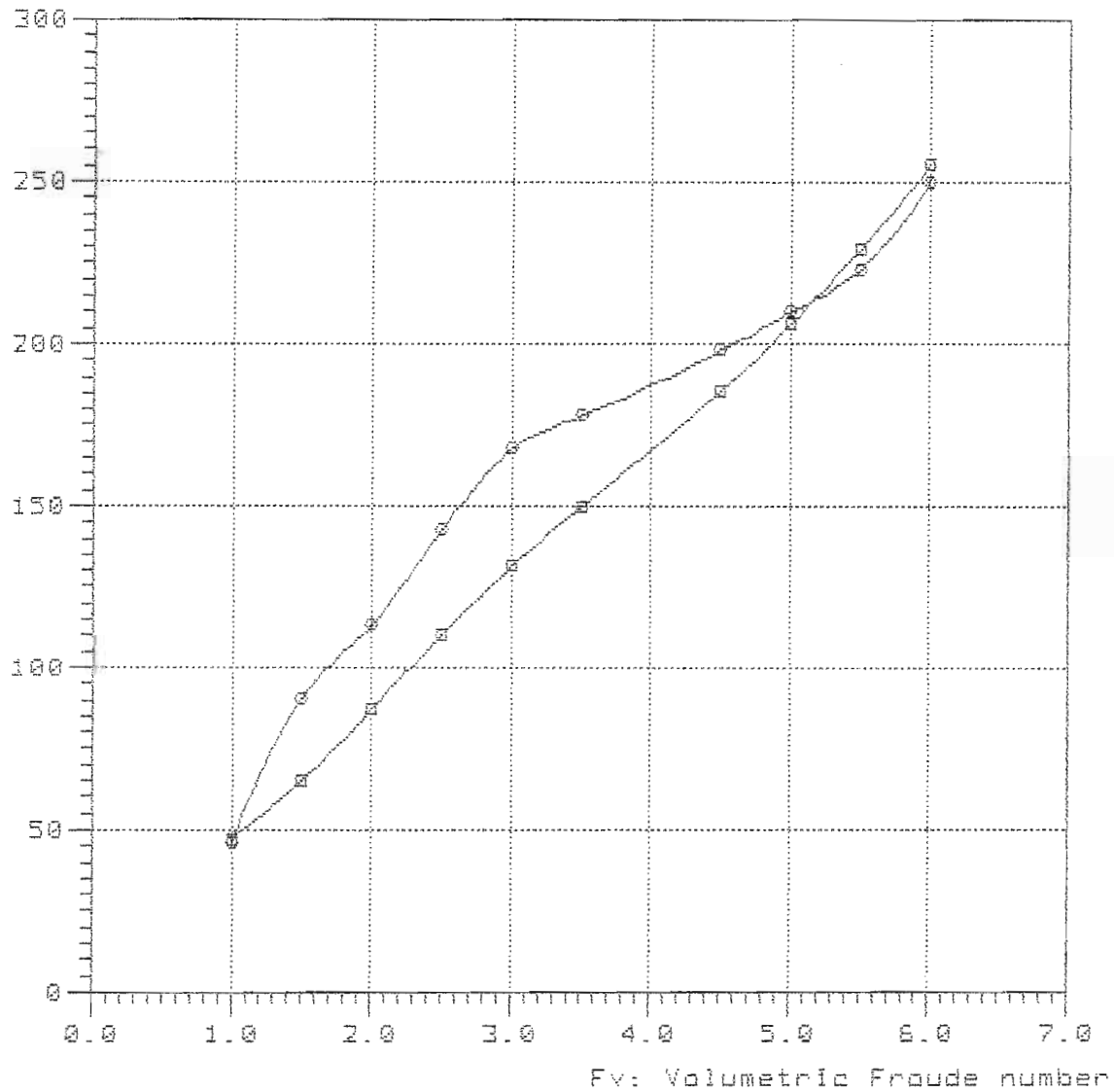
HydroComp, Inc.

File: 7-75-369.mdl

Date: 23 Feb 00

Time: 8:39

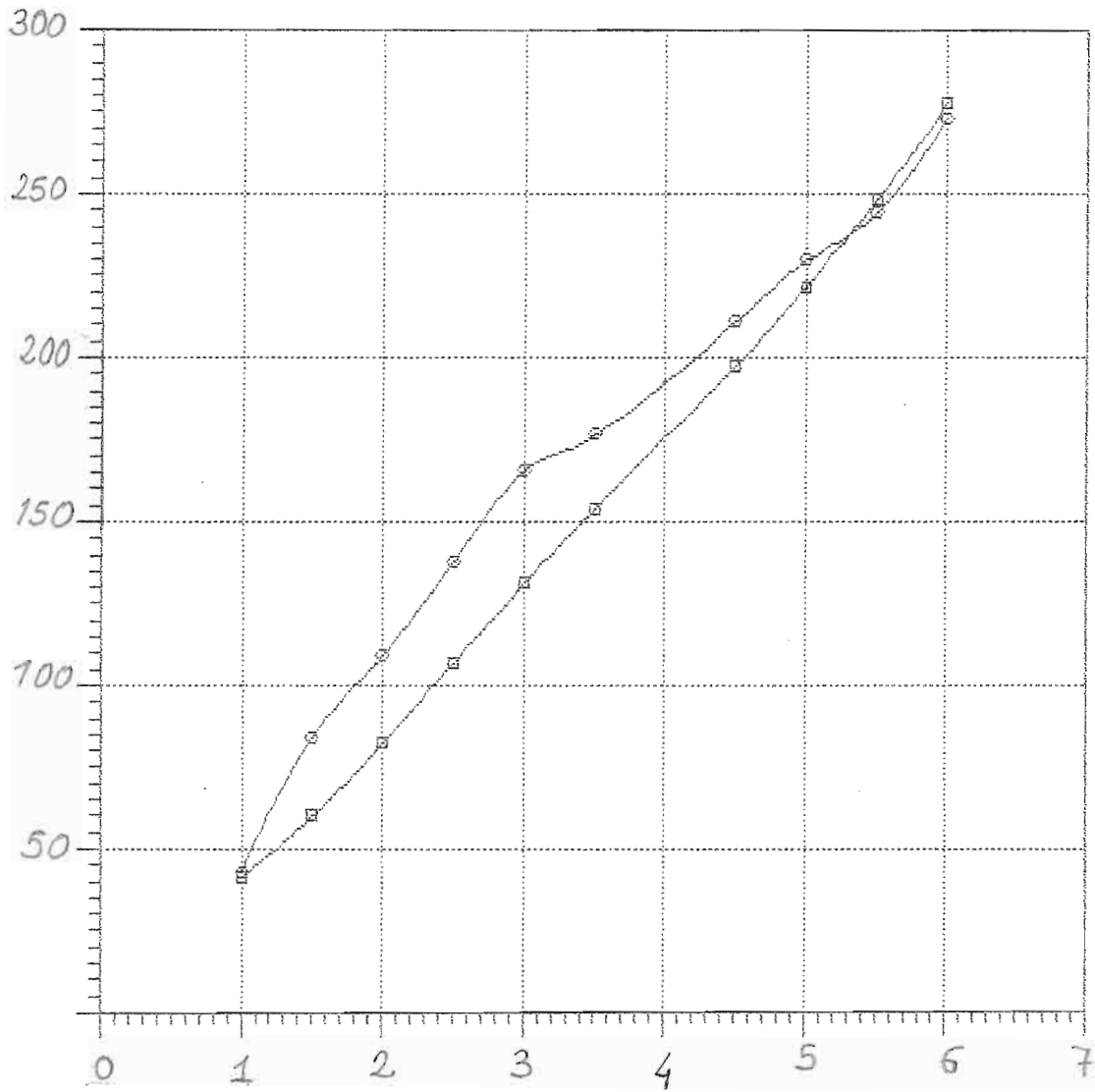
Rbare: Bare-hull resistance (lbs)



—■—

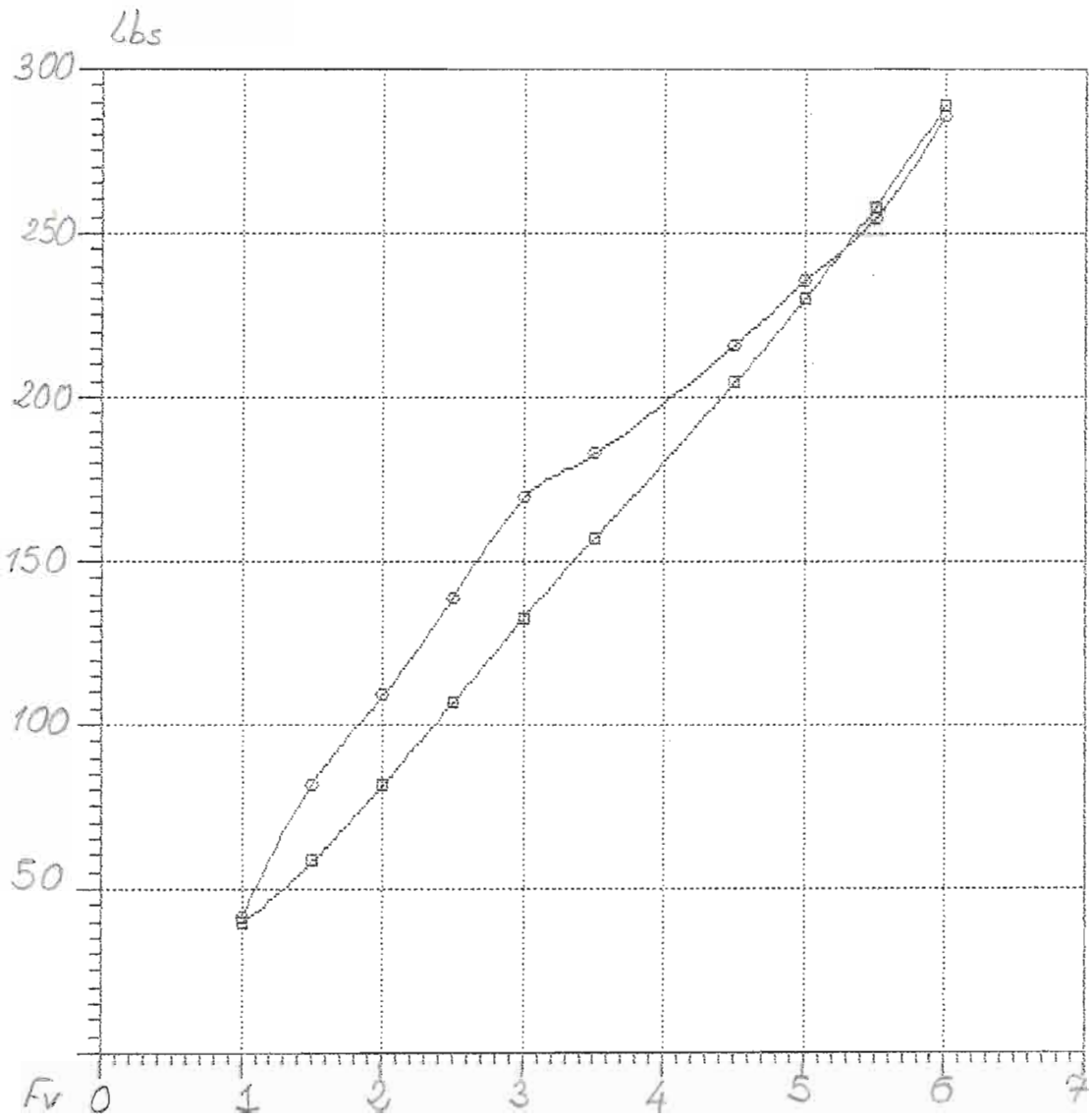
—●— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=6.539 Lpx/Ap=8.557 Log/Lpx=0.369

7-75-409



—□—  
—○—

7-75-429



—□—  
—○—

NavCad(tm) 3.1d

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HydroComp, Inc.

### Bare-hull resistance

vs.

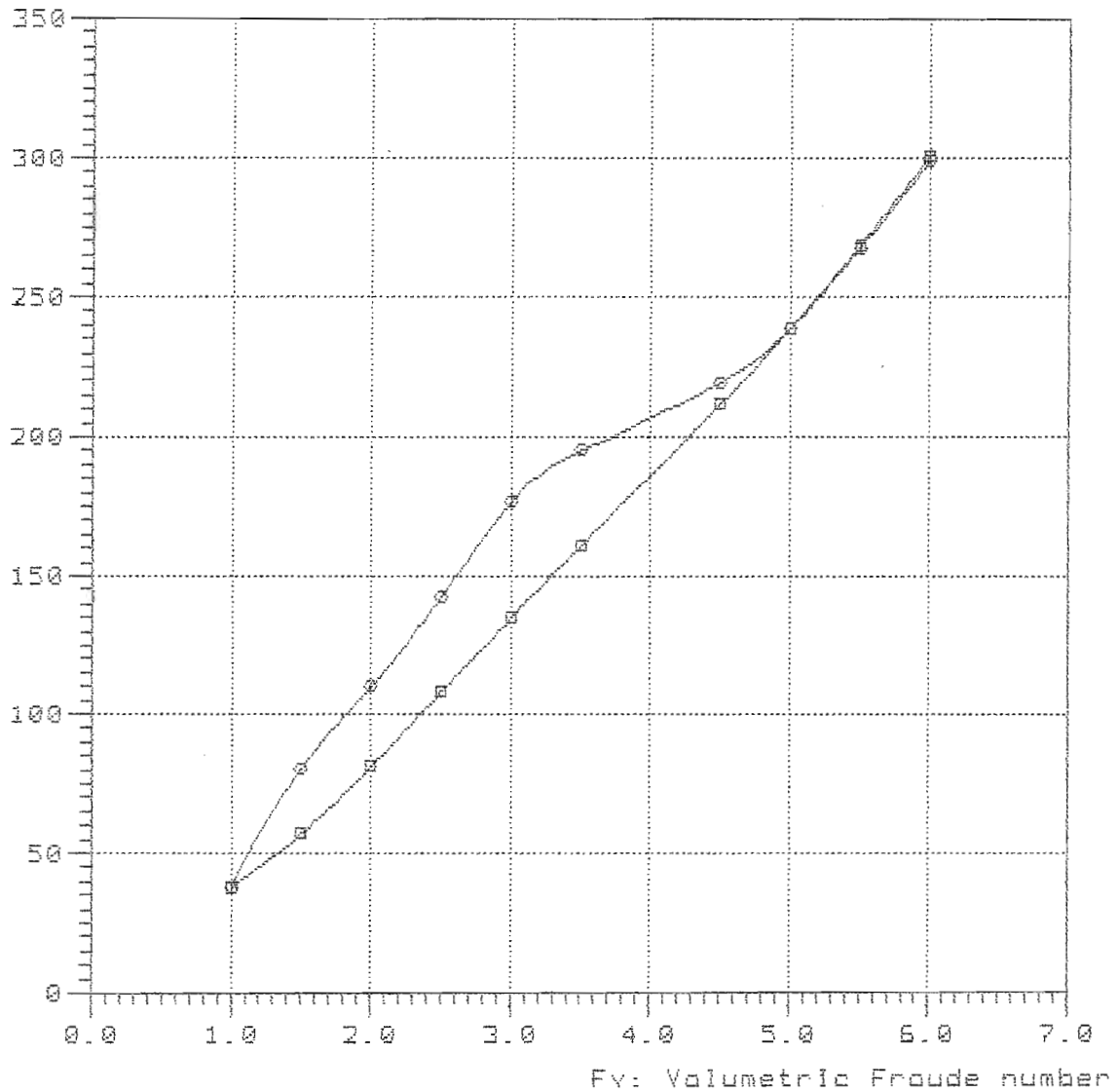
### Volumetric Froude number

File: 7-75-449.mdl

Date: 23 Feb 00

Time: 8:52

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

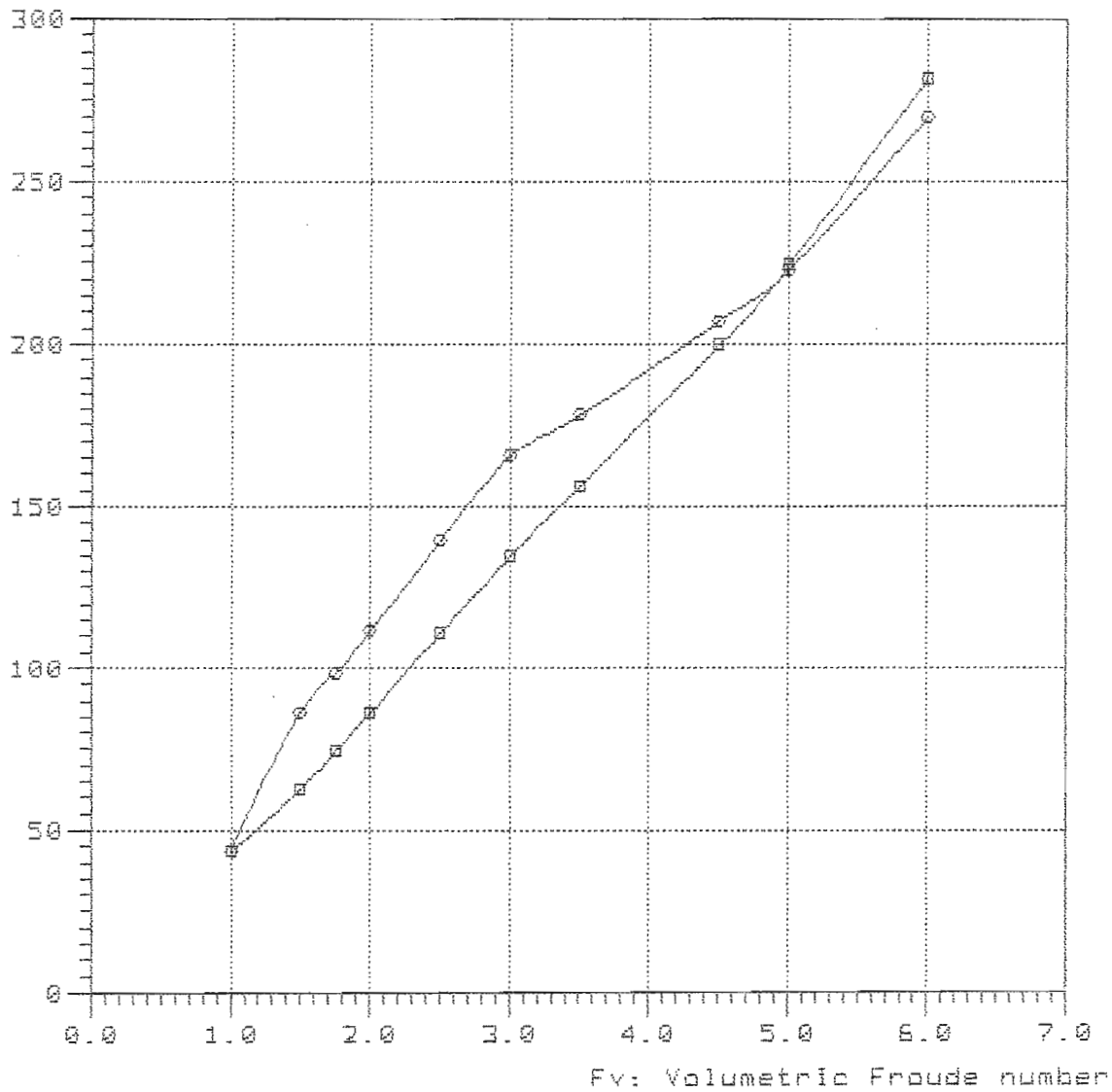
—●— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=6.539 Lpx/Rp=8.557 Lcg/Lpx=0.449

Model = 4669  
Ref = NSRDC  
Friction = ATTC  $Ca=4e-4$

Lpx = 20.000 ft  
Lwl = 19.760 ft  
Bpx = 2.857 ft  
Ap = 46.751 sqft  
Disp = 1000.00 Lb  
Deadrise = 13.00 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 7.000  
Lpx/Ap = 8.556  
Ap /Vol = 7.479  
Lpx/Vol = 8.024

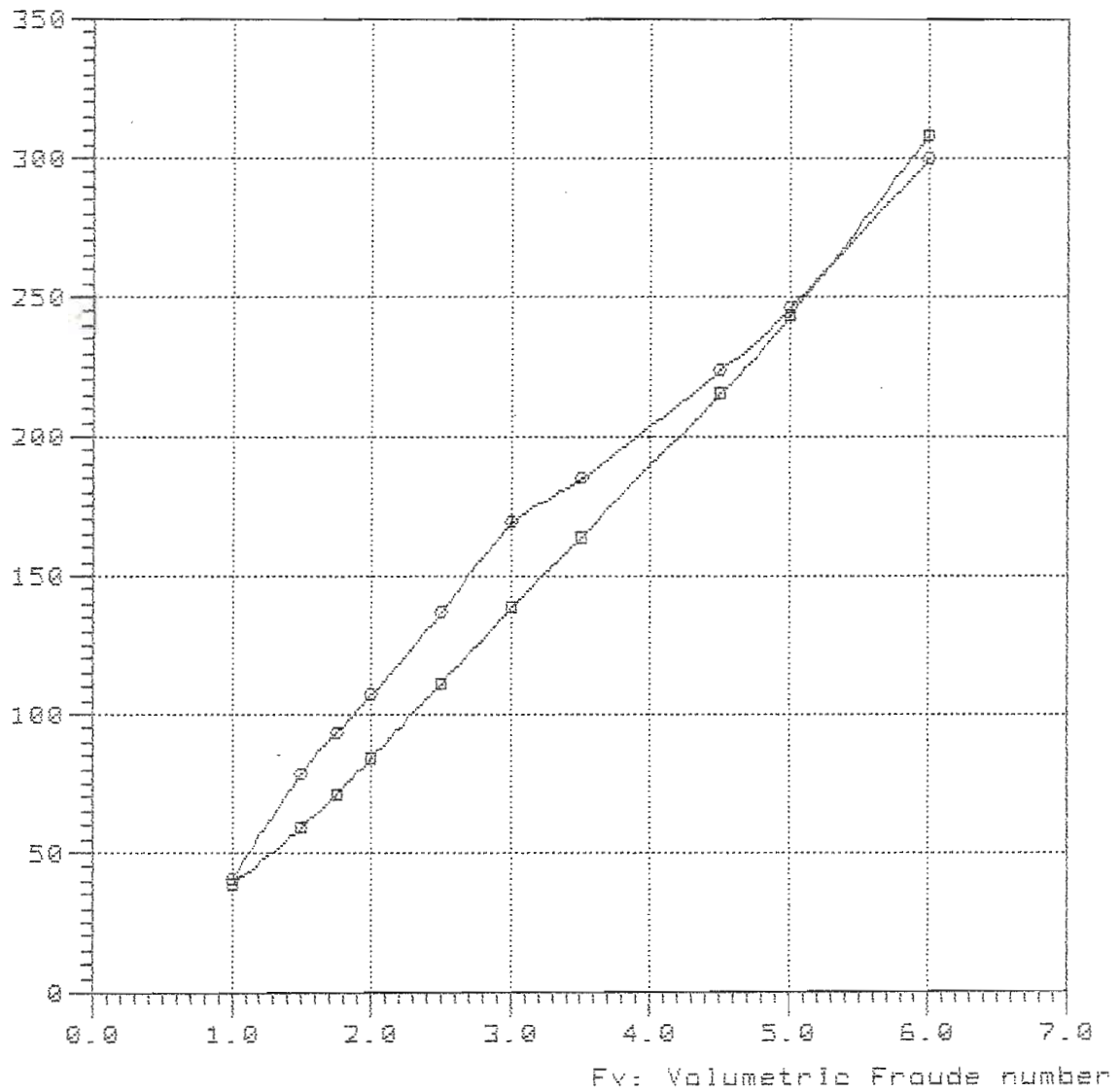
Rbare: Bare-hull resistance (lbs)



—□—  
—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=7.48 Lpx/Ap=8.557 Lcg/Lpx=0.369



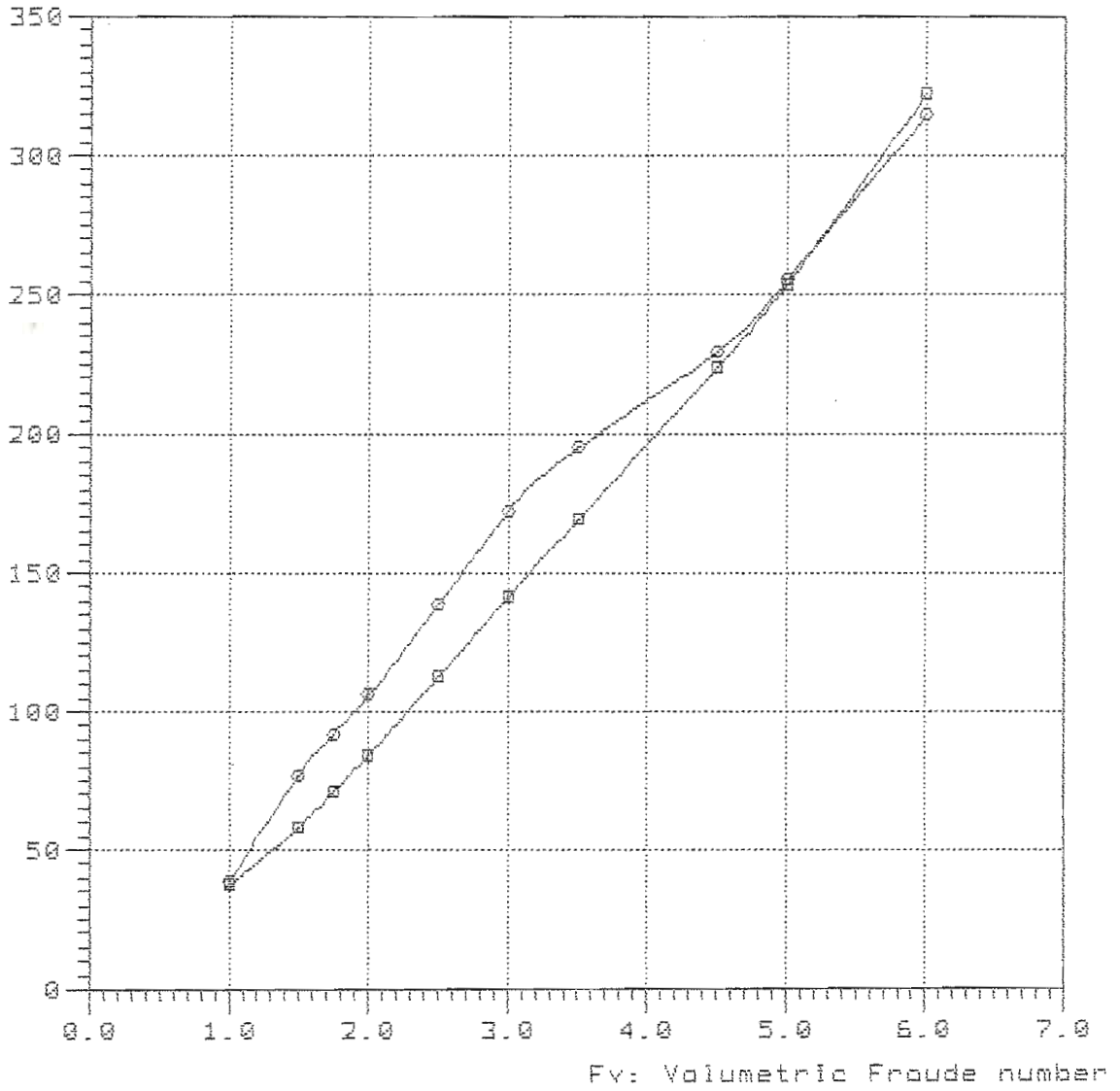
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=7.48 Lpx/Sp=8.557 Lcg/Lpx=0.409

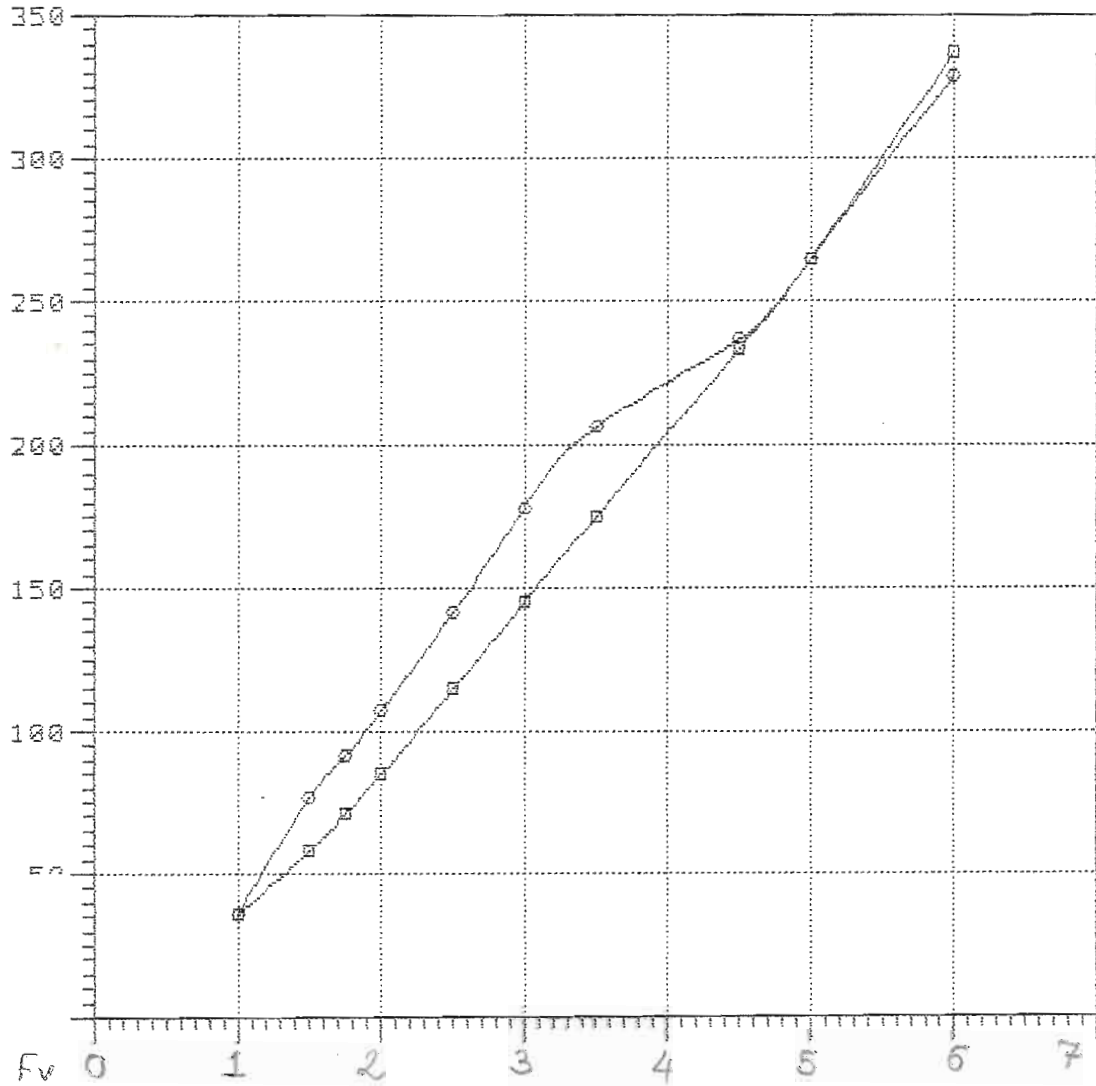
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=7.48 Lpx/Ap=8.557 Log/Lpx=0.429

Rbare: Bare-hull resistance (lbs)



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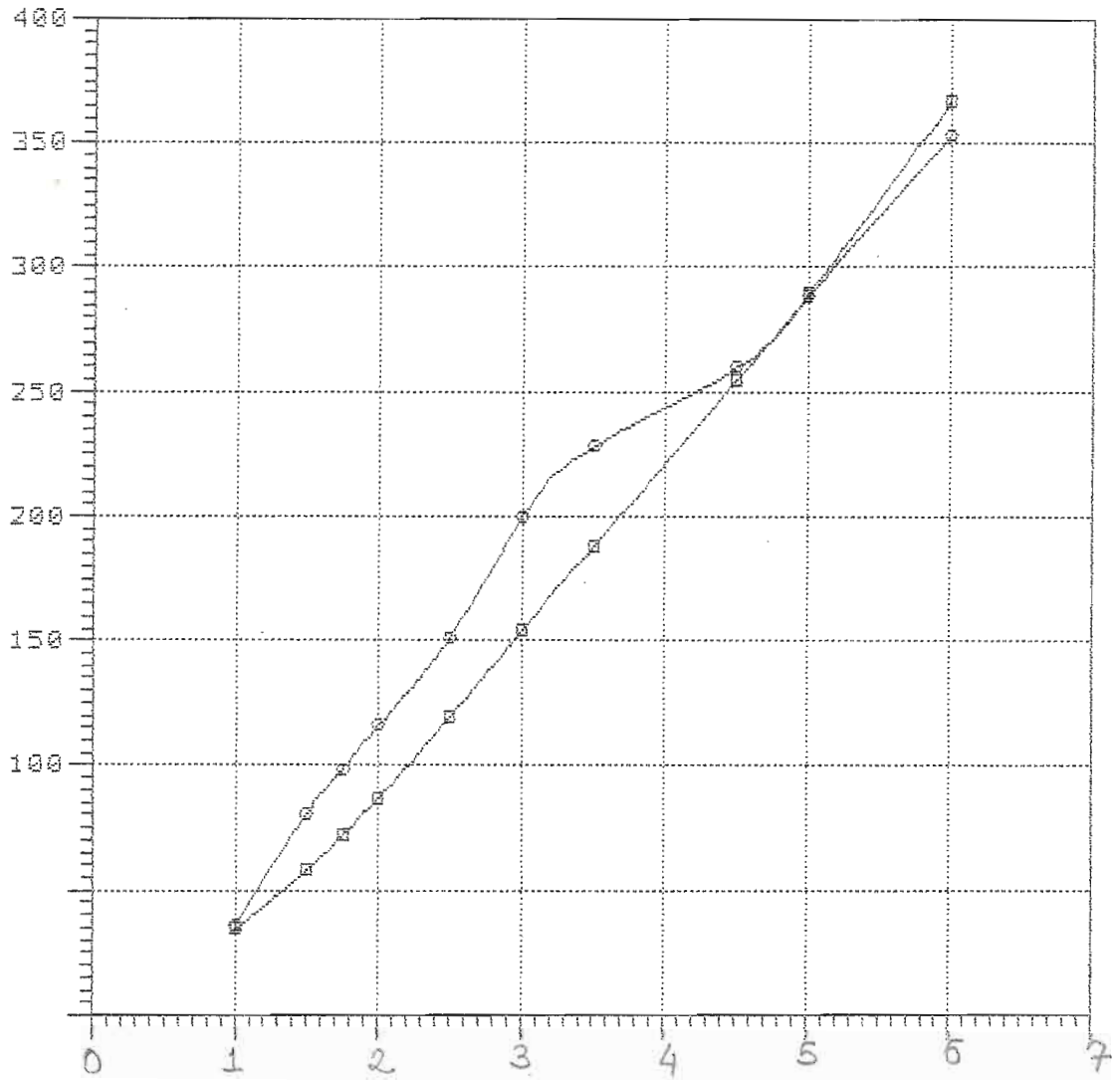
HydroComp, Inc.

File: 7-80-489.mdl

Date: 23 Feb 00

Time: 9:45

Rbare: Bare-hull resistance (lbs)



—□—

—○—

DL 62A

Model = DL 62A  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 10.000 ft  
Lwl = 9.880 ft  
Bpx = 3.268 ft  
Ap = 26.553 sqft  
Vcg = 0.000 ft  
Disp = 1000.00 Lb  
Deadrise = 20.00 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 3.060  
Lpx/Ap = 3.766  
Ap /Vol = 4.248  
Lpx/Vol = 4.012  
Cvload = 0.448  
Lbload = 0.069

**Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCI DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez. Faksir  
veya kopya edilemez ve her ne mak-  
sadı olursa olsun maksadı dışında  
izinsiz kullanılamaz.**

NavCad(tm) 3.1d

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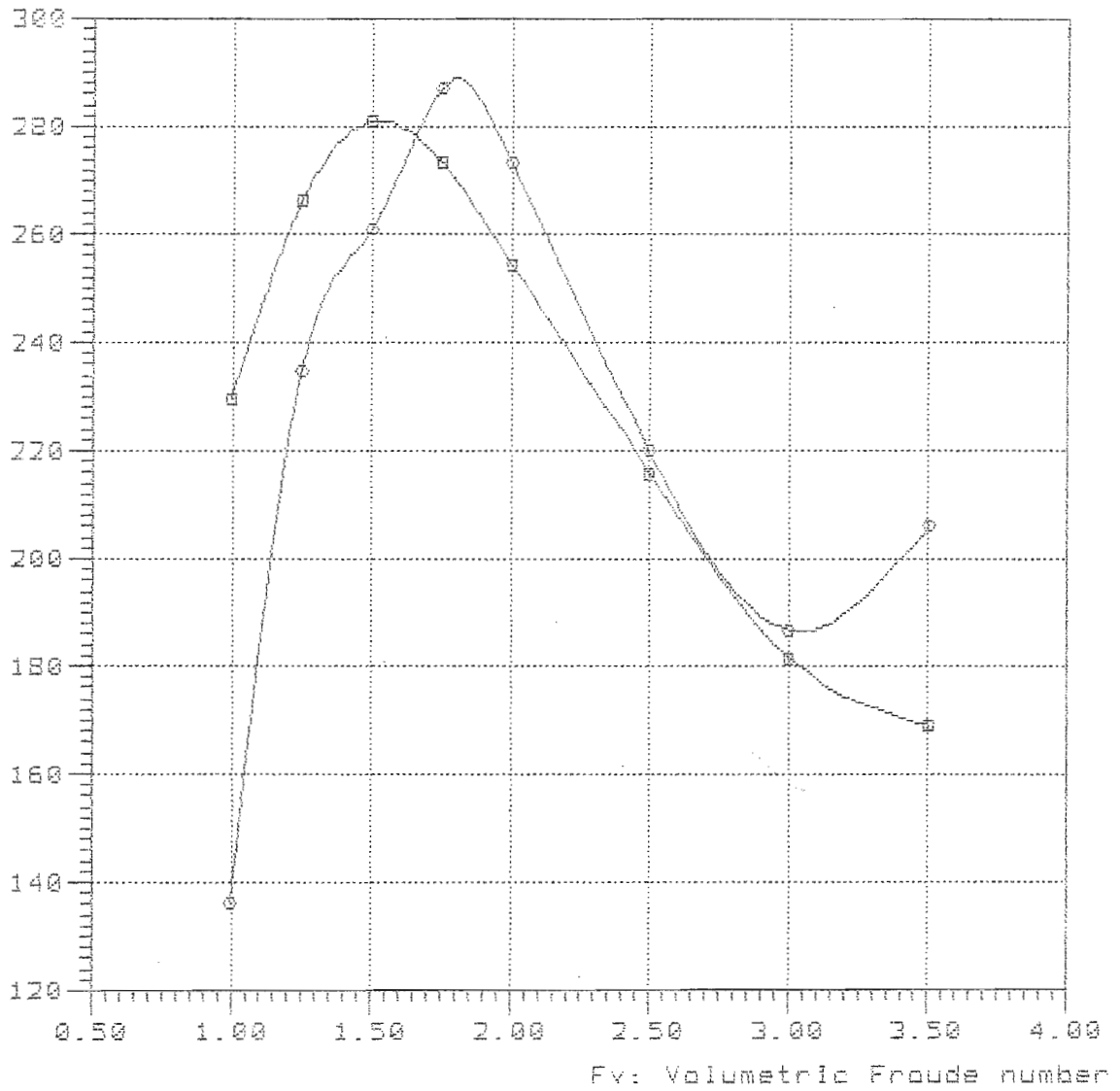
HydroComp, Inc.

File: 4-40-333.mdl

Date: 24 Feb 00

Time: 8:41

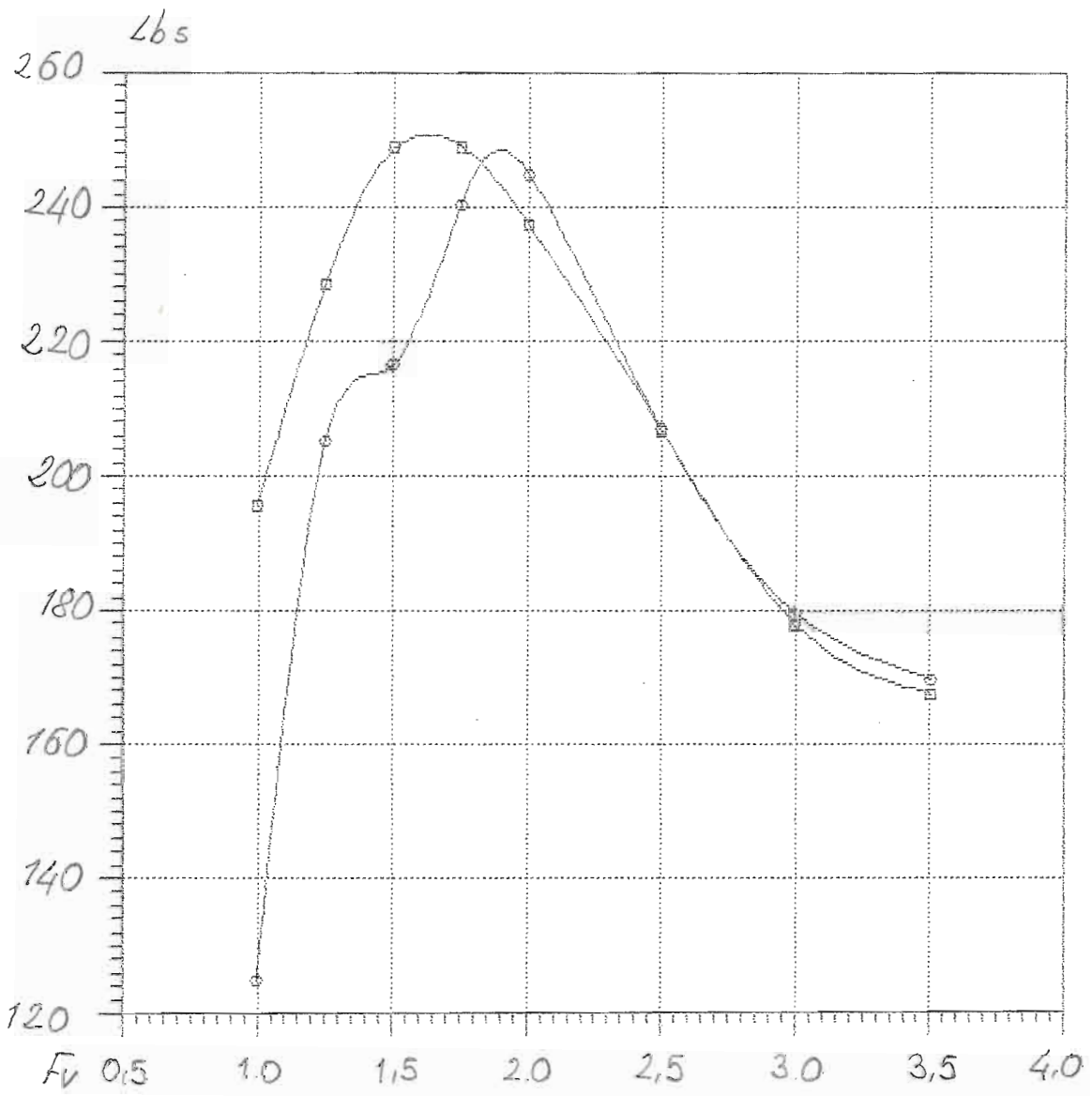
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-DL62A Lpx/Bpx=3.06 Ap/Vol=4.249 Lpx/Vol=4.0 Lpx/Ap=3.766 Log/Lpx=0.333

4-40-353



—□—  
—○—



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### Bare-hull resistance

vs.

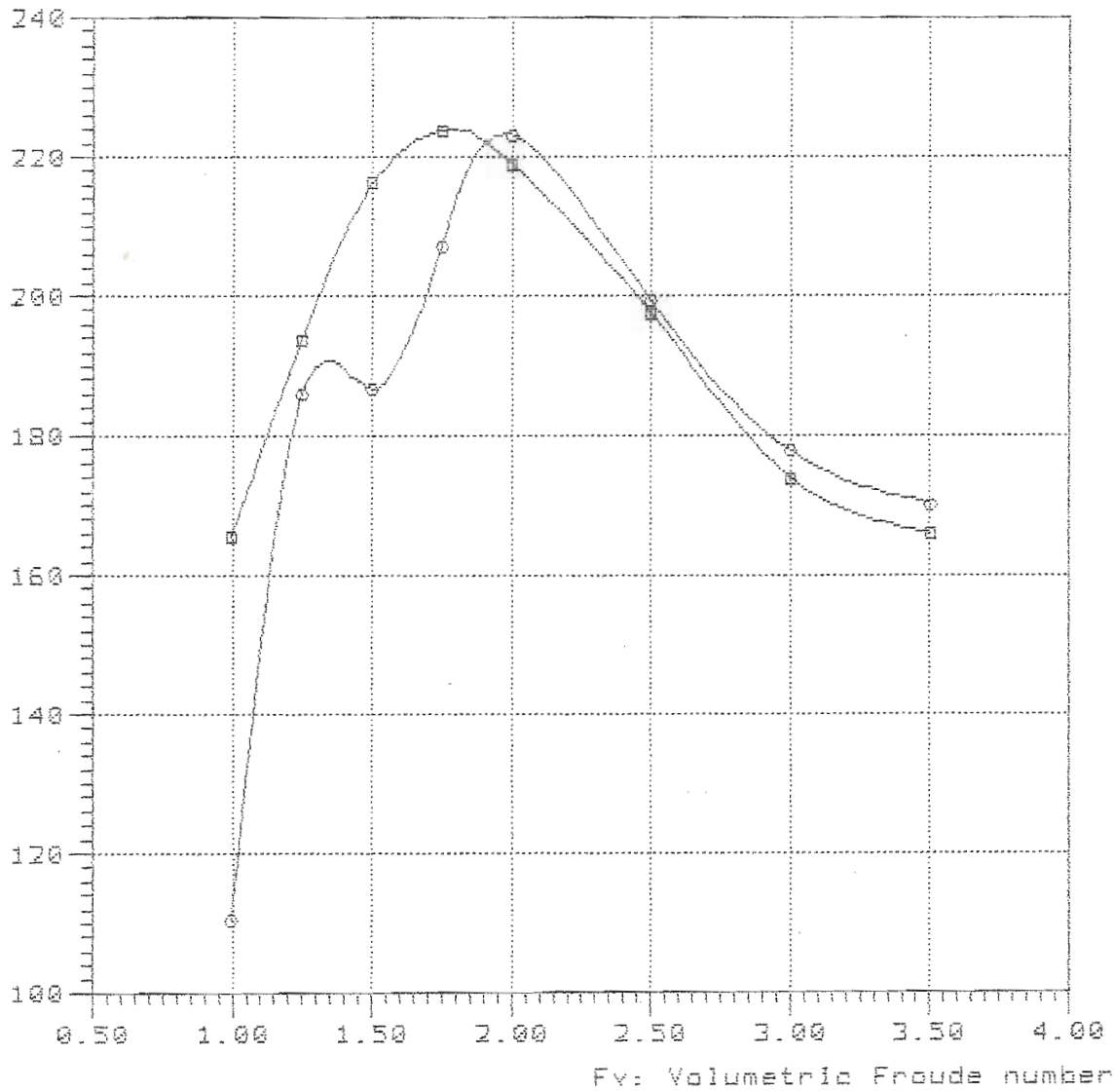
### Volumetric Froude number

File: 4-40-376.mdl

Date: 24 Feb 06

Time: 8:47

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-DL62A Lpx/Bpx=3.06 Ap/Vol=4.249 Lpx/Vol=4.0 Lpx/Ap=3.766 Lcg/Lpx=0.376

NavCad(tm) 3.1d

### Bare-hull resistance

File: 4-40-415.mdl

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vs.

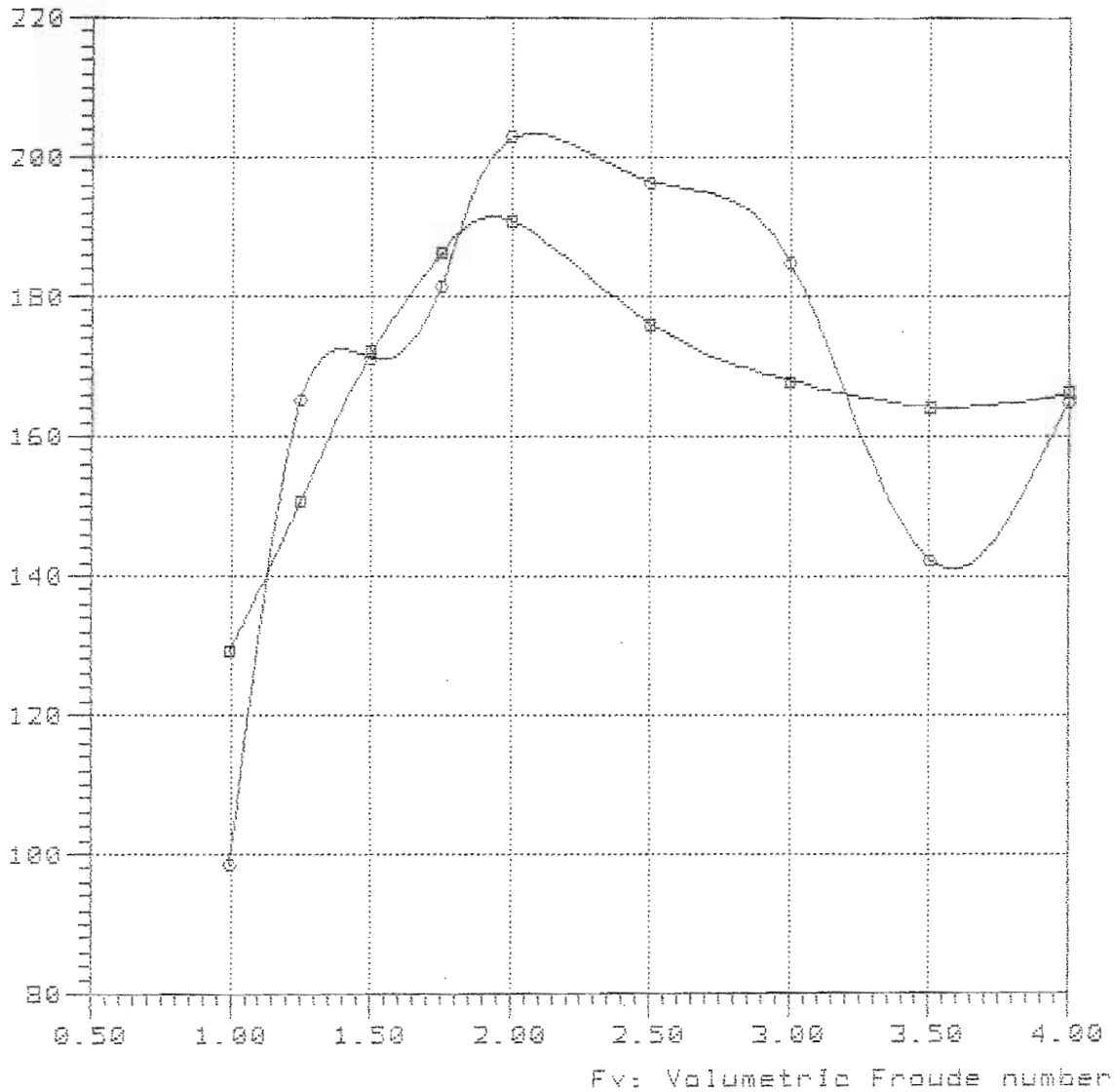
Date: 24 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 8:51

Rbare: Bare-hull resistance (lba)



#### Curve legend

—□—

—○— TMB-DL62A Lpx/Bpx=3.06 Ap/Vol=4.249 Lpx/Vol=4.0 Lpx/Ap=3.766 Log/Lpx=0.415

Model = DL 62A  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

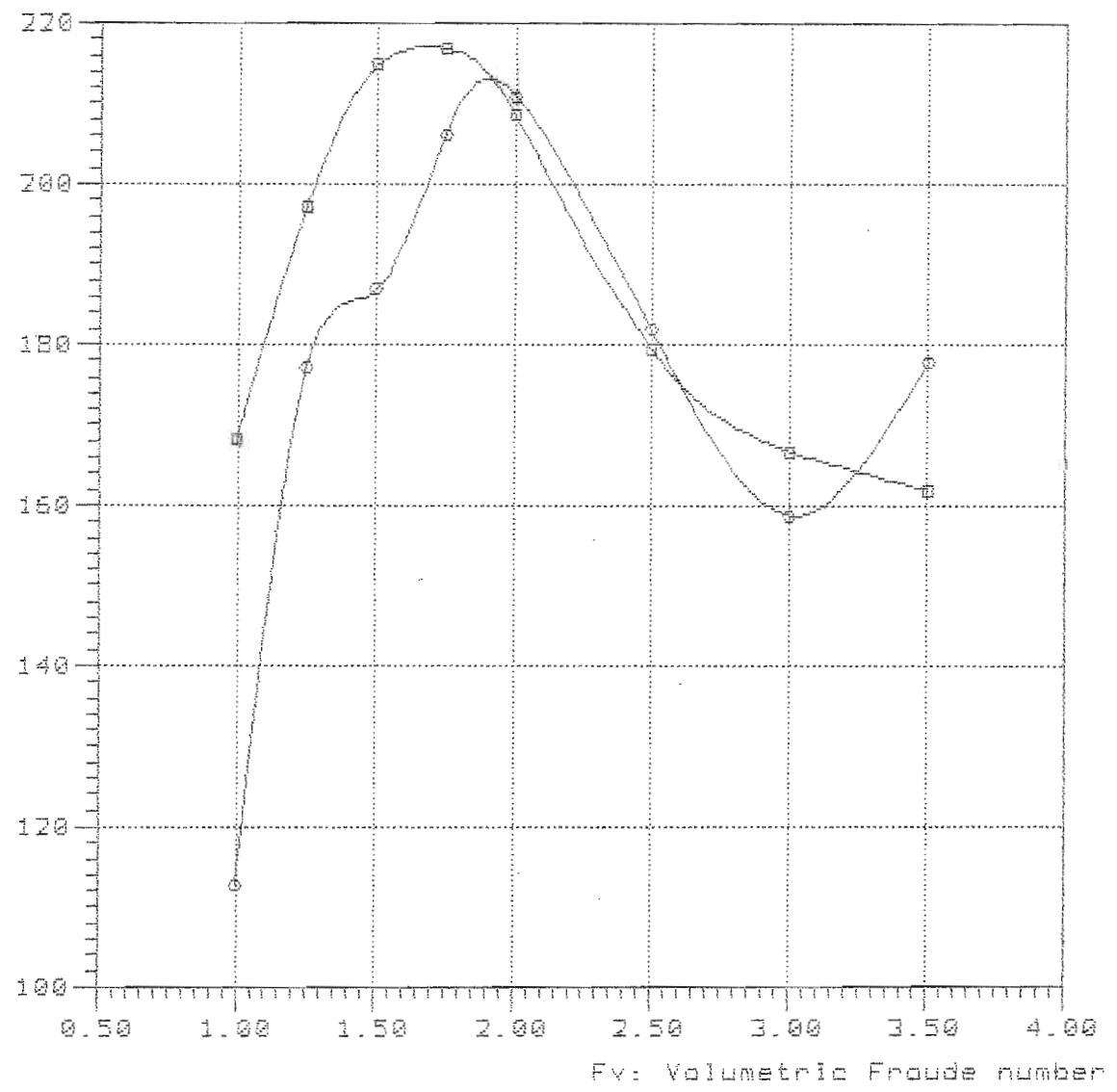
Lpx = 11.200 ft  
Lwl = 11.066 ft  
Bpx = 3.660 ft  
Ap = 33.309 sqft  
Vcg = 0.000 ft  
Disp = 1000.00 Lb  
Deadrise = 20.00 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 3.060  
Lpx/Ap = 3.766  
Ap /Vol = 5.329  
Lpx/Vol = 4.493  
Cvload = 0.319  
Lbload = 0.049

NavCad(tm) 3.1d  
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HydroComp, Inc.

File: 5-45-333.mdl  
Date: 24 Feb 00  
Time: 8:54

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-DL62A Lpx/Bpx=3.06 Ap/Vol=5.329 Lpx/Vol=4.5 Lpx/Ap=3.766 Lcg/Lpx=0.333

NavCad(tm) 3.1d

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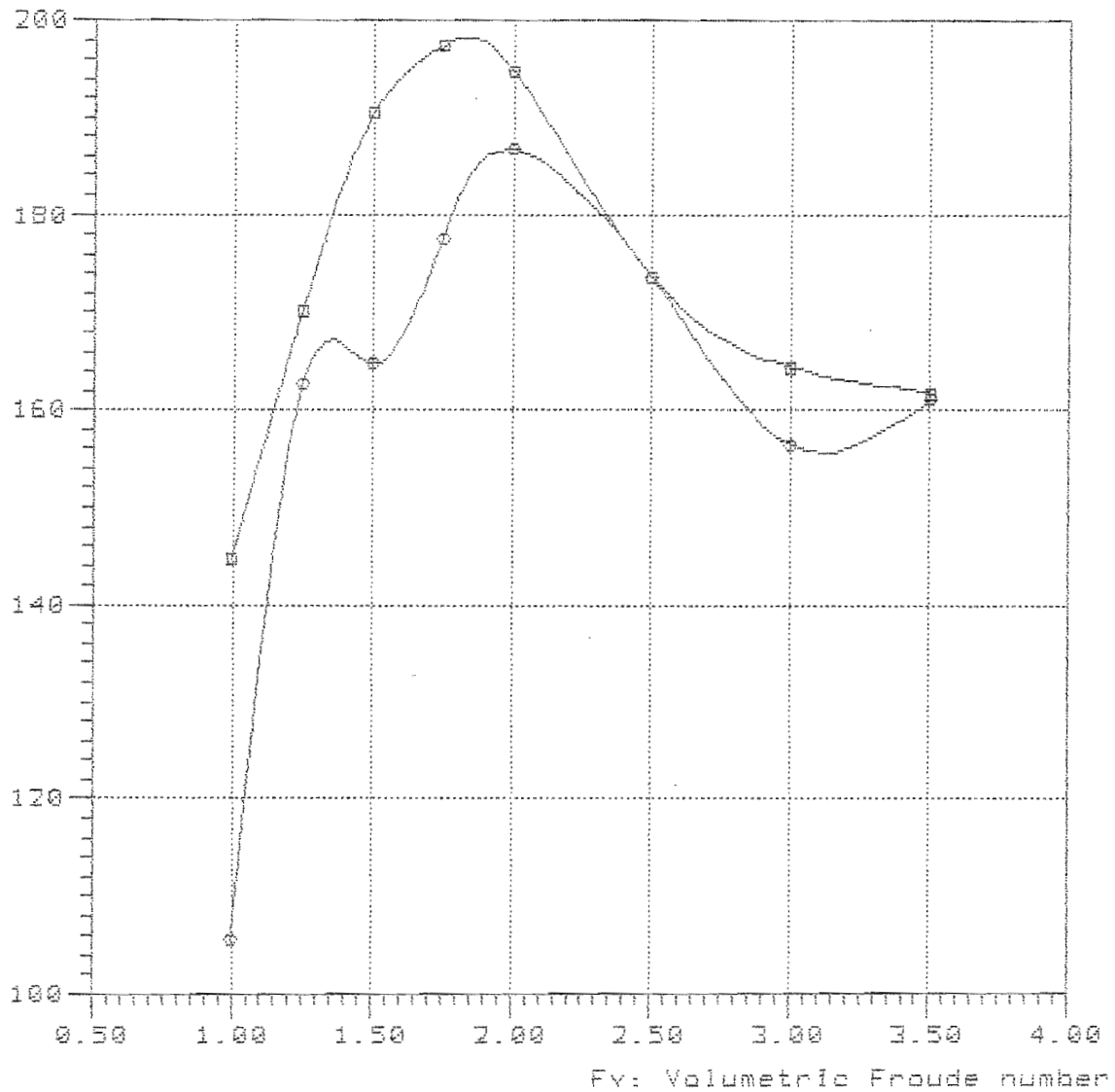
HydroComp, Inc.

File: 5-45-253.mdl

Date: 24 Feb 00

Time: 8:57

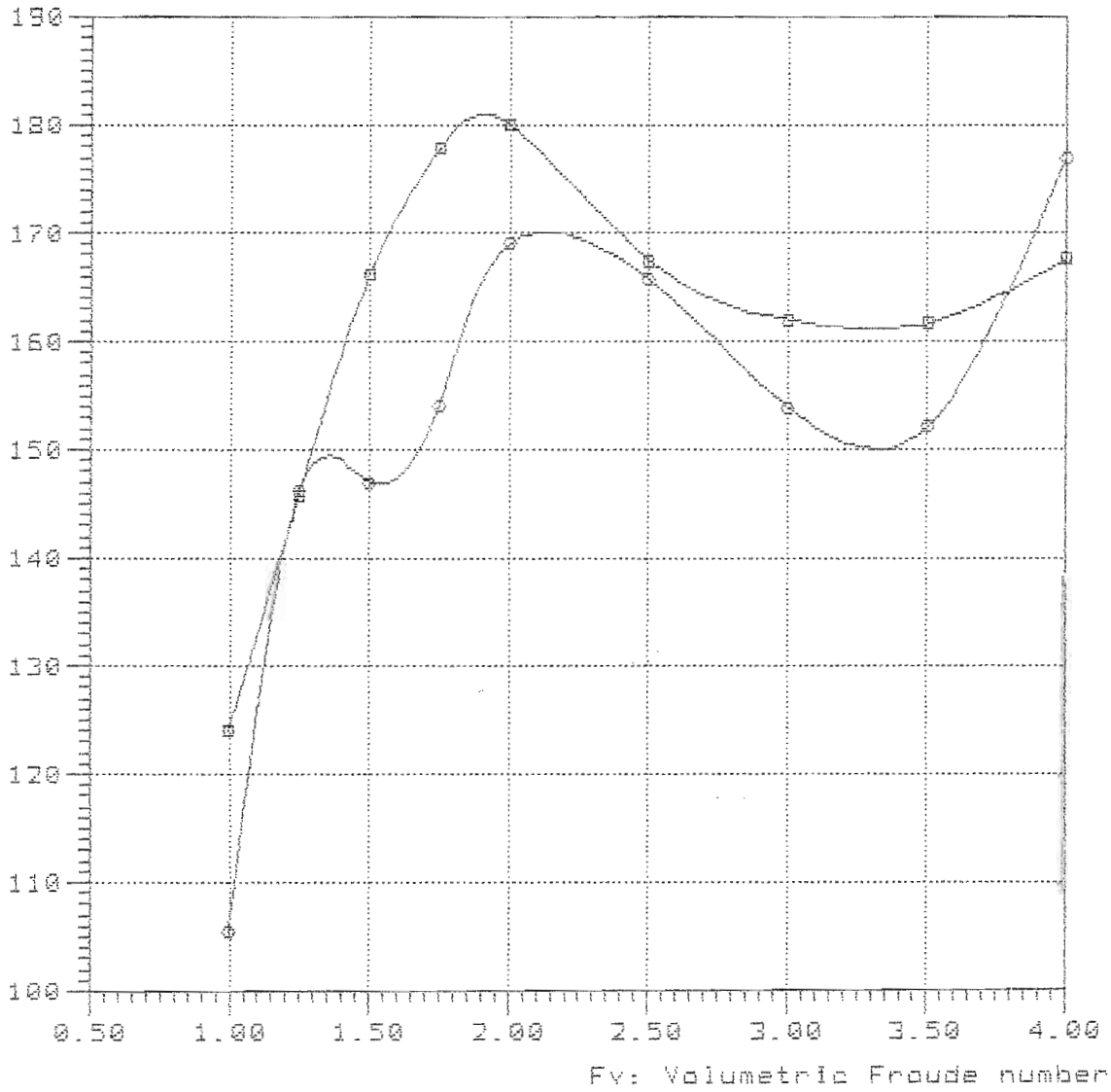
Rbare: Bare-hull resistance (lbs)



—■—

—◆— TMB-DL629 Lpx/Bpx=3.06 Ap/Vol=5.329 Lpx/Vol=4.5 Lpx/Ap=3.766 Lcg/Lpx=0.353

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-DL62A Lpx/Bpx=3.06 Ap/Vol=5.329 Lpx/Vol=4.5 Lpx/Ap=3.766 Lcg/Lpx=0.376

NavCad(tm) 3.1d

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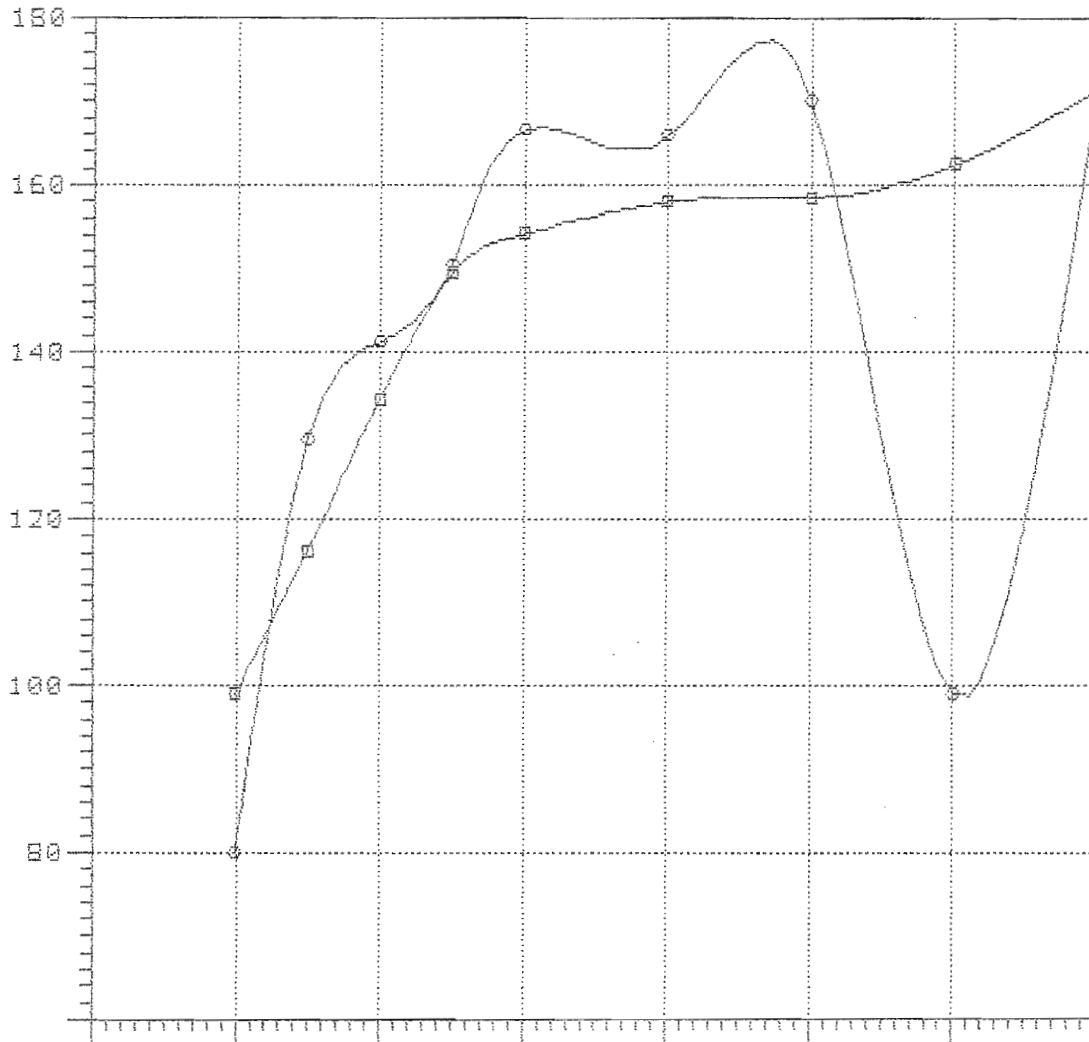
HydroComp, Inc.

File: 5-45-415.mdi

Date: 24 Feb 00

Time: 9:04

Rbare: Bare-hull resistance (lbs)



—□—

—○—

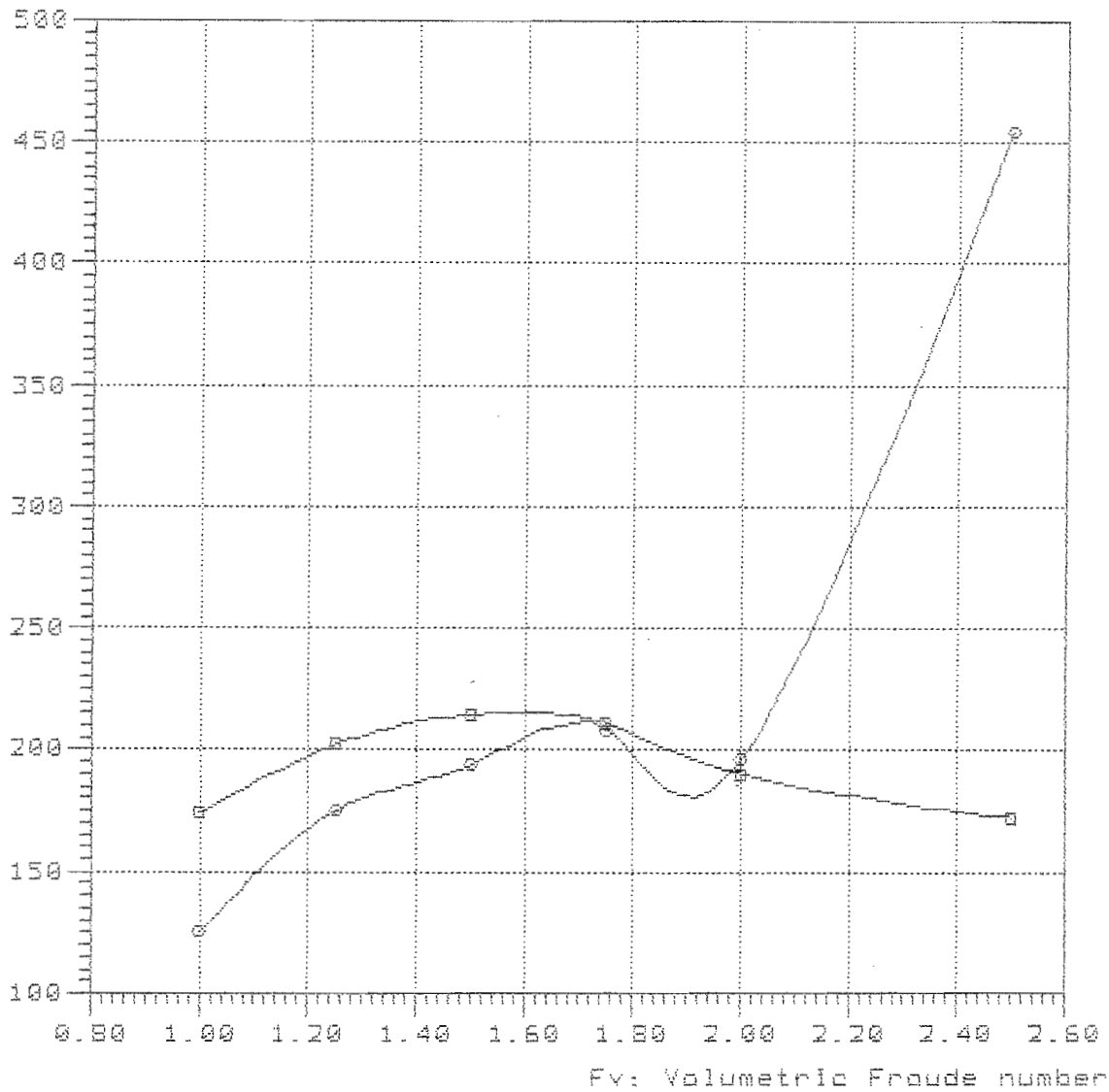
Model = DL 62A  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 12.500 ft  
Lwl = 12.350 ft  
Bpx = 4.085 ft  
Ap = 41.490 sqft  
Vcg = 0.000 ft  
Disp = 1000.00 Lb  
Deadrise = 20.00 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 3.060  
Lpx/Ap = 3.766  
Ap /Vol = 6.638  
Lpx/Vol = 5.015  
Cvload = 0.229  
Lbload = 0.036



Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-DL62A Lpx/Bpx=3.06 Ap/Vol=6.638 Lpx/Vol=5.0 Lpx/Ap=3.766 Lcg/Lpx=0.294

NavCad(tm) 3.1d

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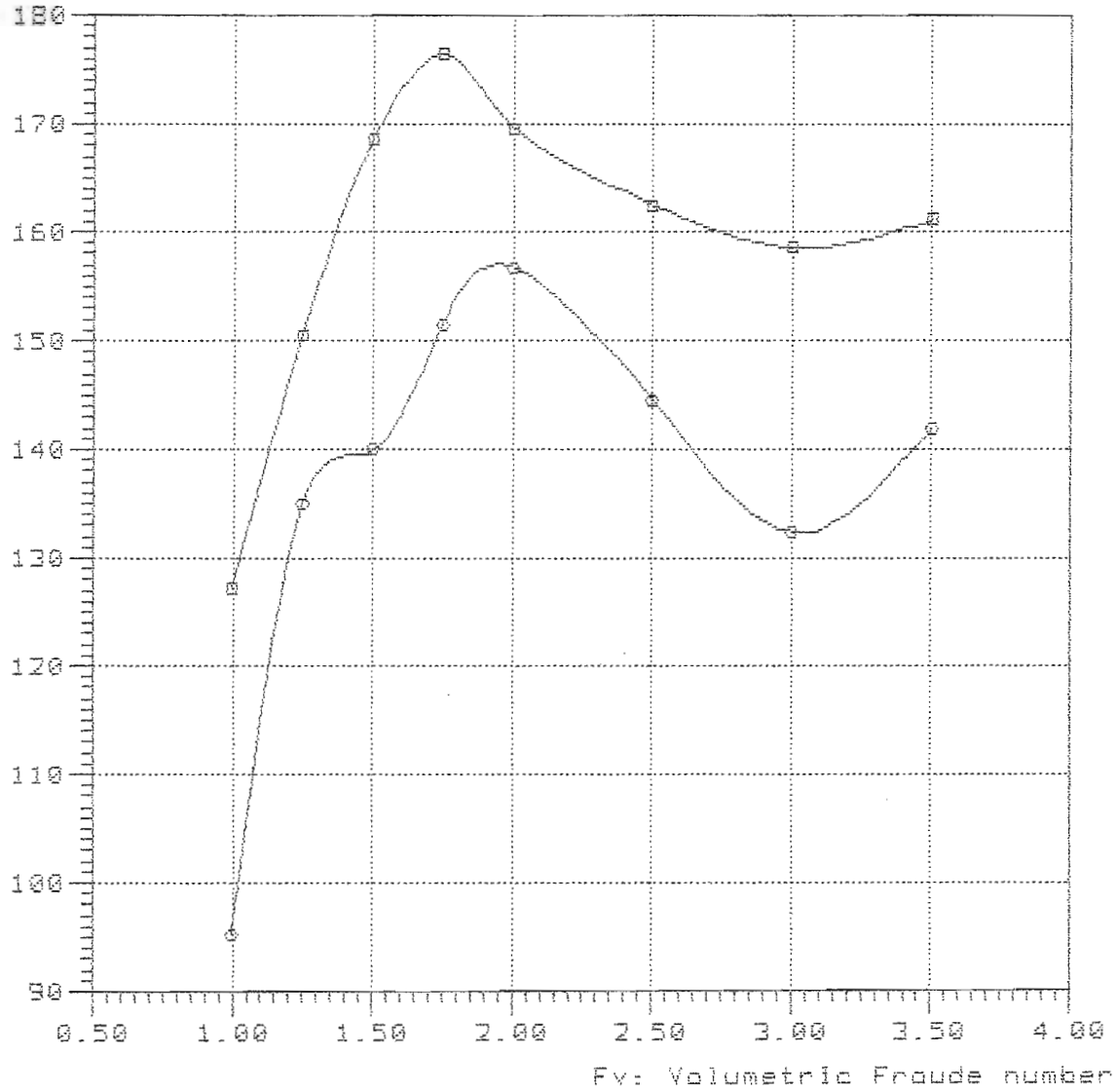
HydroComp, Inc.

File: 7-50-333.mdl

Date: 24 Feb 00

Time: 9:11

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-DL62A Lpx/Bpx=3.06 Ap/Val=6.638 Lpx/Val=5.0 Lpx/Ap=3.766 Log/Lpx=0.333

NavCad(tm) 3.1d

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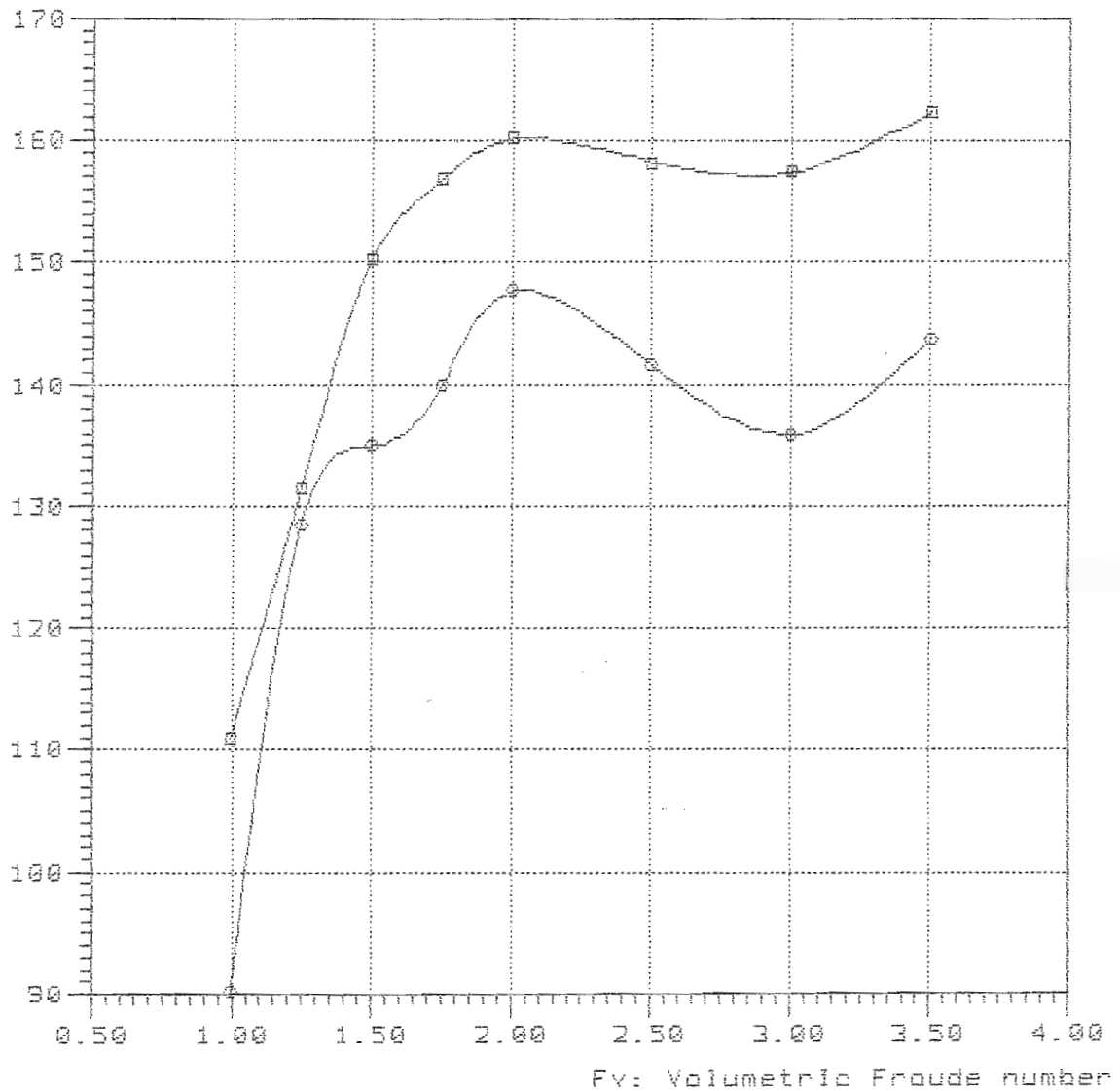
HydroComp, Inc.

File: 7-50-353.mdi

Date: 24 Feb 00

Time: 9:41

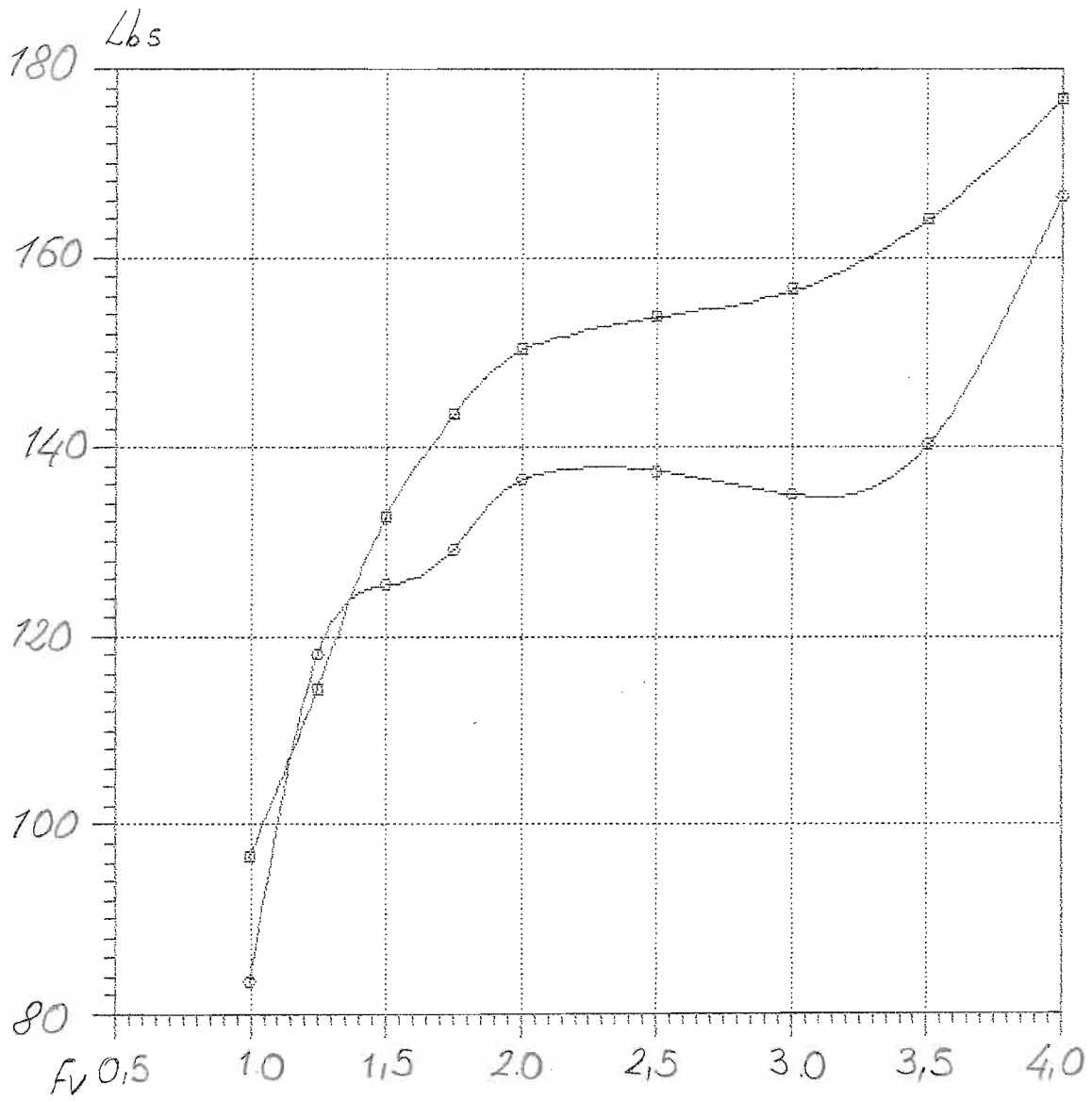
Rbare: Bare-hull resistance (lba)



—■—

—●— TMB-DL52A Lpx/Bpx=3.06 Ap/Vol=6.638 Lpx/Vol=5.0 Lpx/Rp=3.756 Log/Lpx=0.353

7-50-376



—□—

—○—

NavCad(tm) 3.1d

### Bare-hull resistance

File: 7-50-415.mdl

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vs.

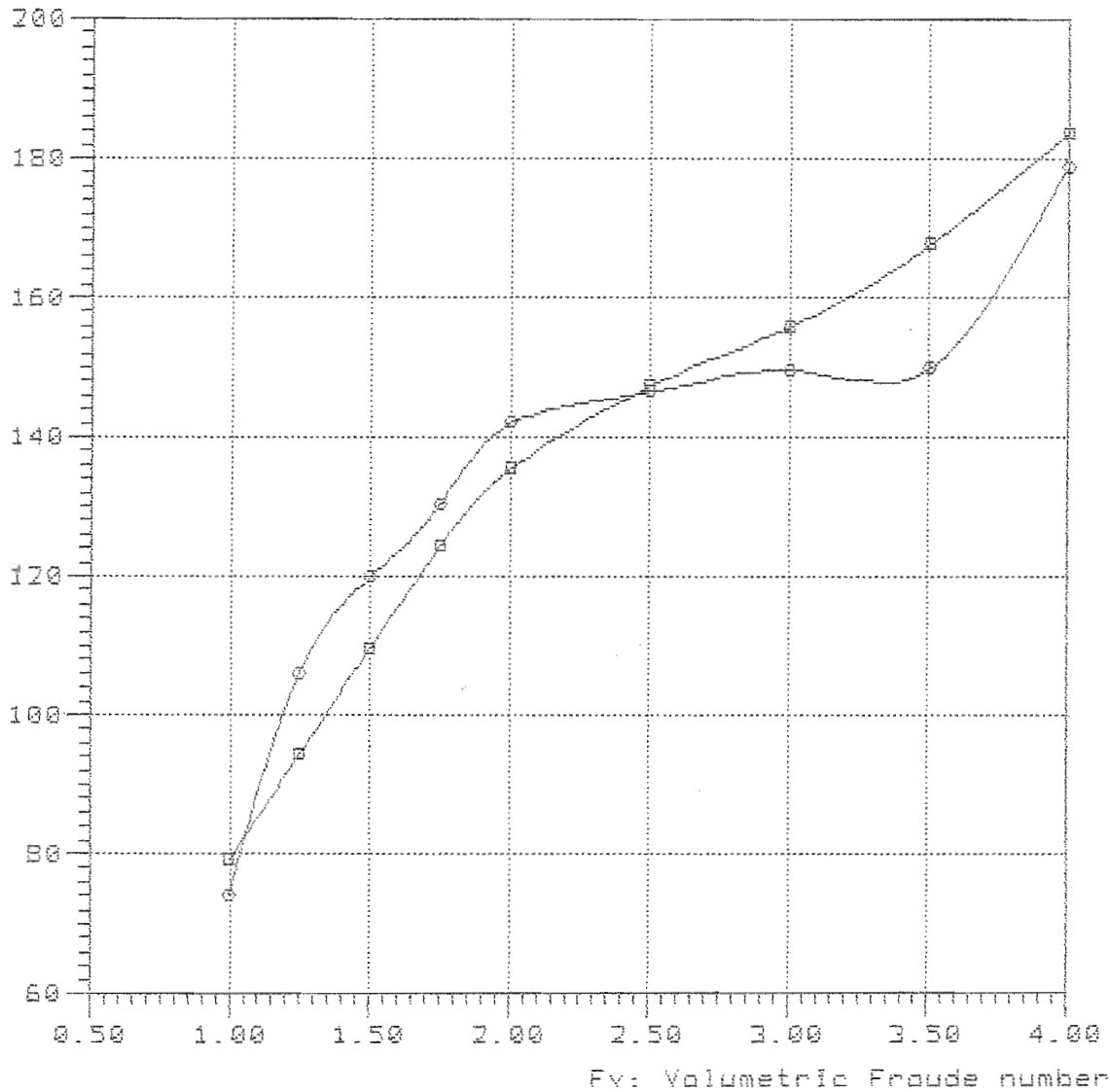
Date: 24 Feb 88

HydraComp, Inc.

### Volumetric Froude number

Time: 9:47

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-DL62A Lpx/Bpx=3.06 Ap/Val=6.638 Lpx/Val=5.0 Lpx/Ap=3.766 Log/Lpx=0.415

Model = DL 62A  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 13.700 ft  
Lwl = 13.536 ft  
Bpx = 4.477 ft  
Ap = 49.838 sqft  
Vcg = 0.000 ft  
Disp = 1000.00 Lb  
Deadrise = 20.00 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 3.060  
Lpx/Ap = 3.766  
Ap /Vol = 7.973  
Lpx/Vol = 5.496  
Cvload = 0.174  
Lbload = 0.027

NavCad(tm) 3.1d

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HydroComp, Inc.

### Bare-hull resistance

vs.

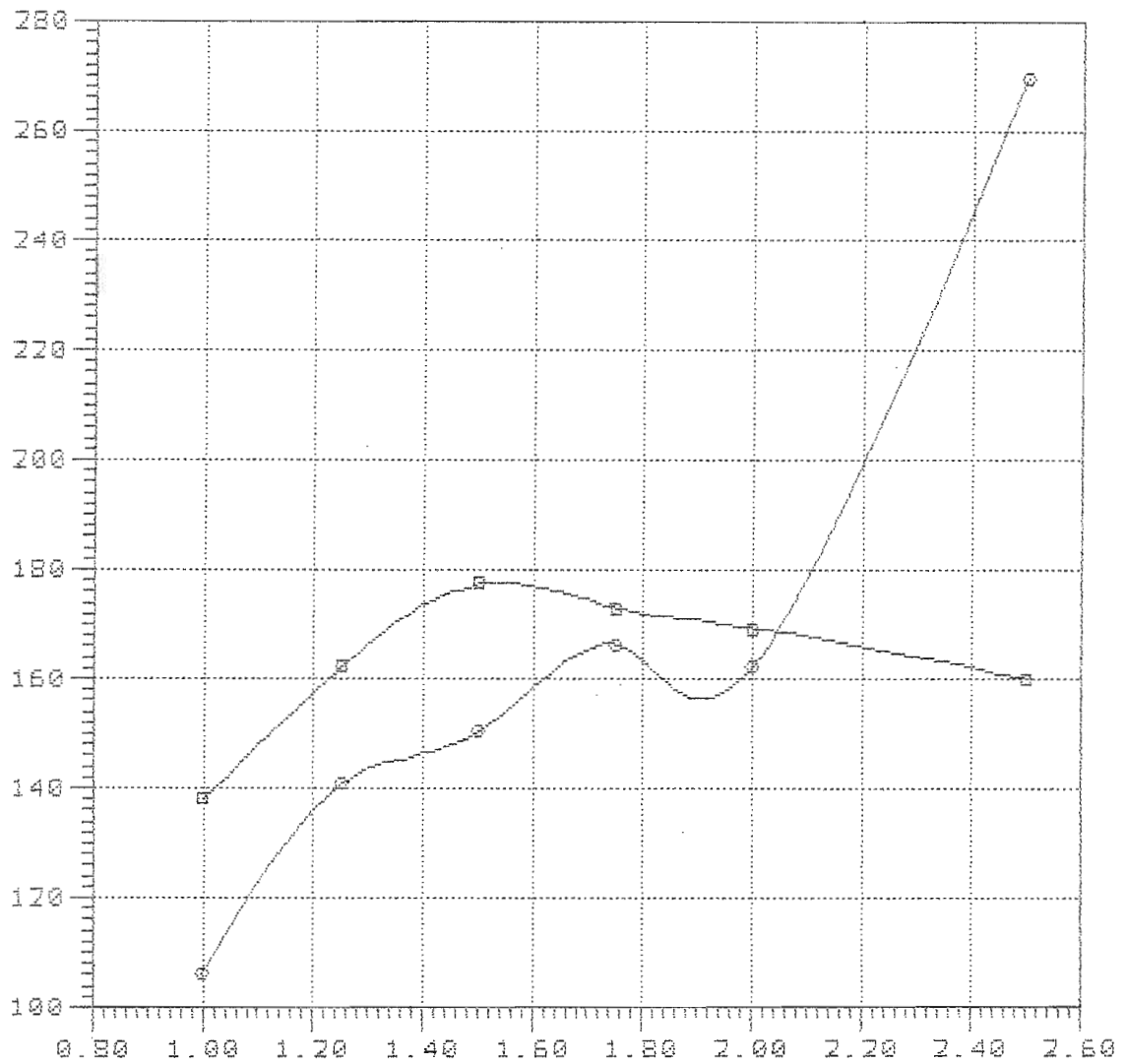
### Volumetric Froude number

File: 8-55-294.mdl

Date: 24 Feb 00

Time: 9:51

Rbare: Bare-hull resistance (lbs)



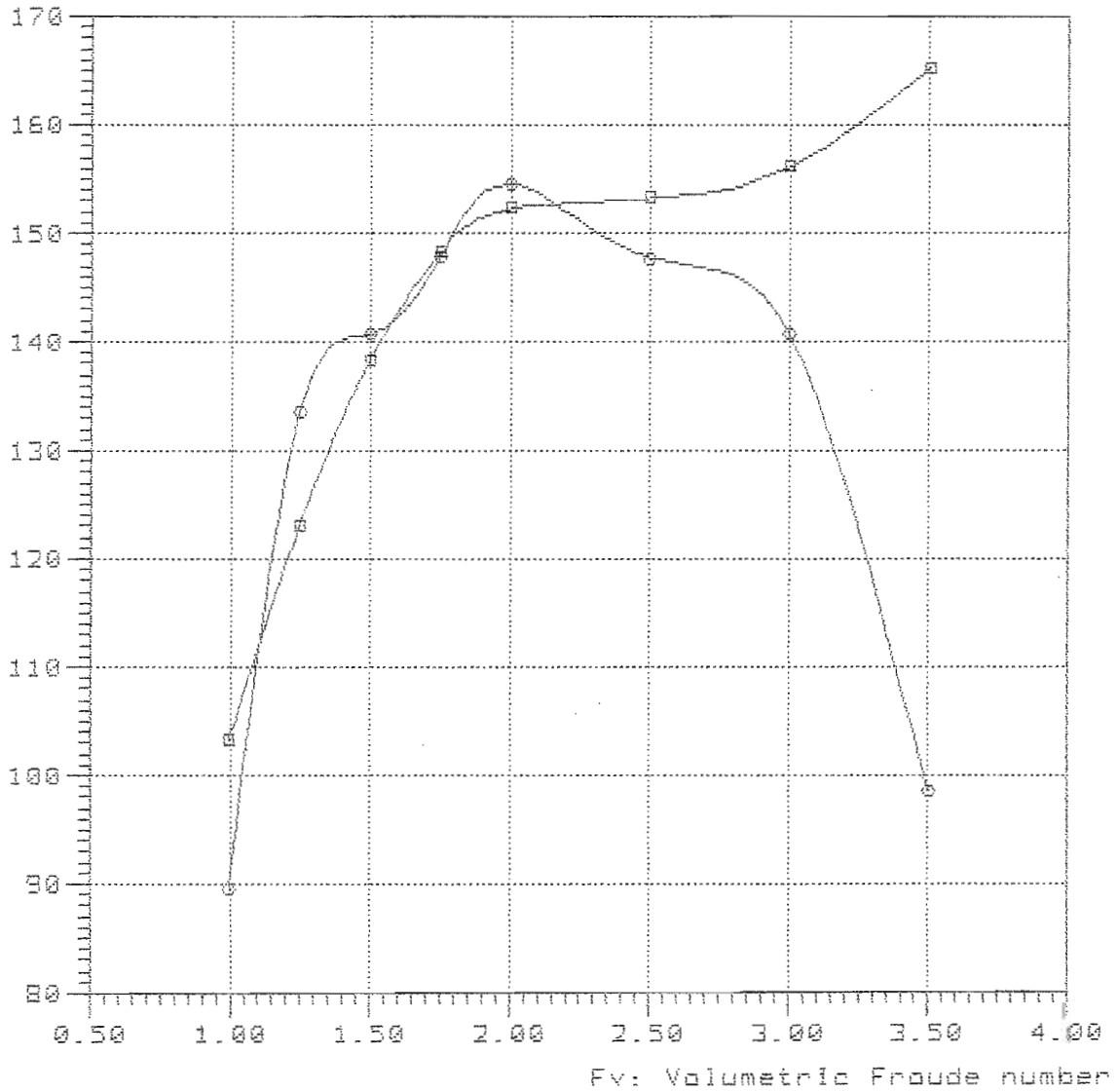
Fv: Volumetric Froude number

#### Curve legend

—■—

—●— TMB-DL62A Lpx/Bpx=3.06 Ap/Vol=7.974 Lpx/Vol=5.5 Lpx/Ap=3.766 Log/Lpx=0.294

Rbare: Bare-hull resistance (lbs)

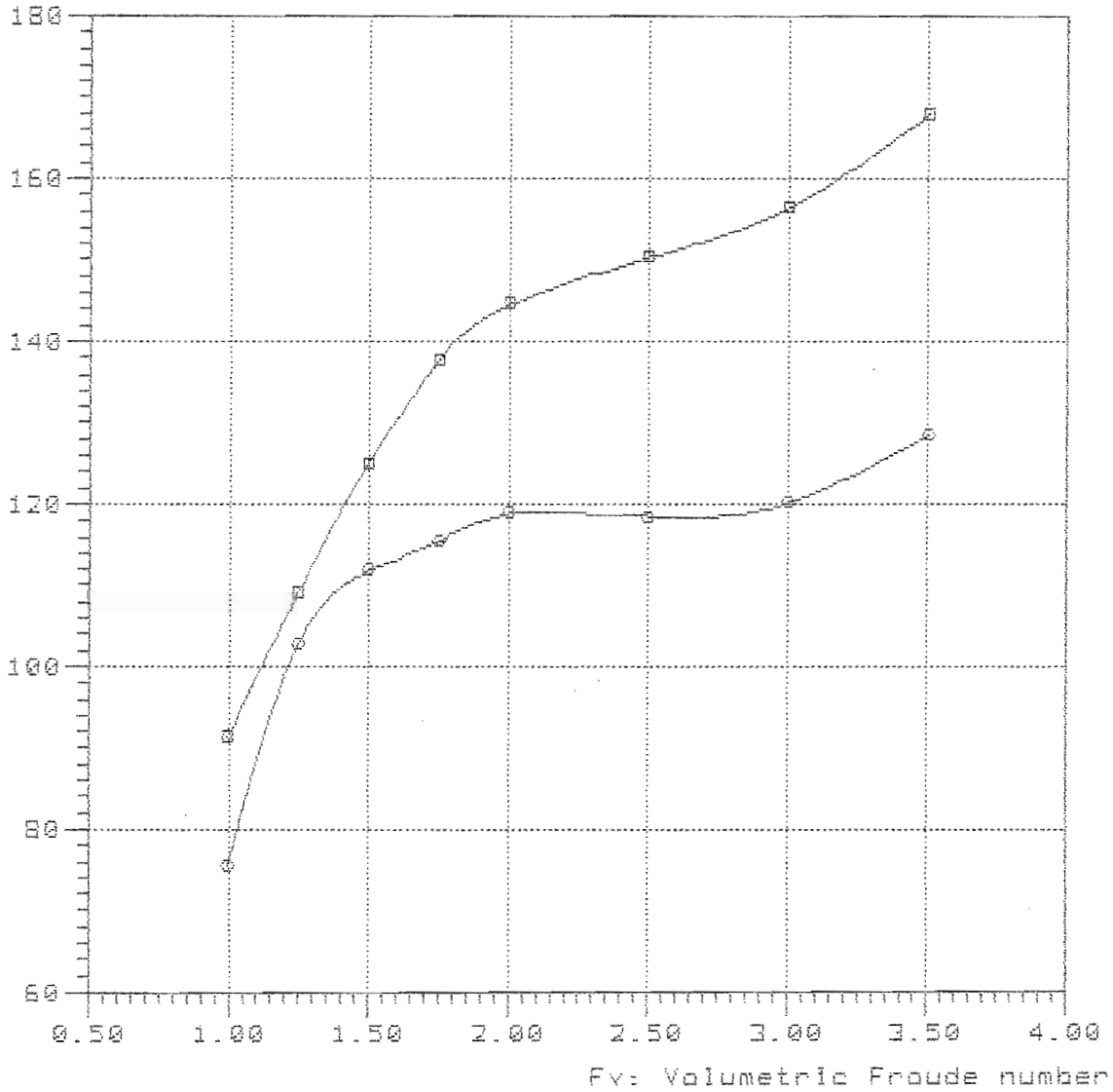


—■—

—○— THB-DL62A Lpx/Bpx=3.06 Ap/Val=7.974 Lpx/Val=5.5 Lpx/Ap=3.766 Log/Lpx=0.333



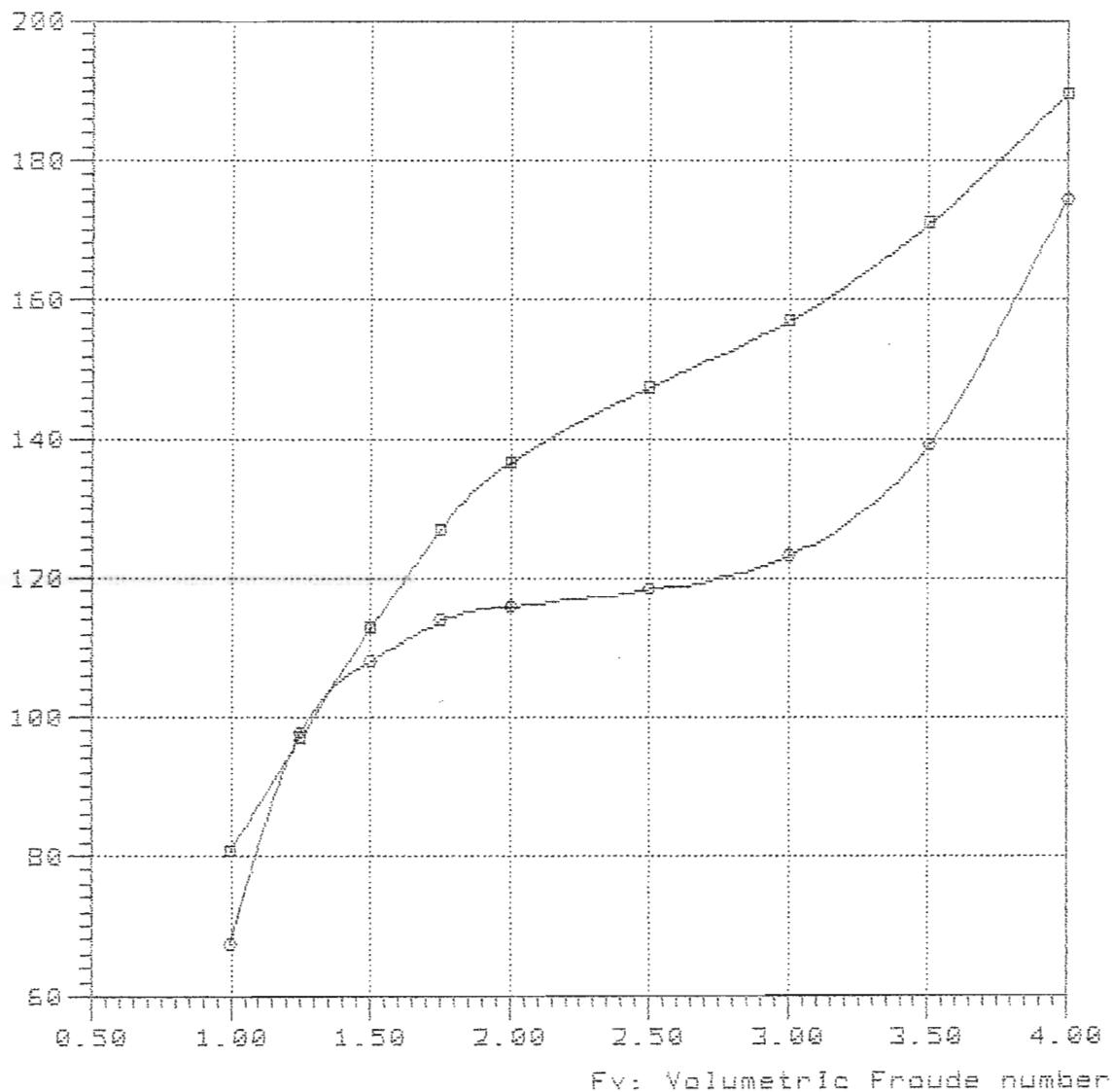
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-DL62R Lpx/Bpx=3.06 Ap/Vol=7.974 Lpx/Vol=5.5 Lpx/Ap=3.766 Log/Lpx=0.353

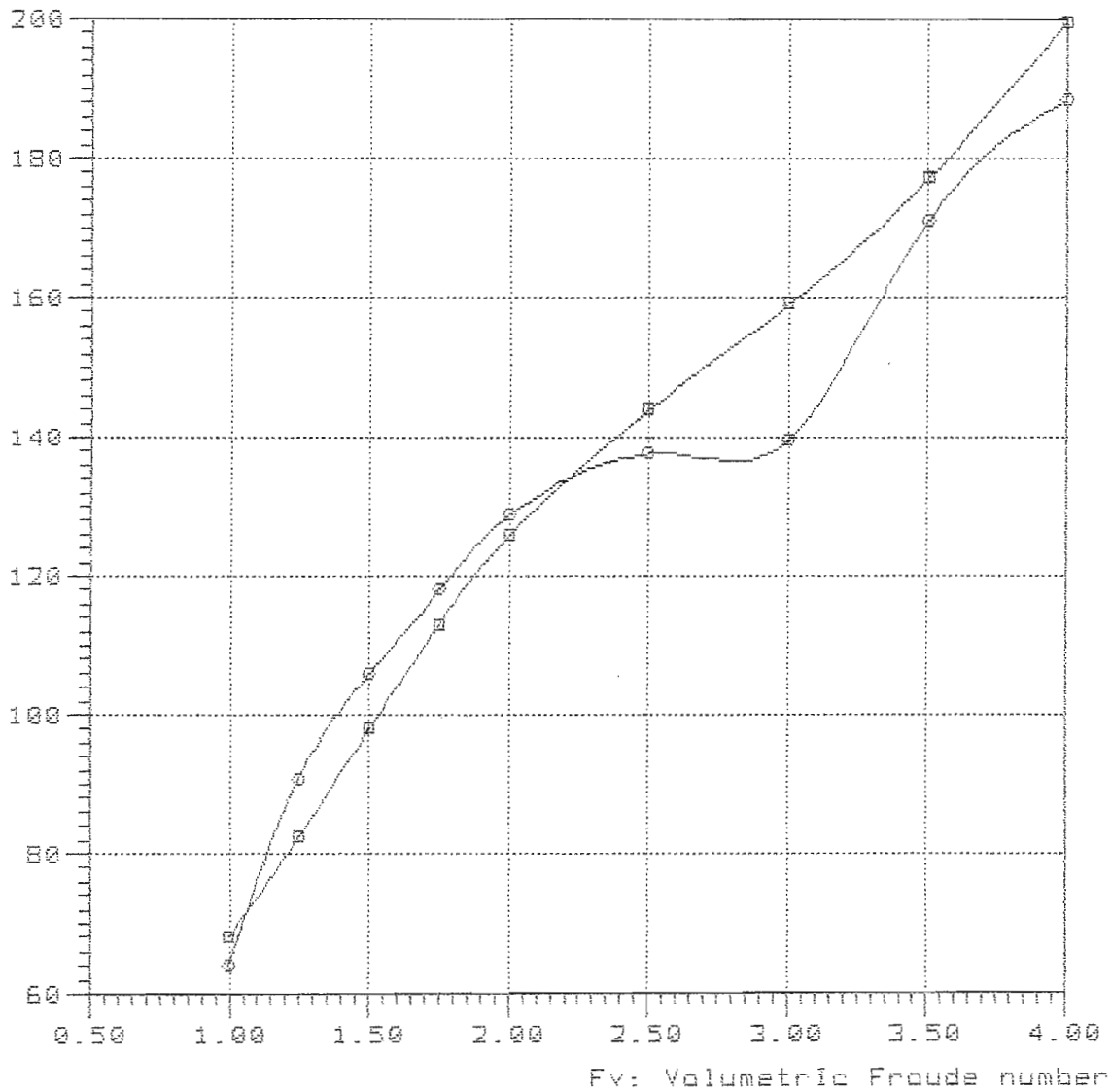
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-DL62A Lpx/Bpx=3.06 Ap/Vol=7.974 Lpx/Vol=5.5 Lpx/Ap=3.766 Log/Lpx=0.376

Rbare: Bare-hull resistance (lbs)



—■—

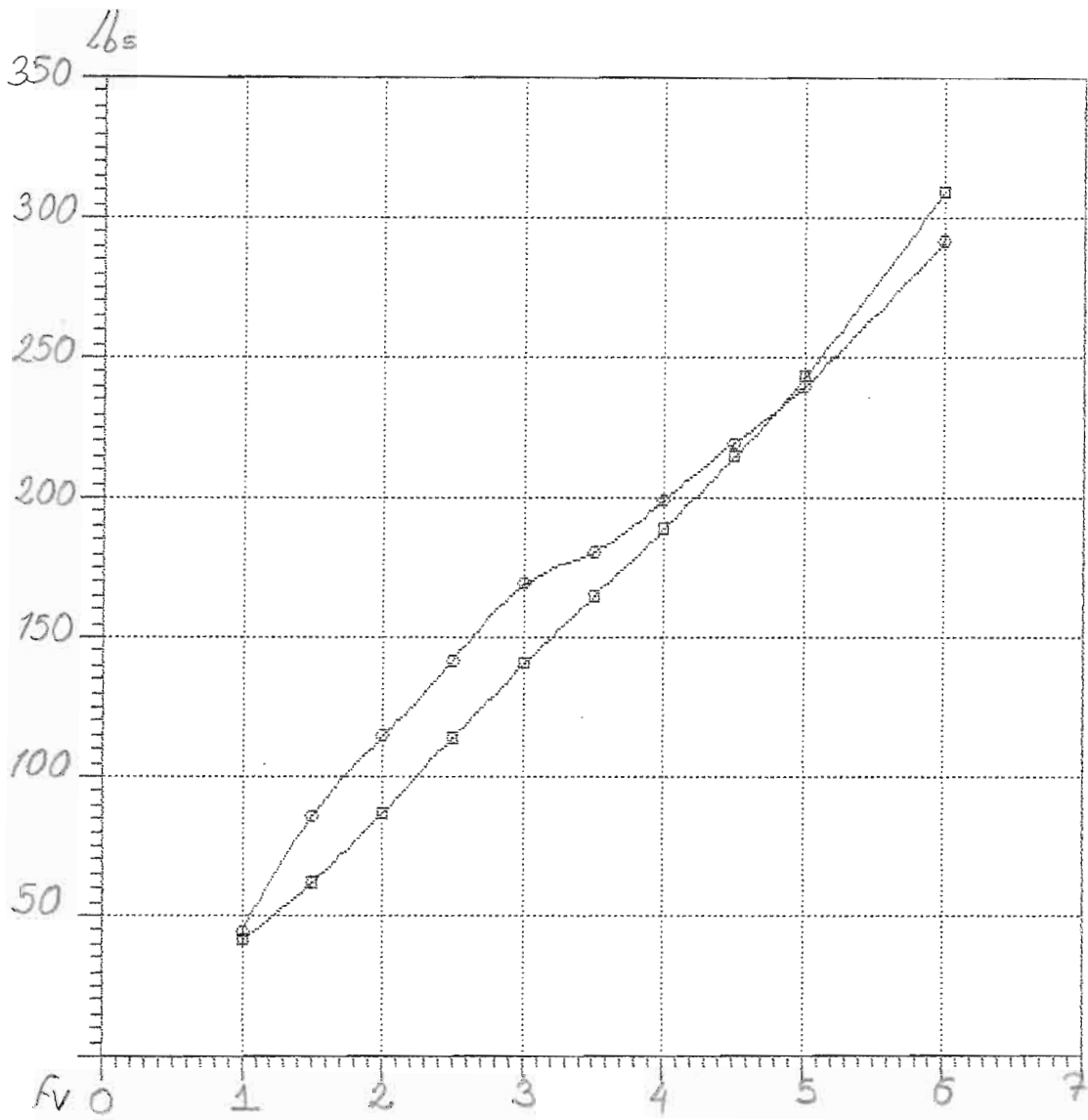
—○— TMB-DL62A Lpx/Bpx=3.06 Ap/Vol=7.974 Lpx/Vol=5.5 Lpx/Ap=3.766 Lcg/Lpx=0.415

Model = 4669  
Ref = NSRDC  
Friction = ATTC Ca=4e-4

Lpx = 21.200 ft  
Lwl = 20.946 ft  
Bpx = 3.029 ft  
Ap = 52.529 sqft  
Disp = 1000.00 Lb  
Deadrise = 13.00 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 6.999  
Lpx/Ap = 8.556  
Ap /Vol = 8.404  
Lpx/Vol = 8.505

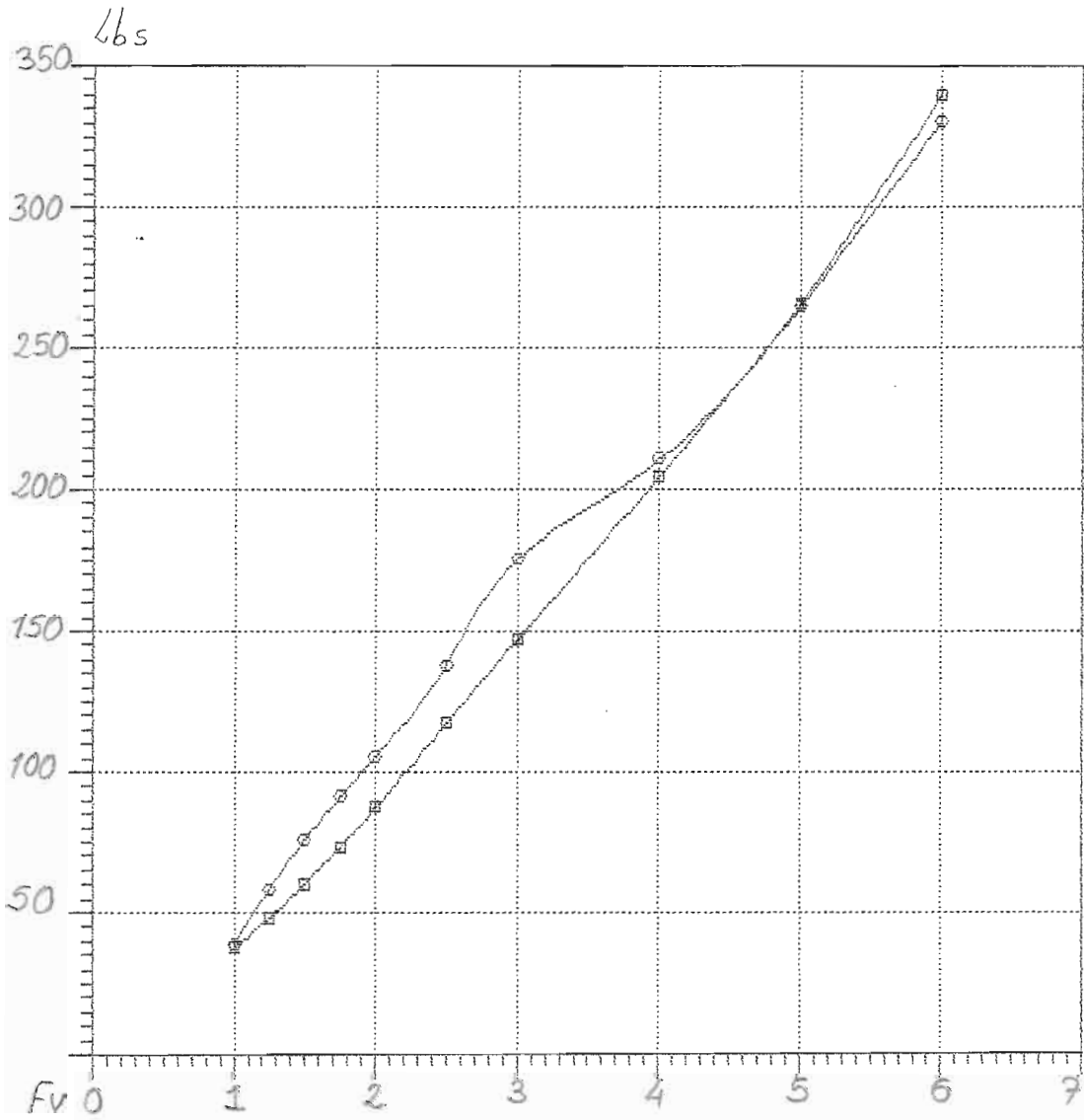
8-85-369



—□—

—○—

8-85-409



—□—

—○—

NavCad(tm) 3.1d

### Bare-hull resistance

File: 8-85-449.mdl

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vs.

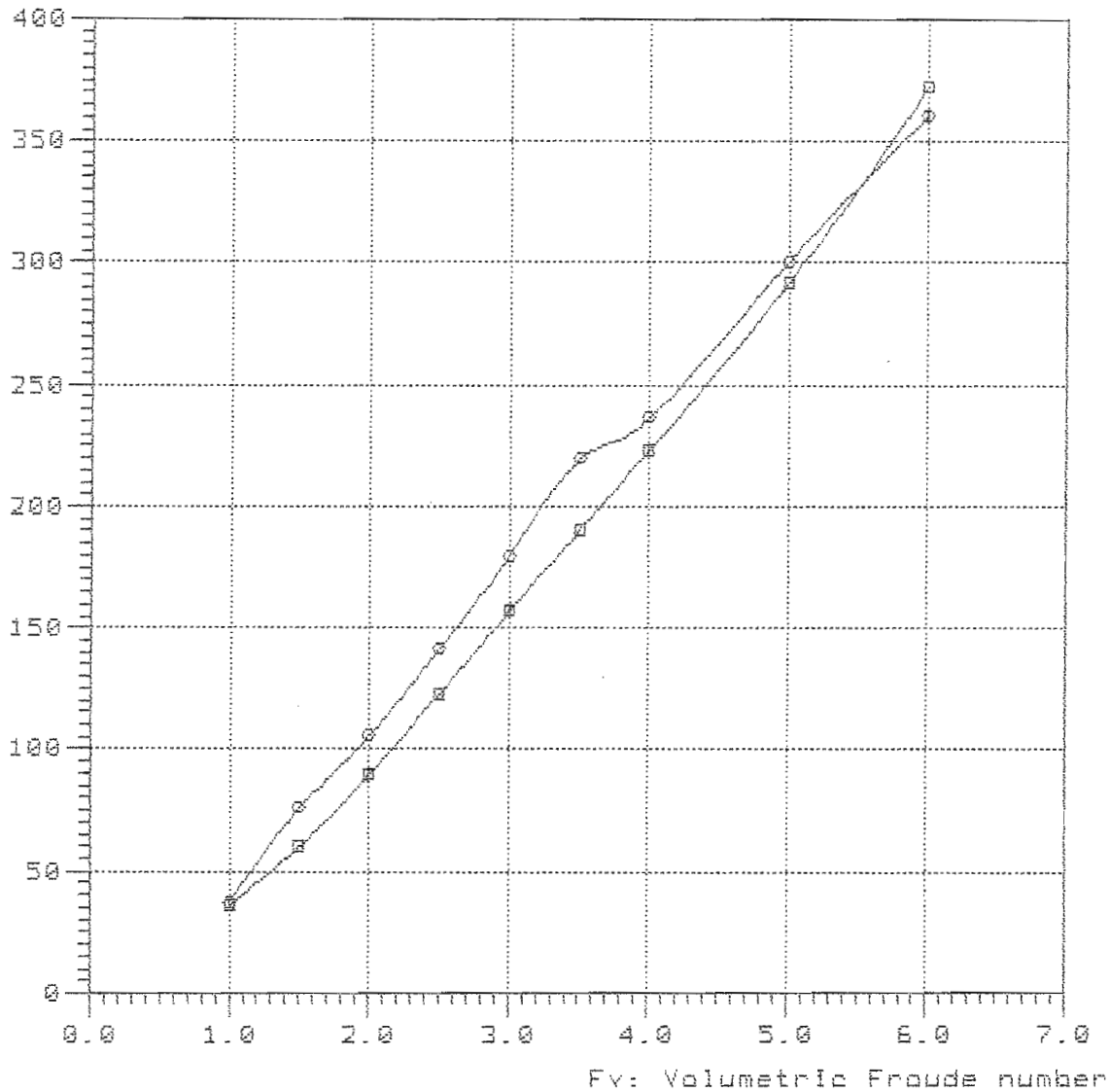
Date: 23 Feb 88

HydroComp, Inc.

### Volumetric Froude number

Time: 10:01

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMS-4669 Lpx/Bpx=7.000 Ap/Vol=8.405 Lpx/Ap=8.557 Log/Lpx=0.449

NavCad(tm) 3.1d

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HydroComp, Inc.

### Bare-hull resistance

vs.

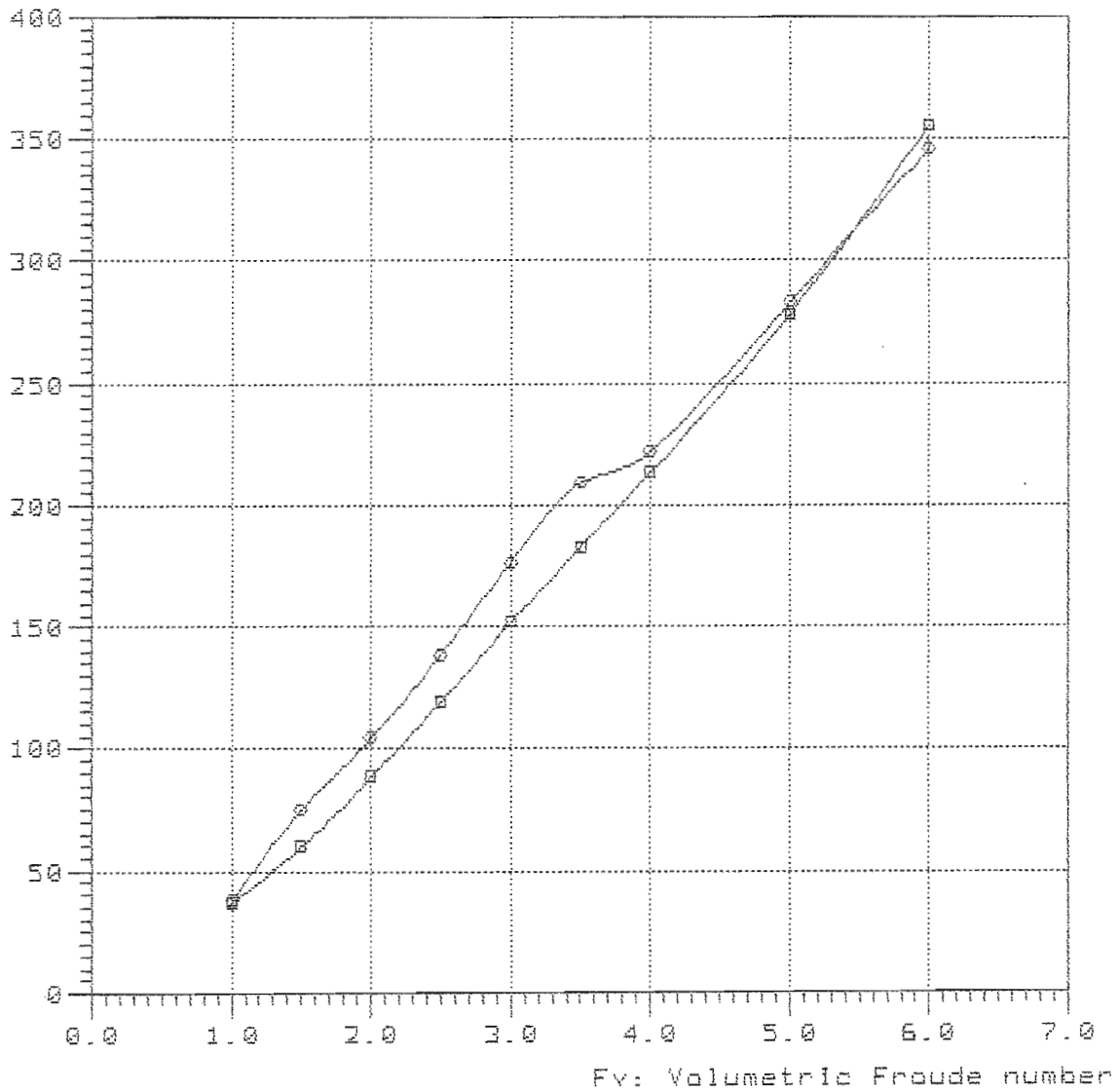
### Volumetric Froude number

File: 8-85-429.mdl

Date: 23 Feb 00

Time: 9:57

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=8.405 Lpx/Ap=8.557 Log/Lpx=0.429



NavCad(tm) 3.1d

(c) Copyright 1995

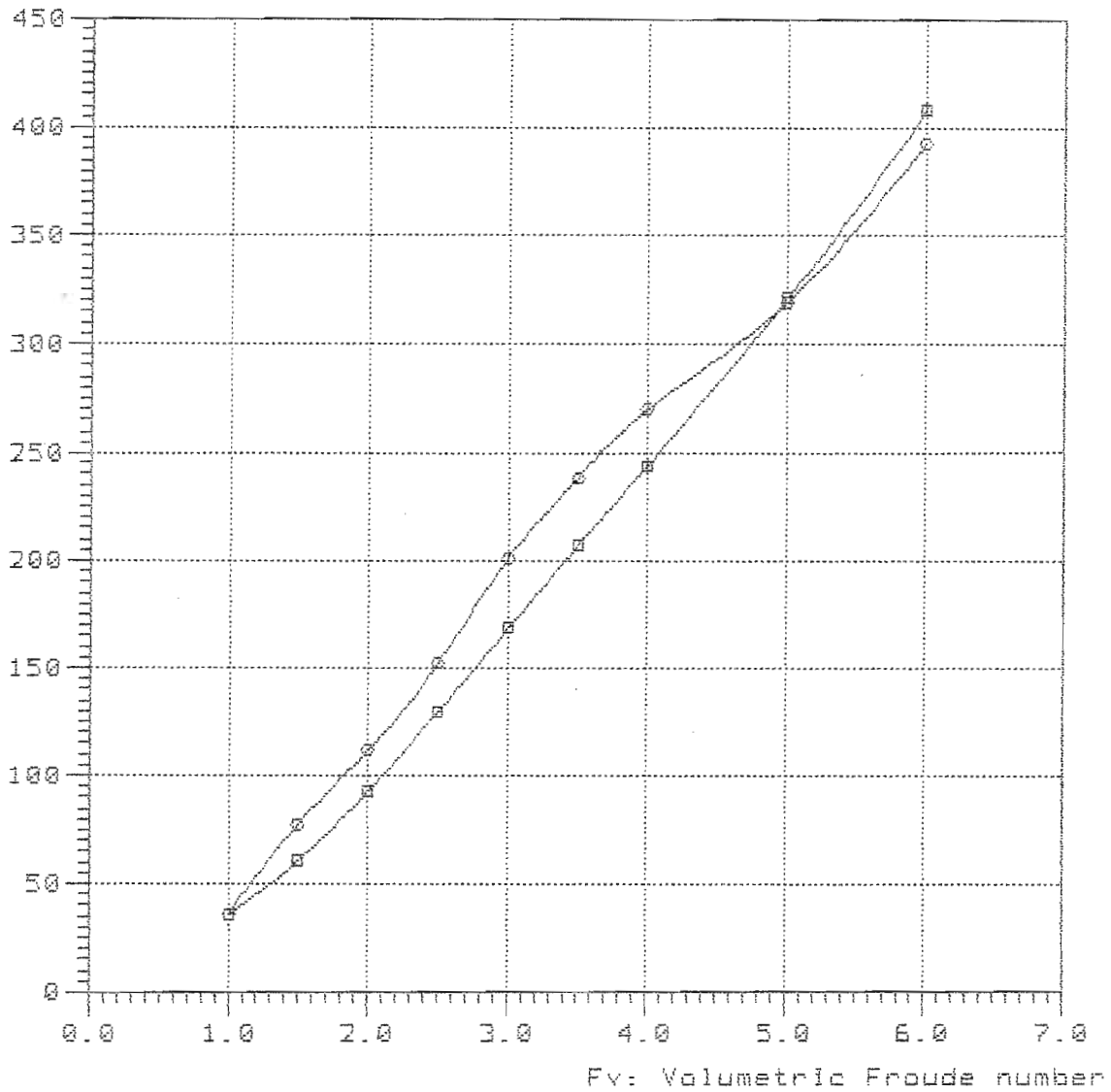
HydroComp, Inc.

File: 8-85-489.mdi

Date: 23 Feb 00

Time: 10:04

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-4669 Lpx/Bpx=7.000 Ap/Vol=8.405 Lpx/Ap=8.557 Log/Lpx=0.489

4966

03/02/2000 10:48:34

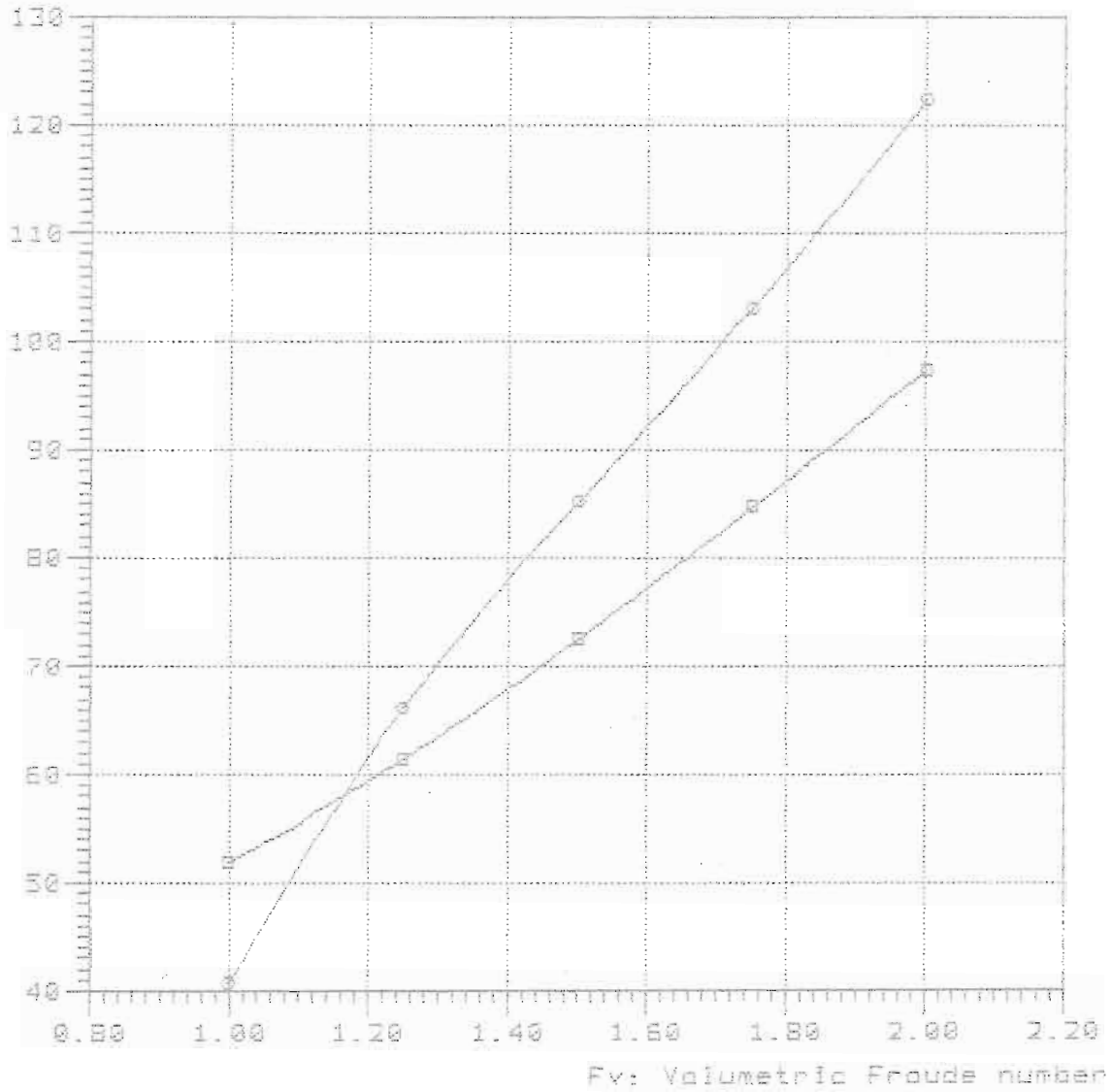
Model = 4966  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 18.700 ft  
Lwl = 18.587 ft  
Bpx = 2.833 ft  
Ap = 38.411 sqft  
Vcg = 0.871 ft  
Disp. = 1000.00 Lb  
Deadrise = 22.50 degree  
Twist Angle = 2.00 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 6.601  
Lpx/Ap = 9.104  
Ap /Vol = 6.145  
Lpx/Vol = 7.482  
Cvload = 0.687  
Lbload = 0.033  
Disp-Lpx = 68.270

**Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCI DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez, kopya  
veya kopya edilemez ve her ne maksadla  
olursa olsun maksadı dışında  
izinsiz kullanılamaz,**

Rbare: Bare-hull resistance (lbs)

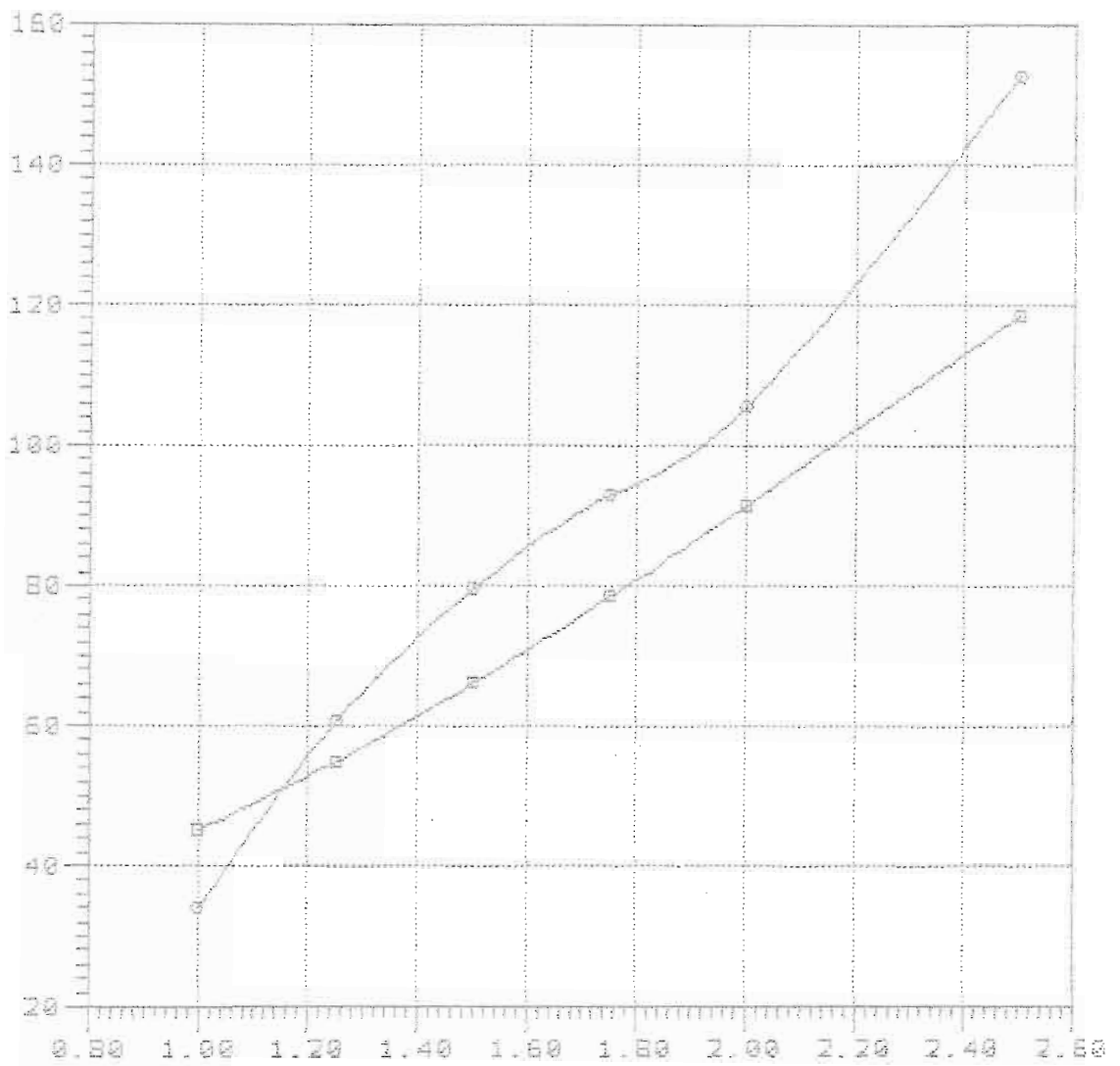


—■—

—○—

TMB- 65A Lpx/Bpx=6.60 Ap/Vol=6.146 Lpx/Ap=9.104 Log/Lpx=0.360

Rbare: Bare-hull resistance (lbs)

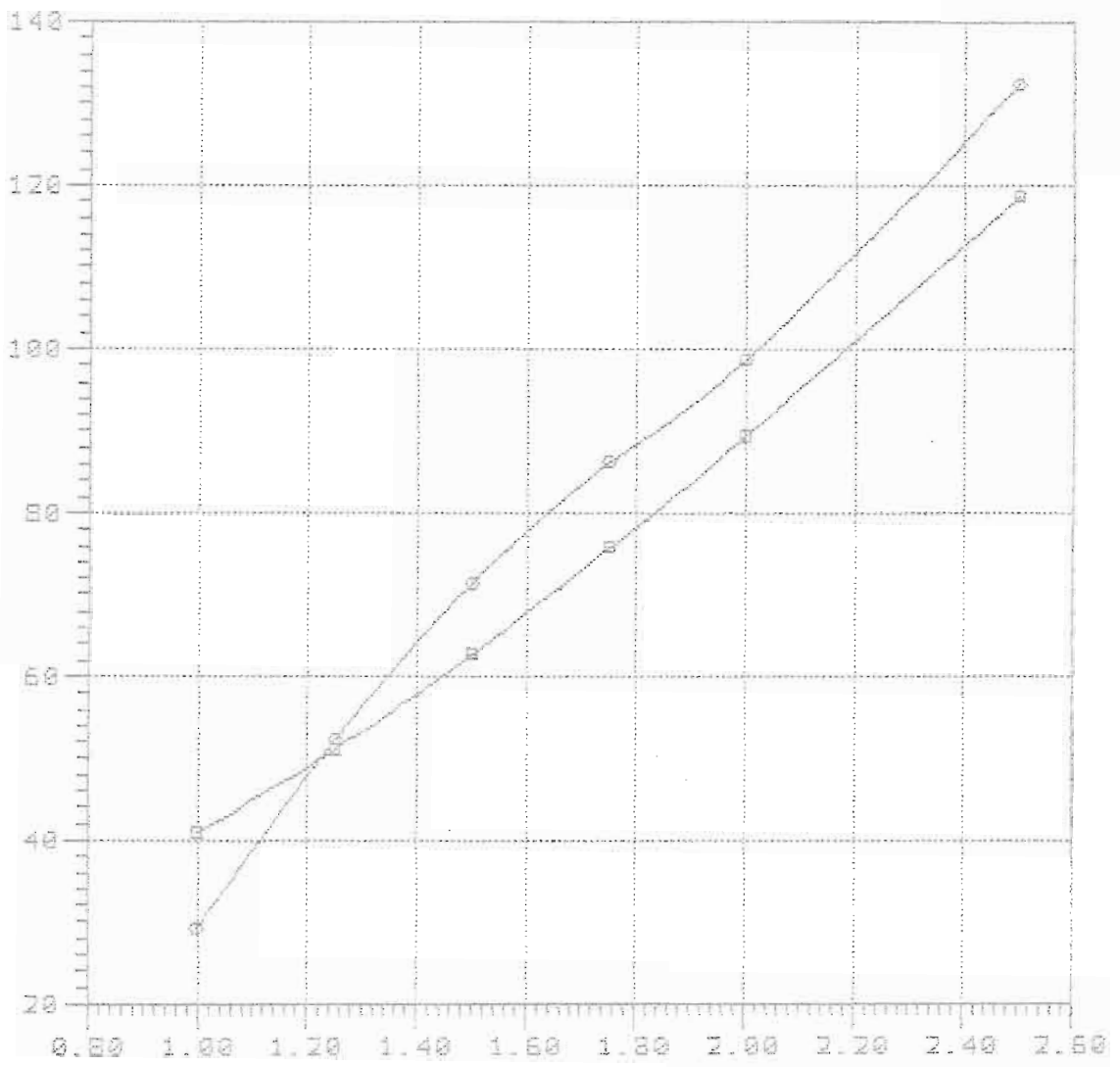


Fv: Volumetric Froude number

—■—

—●— TMB- 53A Lpx/Bpx=6.60 Ap/Vol=6.146 Lpx/Ap=9.104 Log/Lpx=0.400

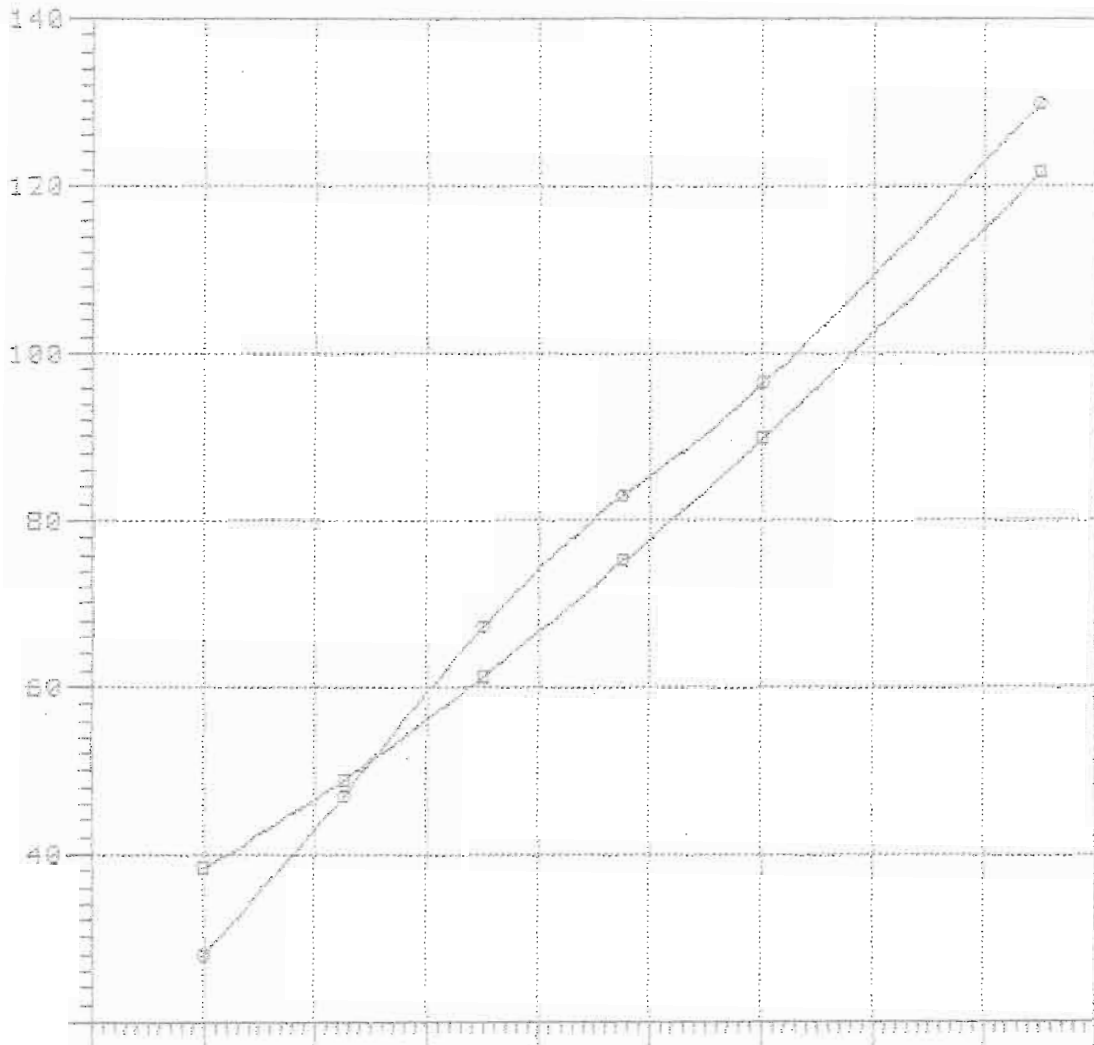
Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

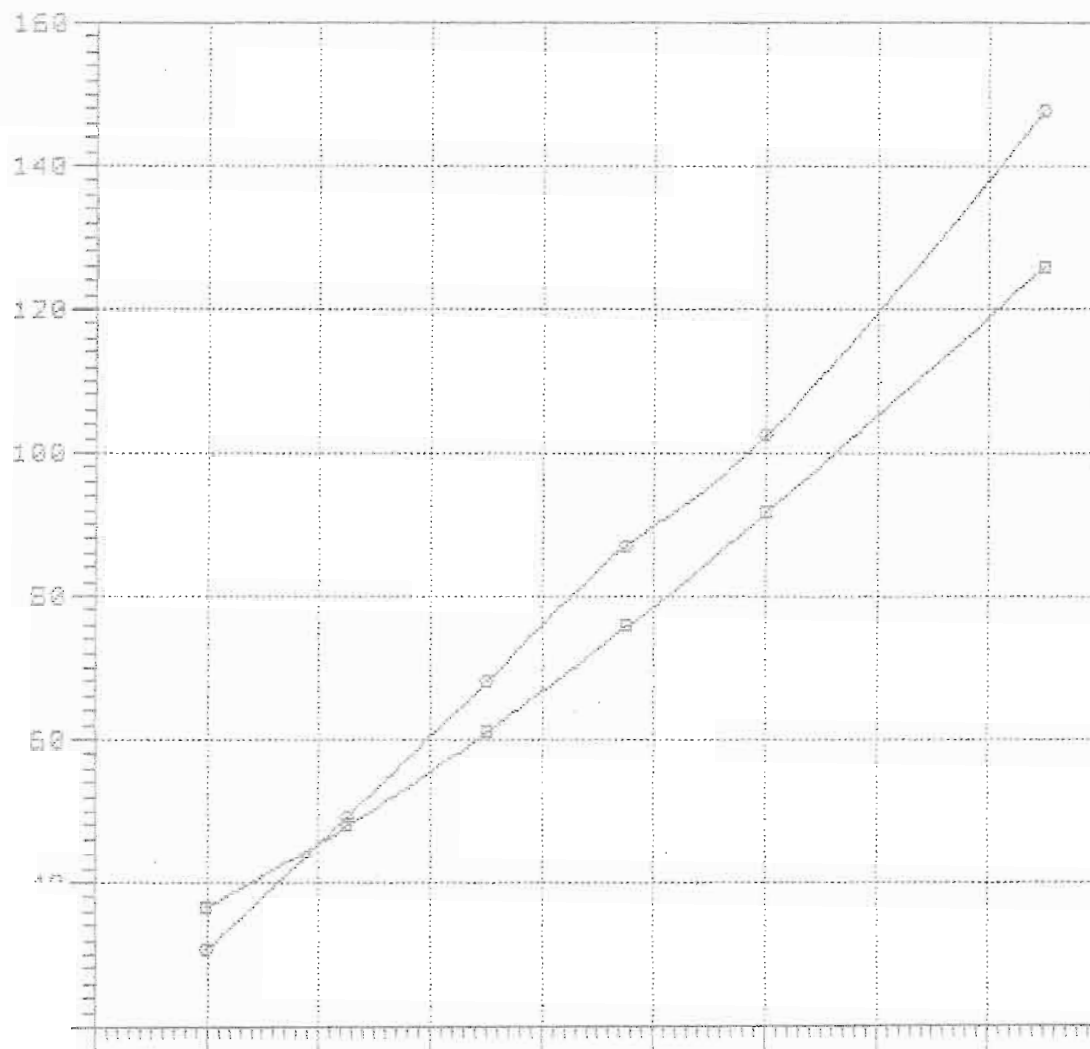
- 
- TMB- 65A Lpx/Bpx=6.60 Ap/Vol=6.146 Lpx/Sp=3.104 Lcg/Lpx=0.440

Rbare: Bare-hull resistance (lbs)



—□—  
—○—

Rbare: Bare-hull resistance (lbs)

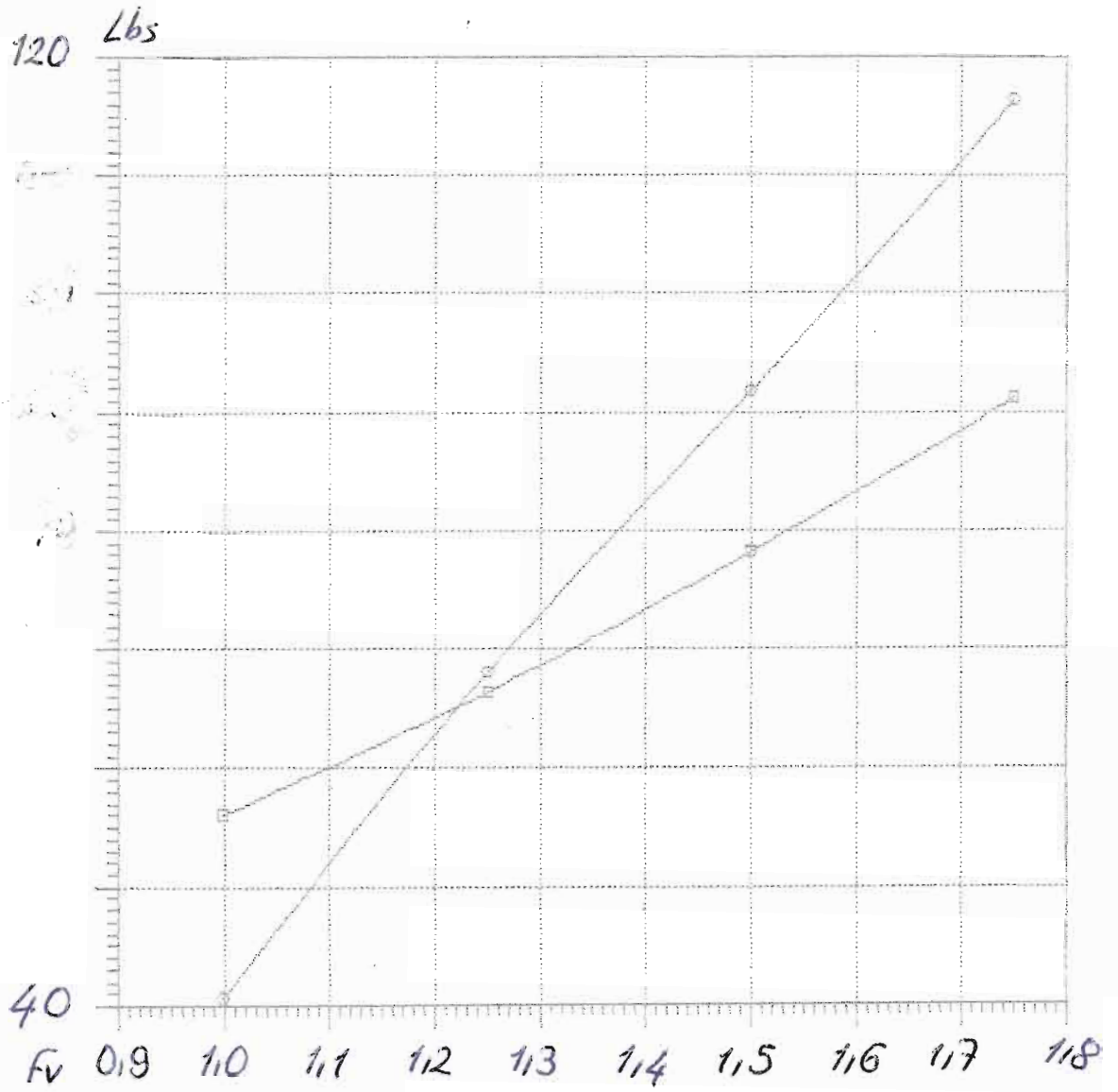


—□—  
—○—



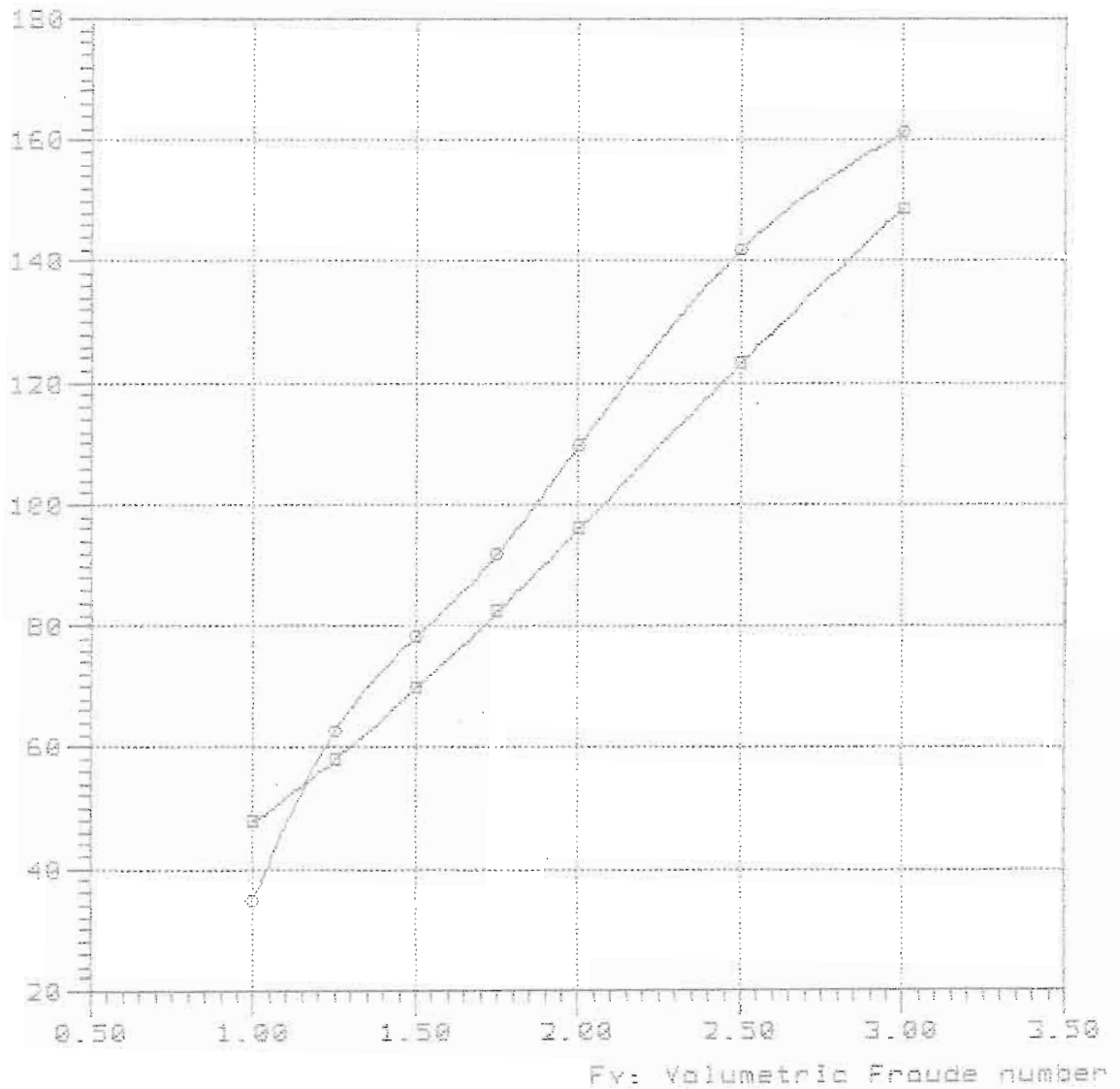
Model	=	4966
Ref	=	NSRDC
Friction	=	ATTC Ca=4e-4
Lpx	=	20.000 ft
Lwl	=	19.880 ft
Bpx	=	3.030 ft
Ap	=	43.937 sqft
Vcg	=	0.931 ft
Disp.	=	1000.00 Lb
Deadrise	=	22.50 degree
Twist Angle	=	2.00 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	6.601
Lpx/Ap	=	9.104
Ap /Vol	=	7.029
Lpx/Vol	=	8.002
Cvload	=	0.562
Lbload	=	0.027
Disp-Lpx	=	55.804

7-80-320



—○—  
—□—

Rbare: Bare-hull resistance (lbs)

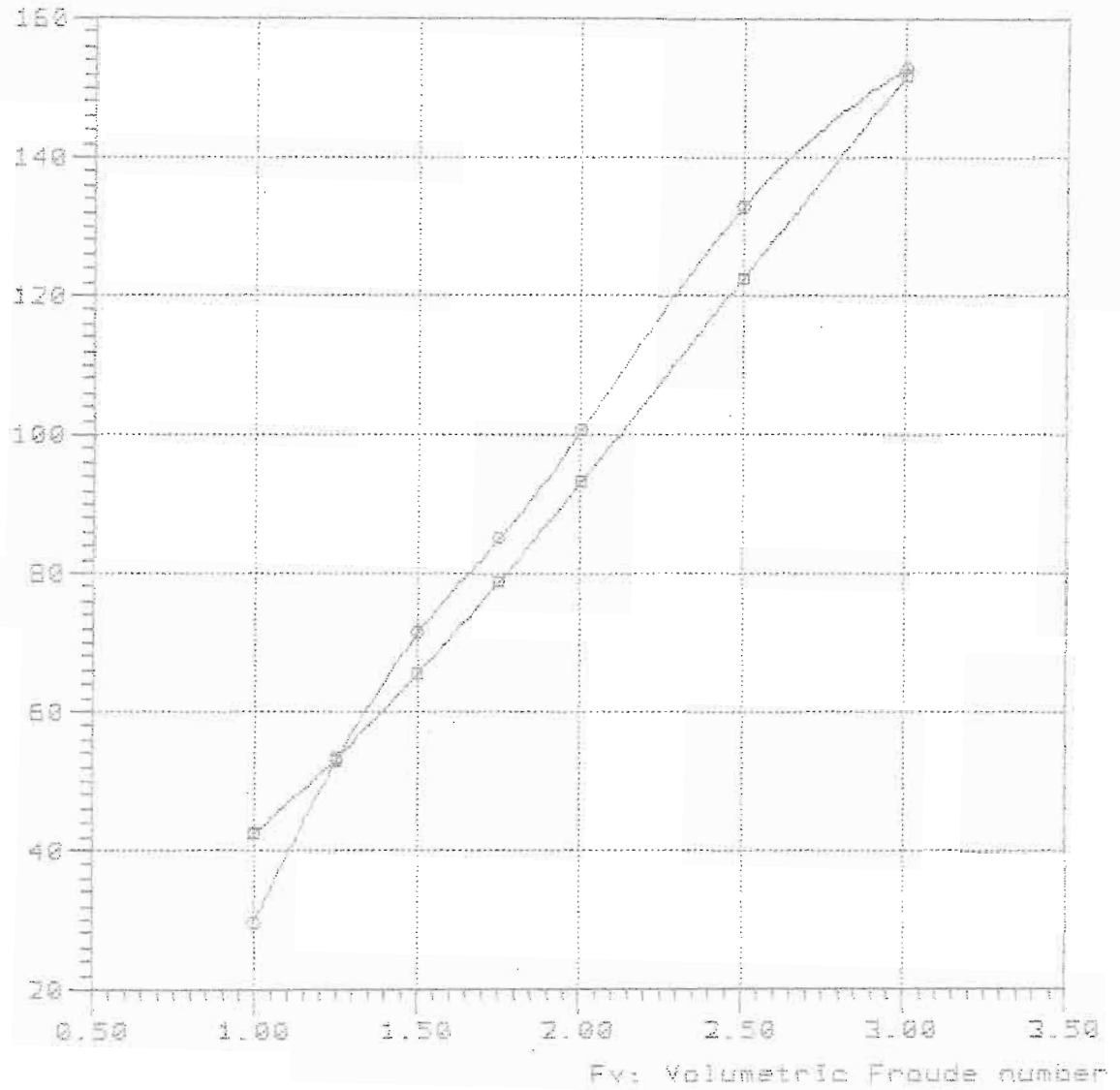


Curve legend

—■—

—●— TMB- 65A Lpx/Bpx=6.60 Ap/Vol=7.030 Lpx/Rp=9.104 Log/Lpx=0.360

Rbare: Bare-hull resistance (lbs)

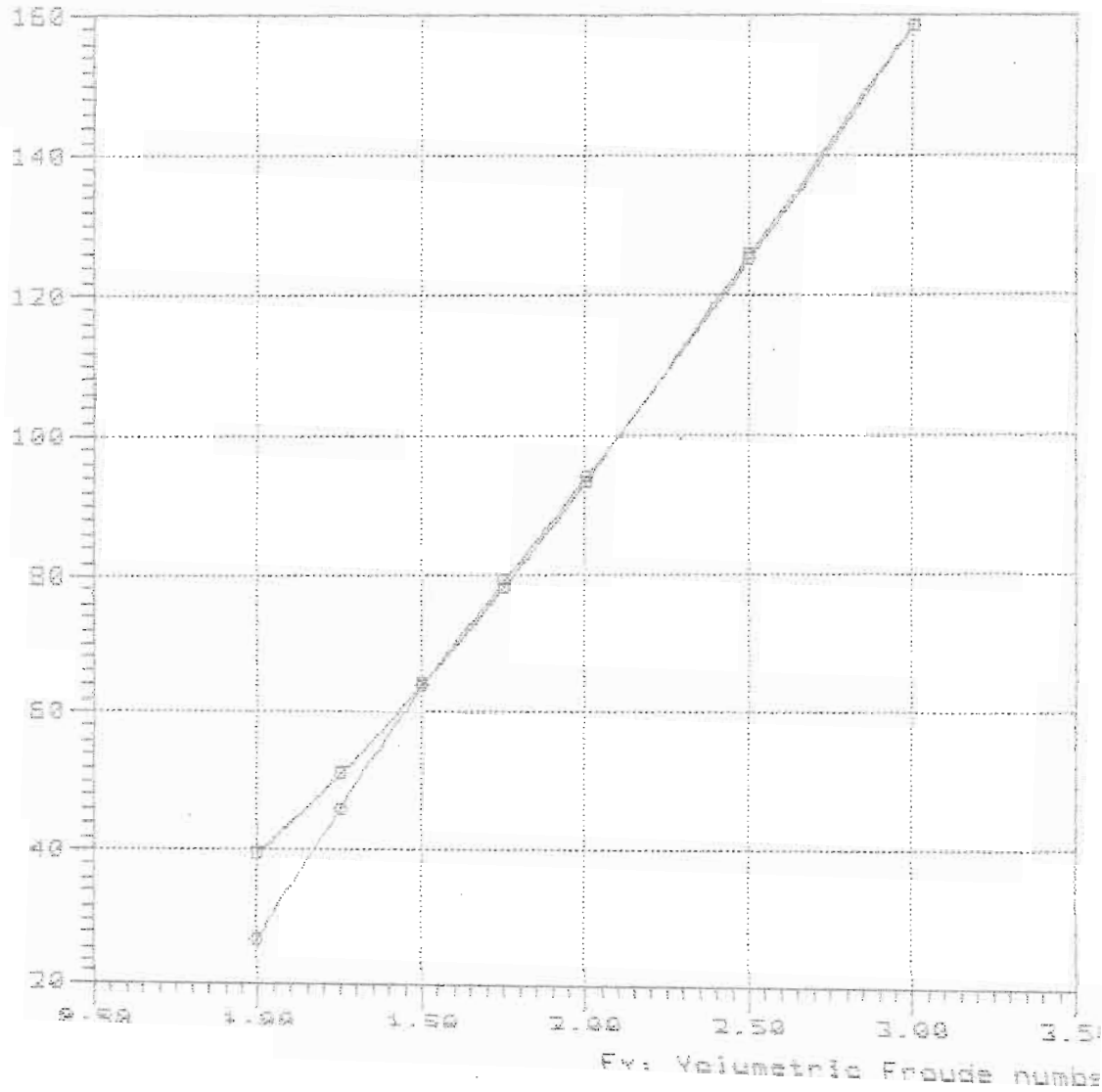


Curve legend

—■—

—○— TME- 63A Lpx/Bpx=6.60 Ap/Vol=7.030 Lpx/Ap=9.104 Log/Lpx=0.400

Rbare: Bare-hull resistance (lbs)

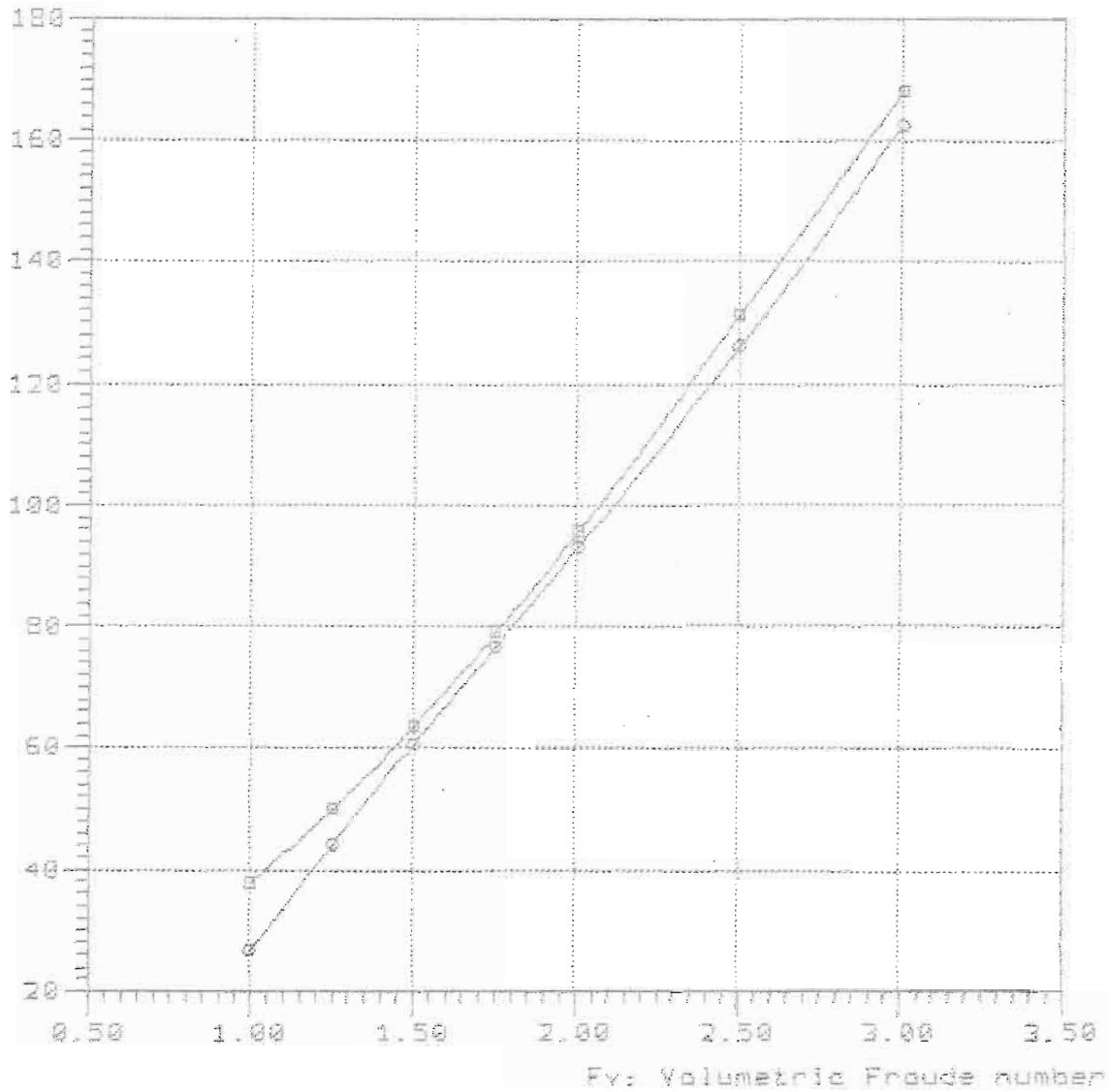


—■—

—●—

TMB- 65A Lpx/Bpx=6.60 Rp/Val=7.030 Lpx/Rp=5.104 Log/Lpx=0.440

Reare: Bare-hull resistance (lbs)

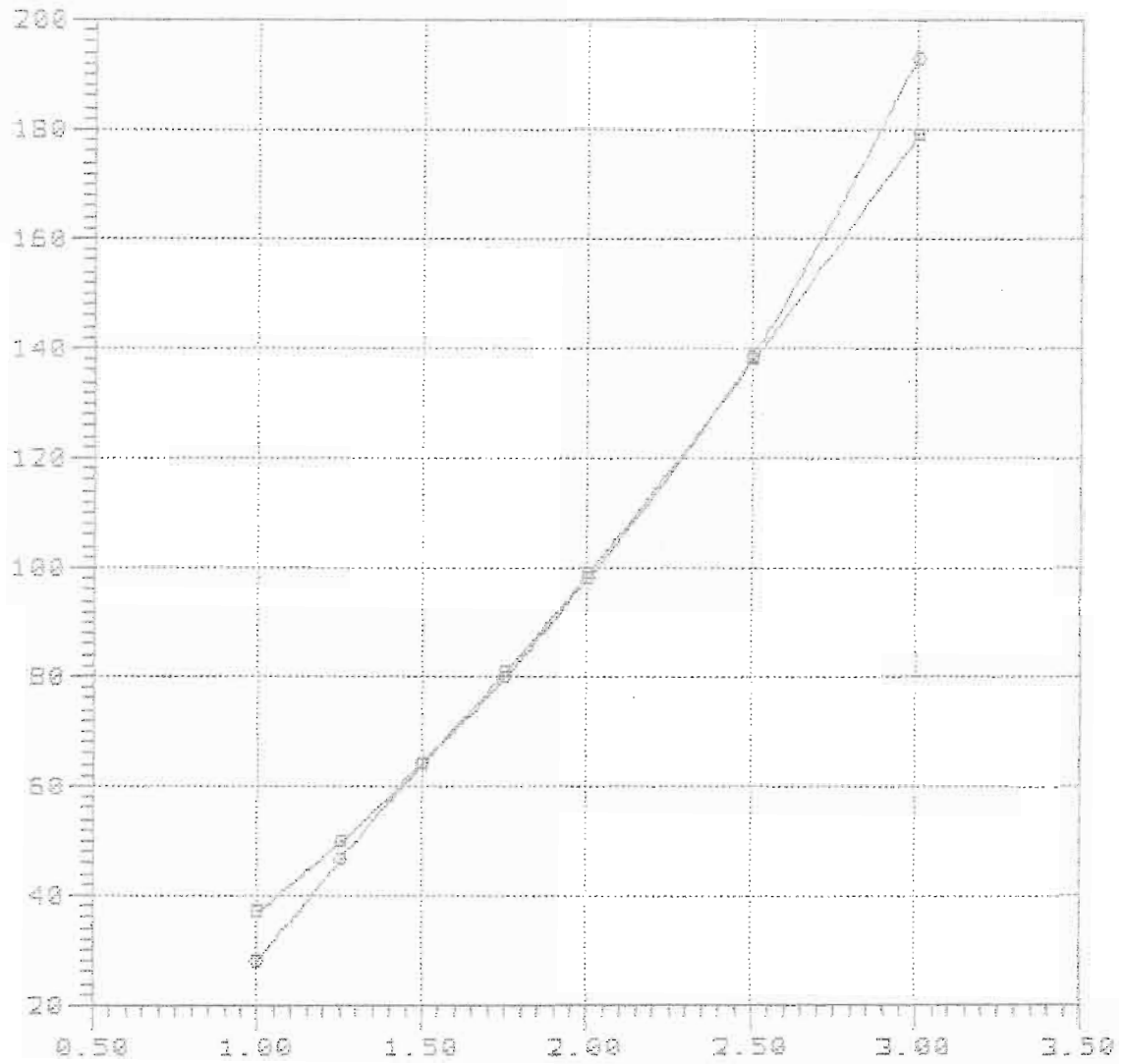


—■—

—●—

TMB- 65R Lpx/Bpx=6.60 Rp/Vol=7.030 Lox/Rp=9.104 Log/Lpx=6.420

Rbare: Bare-kull resistance (lbs)



Fv: Volumetric Froude number

—■—

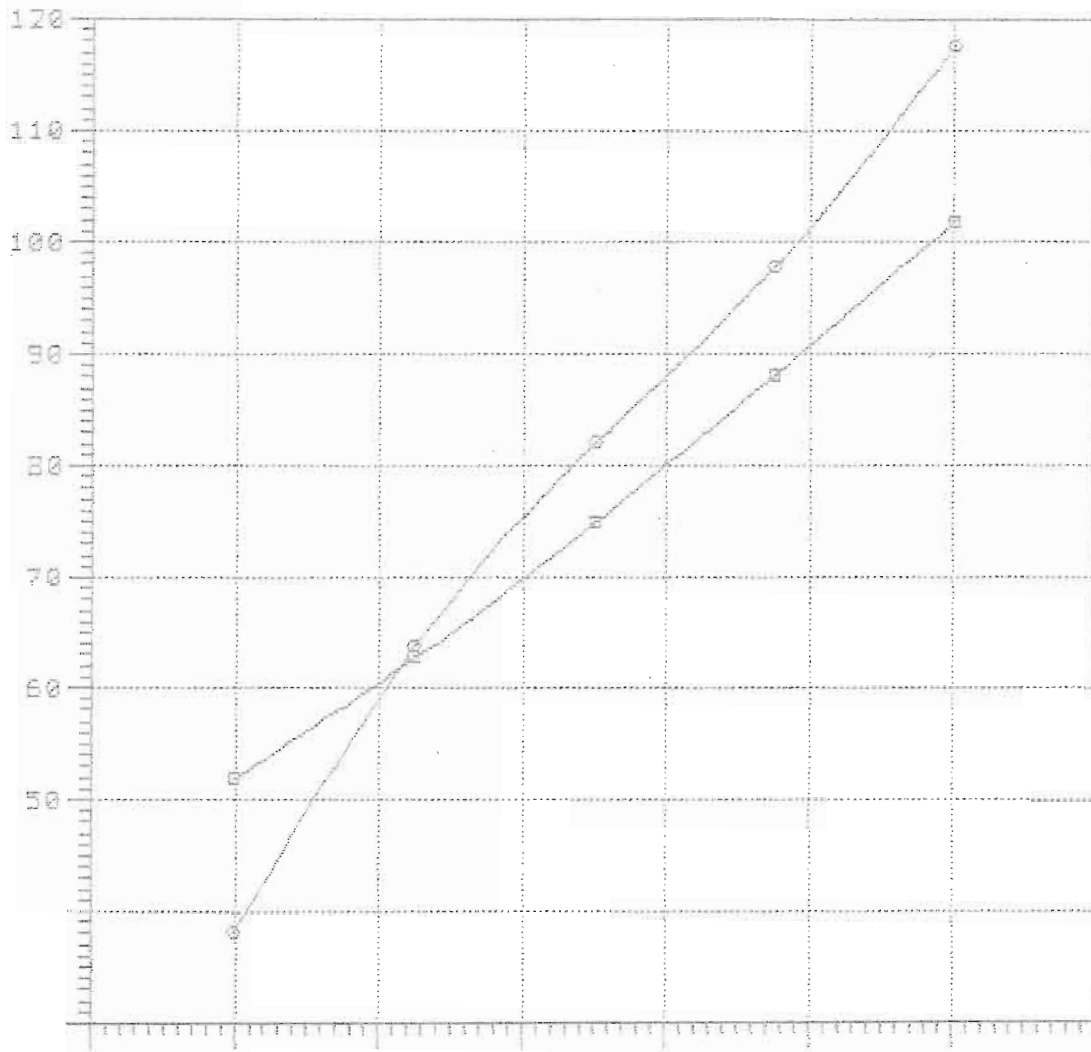
—●— TMB- 65A Lpx/Bpx=6.60 Ap/Vol=7.830 Lpx/Ar=9.184 Log/Lpx=0.520

Model	=	4966
Ref	=	NSRDC
Friction	=	<del>A</del> TTC Ca=4e-4
Lpx	=	21.200 ft
Lwl	=	21.072 ft
Bpx	=	3.212 ft
Ap	=	49.367 sqft
Vcg	=	0.987 ft
Disp.	=	1000.00 Lb
Deadrise	=	22.50 degree
Twist Angle	=	2.00 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc

Lpx/Bpx	=	6.600
Lpx/Ap	=	9.104
Ap /Vol	=	7.898
Lpx/Vol	=	8.483
Cvload	=	0.472
Lbload	=	0.023
Disp-Lpx	=	46.854



Rbare: Bare-hull resistance (lbs)



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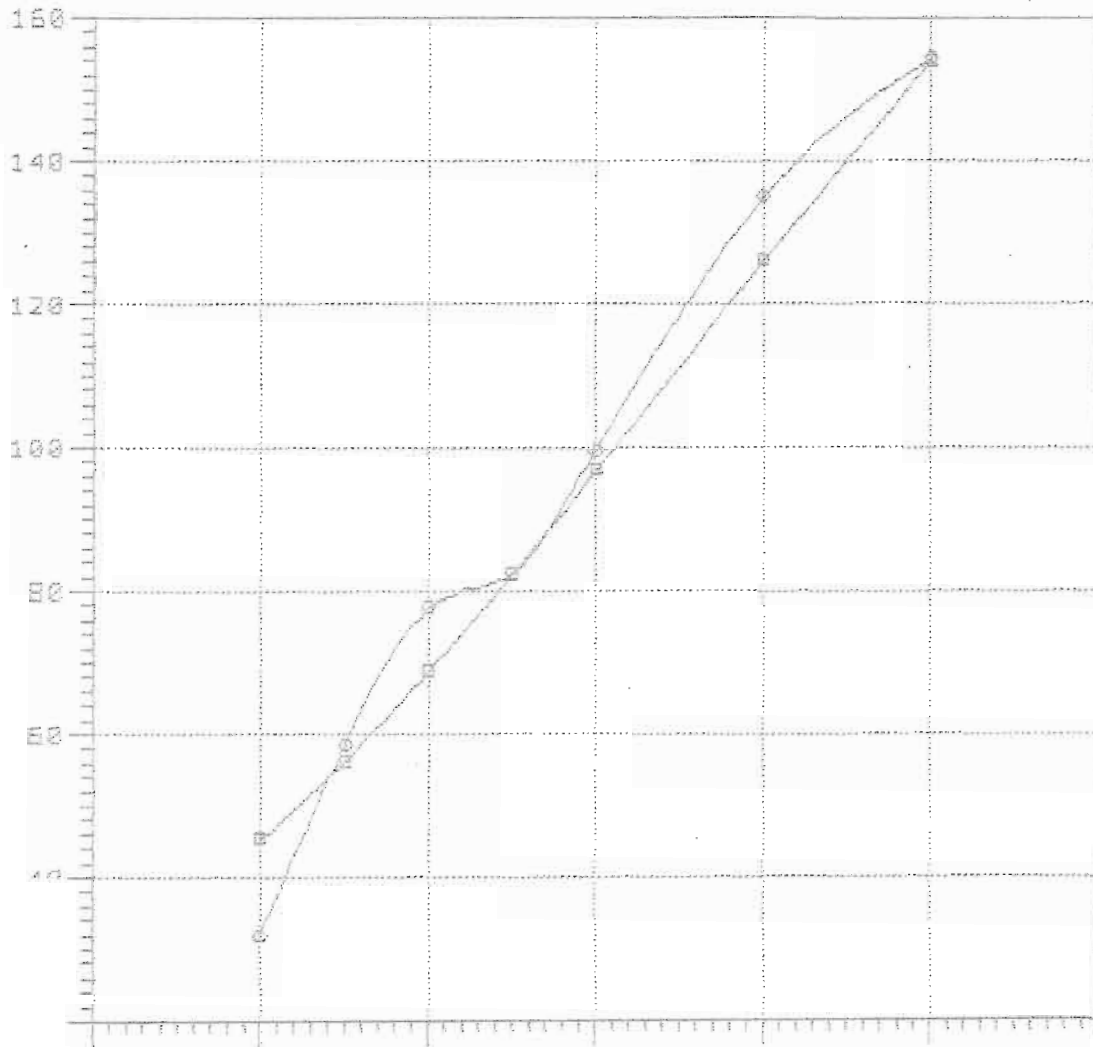
HydroComp, Inc.

File: B-95-360.mdl

Date: 2 Mar 00

Time: 9:56

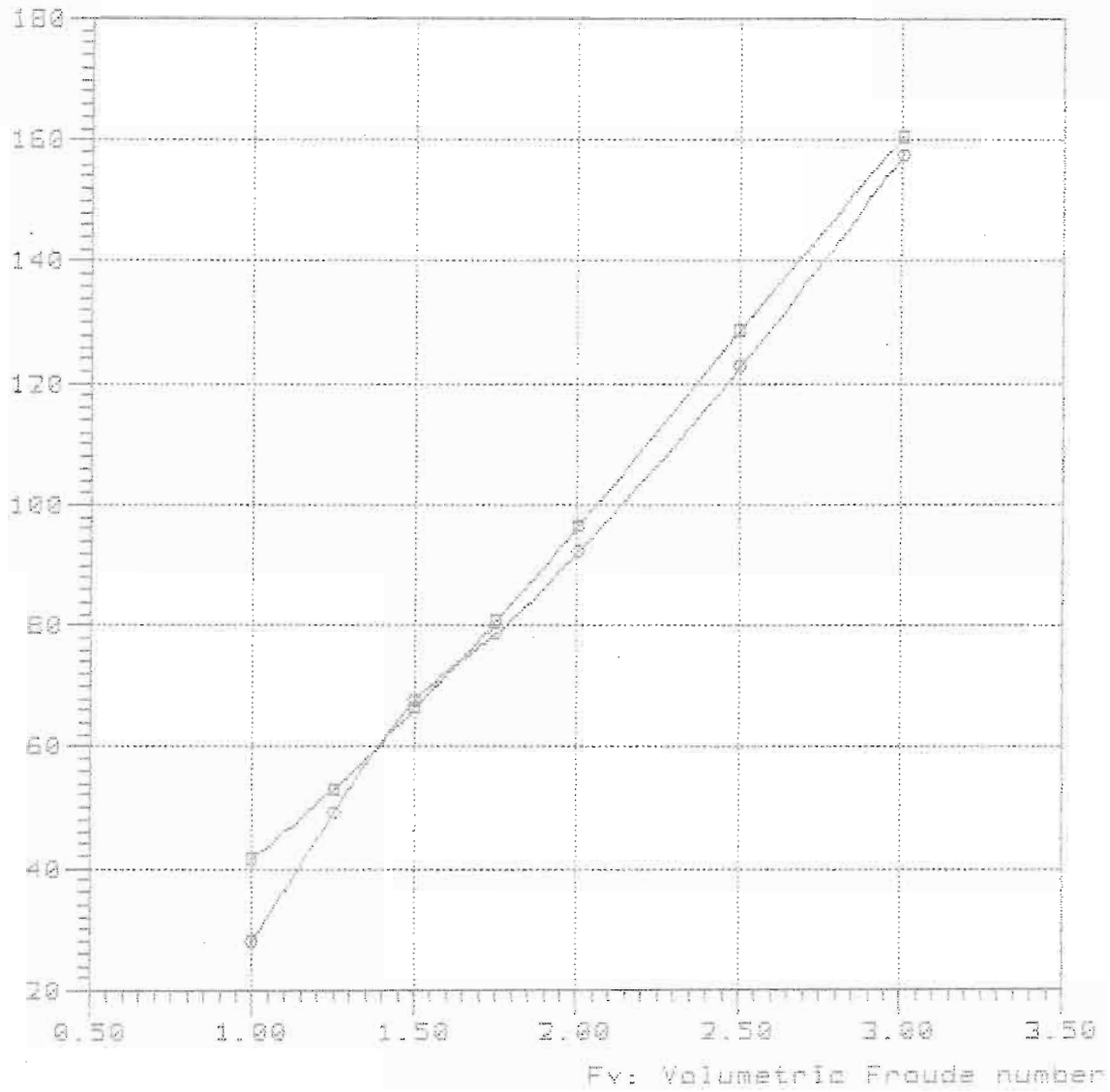
Rbare: Bare-hull resistance (lbs)



—■—

—○—

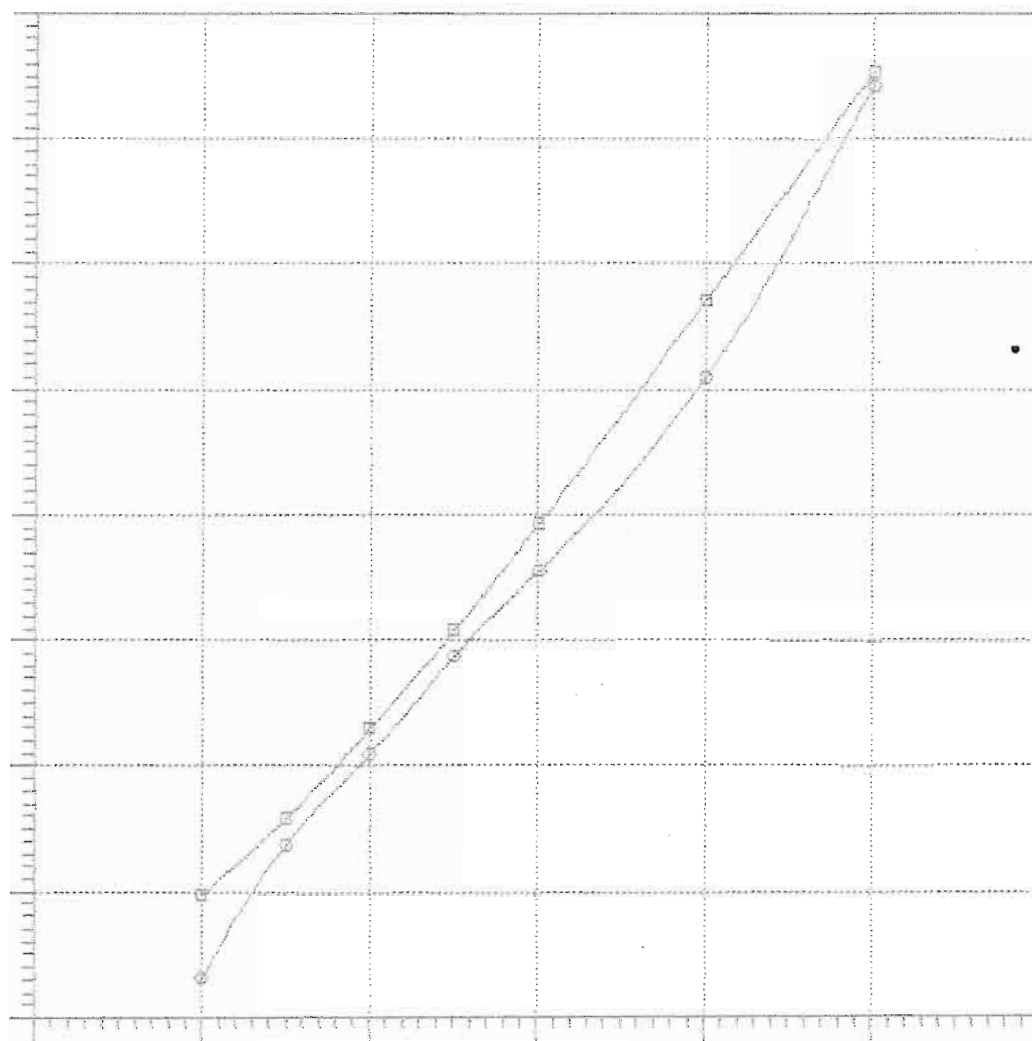
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB- 65A Lpx/Bpx=6.60 Ap/Vol=7.899 Lpx/Ap=9.104 Log/Lpx=0.400

8-85-440



— □ —  
— ○ —

NavCad(tm) 3.1d

### Bare-hull resistance

File: B-85-450.mdl

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vs.

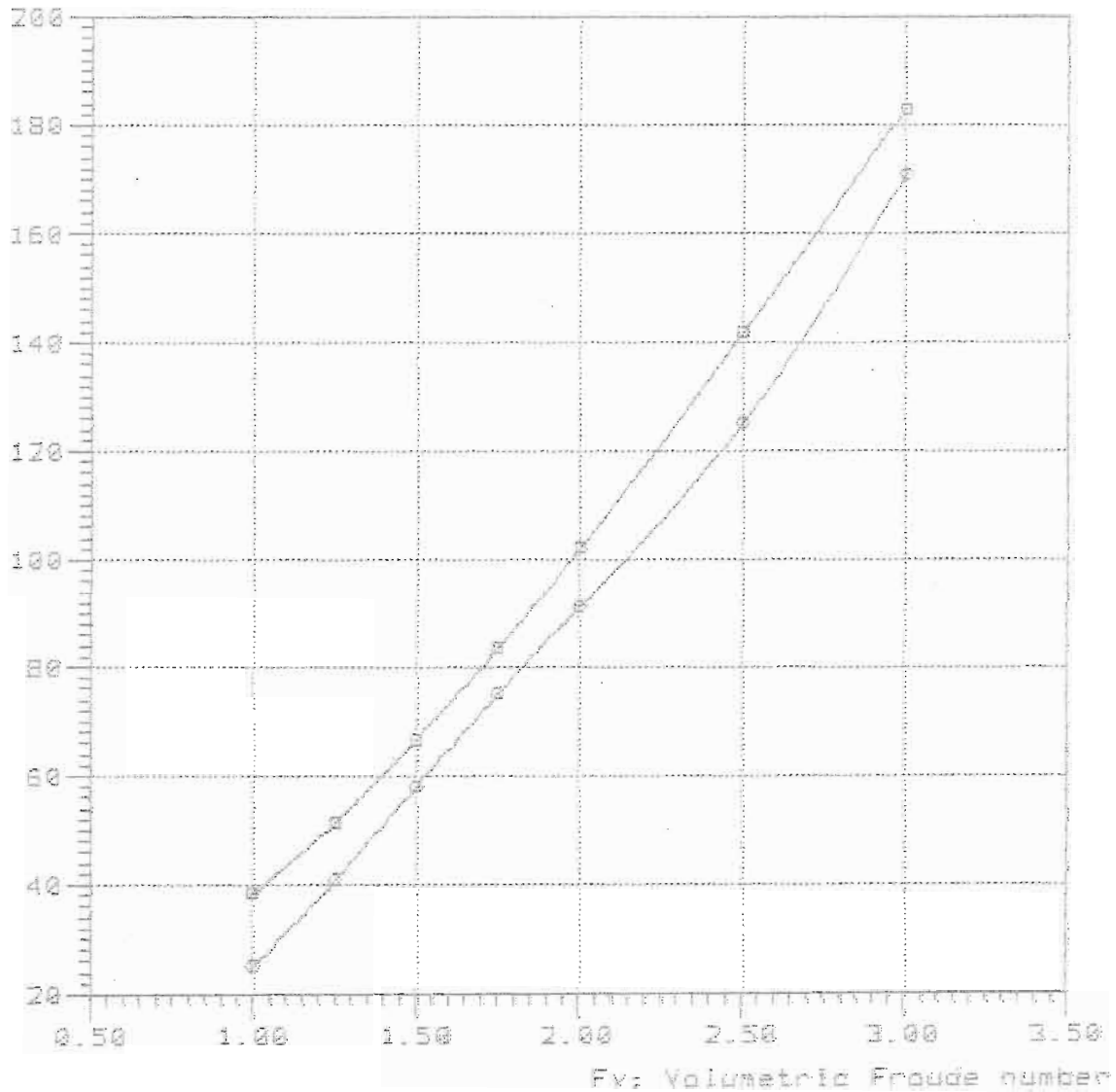
Date: 2 Mar 00

HydroComp, Inc.

### Volumetric Froude number

Time: 10:04

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

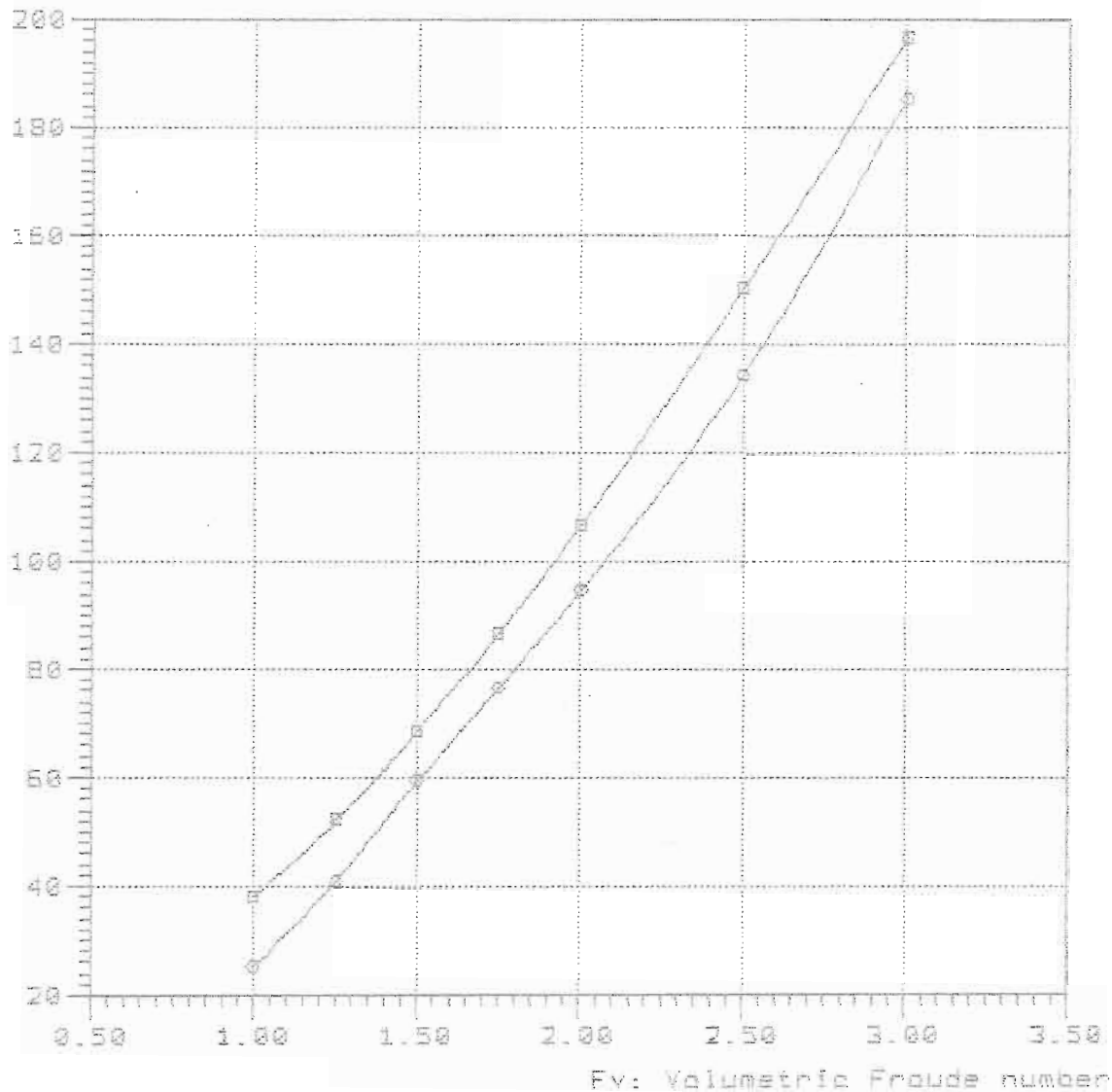
—○— TMS- 65R Lox/Bpx=6.60 Ap/Vol=7.899 Lox/Ag=9.164 Lcg/Lpx=6.488

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



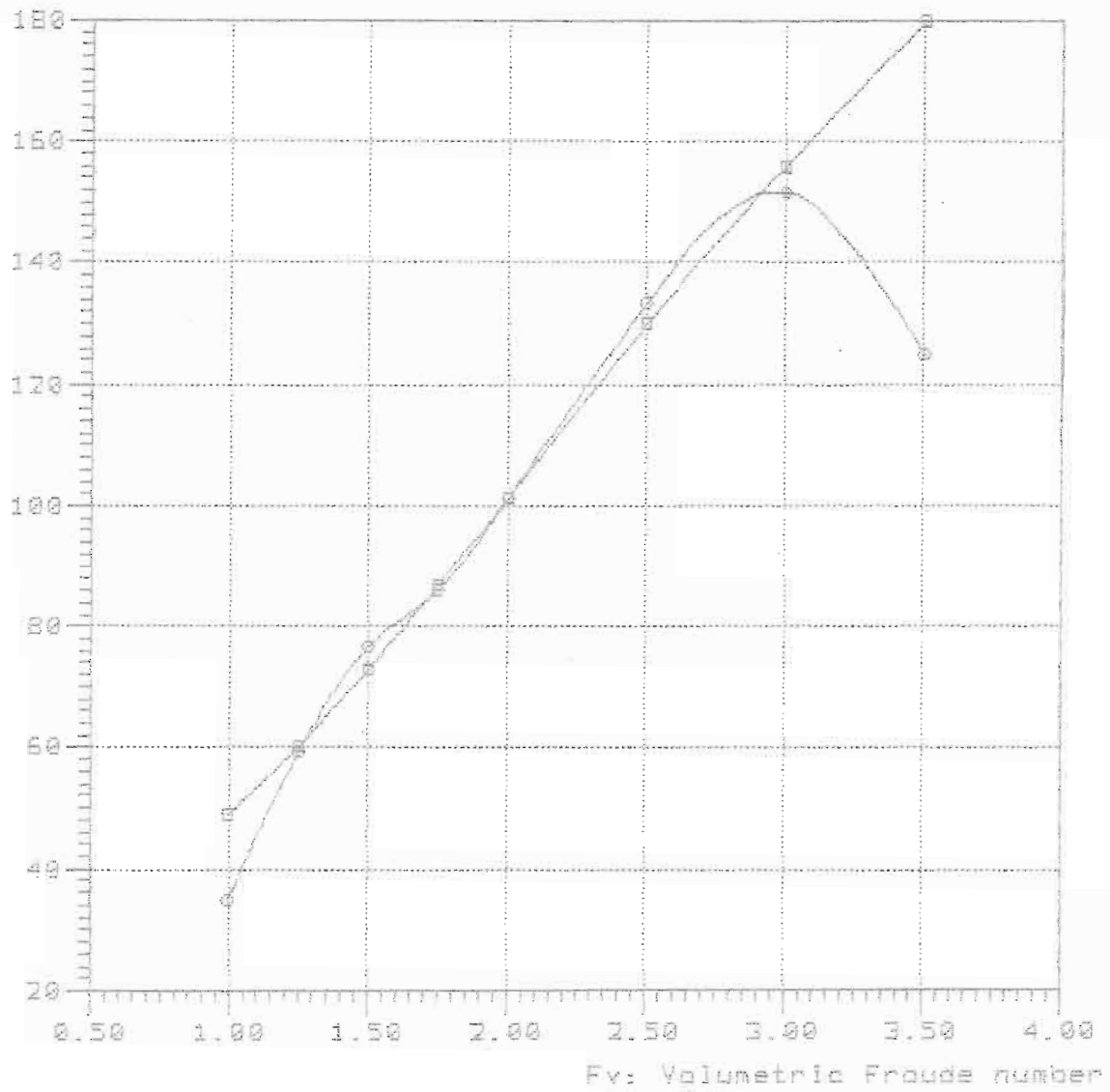
#### Curve legend

—■—

—○— THE- 65R Lpx/Bpx=6.68 Ap/Vol=7.899 Lpx/Ap=9.104 Log/Lpx=0.520

Model	=	4966
Ref	=	NSRDC
Friction	=	<del>A</del> TTC Ca=4e-4
Lpx	=	22.500 ft
Lwl	=	22.365 ft
Bpx	=	3.409 ft
Ap	=	55.607 sqft
Vcg	=	1.047 ft
Disp.	=	1000.00 Lb
Deadrise	=	22.50 degree
Twist Angle	=	2.00 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	6.600
Lpx/Ap	=	9.104
Ap /Vol	=	8.896
Lpx/Vol	=	9.003
Cvload	=	0.394
Lbload	=	0.019
Disp-Lpx	=	39.193

Rbare: Bare-hull resistance (lbs)

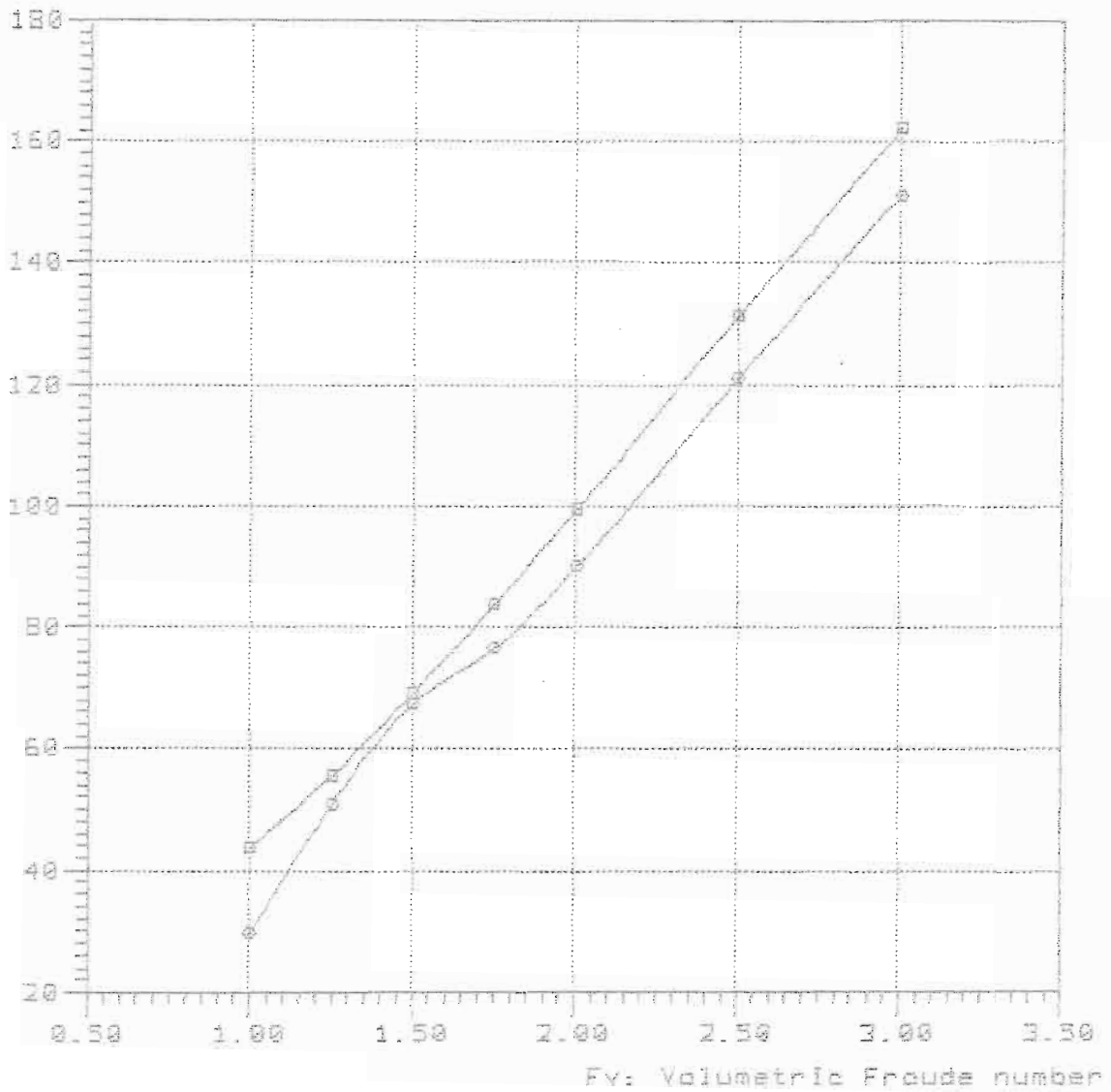


—□—

—○— TMB- 65A Lpx/Bpx=6.60 Ap/Vol=2.897 Ap=9.184 Lcg/Lpx=0.328



Rbare: Bare-hull resistance (lbs)

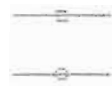
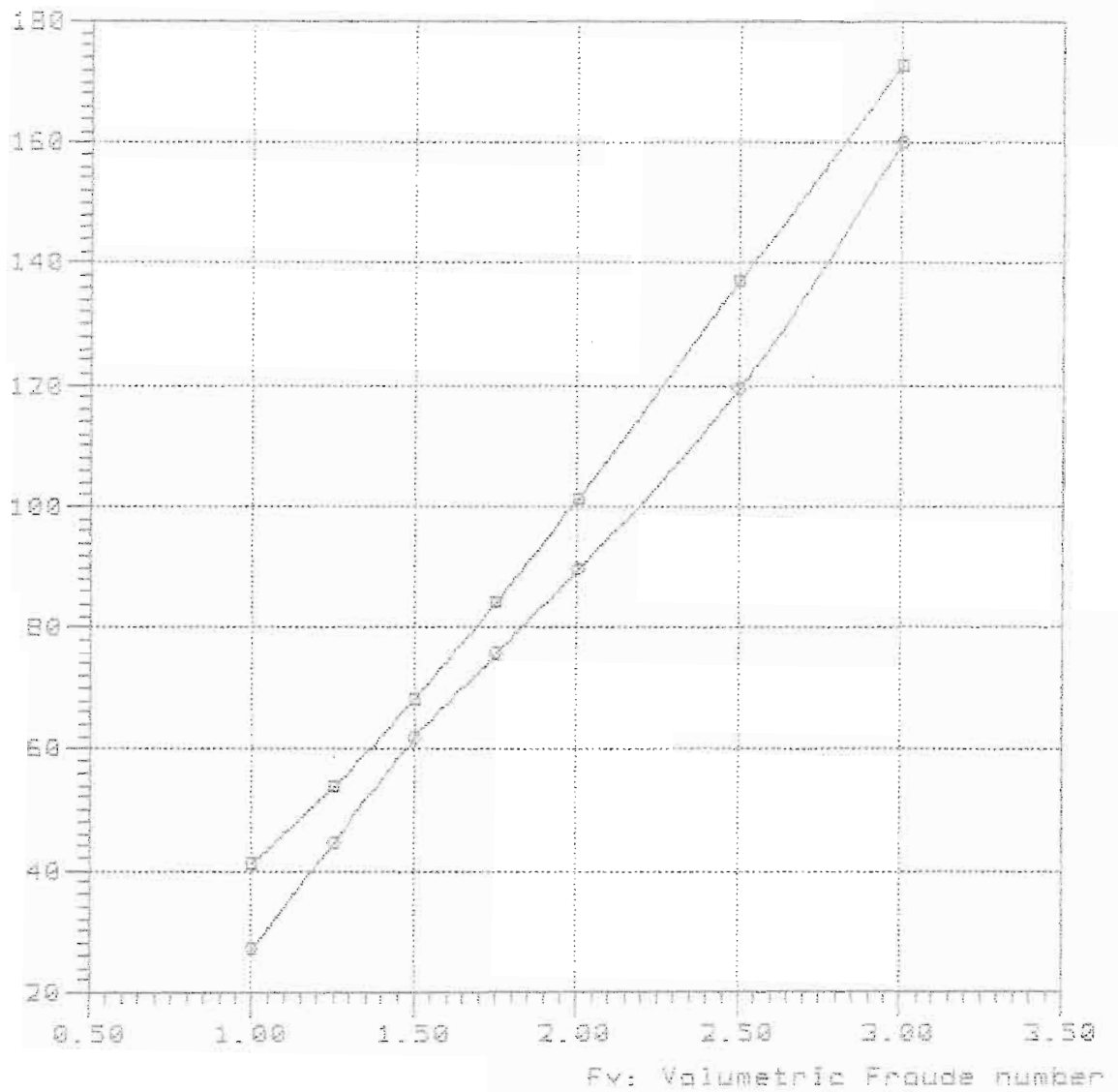


—■—

—○—

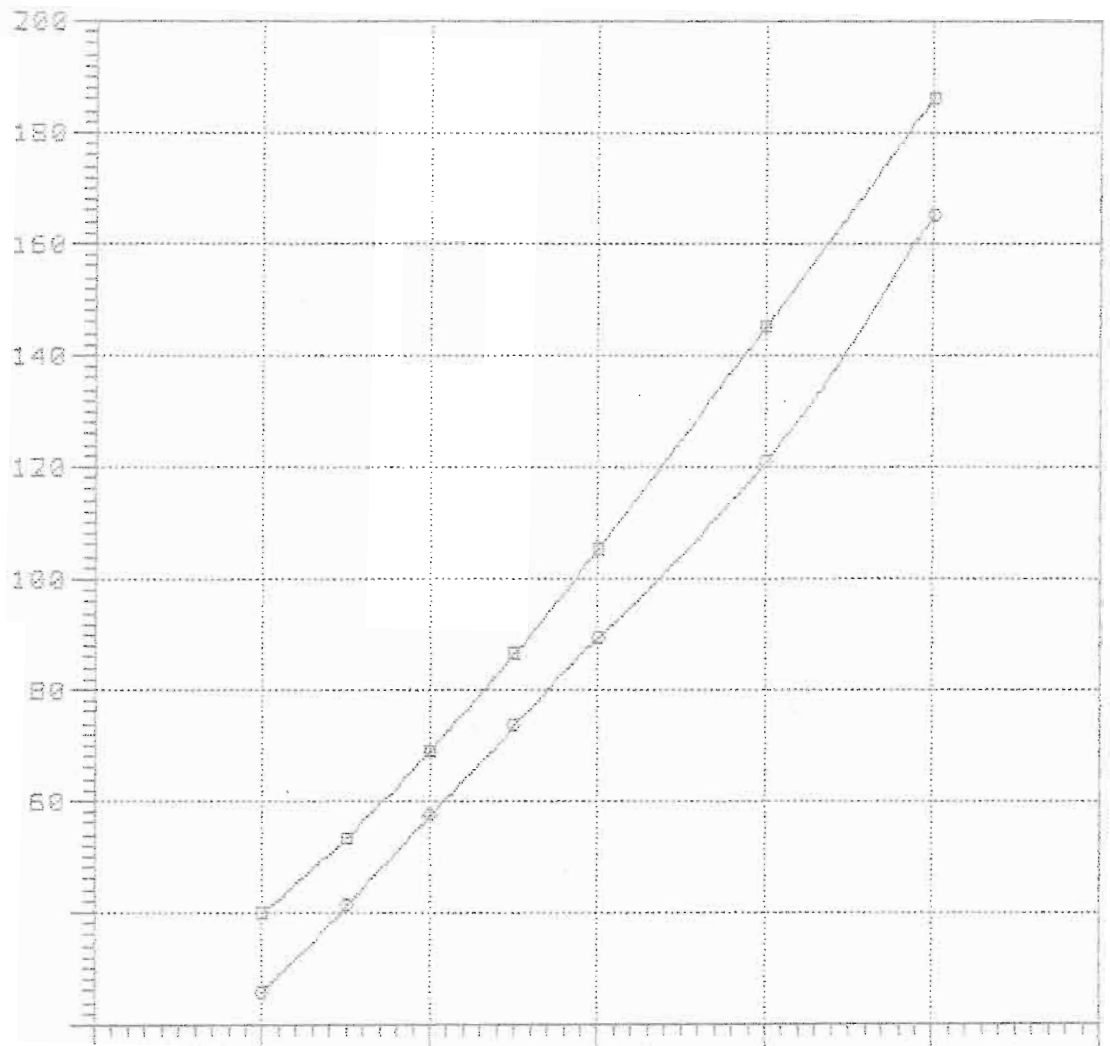
TMS-65A Lpx/Bpx=6.60 Ap/Vol=8.897 Ap=9.104 Lcg/Lpx=0.360

Rbars: Bare-hull resistance (lbs)



TMB-65A Lpx/Bpx=6.60 Ap/Vol=8.897 Ap=9.104 Lcg/Lpx=0.408

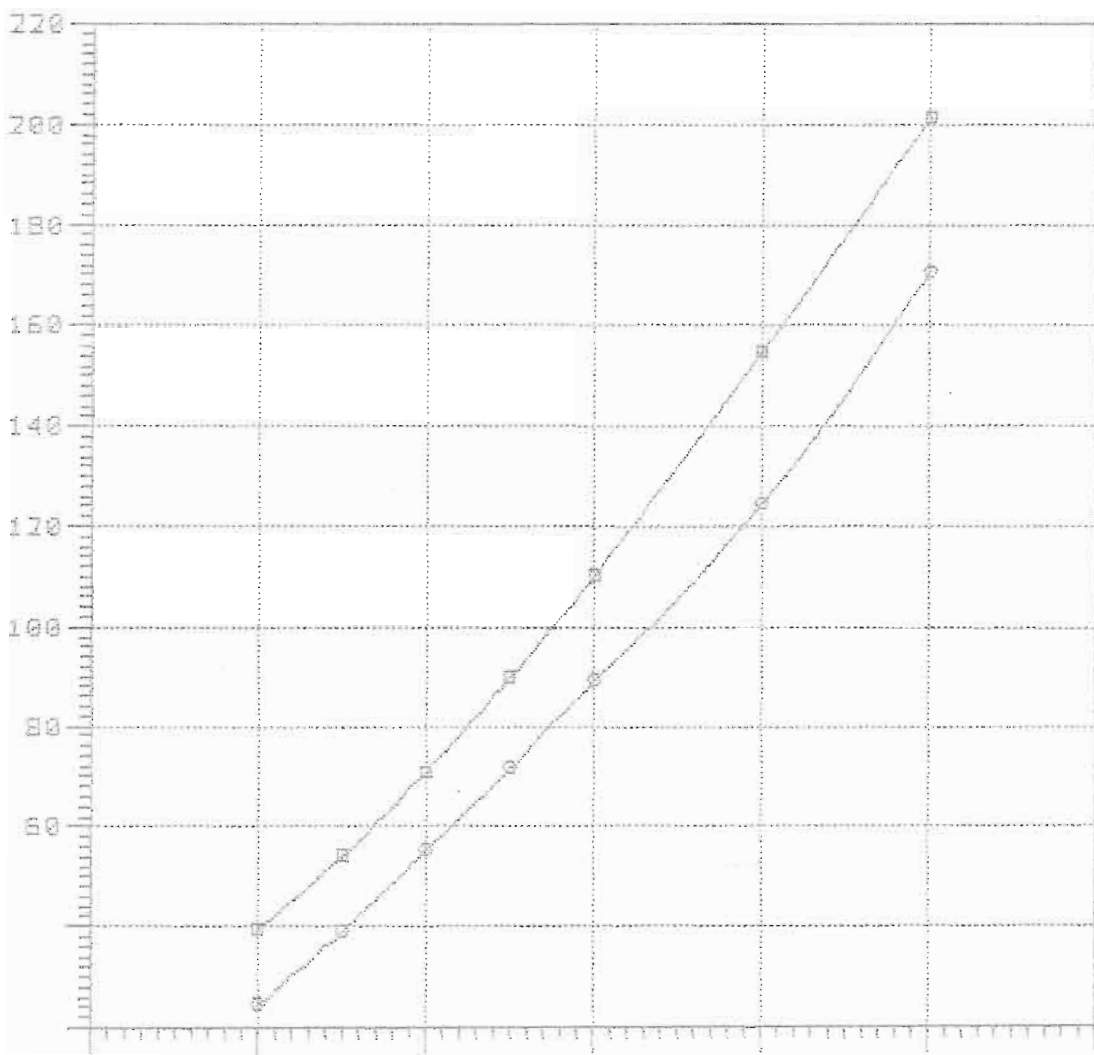
Rbare: Bare-hull resistance (lbs)



—■—

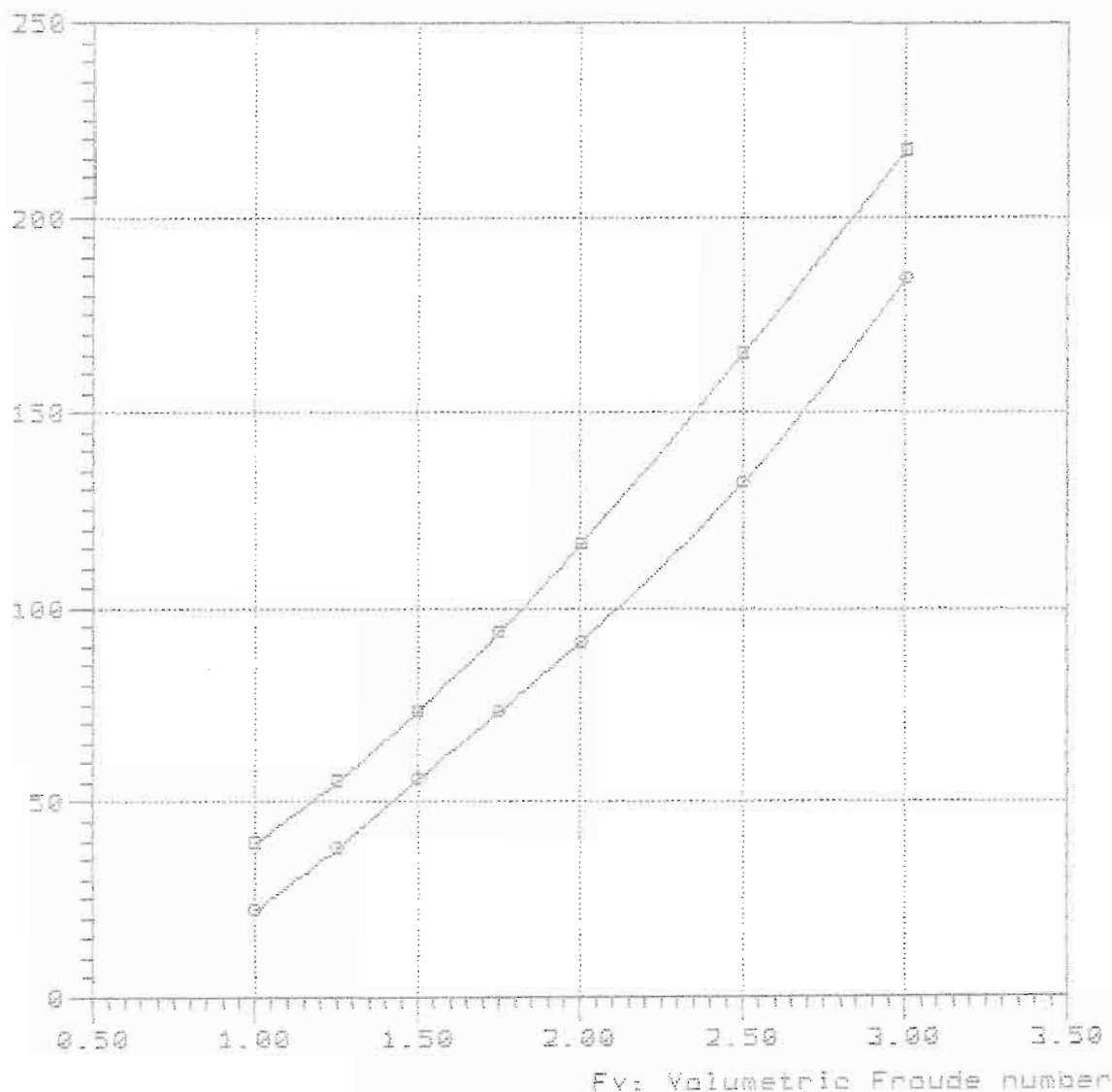
—○—

Rbare: Bare-hull resistance (lbs)



- 
-

Rbare: Bare-hull resistance (lba)



—■—

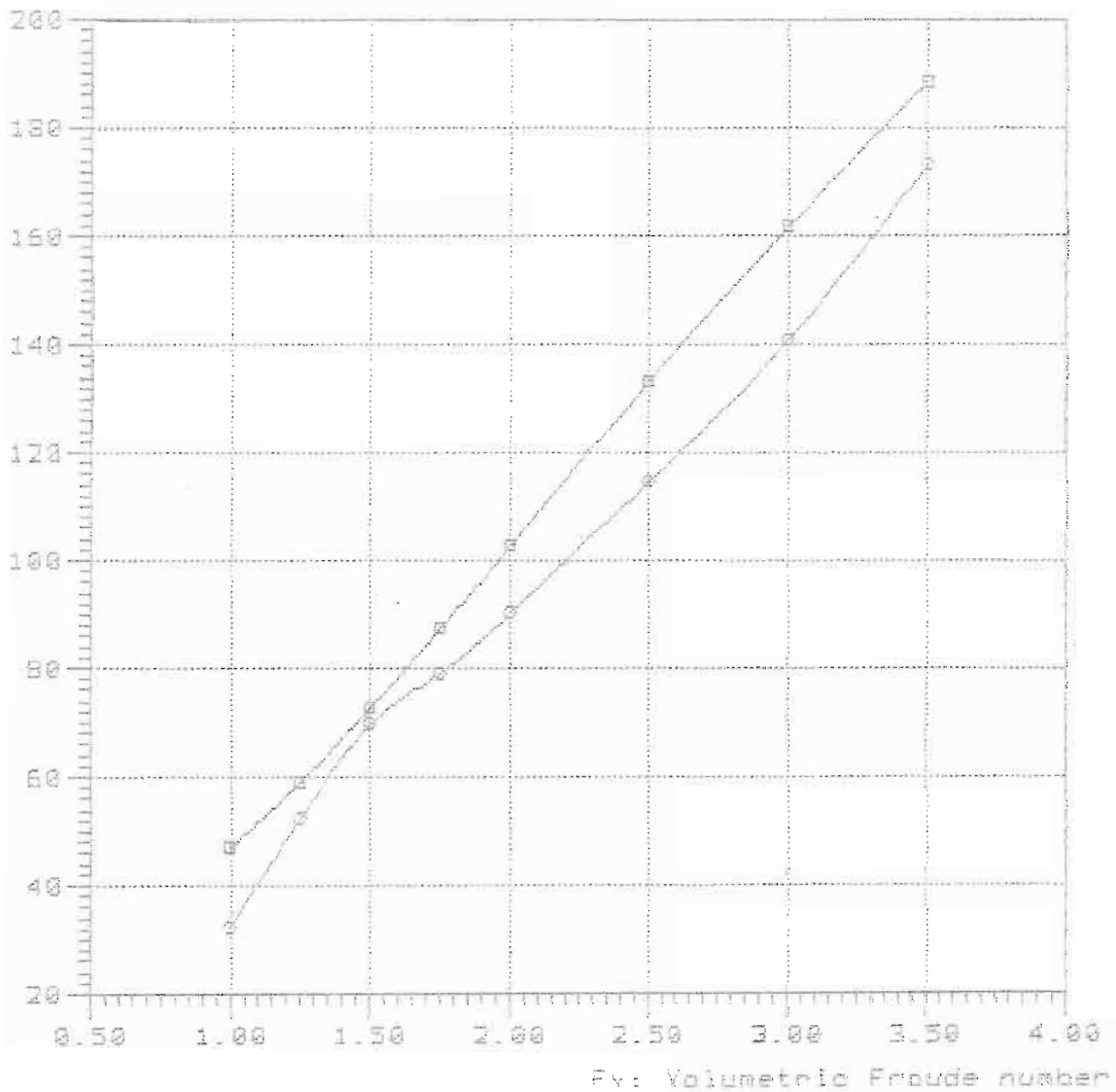
—○— TME-65A Lpx/Bpx=6.60 Ap/Vol=8.897 Lpx/Rp=9.104 Leg/Lpx=0.520

Model	=	4966
Ref	=	NSRDC
Friction	=	<del>A</del> TTC Ca=4e-4
Lpx	=	23.700 ft
Lwl	=	23.557 ft
Bpx	=	3.591 ft
Ap	=	61.697 sqft
Vcg	=	1.103 ft
Disp.	=	1000.00 Lb
Deadrise	=	22.50 degree
Twist Angle	=	2.00 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	6.600
Lpx/Ap	=	9.104
Ap /Vol	=	9.870
Lpx/Vol	=	9.483
Cvload	=	0.337
Lbload	=	0.016
Disp-Lpx	=	33.536

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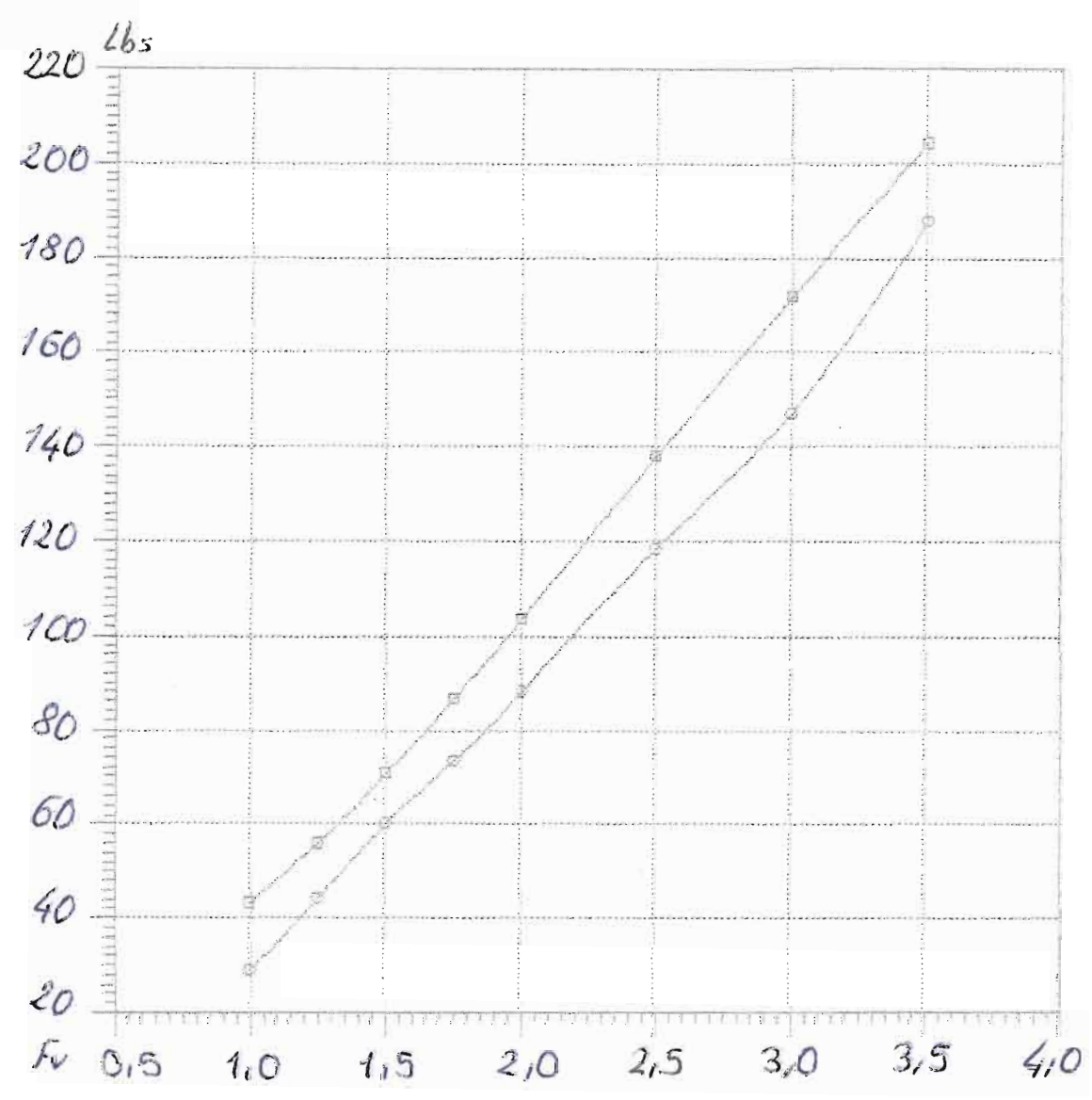
File: 10-95-32.mdi  
Date: 2 Mar 00  
Time: 8:35

Rbare: Bare-hull resistance (lbs)



—■—  
—○— TMB-65A Lpx/Bpx=6.60 Ap/Vol=9.871 Lpx/Ap=9.104 Log/Lpx=0.320

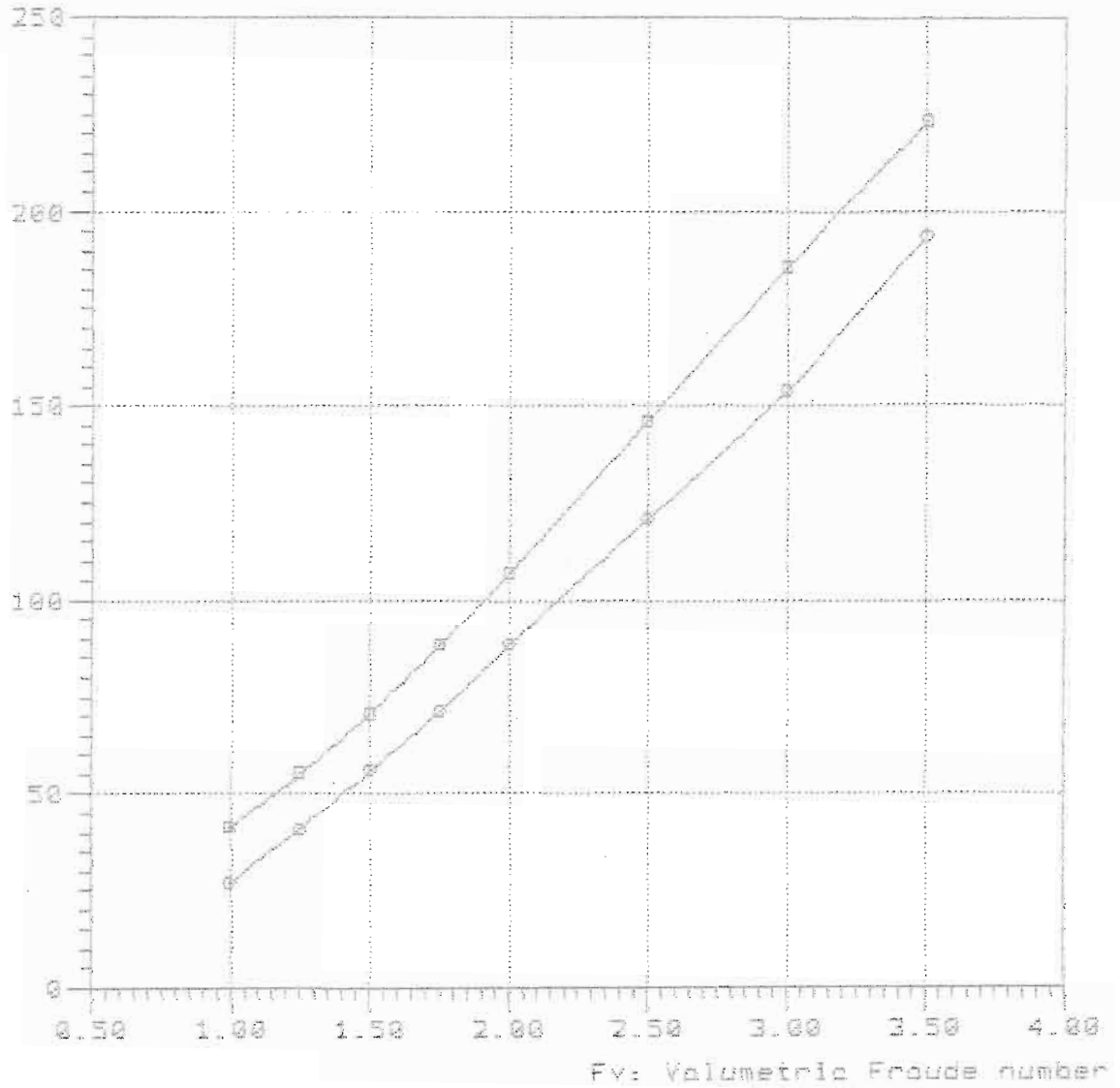
10-95-36  
md e



—■—  
—○—



Rbare: Bare-hull resistance (lbs)

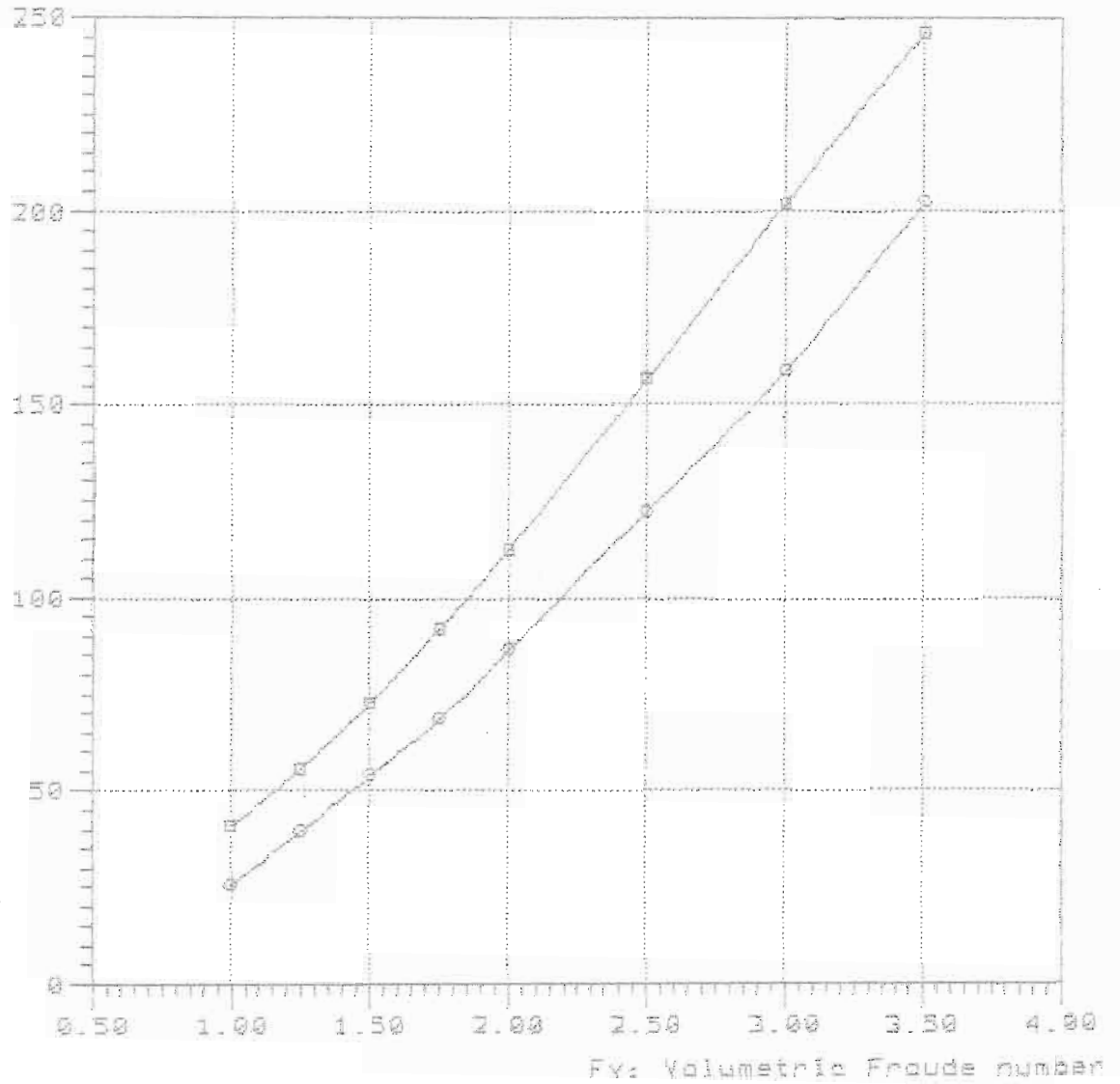


Curve Legend

—■—

—○— 7ME-65R Lpx/Box=6.60 Ap/Vol=9.57i Lpx/Ap=9.104 Lcg/Lpx=0.400

Rbare: Bare-hull resistance (lbs)

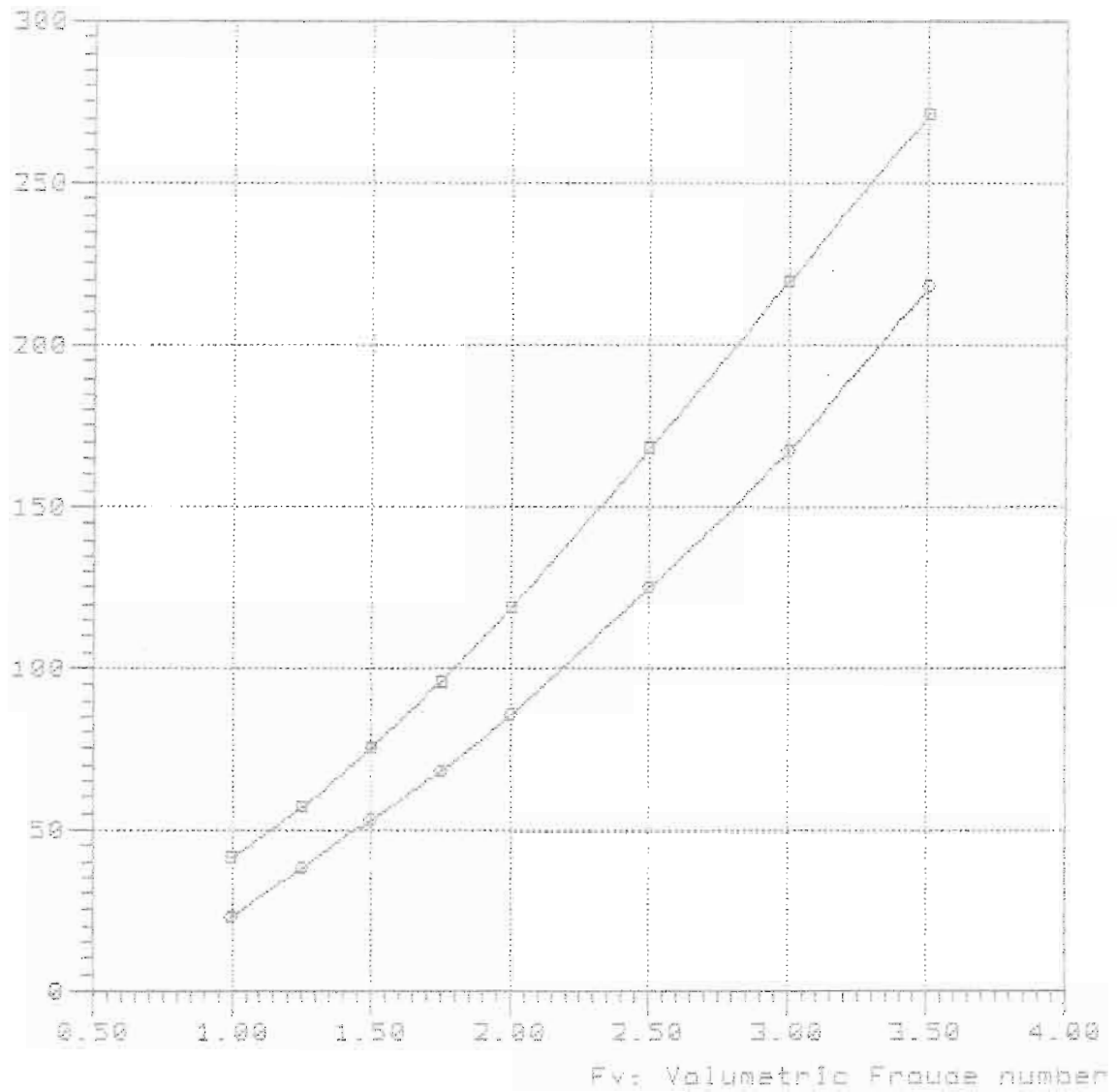


Curve legend

—□—

—○— TMB-65R Lpx/Bpx=6.60 Ap/Vol=9.871 Lpx/Ap=0.104 Lcg/Lpx=0.440

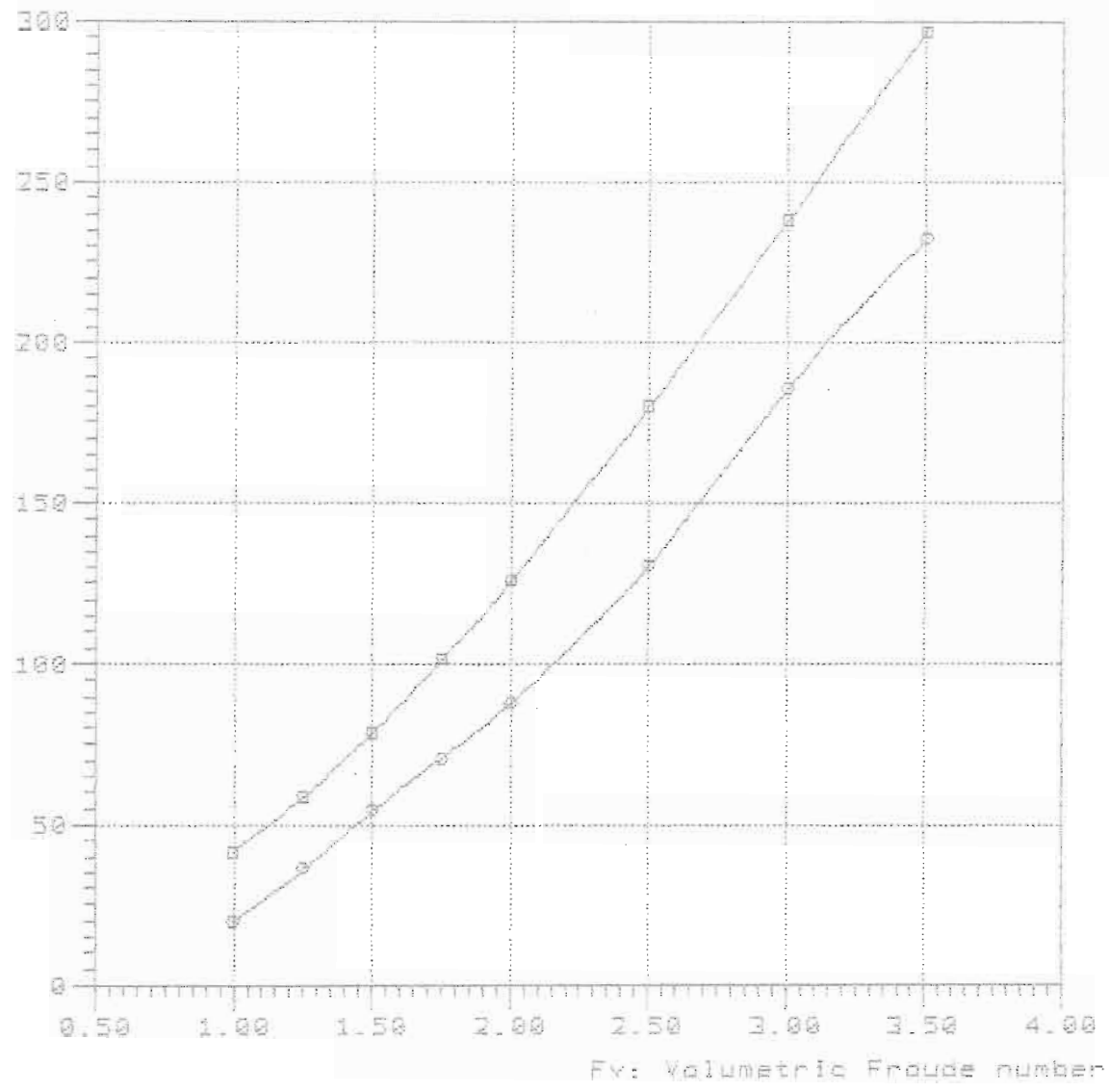
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-63A Lpx/Bpx=6.66 Rb/Val=9.871 Lpx/Rp=9.104 Log/Lpx=0.450

Rbare: Bare-hull resistance (lbs)



□  
○

TMB-65A Lpx/Bpx=6.60 Ap/Vol=9.871 Lpx/Ap=9.104 Log/Lox=0.520

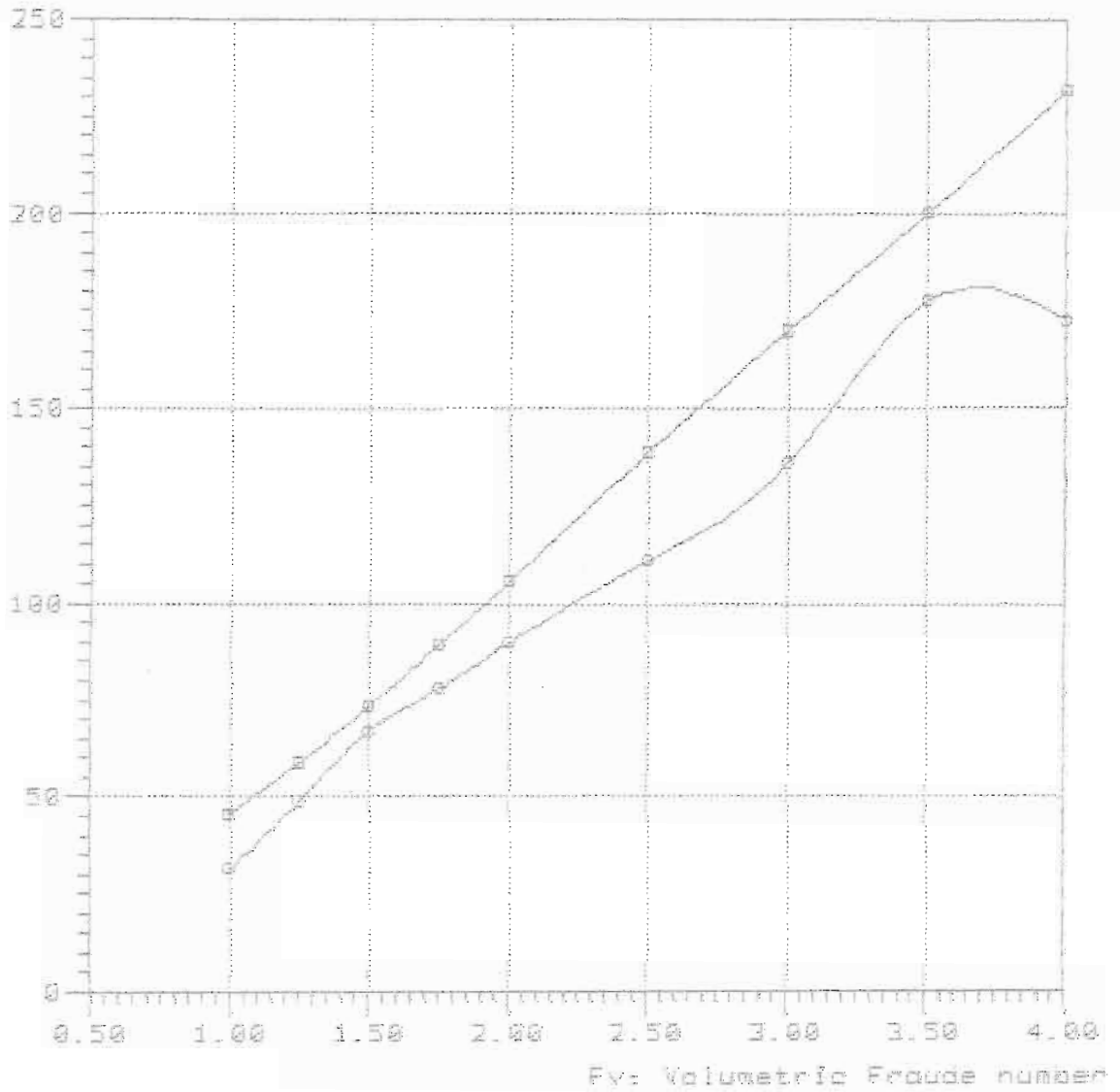
03/02/2000 10:57:36

Model = 4966  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4  
Lpx = 25.000 ft  
Lwl = 24.989 ft

Bpx = 3.788 ft  
Ap = 68.651 sqft  
Vcg = 1.170 ft  
Disp. = 1000.00 Lb  
Deadrise = 22.50 degree  
Twist Angle = 2.00 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 6.600  
Lpx/Ap = 9.104  
Ap /Vol = 10.983  
Lpx/Vol = 10.003  
Cvload = 0.287  
Lbload = 0.014  
Disp-Lpx = 28.571

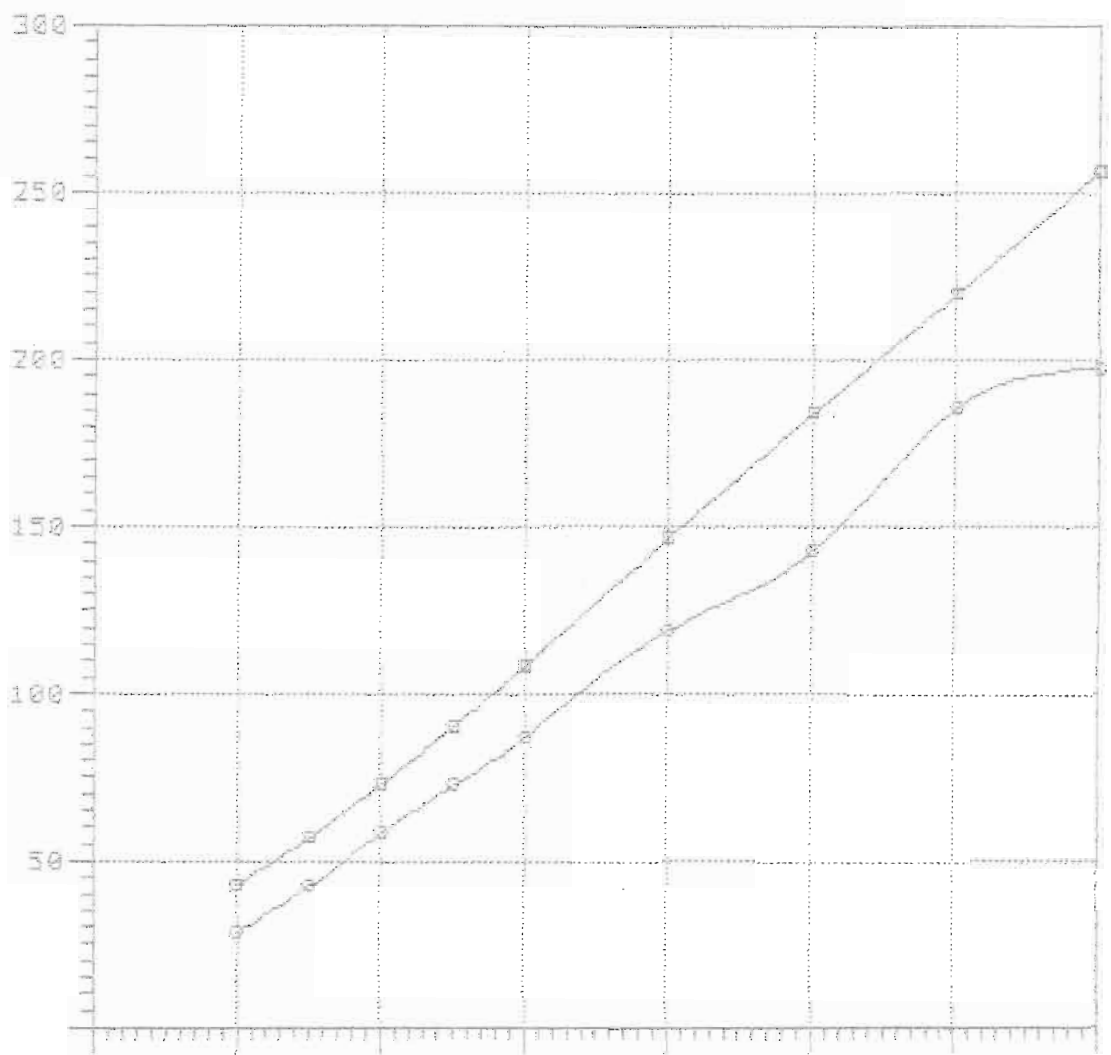
Rbare: Bare-hull resistance (lbs)



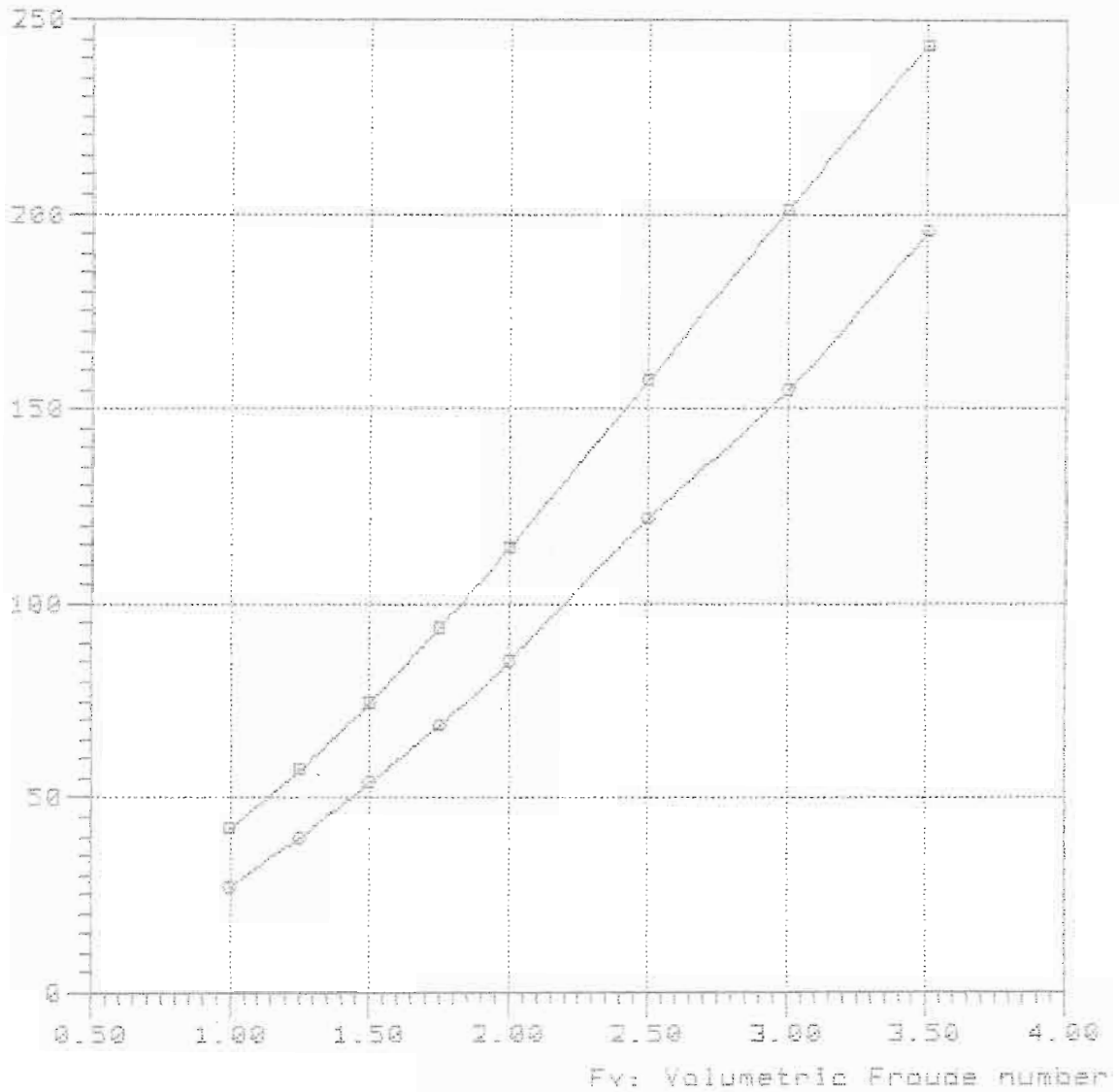
—■—

—○— TWB-65A Lpx/Bpx=6.60 Ap/Vol=10.984 Lpx/Sp=9.184 Log/Lox=8.328

Rbare: Bare-hull resistance (lbs)



Rbare: Bare-hull resistance (lbs)



—■—  
—○— TMB-65A Lpx/Bpx=6.60 Rp/Val=10.984 Lpx/Rp=9.104 Log/Lpx=0.400

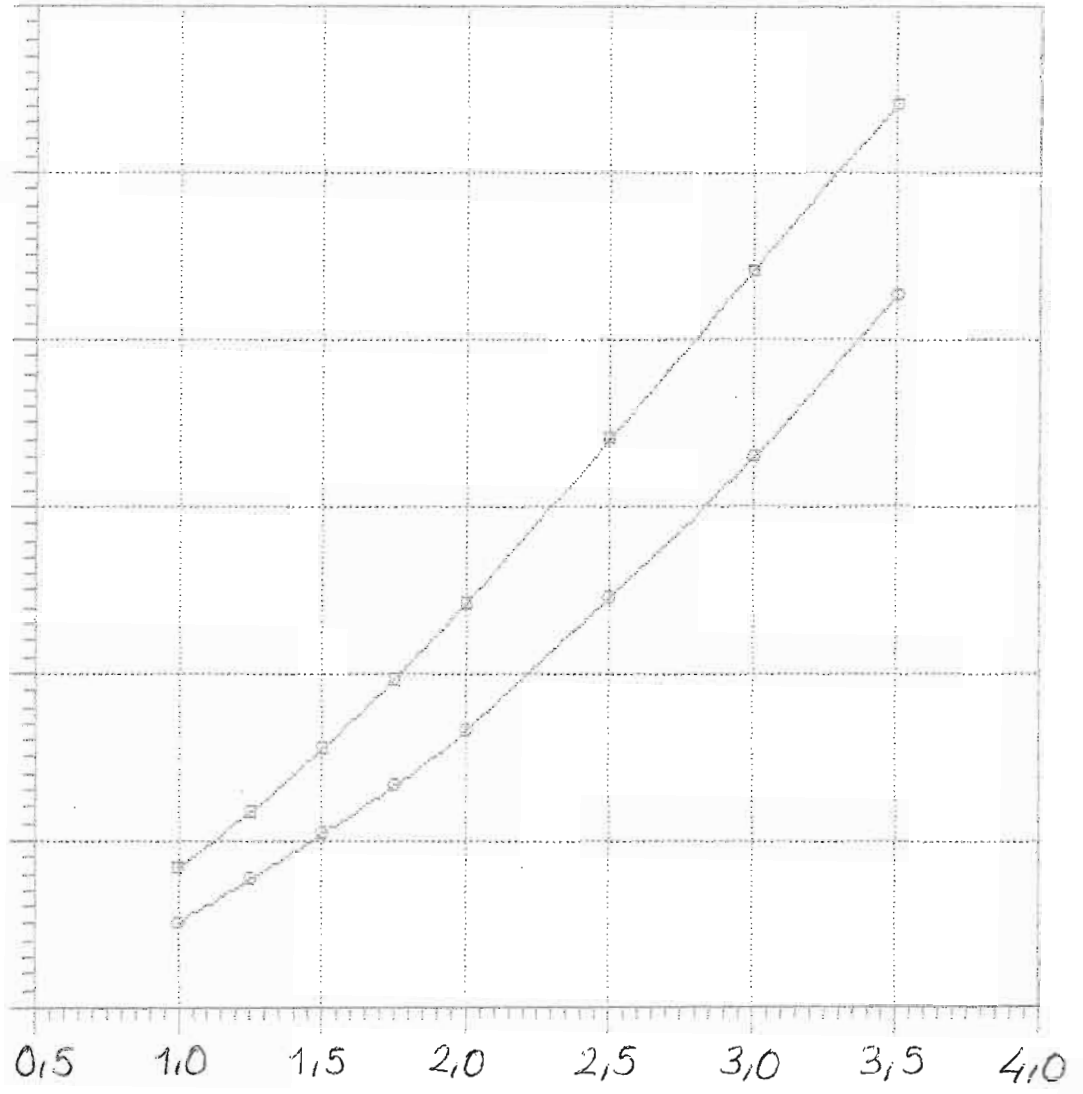


11-10-44  
mdl

220 lbs

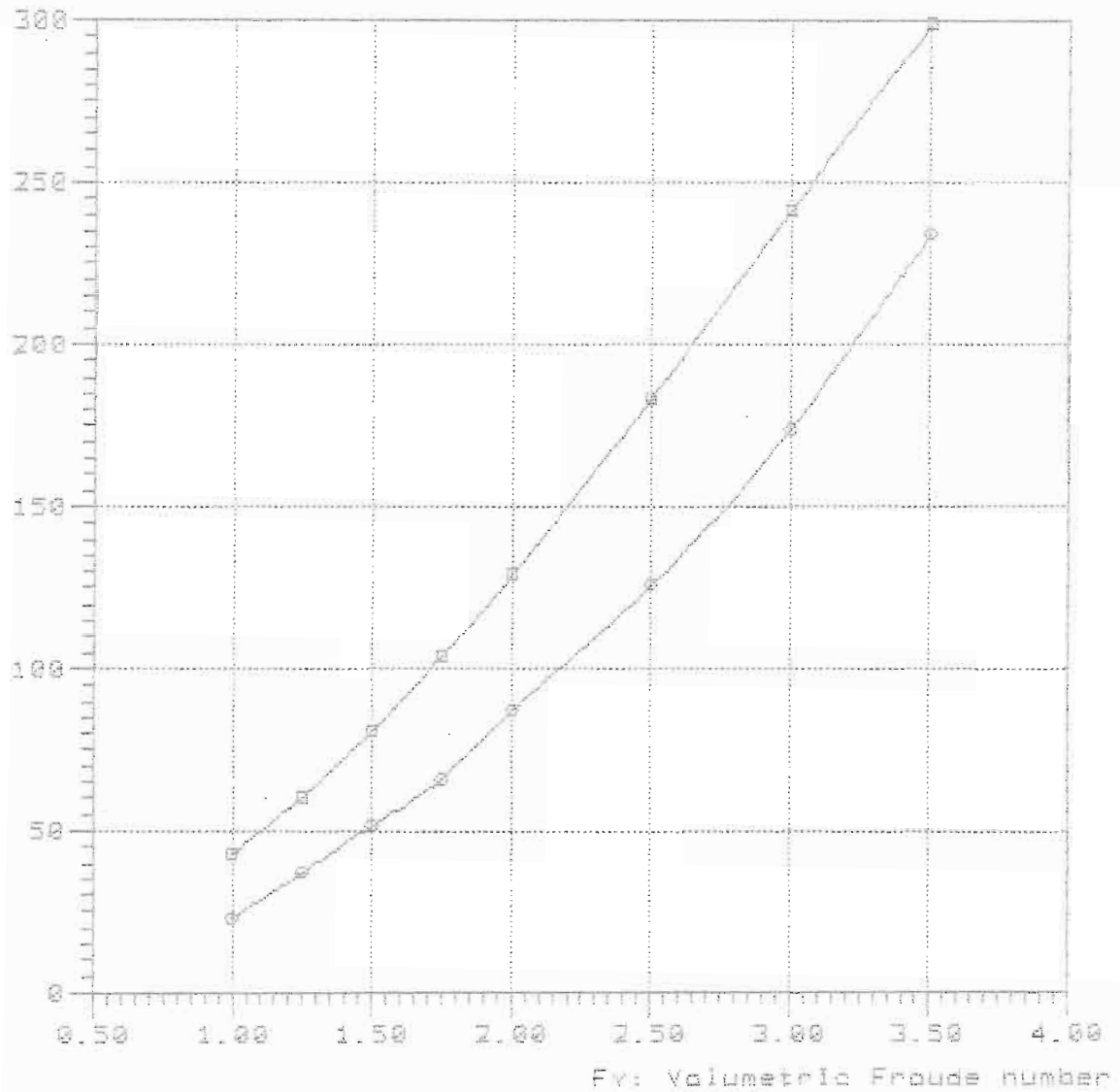
20

Fv



—□—  
—○—

Rbare: Bare-hull resistance (lbs)

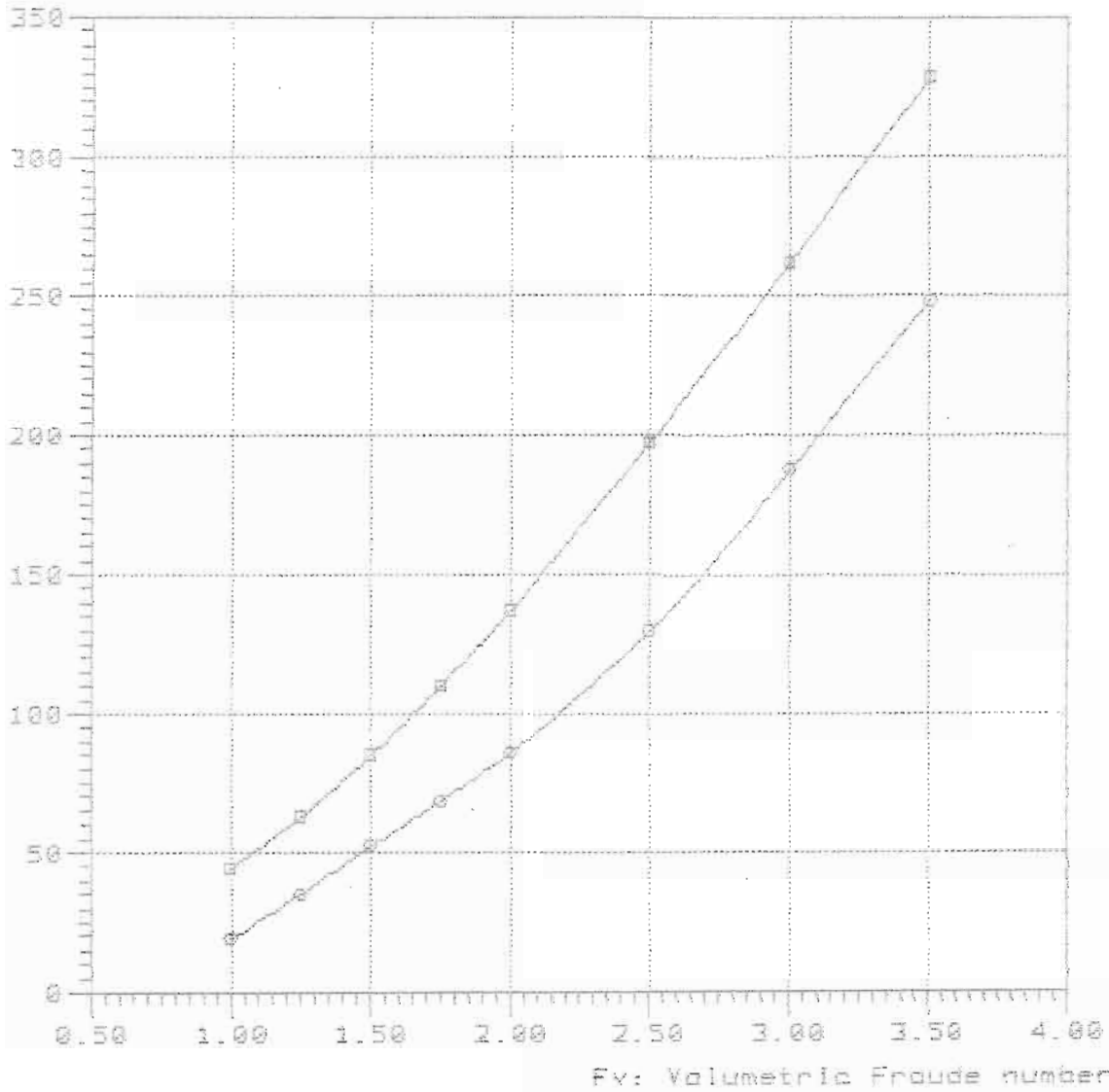


Curve legend



TMB-65A Lpx/Bax=6.60 Ap/Vol=10.954 Lpx/Ap=9.104 Lcg/Lpx=0.486

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—○— TMB-65A Lpx/Bpx=6.60 Ap/Va=10.984 Lpx/Ap=9.104 Log/Lpx=0.520

5167

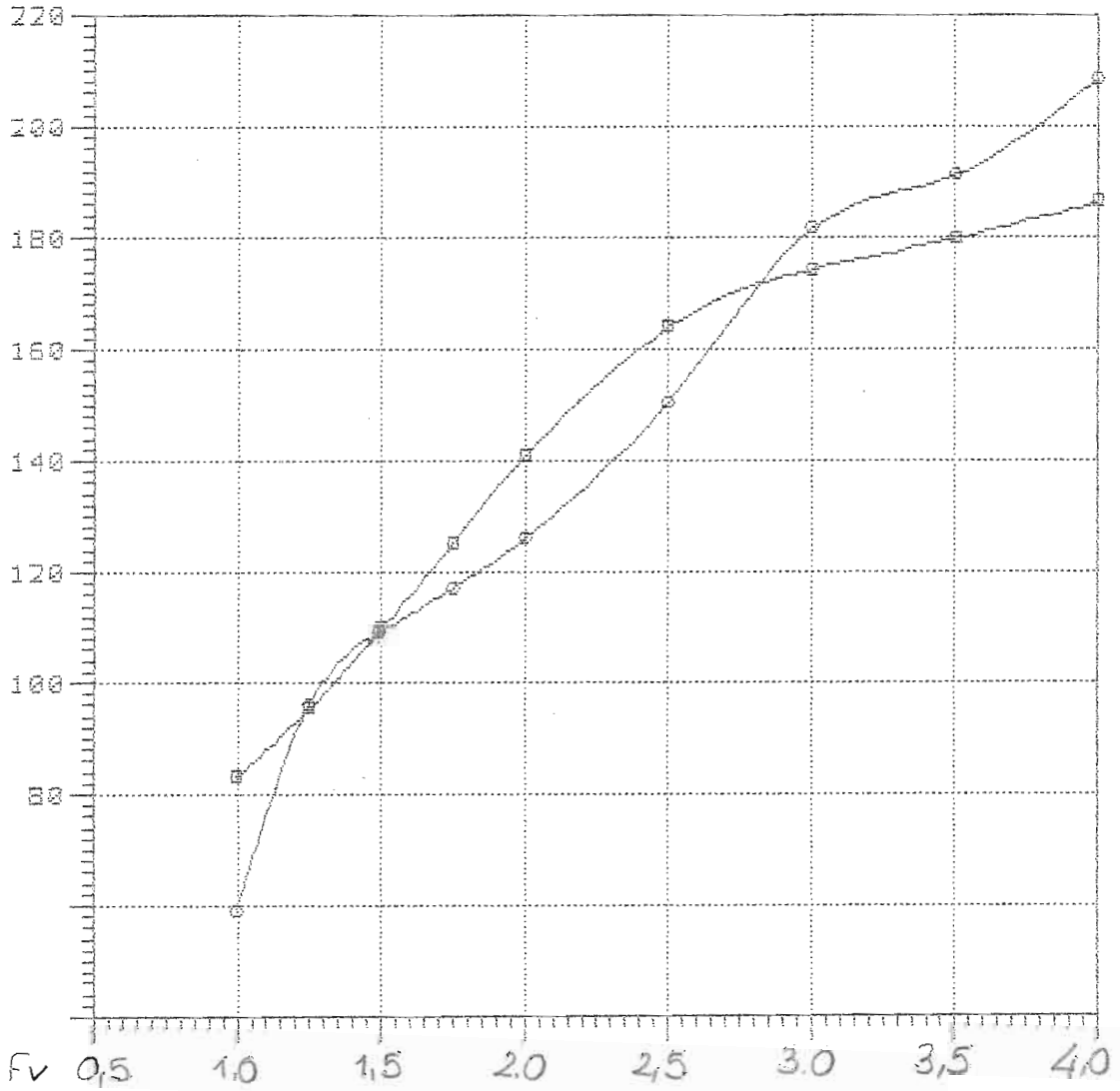
Model = 5167  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 17.500 ft  
Lwl = 17.289 ft  
Bpx = 2.636 ft  
Ap = 34.009 sqft  
Vcg = 0.810 ft  
Disp = 1000.00 Lb  
Deadrise = 28.70 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

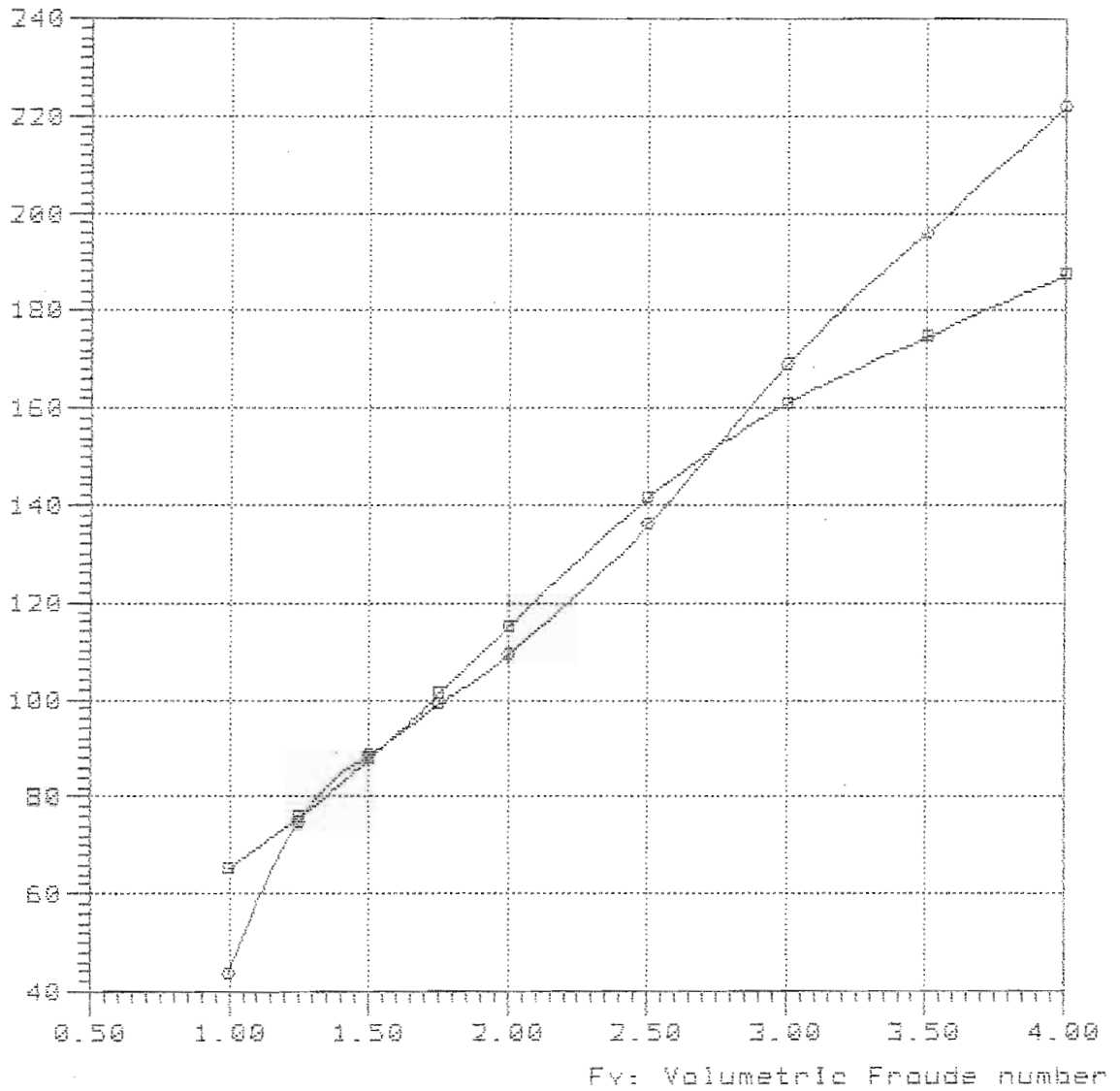
Lpx/Bpx = 6.639  
Lpx/Ap = 9.005  
Ap /Vol = 5.441  
Lpx/Vol = 7.021  
Cvload = 0.853  
Lbload = 0.041

Bu ölçüler dizayn ve bununla ilgili Resimlerin telif hakları ÇEMBERCI DENİZCİLİĞE Aittir. Bu döküman veya bunun bir kısmı üçüncü şahıslara verilemez. Kopya veya kopya edilemez ve her ne amaçla olursa olsun maksadı dışında izinsiz kullanılamaz.

Rbare: Bare-hull resistance (lba)



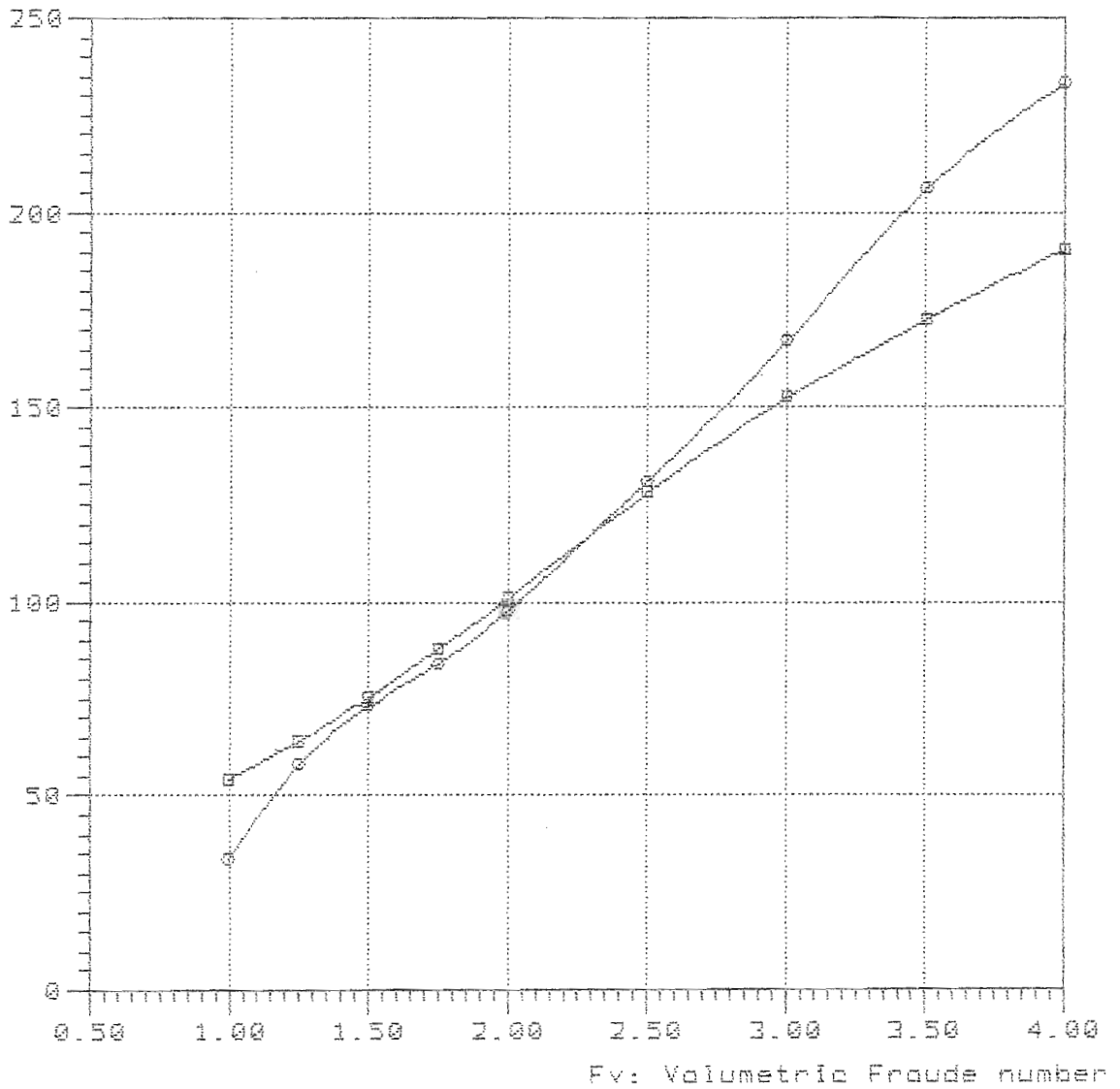
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65E Lpx/Bpx=6.640 Ap/Vol=5.441 Lpx/Ap=9.005 Lcg/Lpx=0.340

Rbare: Bare-hull resistance (lbs)

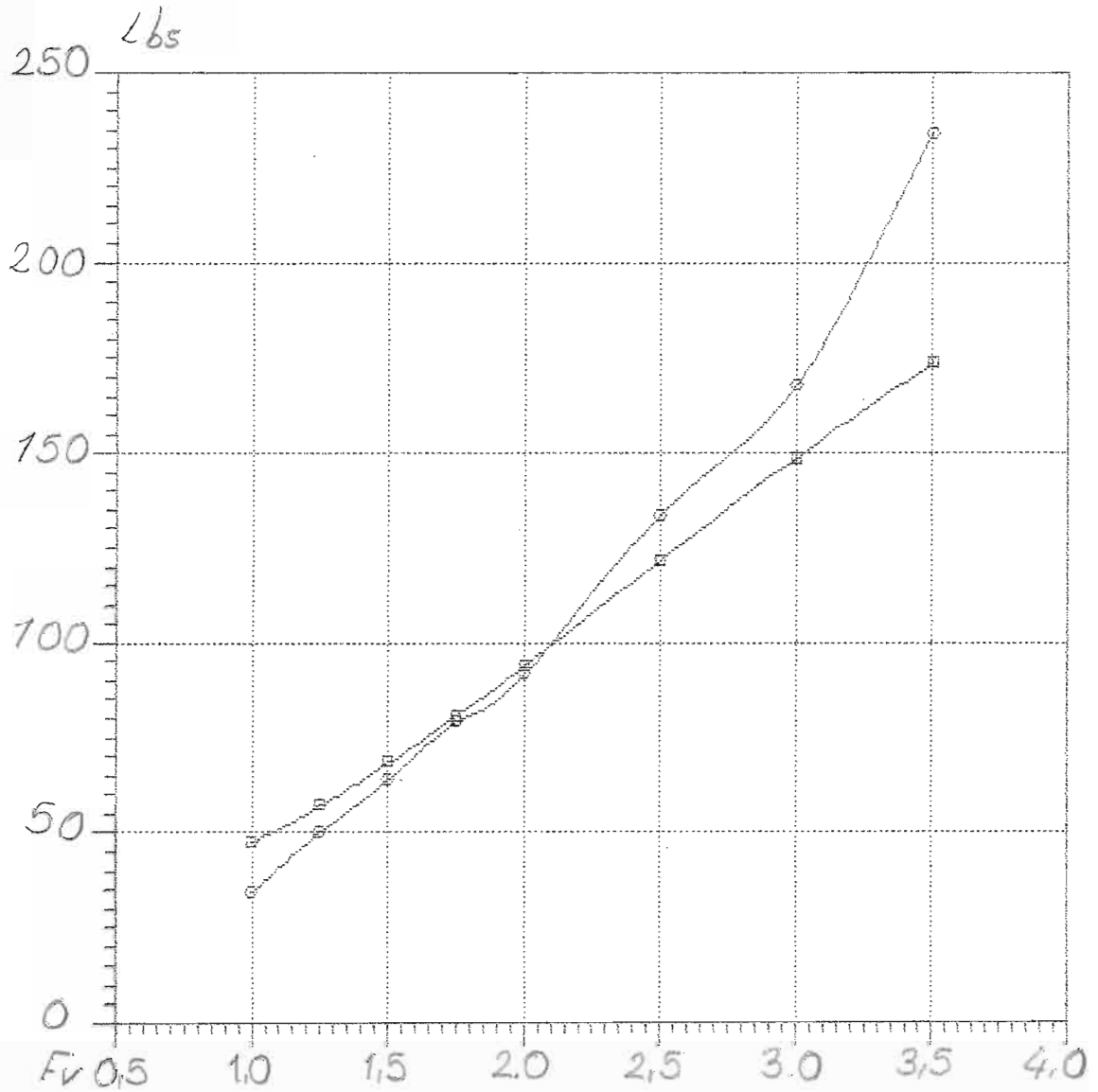


—■—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=5.441 Lpx/Ap=9.005 Log/Lpx=0.380



5-70420



—□—

—○—

Model = 5167  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 18.700 ft  
Lwl = 18.476 ft  
Bpx = 2.816 ft  
Ap = 38.833 sqft  
Vcg = 0.865 ft  
Disp = 1000.00 Lb  
Deadrise = 28.70 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 6.641  
Lpx/Ap = 9.005  
Ap /Vol = 6.213  
Lpx/Vol = 7.502  
Cvload = 0.700  
Lbload = 0.034

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### Bare-hull resistance

vs.

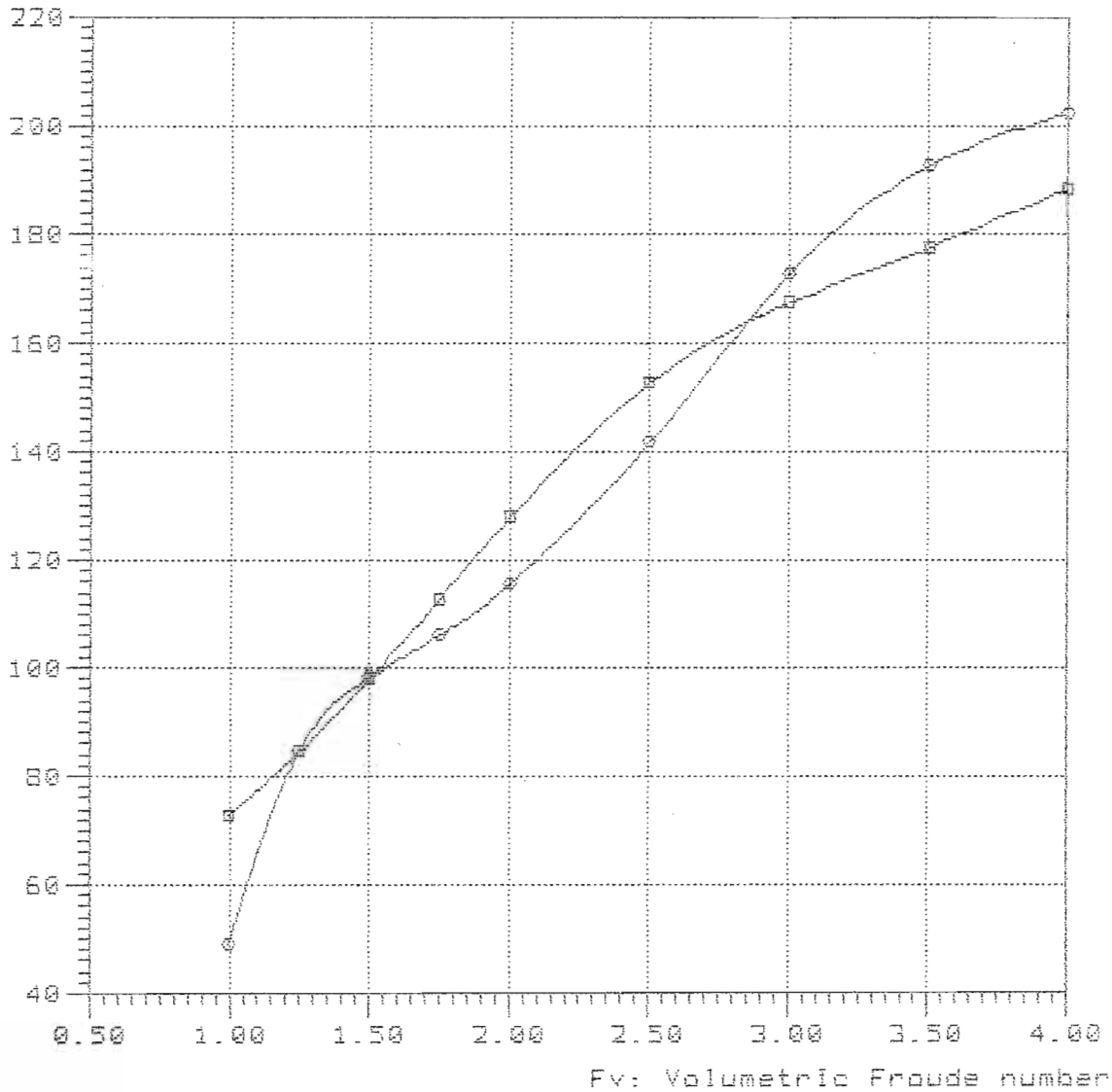
### Volumetric Froude number

File: 6-75-300.mdl

Date: 24 Feb 00

Time: 15:29

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=6.213 Lpx/Ap=9.005 Lcg/Lpx=0.300

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### Bare-hull resistance

vs.

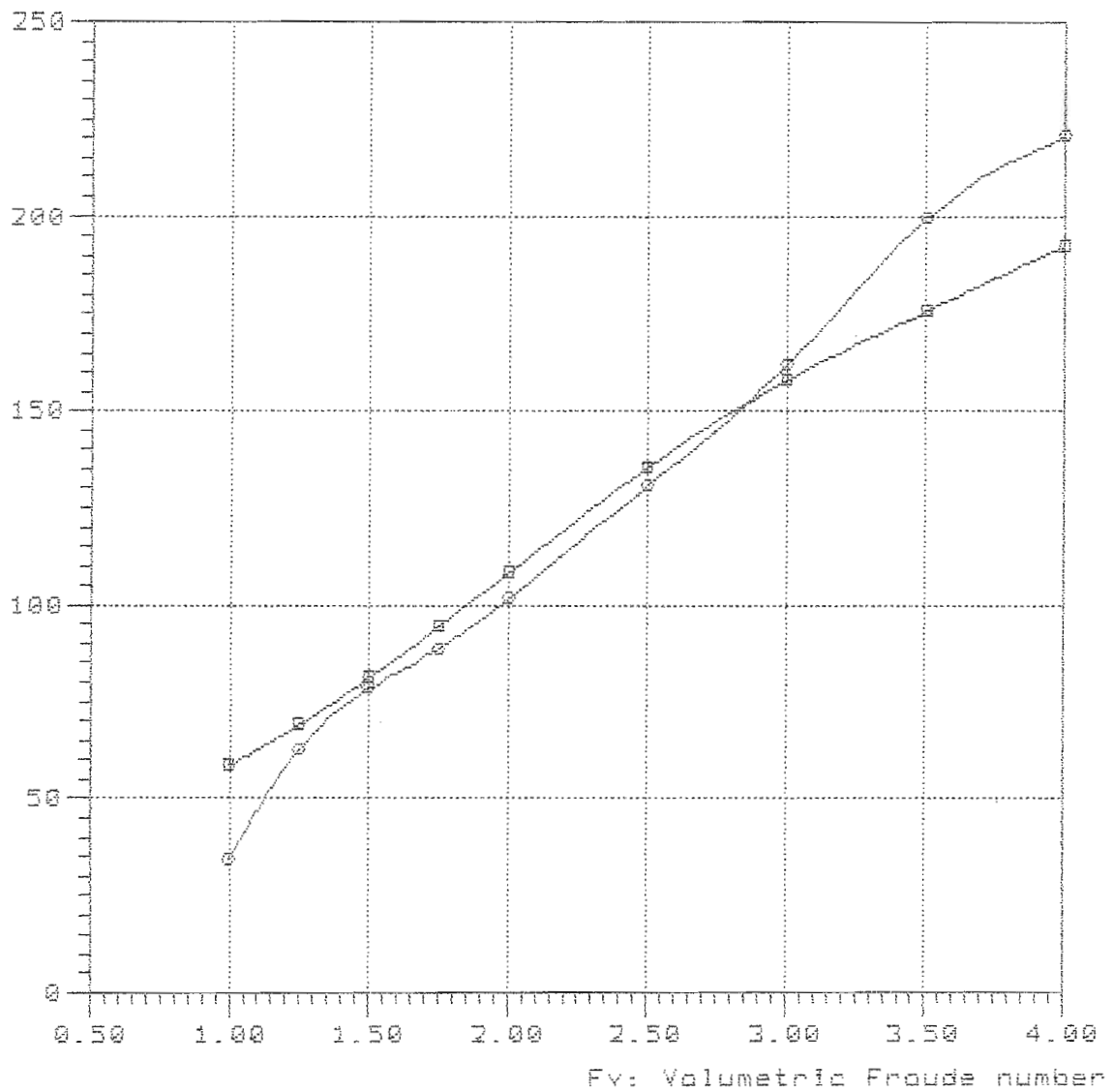
### Volumetric Froude number

File: 6-75-340.mdl

Date: 24 Feb 00

Time: 15:33

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=6.213 Lpx/Ap=9.005 Lcg/Lpx=0.340

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Bare-hull resistance

File: 6-75-380.mdl

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vs.

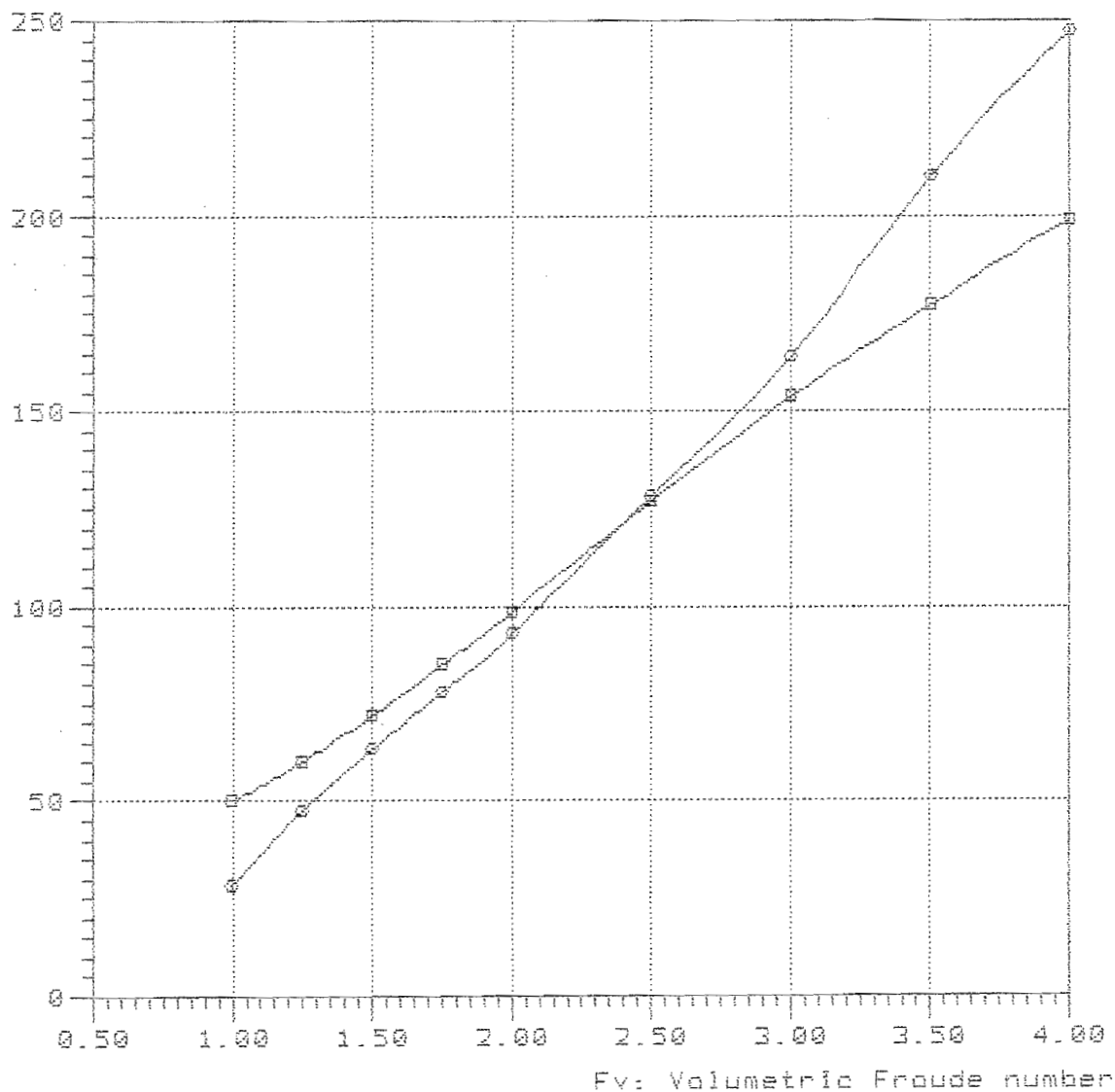
Date: 24 Feb 00

HydroComp, Inc.

Volumetric Froude number

Time: 15:36

Rbare: Bare-hull resistance (lbs)

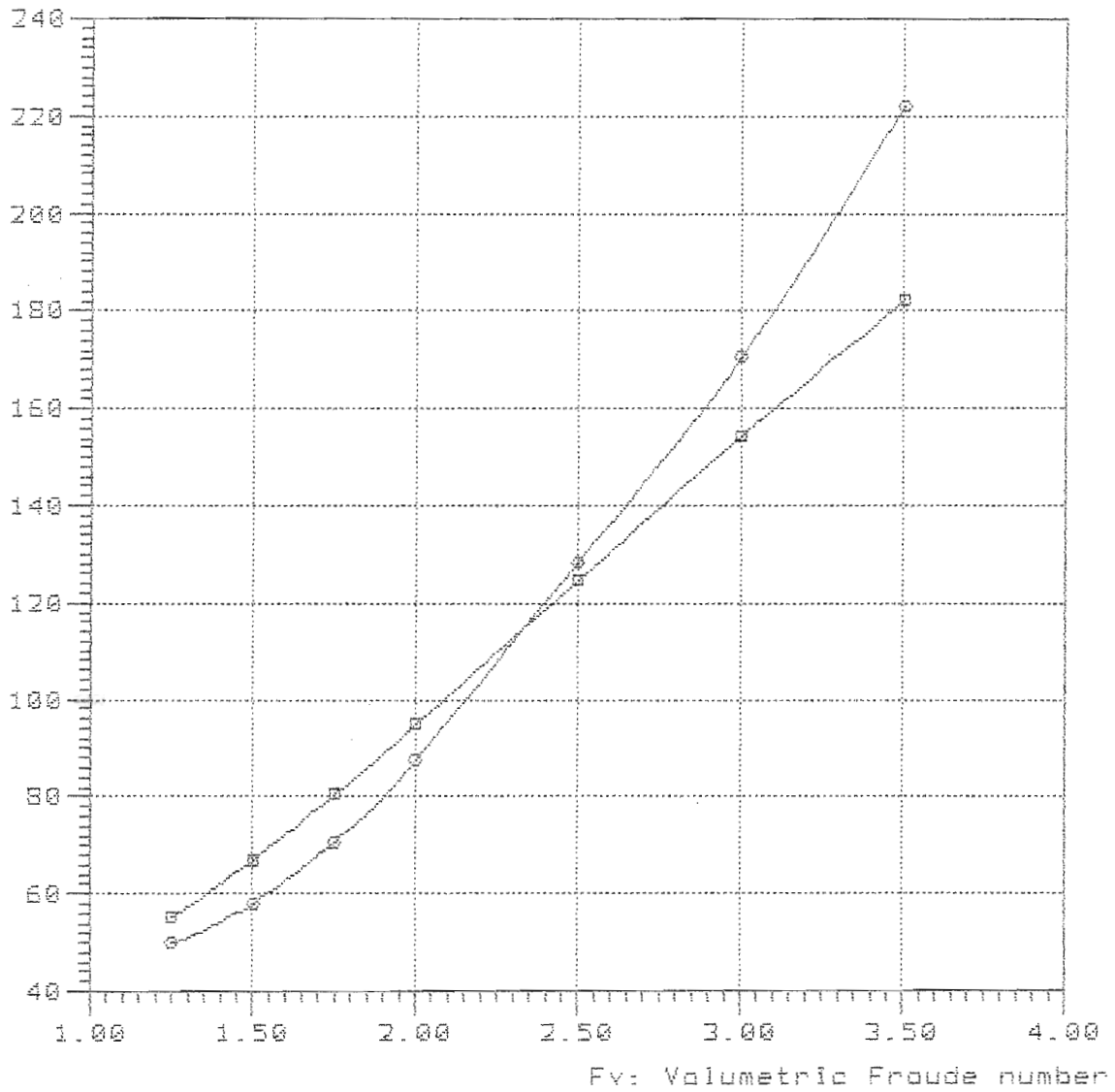


Curve legend

—■—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=6.213 Lpx/Ap=3.005 Log/Lpx=0.380

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65B Lpx/Bpx=6.640 Ap/Vol=6.213 Lpx/Ap=9.005 Lcg/Lpx=0.420

Model = 5167  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 20.000 ft  
Lwl = 19.761 ft  
Bpx = 3.012 ft  
Ap = 44.420 sqft  
Vcg = 0.925 ft  
Disp = 1000.00 Lb  
Deadrise = 28.70 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 6.640  
Lpx/Ap = 9.005  
Ap /Vol = 7.106  
Lpx/Vol = 8.024  
Cvload = 0.572  
Lbload = 0.028

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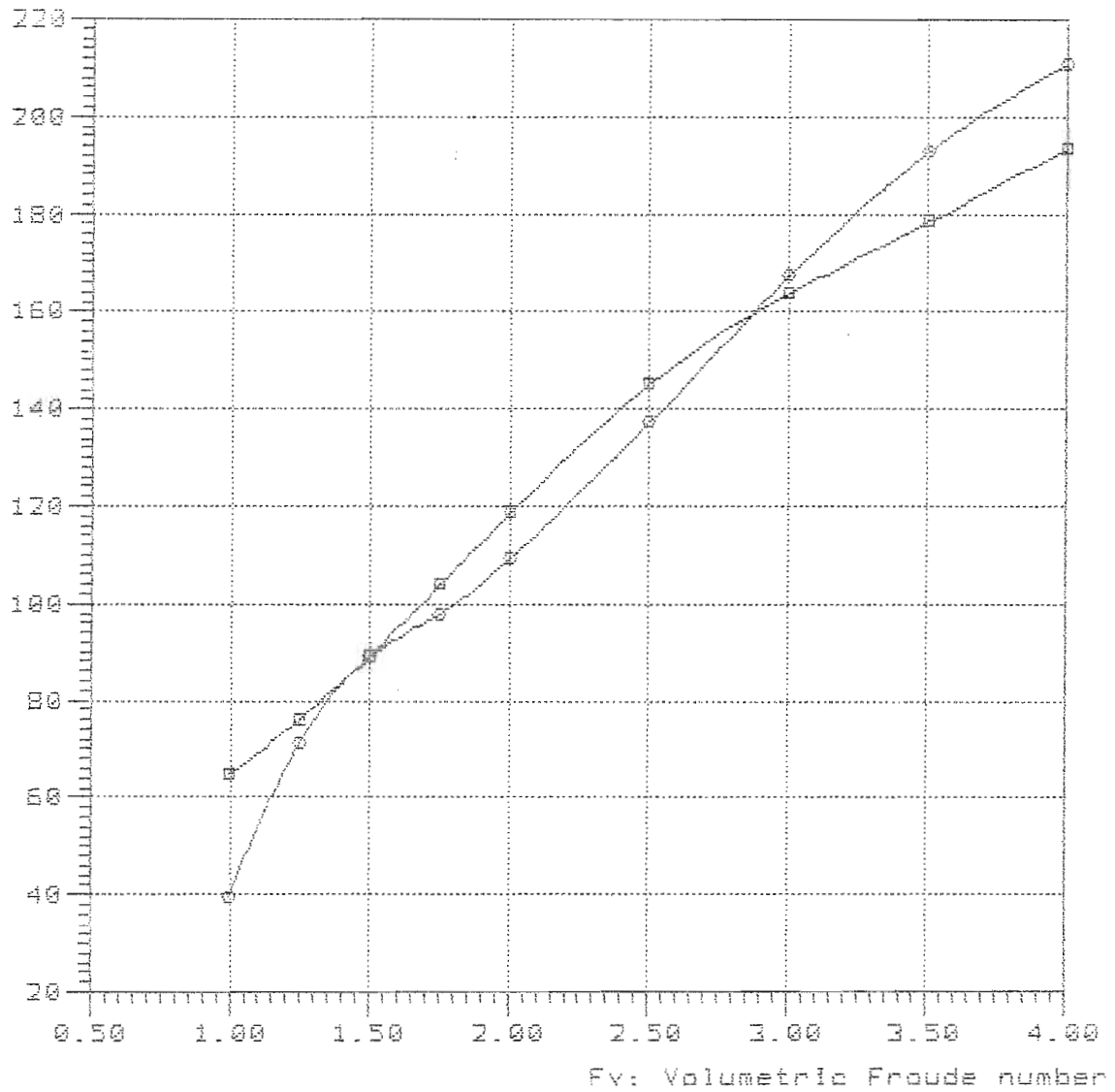
HydroComp, Inc.

File: 7-80-300.mdl

Date: 24 Feb 88

Time: 15:43

Rbare: Bare-hull resistance (lbs)

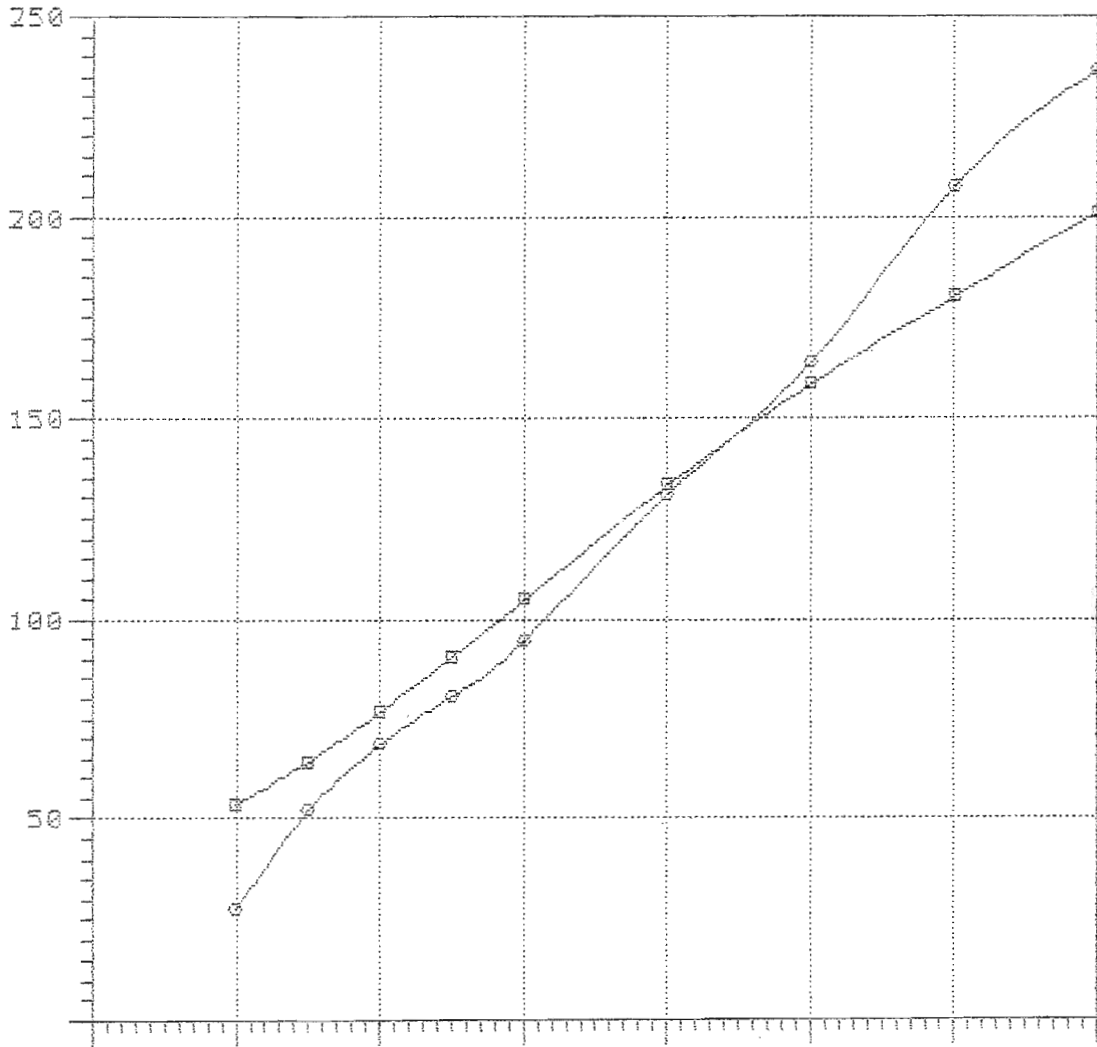


—■—

—○— TNB-65B Lpx/Bpx=5.640 Ap/Vol=7.187 Lpx/Ap=9.005 Lcg/Lpx=0.300



Rbare: Bare-hull resistance (lbs)



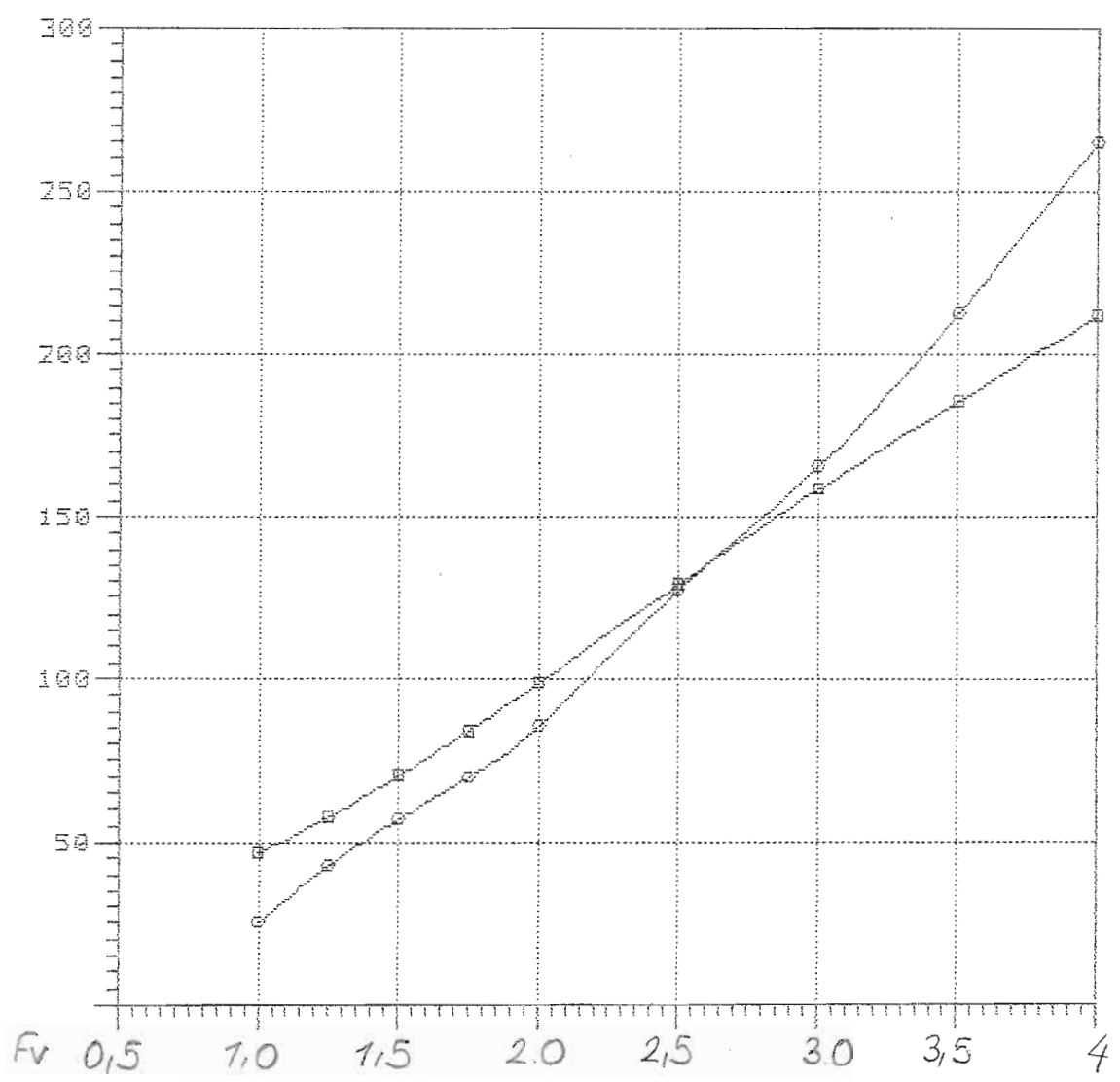
—□—

—○—

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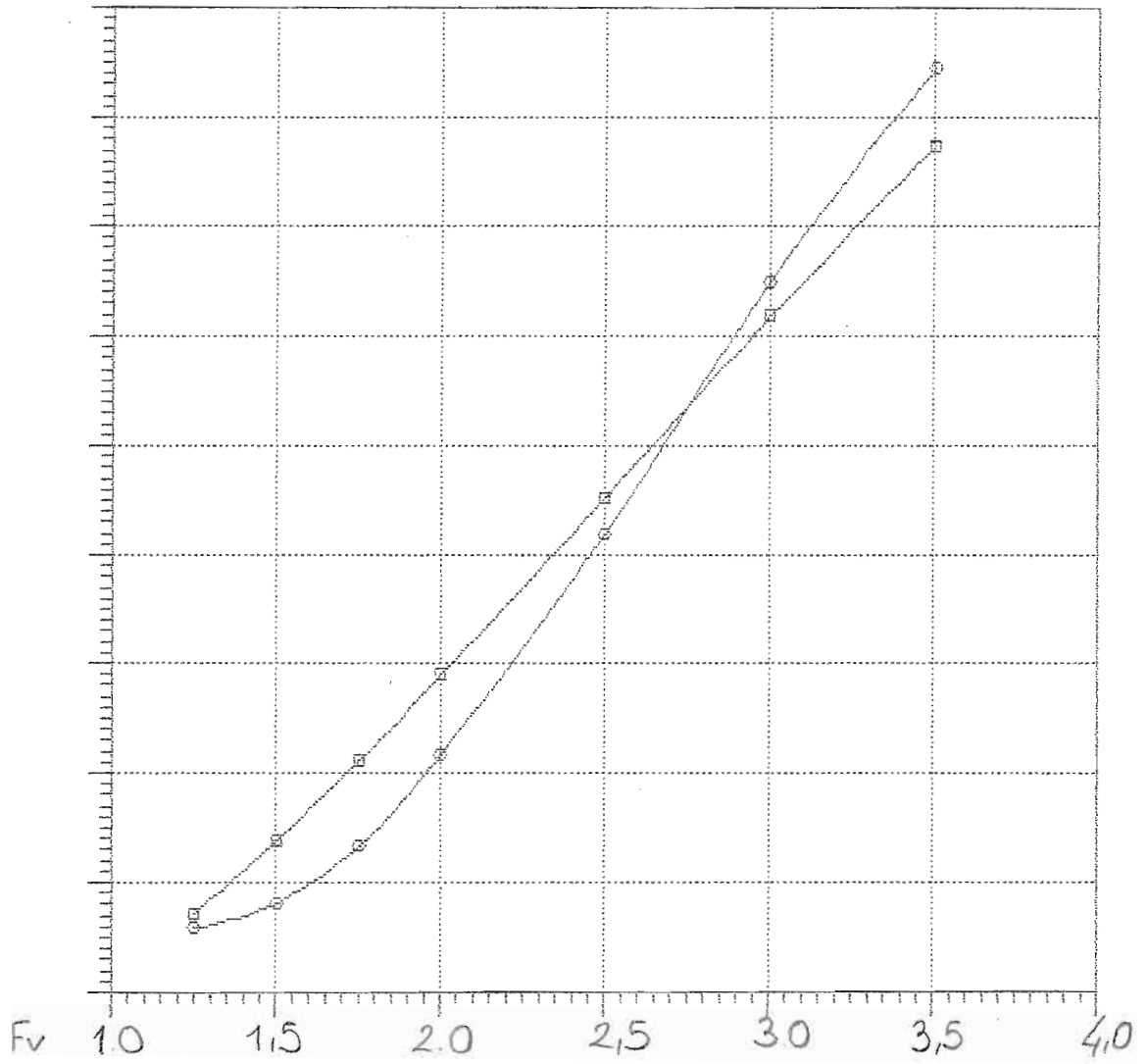
File: 7-80-380.mdl  
Date: 24 Feb 00  
Time: 15:48

Rbare: Bare-hull resistance (lbs)



—□—  
—○—

7-80-420



—□—  
—○—

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### Bare-hull resistance

File: 7-80-480.mdl

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vs.

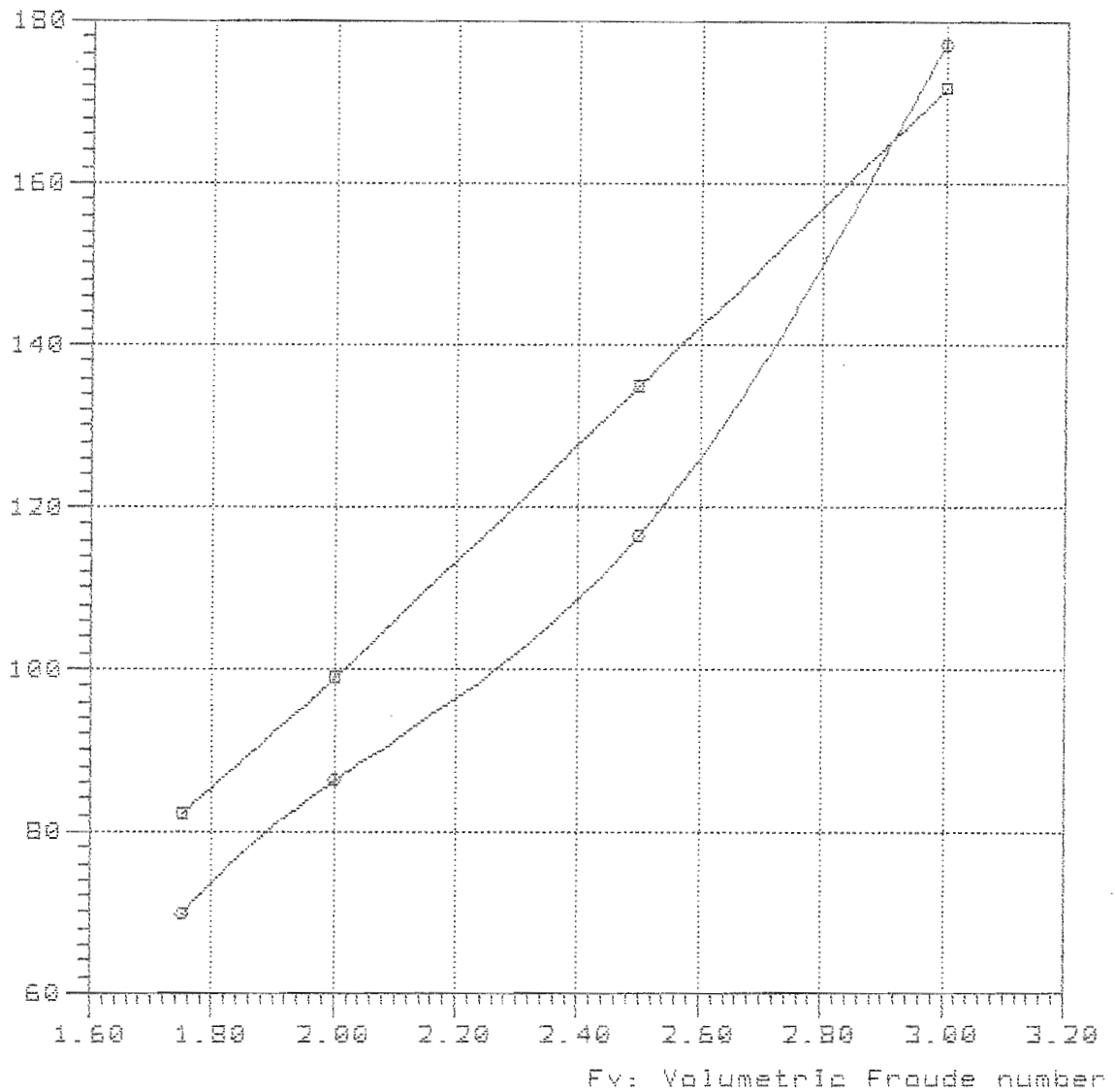
Date: 24 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 15:58

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

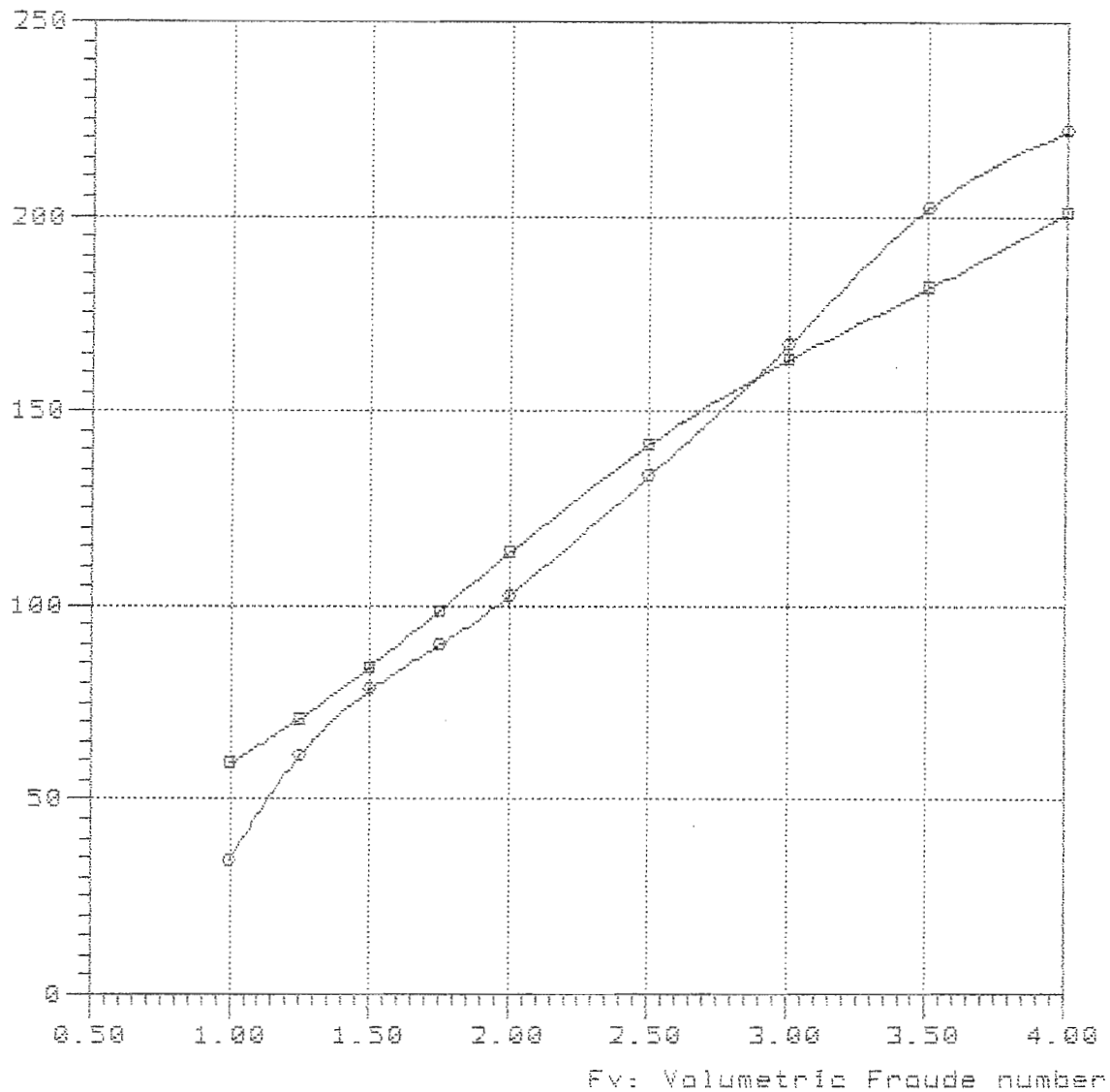
—●— TMB-85B Lpx/Bpx=6.640 Ap/Vol=7.107 Lpx/Ap=9.605 Log/Lpx=0.460

Model = 5167  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 21.200 ft  
Lwl = 20.946 ft  
Bpx = 3.193 ft  
Ap = 49.910 sqft  
Vcg = 0.981 ft  
Disp = 1000.00 Lb  
Deadrise = 28.70 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 6.640  
Lpx/Ap = 9.005  
Ap /Vol = 7.985  
Lpx/Vol = 8.505  
Cvload = 0.480  
Lbload = 0.023

Rbare: Bare-hull resistance (lbs)



—□—  
—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=7.986 Lpx/Ap=9.005 Log/Lpx=0.300

NavCad(tm) 3.1d

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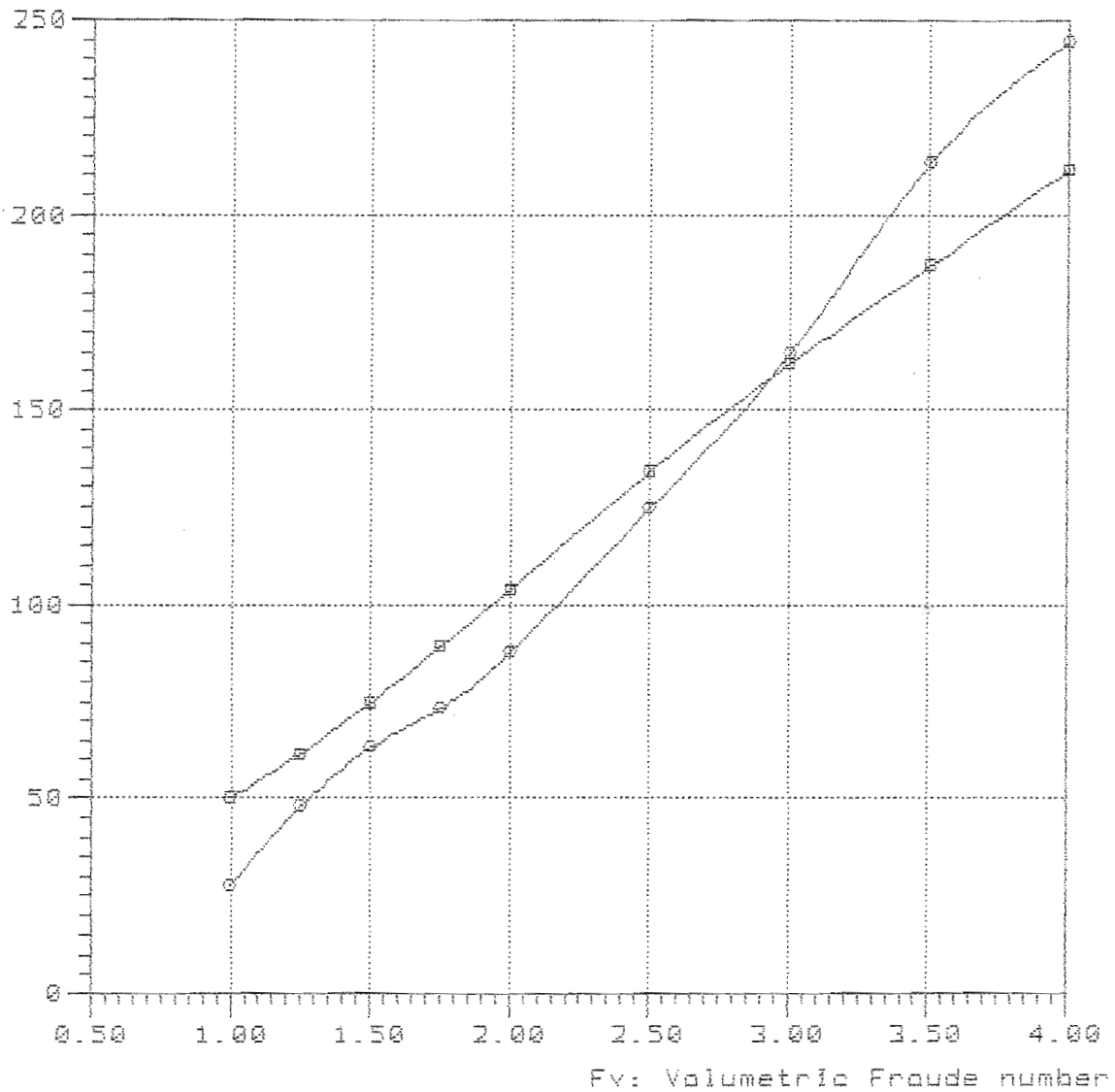
HydroComp, Inc.

File: 8-85-340.mdl

Date: 24 Feb 00

Time: 16:23

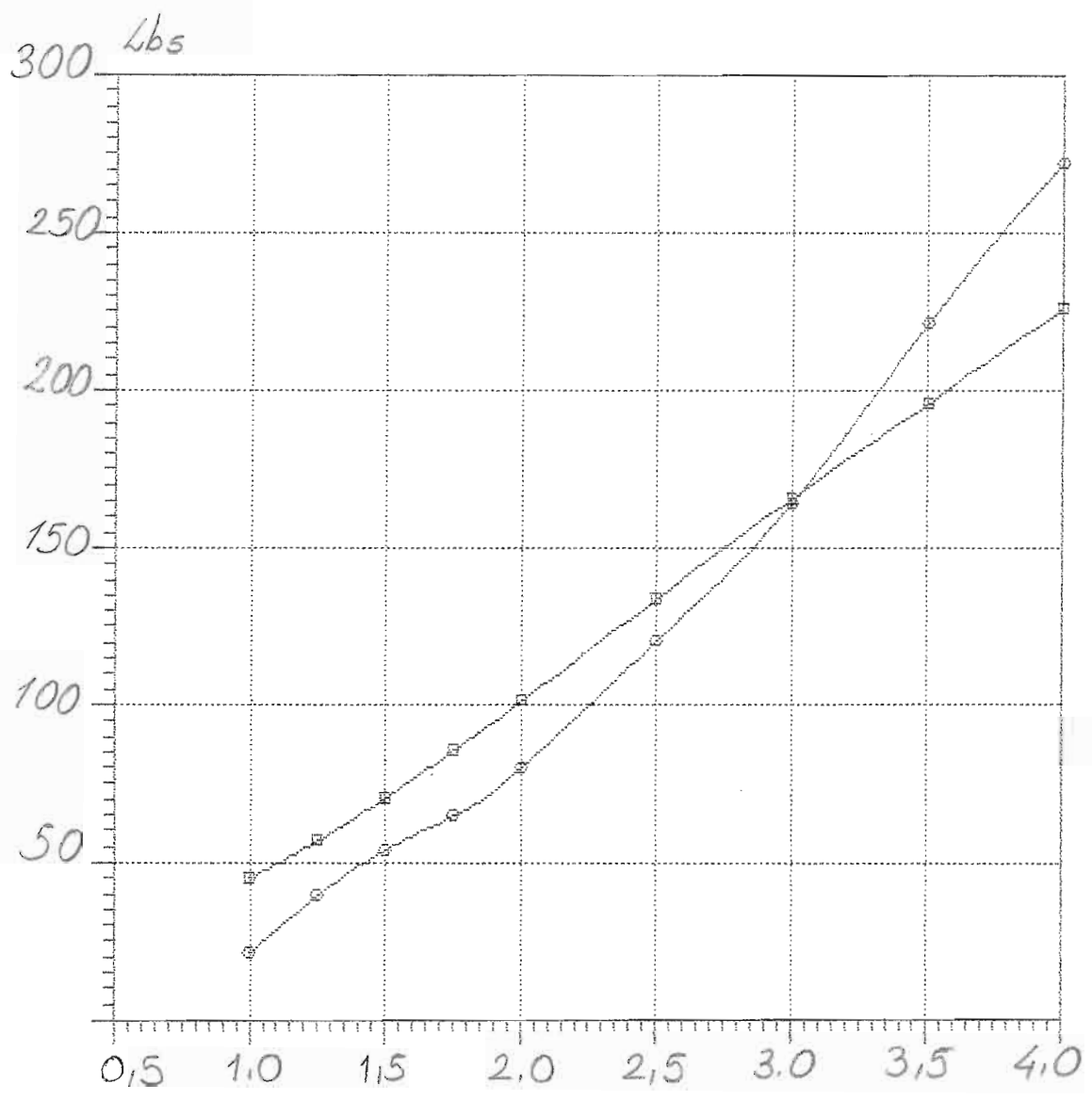
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65E Lpx/Bpx=6.640 Ap/Vol=7.985 Lpx/Ap=9.005 Log/Lpx=0.340

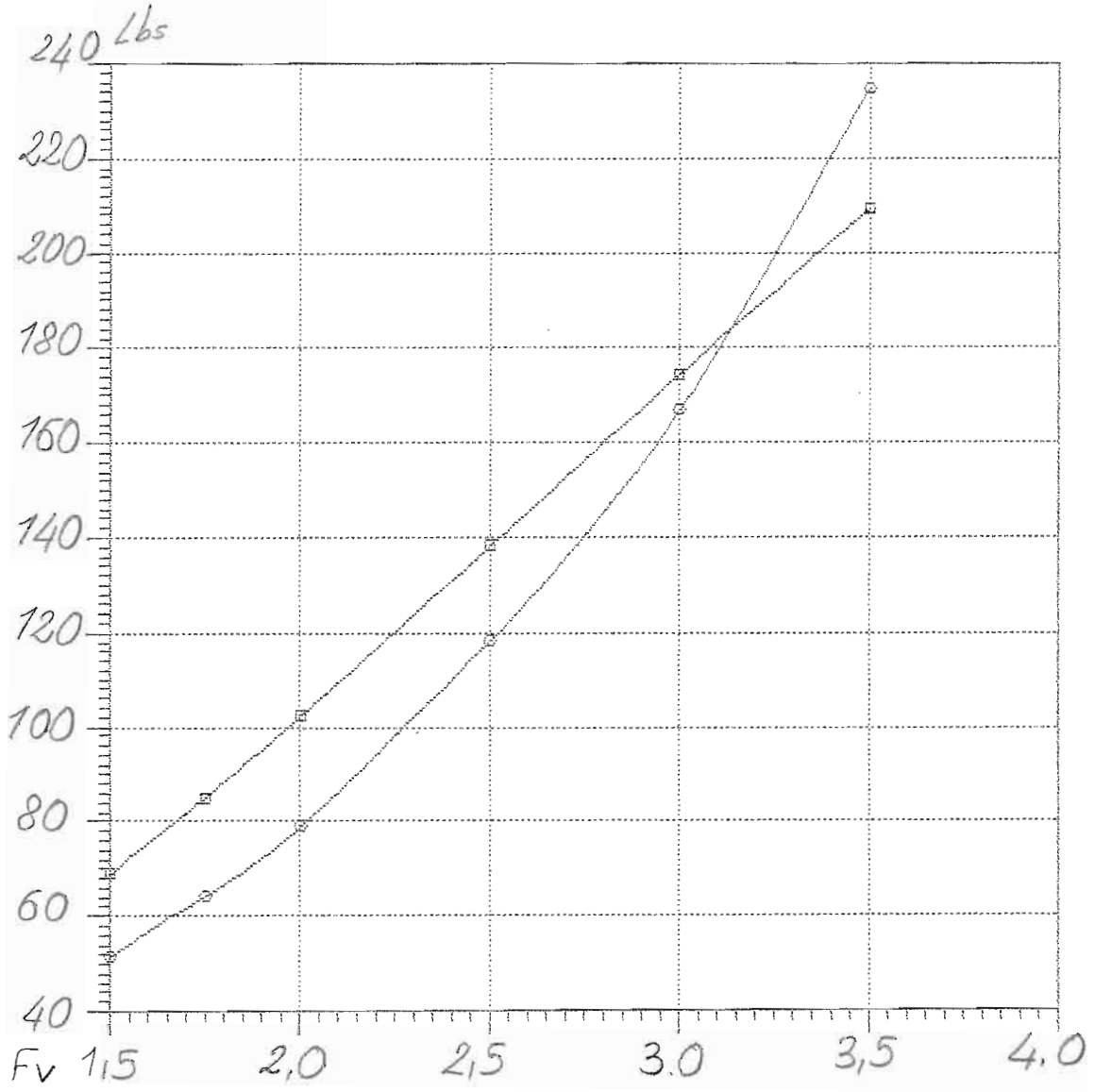
8-85-300



—□—  
—○—



8-85-420



—□—  
—○—

NavCad(tm) 3.1d

### Bare-hull resistance

File: S-85-460.mdl

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vs.

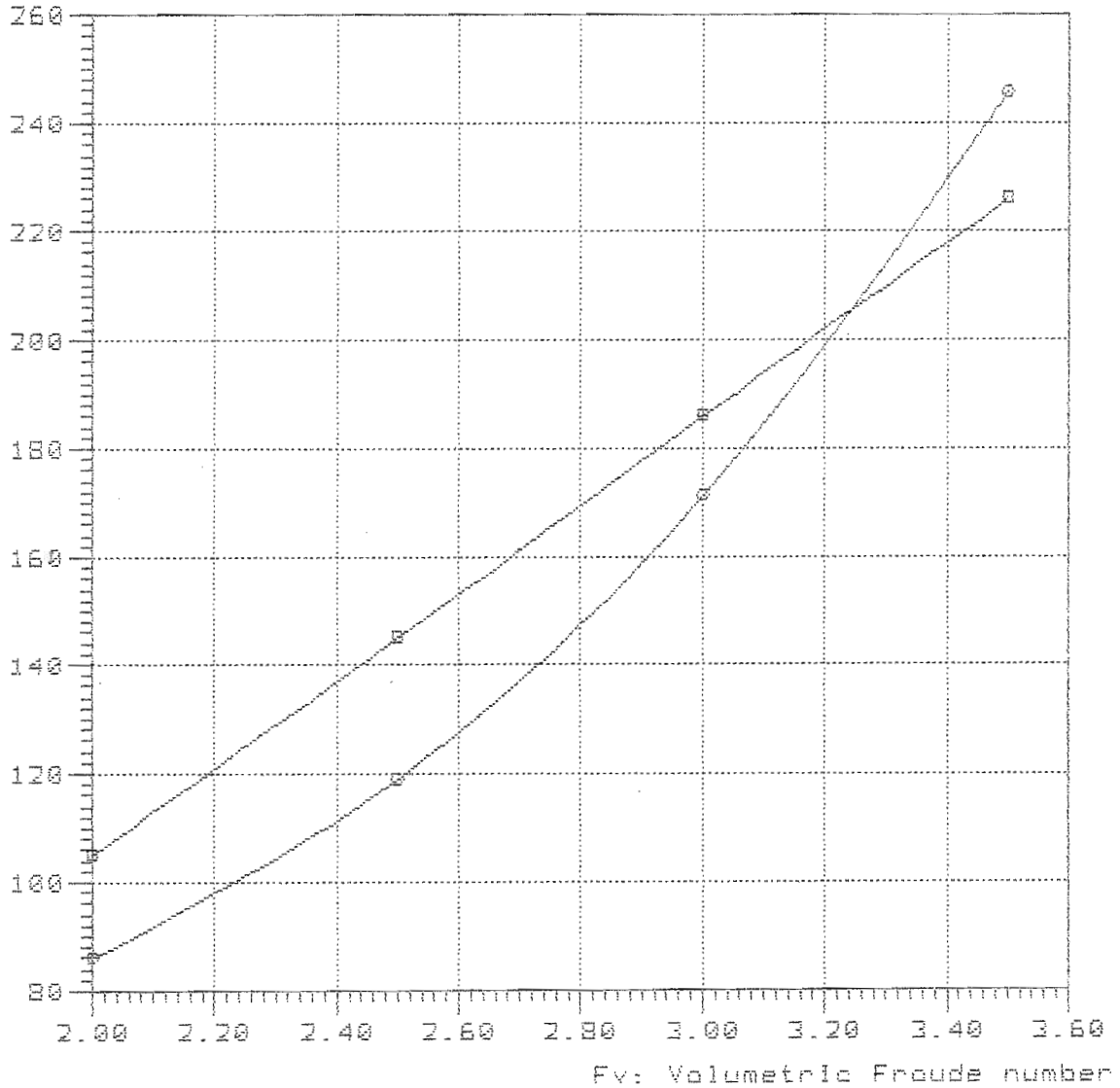
Date: 24 Feb 88

HydroComp, Inc.

### Volumetric Froude number

Time: 16:32

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—●— TMB-658 Lpx/Bpx=6.640 Ap/Vol=7.986 Lpx/Ap=9.005 Log/Lpx=0.450

Model = 5167  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 22.500 ft  
Lwl = 22.231 ft  
Bpx = 3.389 ft  
Ap = 56.219 sqft  
Vcg = 1.041 ft  
Disp = 1000.00 Lb  
Deadrise = 28.70 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 6.639  
Lpx/Ap = 9.005  
Ap /Vol = 8.994  
Lpx/Vol = 9.027  
Cvload = 0.401  
Lbload = 0.019

NavCad(tm) 3.1d

### Bare-hull resistance

File: 9-90-300.mdl

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vs.

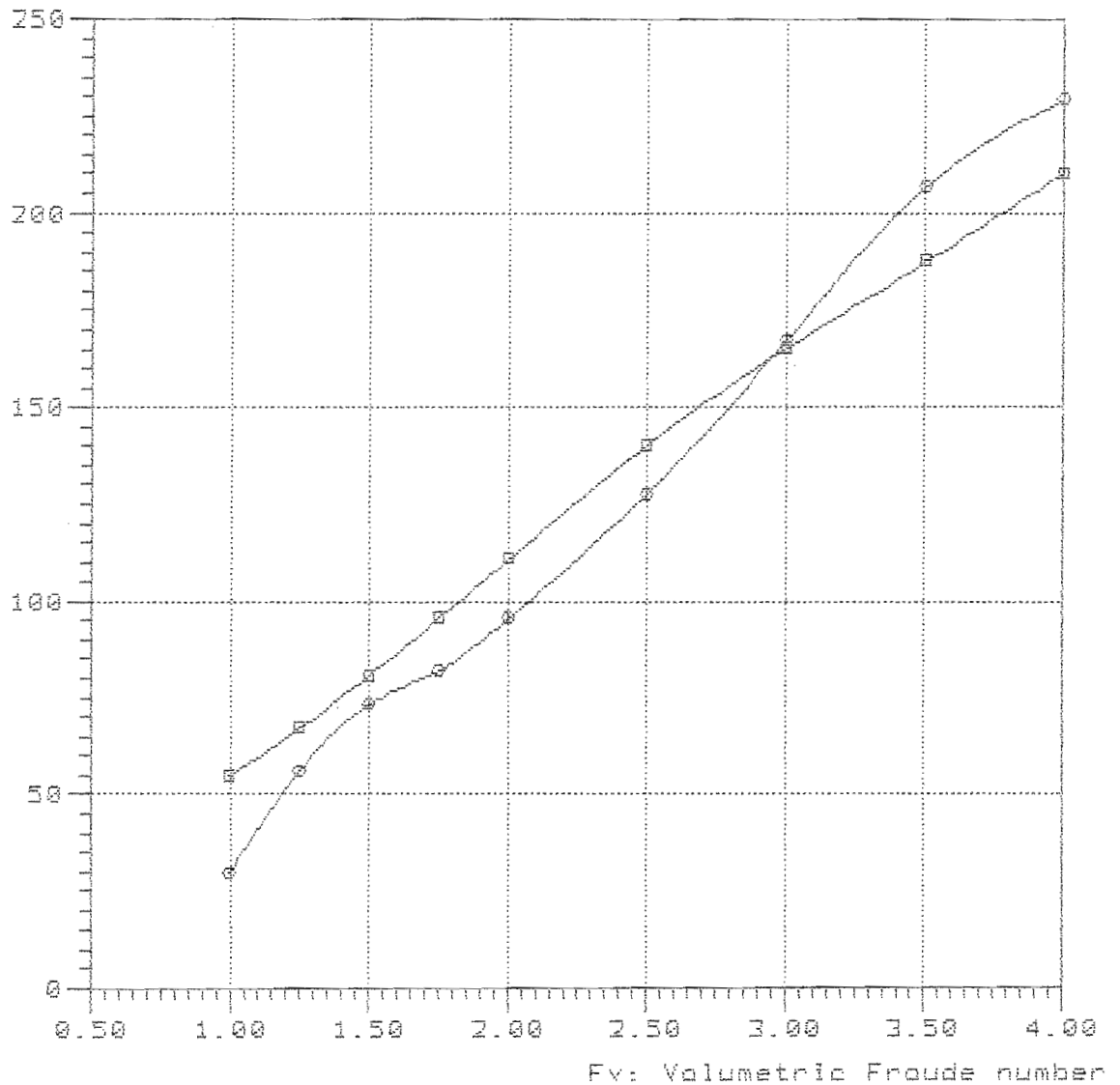
Date: 24 Feb 00

HydraComp, Inc.

### Volumetric Froude number

Time: 16:36

Rbare: Bare-hull resistance (lbs)

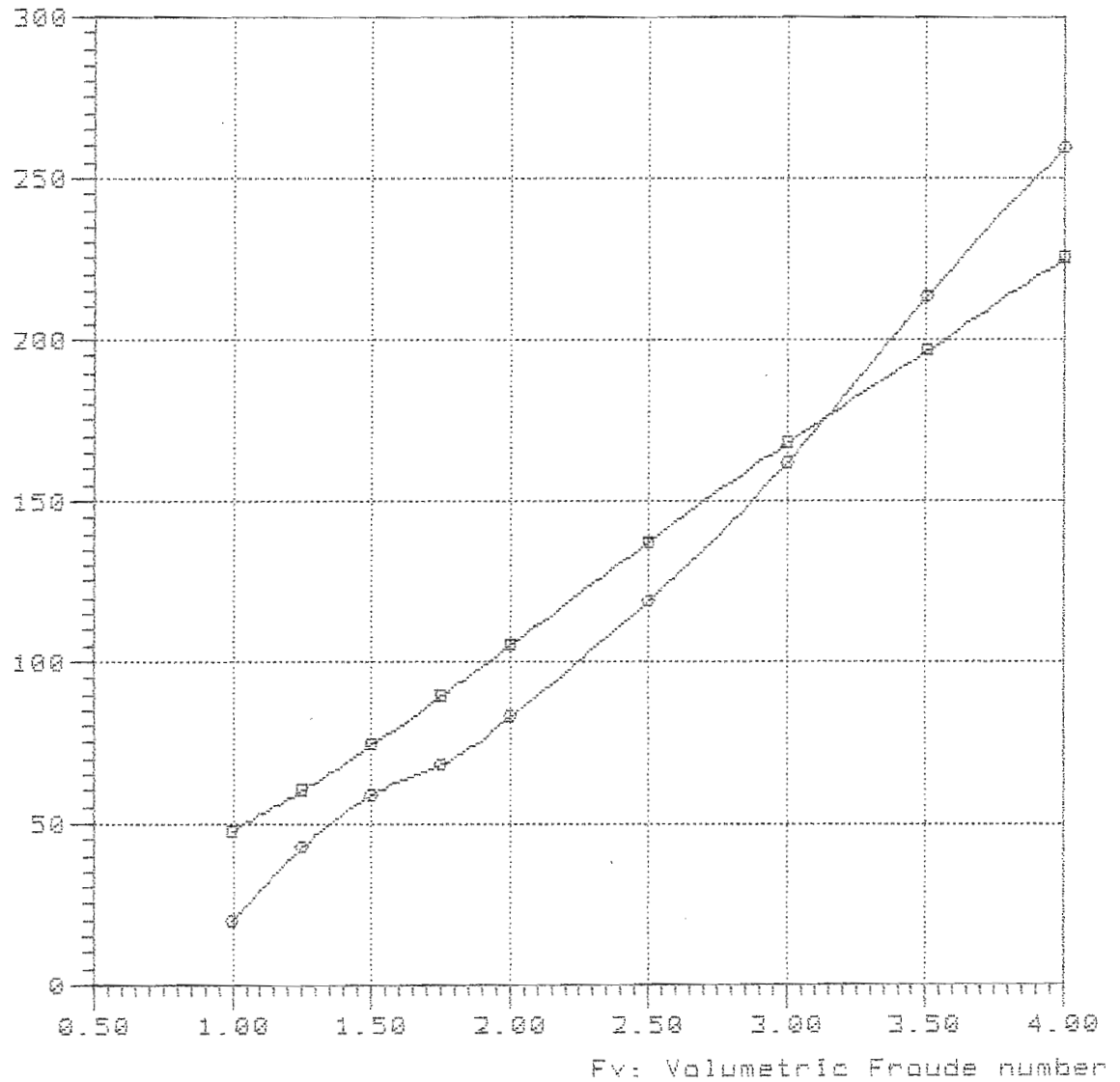


#### Curve legend

—□—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=8.995 Lpx/Ap=9.005 Lcg/Lpx=0.300

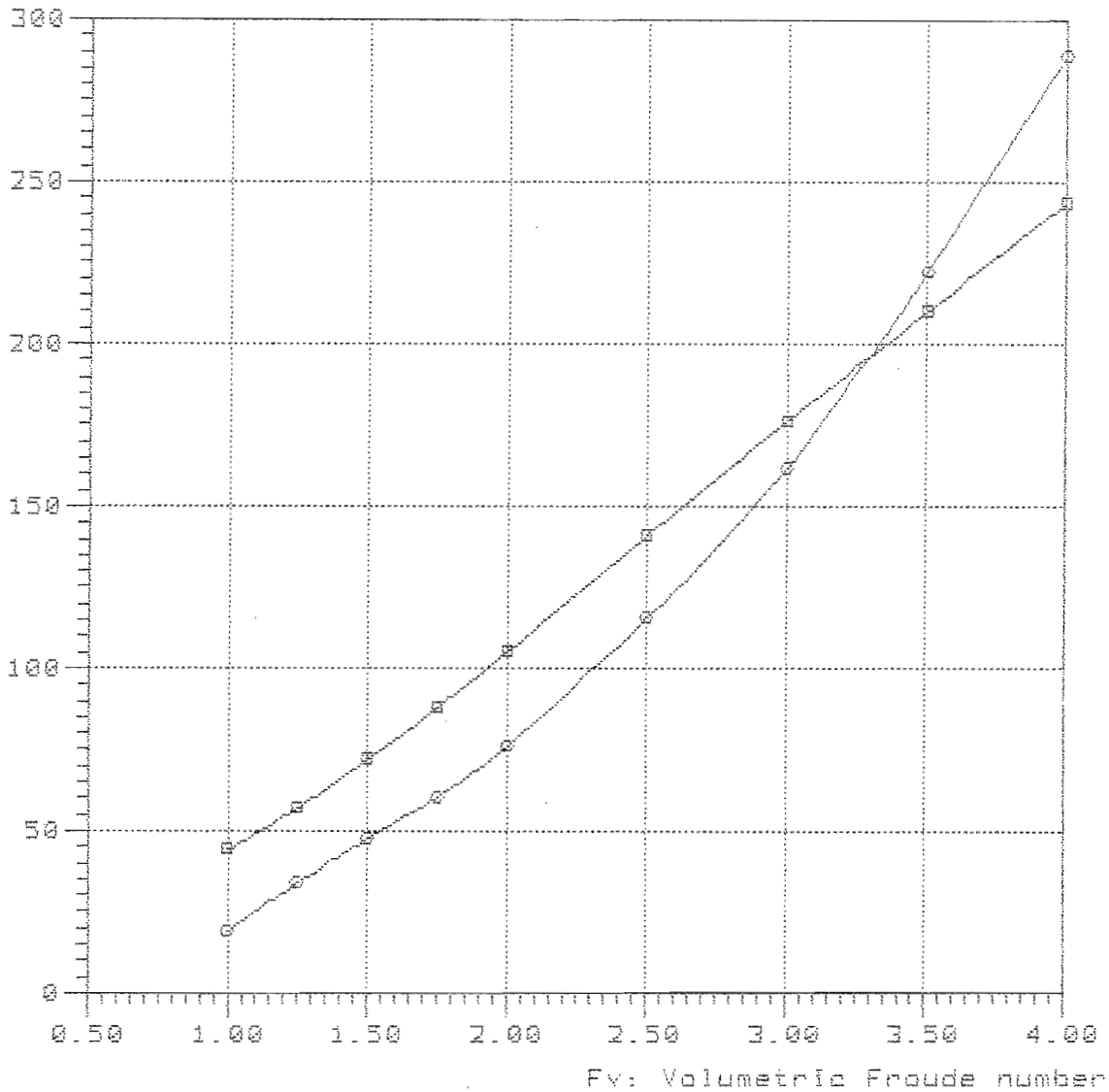
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=8.995 Lpx/Ap=9.005 Log/Lpx=0.340

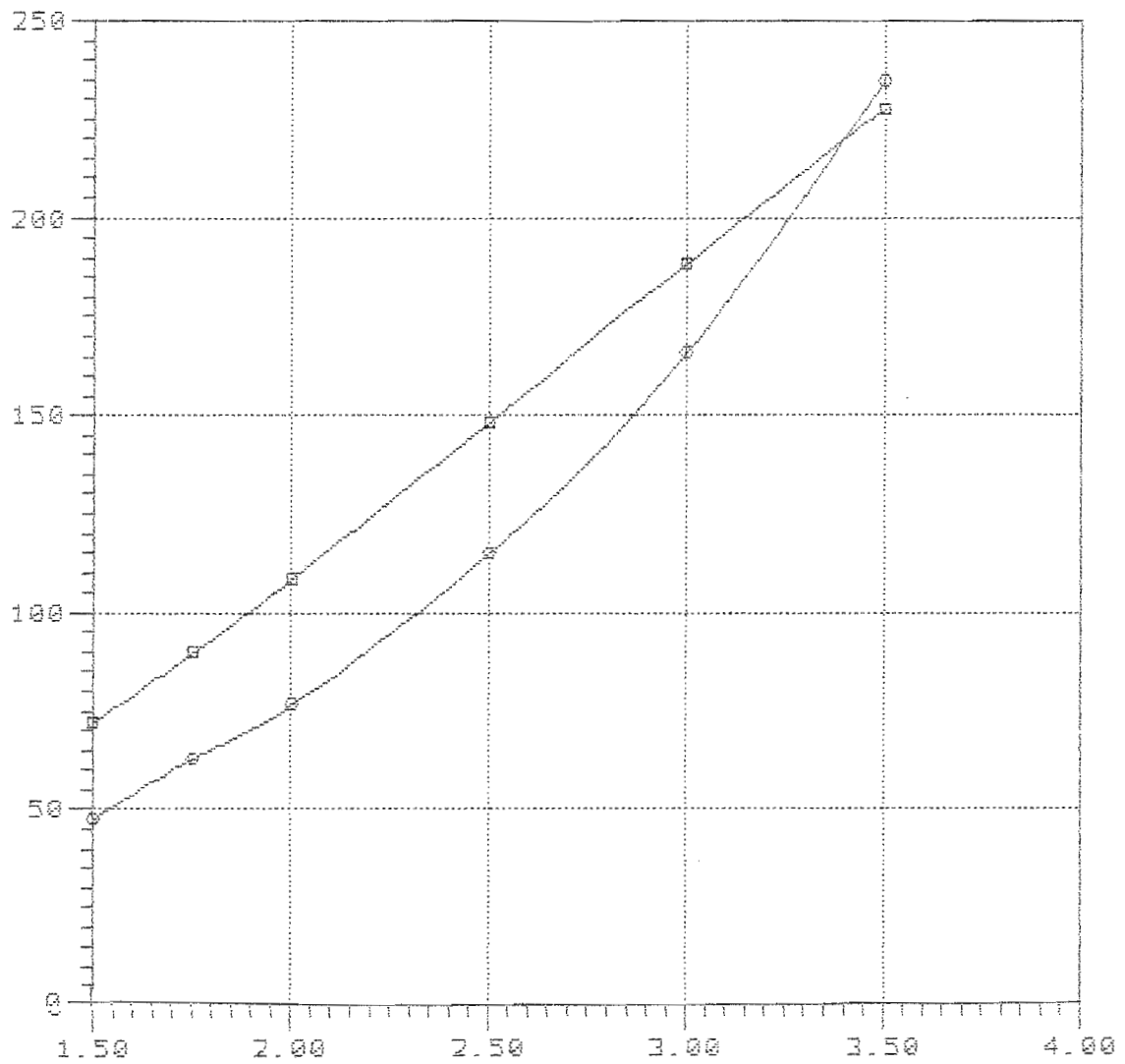
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=8.995 Lpx/Ap=9.005 Log/Lpx=0.380

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—

—●— TMB-65B Lpx/Bpx=6.640 Ap/Vol=8.995 Lpx/Ap=9.005 Log/Lpx=0.420

Model = 5167  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 23.700 ft  
Lwl = 23.416 ft  
Bpx = 3.569 ft  
Ap = 62.375 sqft

Vcg = 1.097 ft  
Disp = 1000.00 Lb  
Deadrise = 28.70 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 6.641  
Lpx/Ap = 9.005  
Ap /Vol = 9.979  
Lpx/Vol = 9.508  
Cvload = 0.344  
Lbload = 0.017



NavCad(tm) 3.1a

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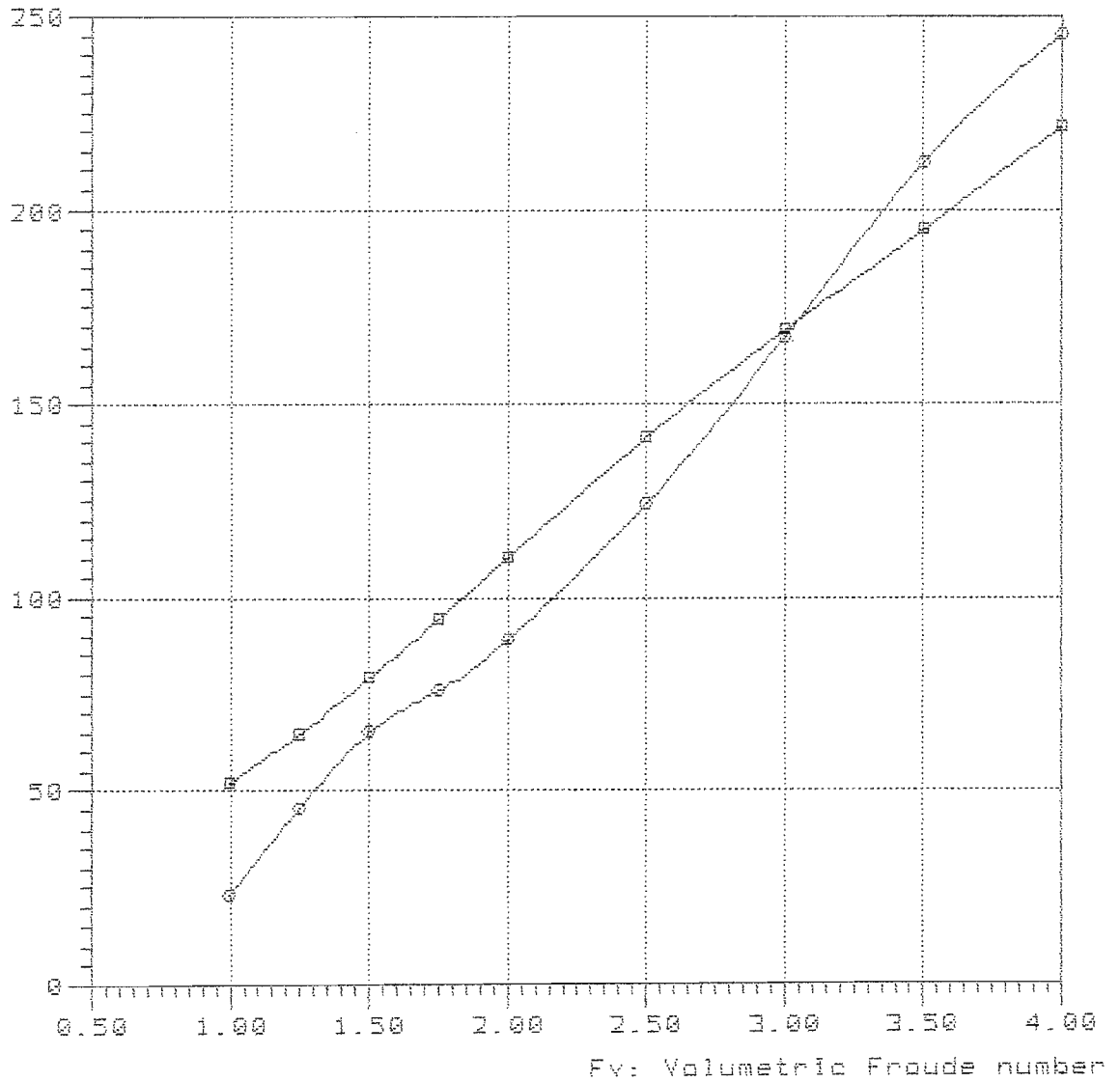
HydroComp, Inc.

File: 10-95-20.mdl

Date: 24 Feb 00

Time: 14:48

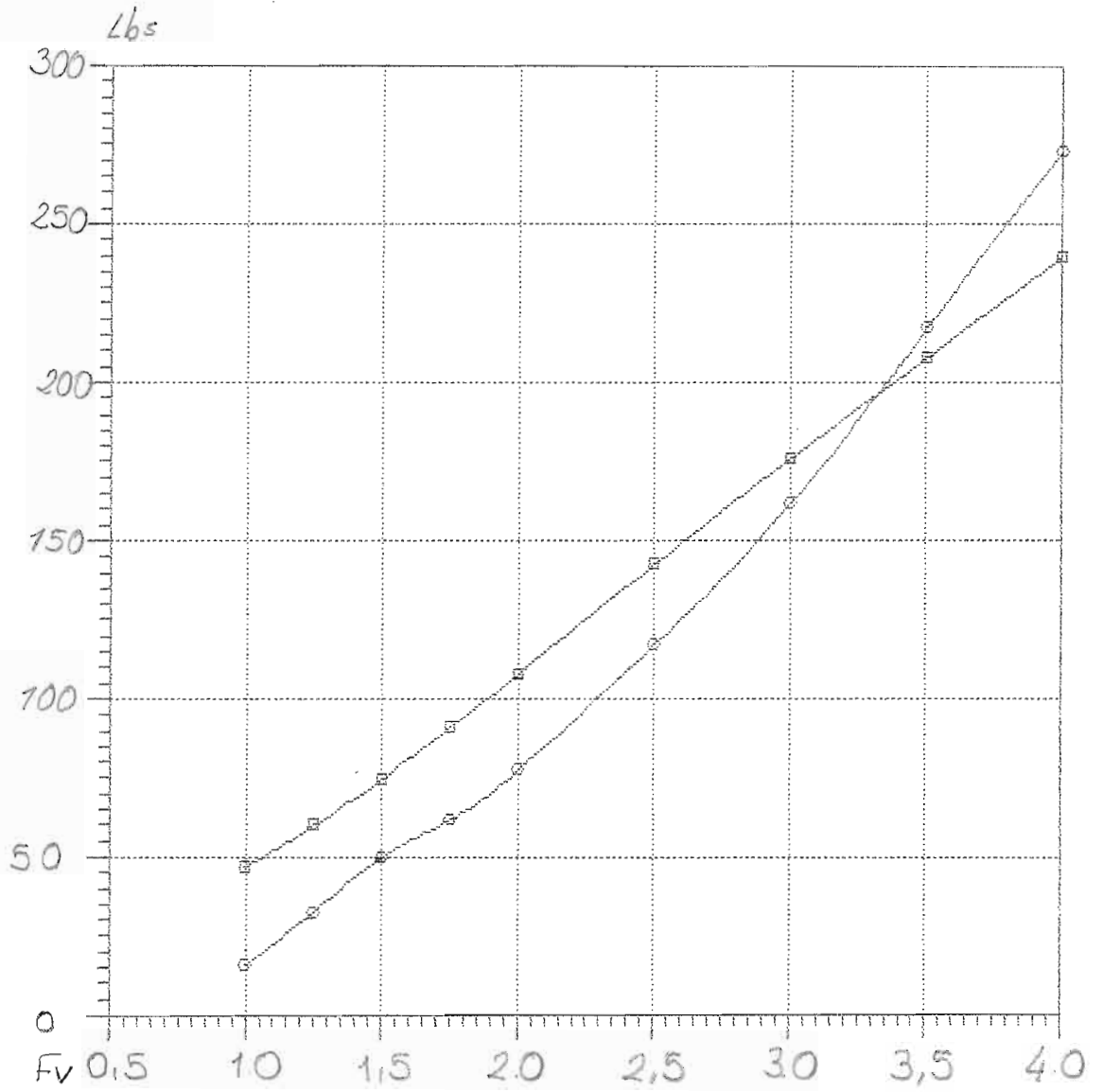
Series: Bare-hull resistance (lbs)



—□—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=9.980 Lpx/Ap=9.005 Lcg/Lpx=0.300

10-95-34



—□—  
—○—

NavCad(tm) 3.1d

### Bare-hull resistance

File: 10-95-38.mdl

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vs.

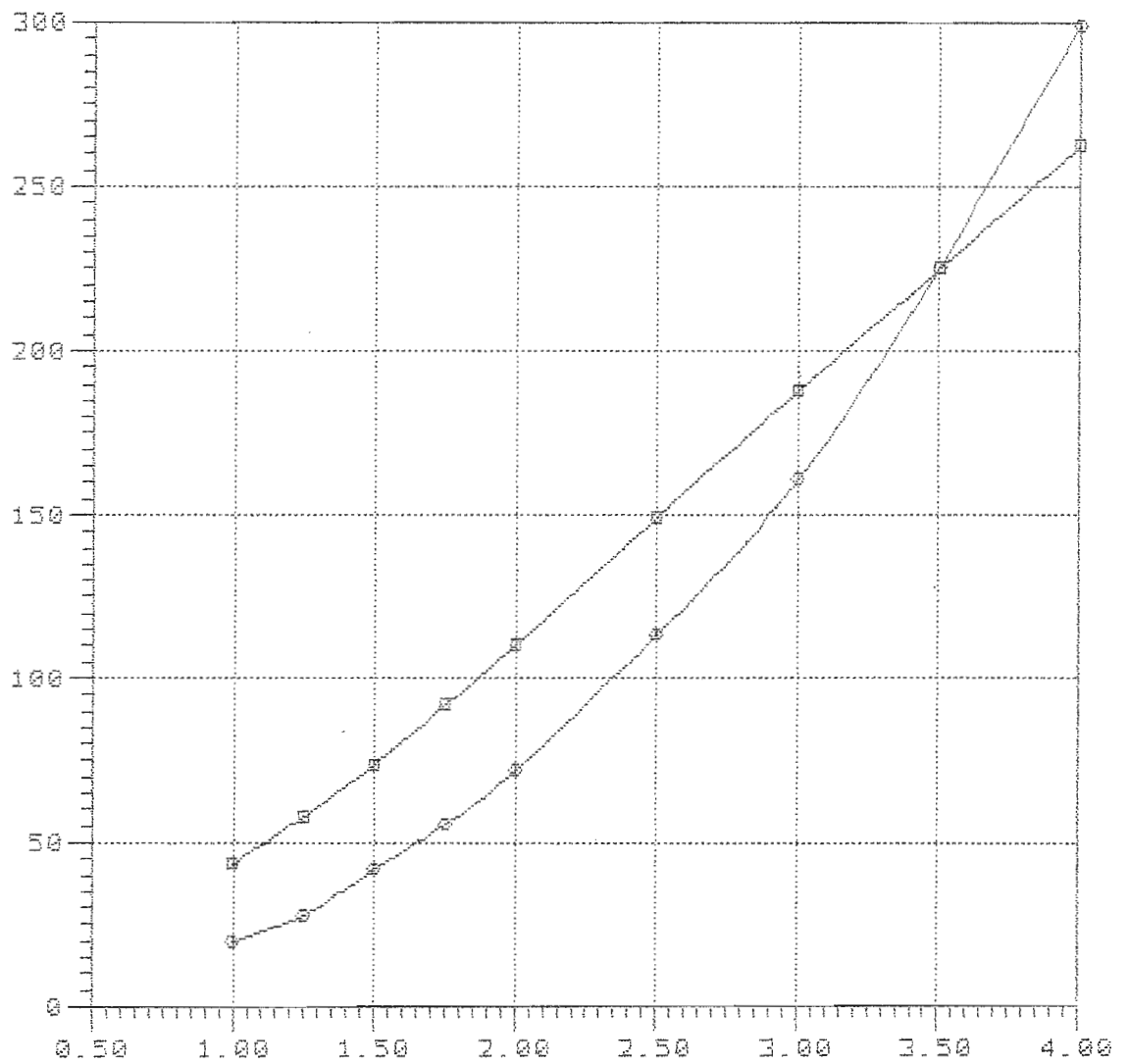
Date: 24 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 14:56

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

#### Curve legend

—■—

—●— TMB-65B Lpx/Bpx=6.640 Ap/Vol=9.980 Lpx/Ap=9.005 Lcg/Lpx=0.380

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

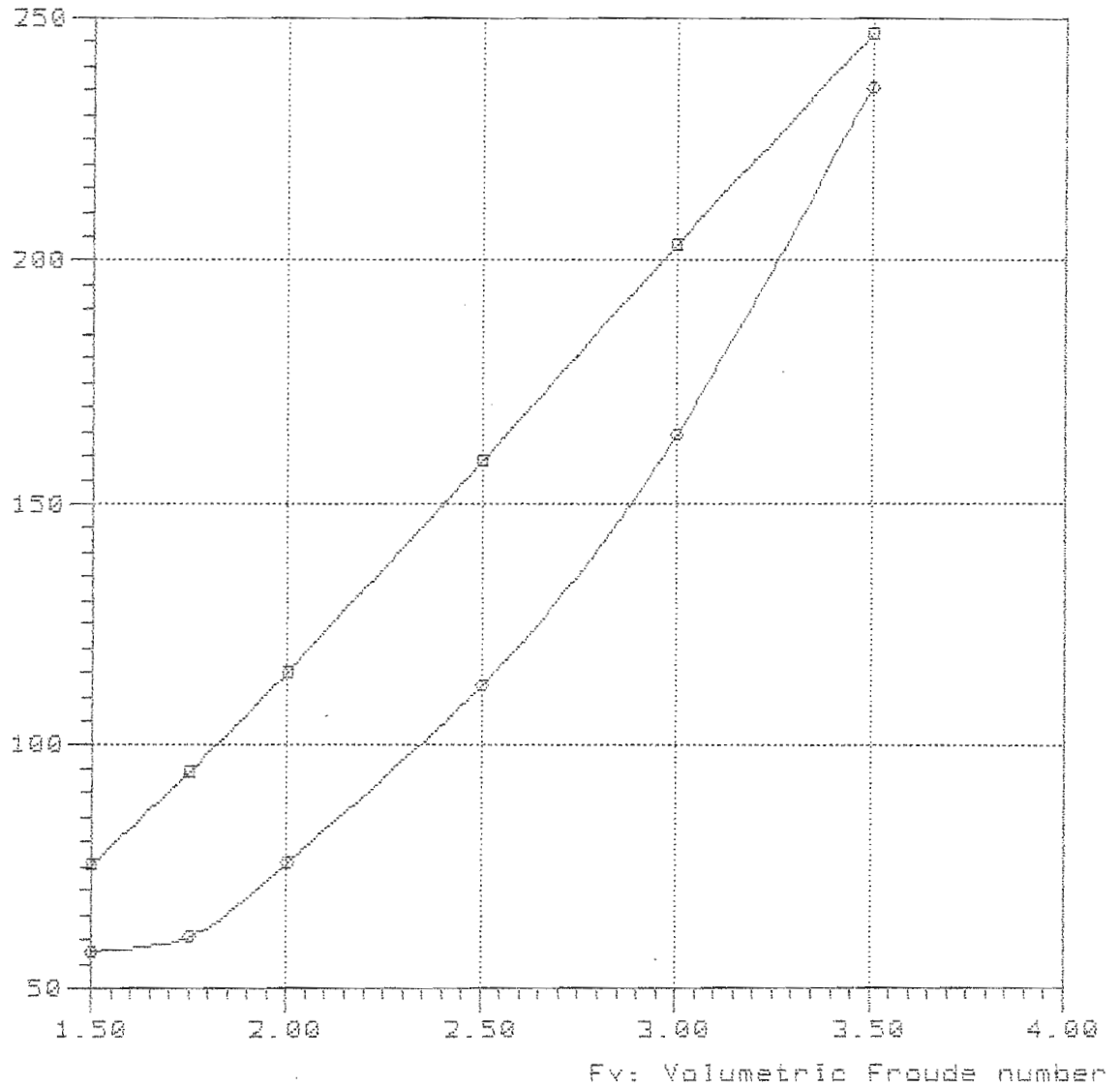
### Volumetric Froude number

File: 10-95-42.mdl

Date: 24 Feb 88

Time: 14:59

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

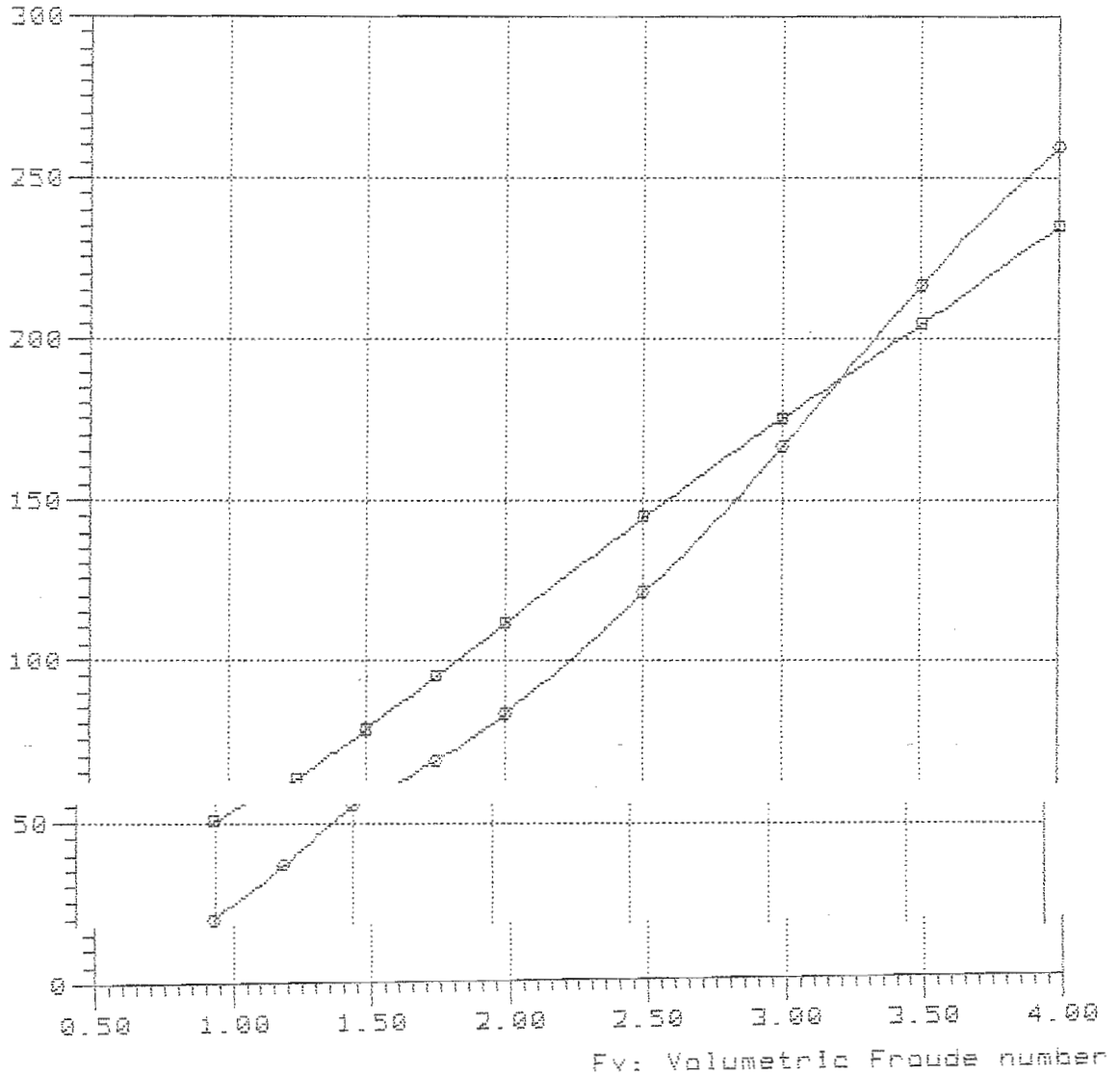
—●— TMB-65B Lpx/Bpx=6.640 Ap/Vol=9.980 Lpx/Ap=9.005 Log/Lpx=0.420

Model = 5167  
Ref = NSRDC  
Friction = ~~f~~TTC Ca=4e-4

Lpx = 25.000 ft  
Lwl = 24.701 ft  
Bpx = 3.765 ft  
Ap = 69.406 sqft  
Vcg = 1.157 ft  
Disp = 1000.00 Lb  
Deadrise = 28.70 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 6.640  
Lpx/Ap = 9.005  
Ap /Vol = 11.104  
Lpx/Vol = 10.030  
Cvload = 0.293  
Lbload = 0.014

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=11.105 Lpx/Ap=9.005 Log/Lpx=0.300

NavCad(tm) 3.1d

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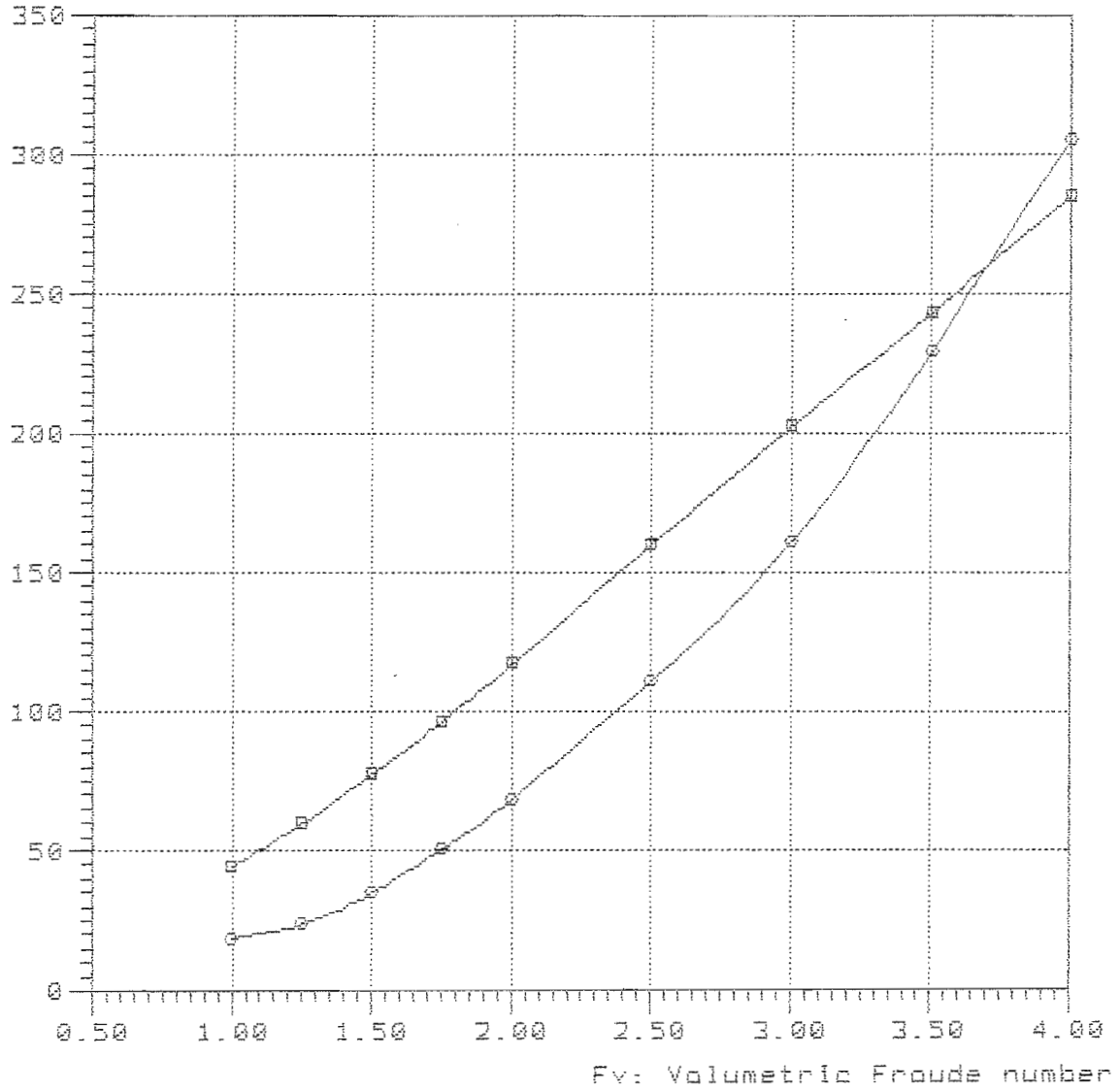
HydraComp, Inc.

File: 11-10-35.mdl

Date: 24 Feb 00

Time: 15:07

Rbare: Bare-hull resistance (lba)



—■—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Val=11.105 Lpx/Ap=9.005 Lcg/Lpx=0.380

NavCad(tm) 3.1d

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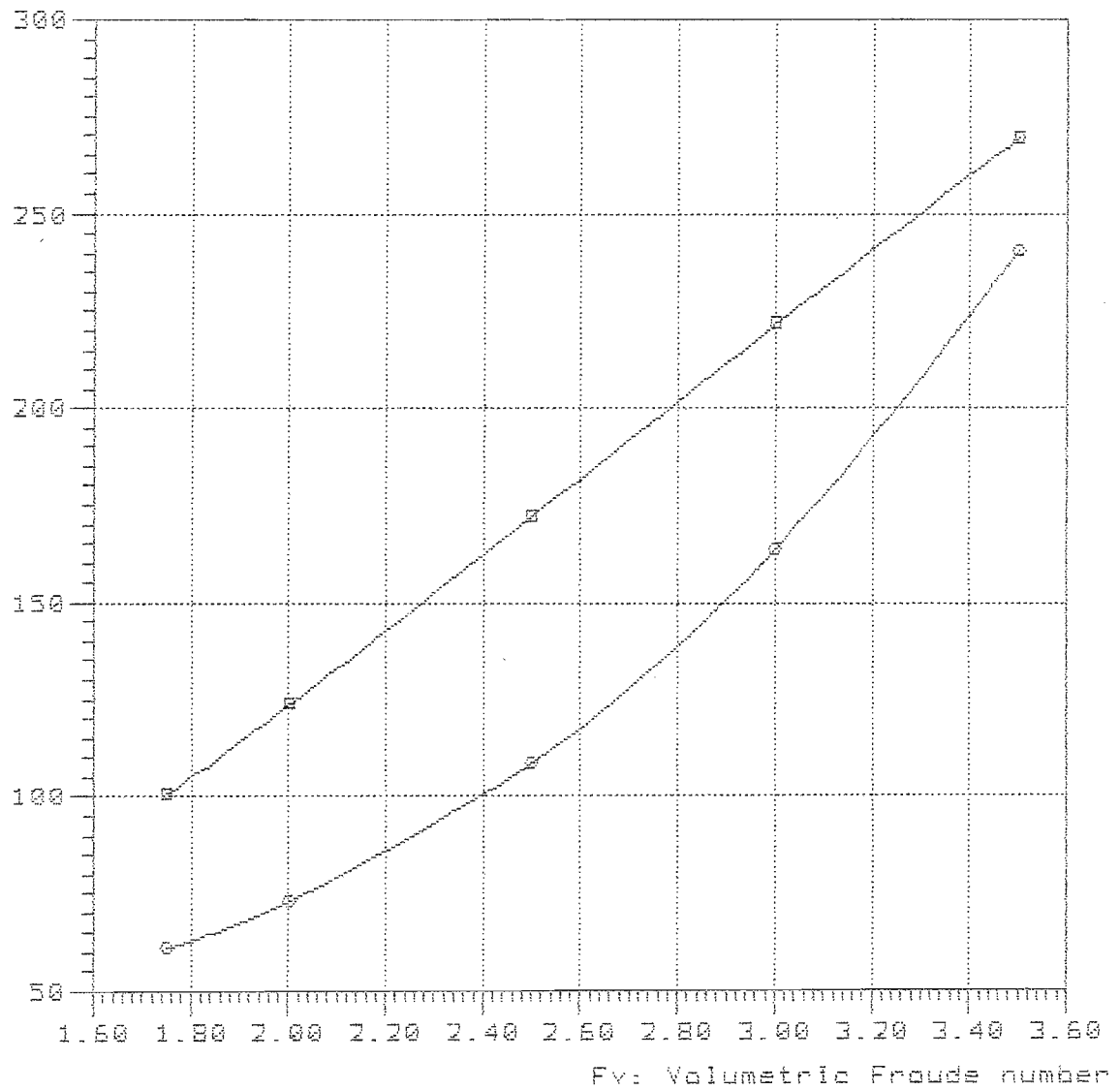
HydroComp, Inc.

File: 11-19-42.mdl

Date: 24 Feb 00

Time: 15:11

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=11.105 Lpx/Ap=9.005 Lcg/Lpx=0.420



5184

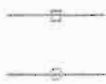
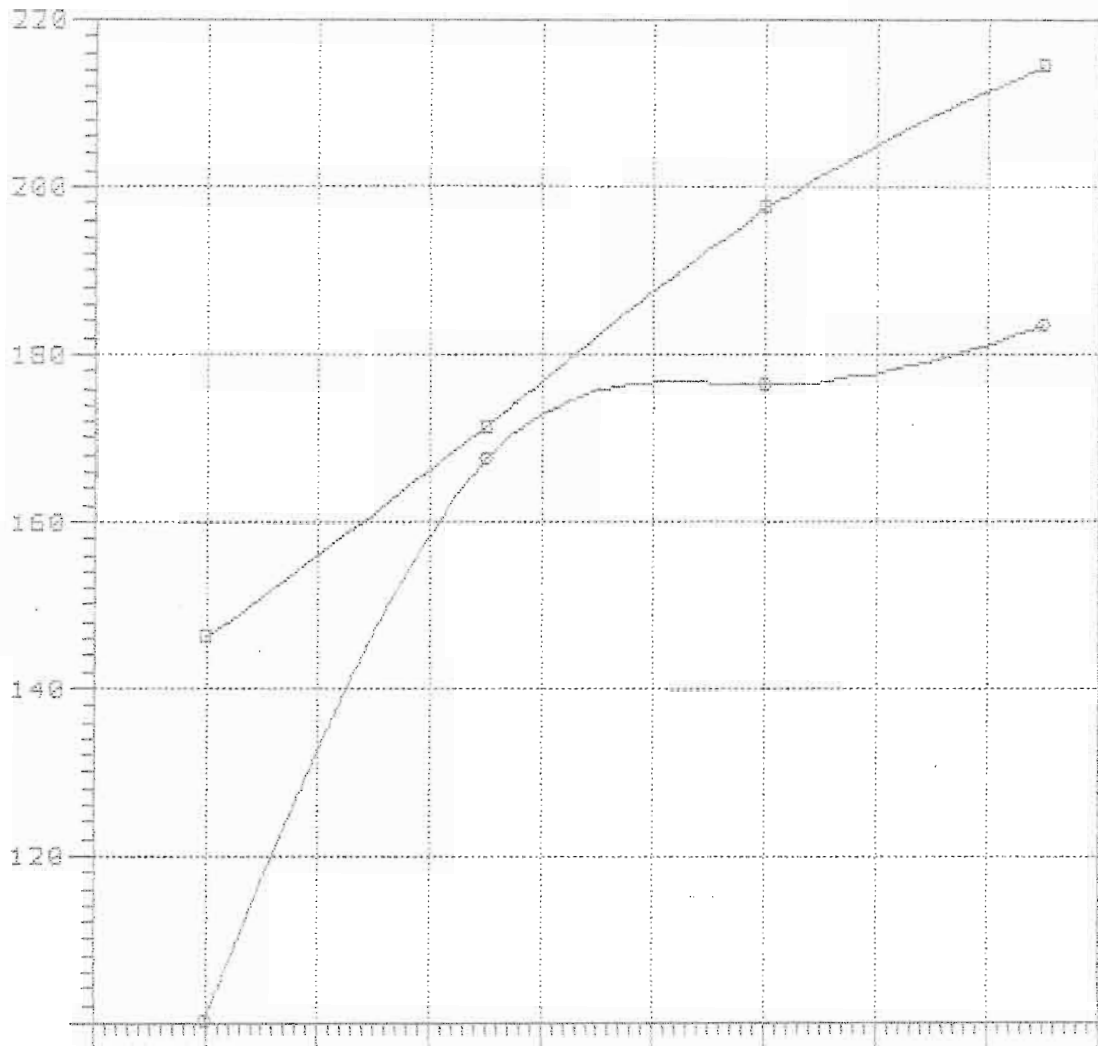
5184

03/01/2000 18:45:48

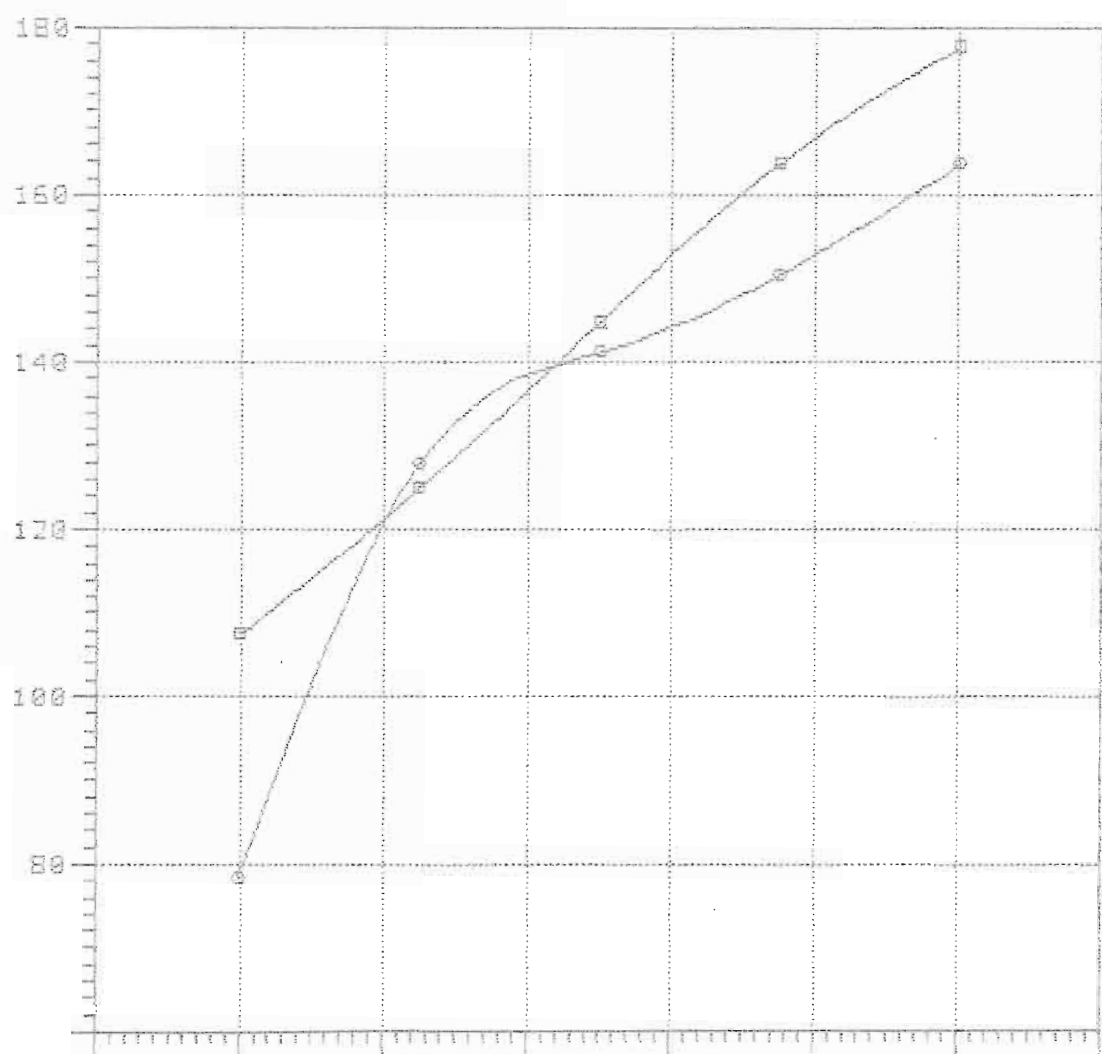
Model = 5184  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4  
Lpx = 13.700 ft  
Lwl = 13.535 ft  
Bpx = 2.921 ft  
Ap = 29.455 sqft  
Vcg = 0.898 ft  
Disp. = 1000.00 Lb  
Deadrise = 28.70 degree  
Twist Angle = 6.20 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc  
Lpx/Bpx = 4.690  
Lpx/Ap = 6.372  
Ap /Vol = 4.712  
Lpx/Vol = 5.482  
Cvload = 0.627  
Lbload = 0.050  
Disp-Lpx = 173.616

Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCI DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez, çoğaltı  
veya kopya edilemez ve her ne amaçla  
olsun olursa olsun maksadı dışında  
izinsiz kullanılamaz.

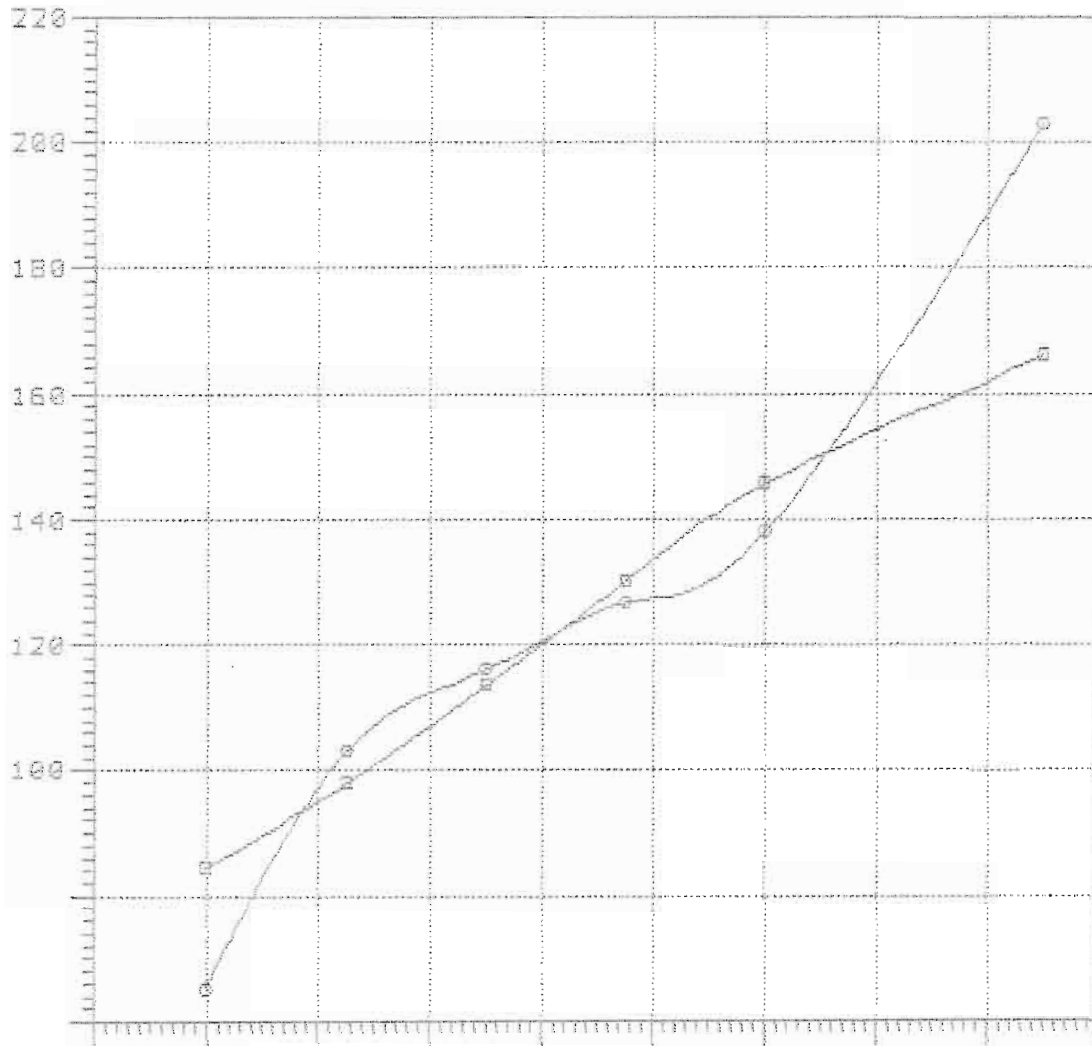
Rbare: Bare-hull resistance (lbs)



Rbare: Bare-hull resistance (lbs)

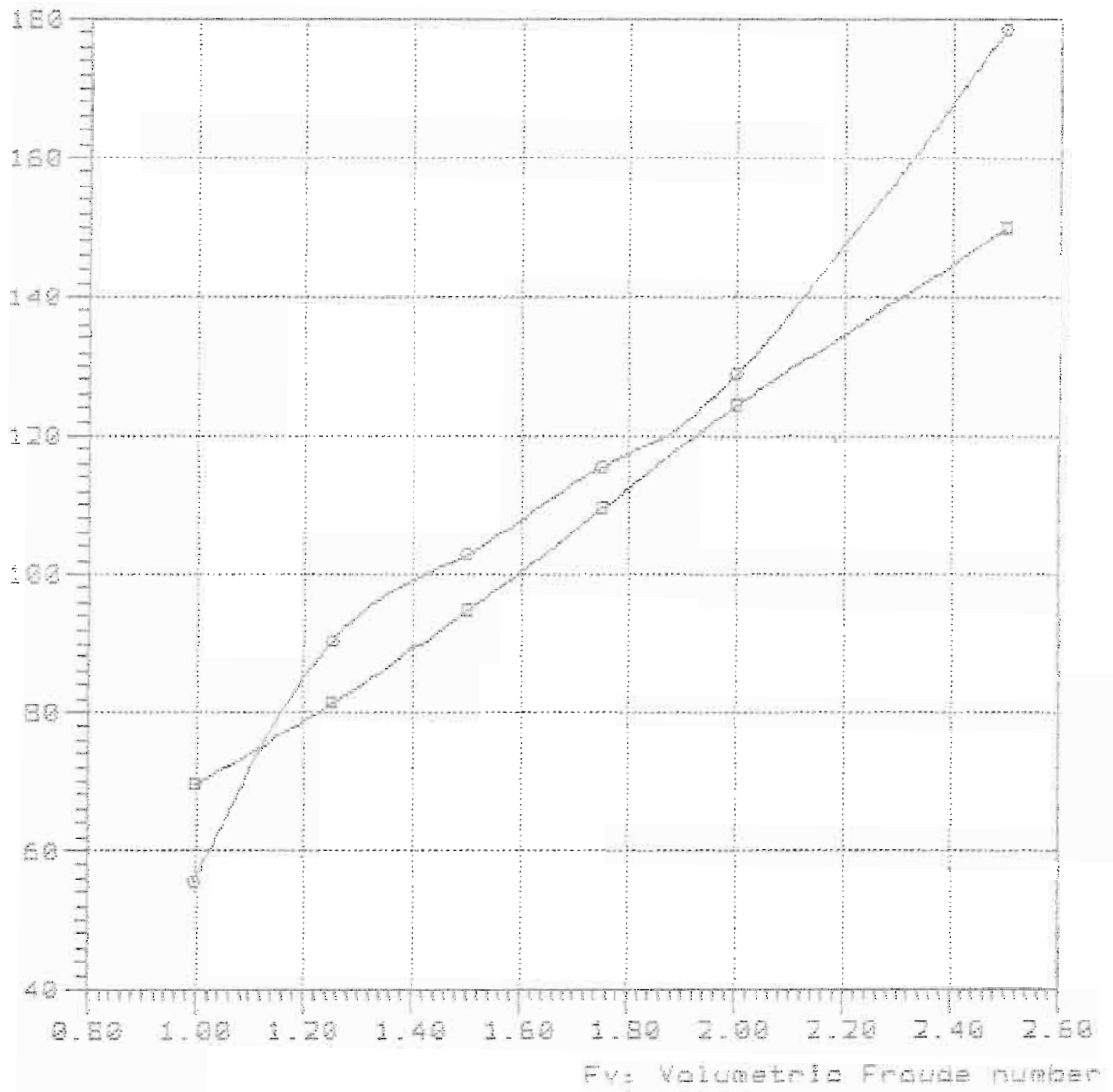


Rbare: Bare-hull resistance (lbs)



—■—  
—●—

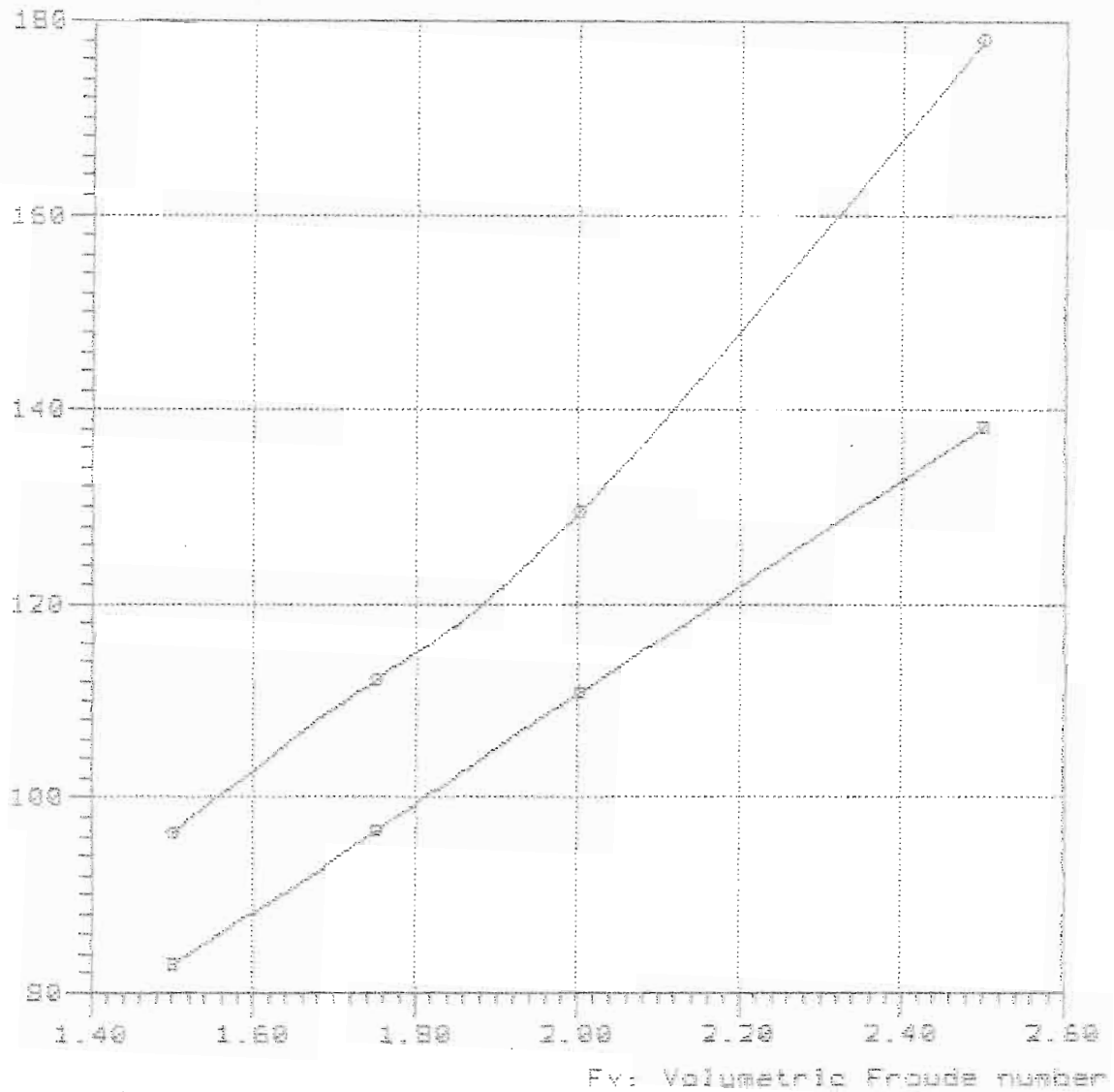
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65B Lpx/Bpx=4.690 Ap/Val=4.713 Lpx/Ap=6.372 Lcg/Lpx=0.420

Rbare: Bare-hull resistance (lbs)



Curve legend

—□—

—○— TMB-658 Lpx/Bpx=4.658 Rp/Wal=4.713 Lpx/Rp=6.372 Log/Lpx=8.458

Model	=	5184
Ref	=	NSRDC
Friction	=	<del>A</del> TTC Ca=4e-4
Lpx	=	15.000 ft
Lwl	=	14.819 ft
Bpx	=	3.198 ft
Ap	=	29.455 sqft
Vcg	=	0.984 ft
Disp.	=	1000.00 Lb
Deadrise	=	28.70 degree
Twist Angle	=	6.20 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.690
Lpx/Ap	=	7.639
Ap /Vol	=	4.712
Lpx/Vol	=	6.002
Cvload	=	0.478
Lbload	=	0.038
Disp-Lpx	=	132.275

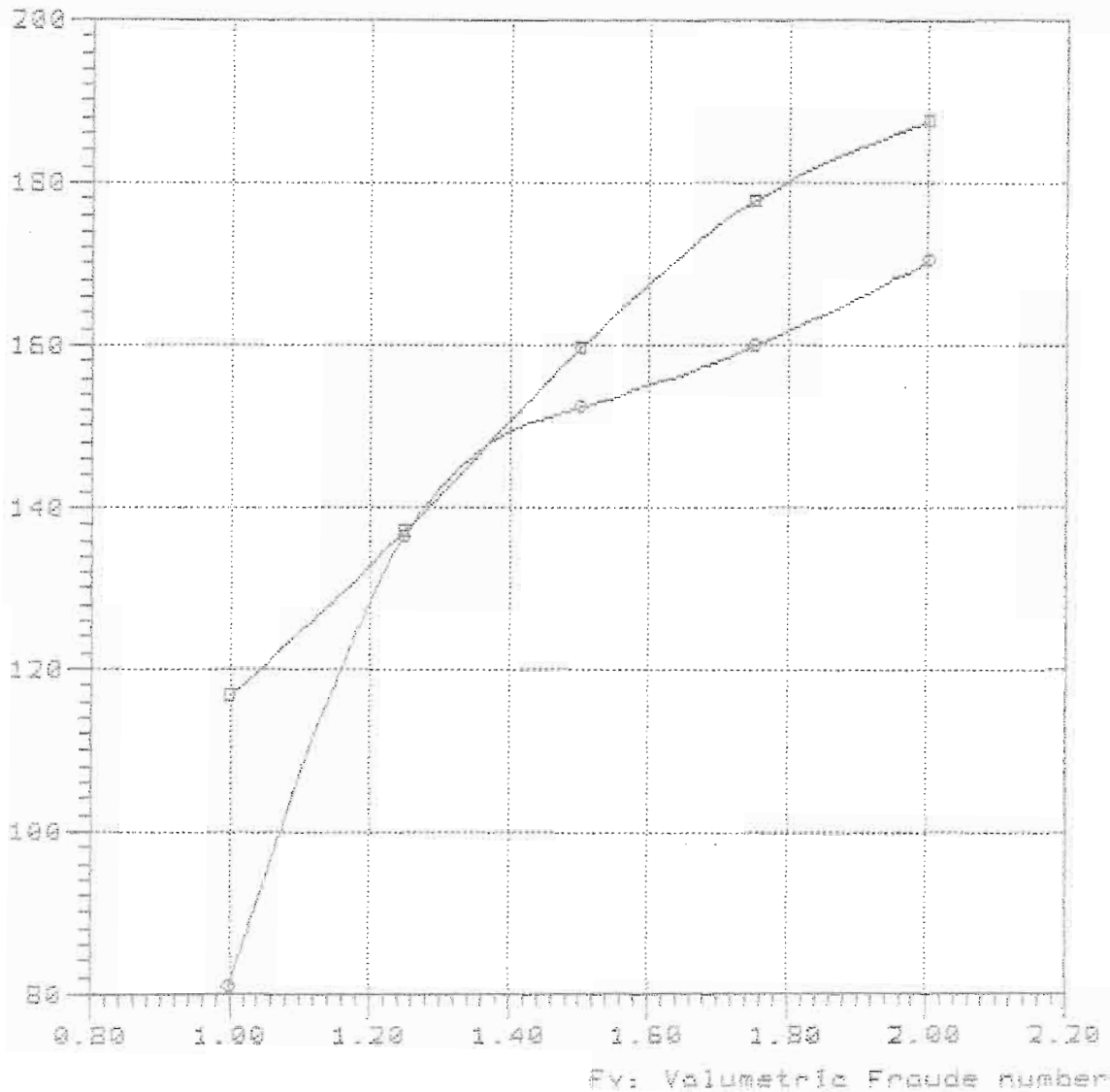


### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—●— TMB-658 Lpx/Bpx=4.698 Ap/Vol=5.630 Lpx/Ap=6.372 Log/Lpx=0.300

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Bare-hull resistance

vs.

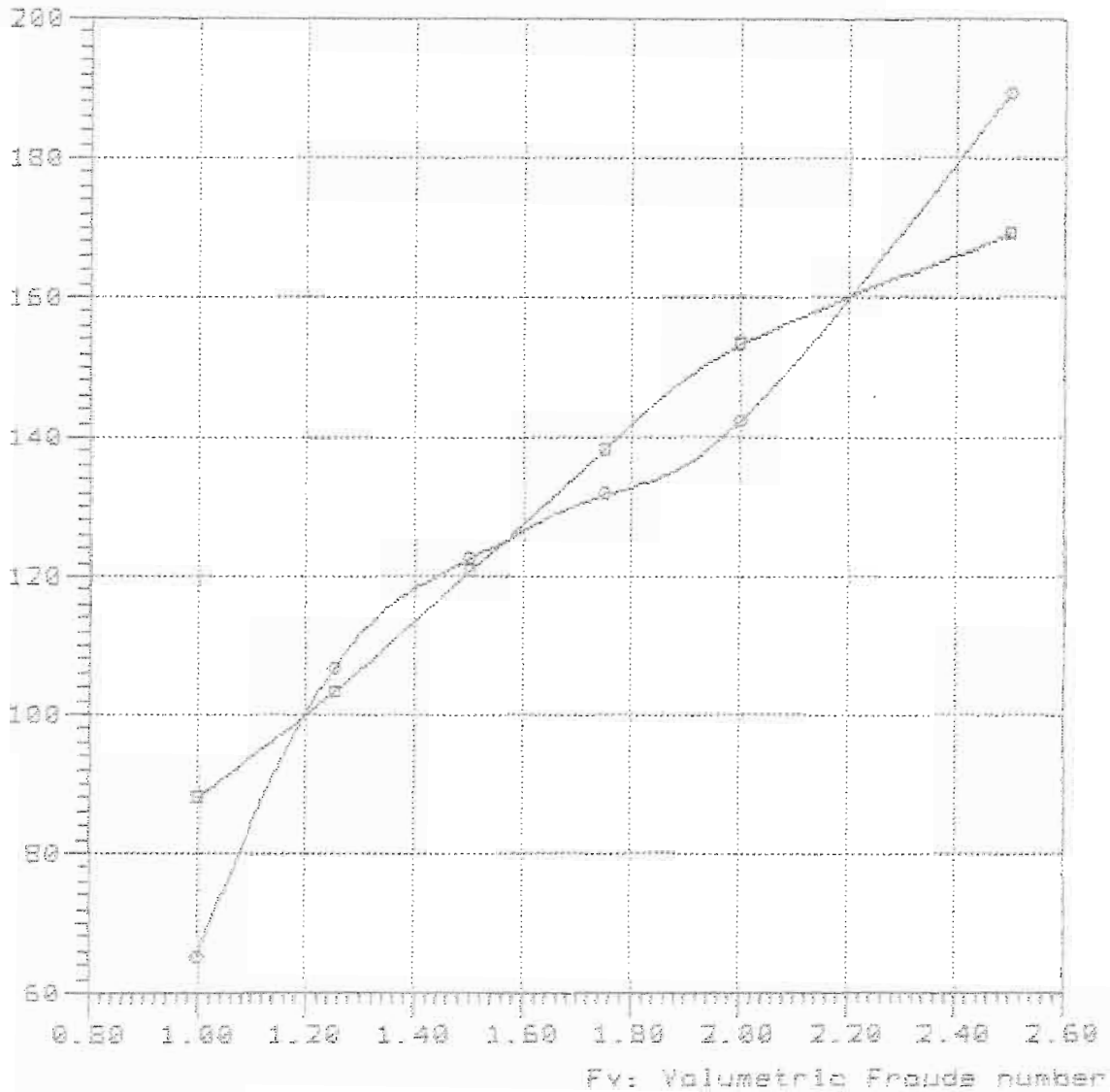
Volumetric Froude number

File: 6-60-348.mdl

Date: 1 Mar 00

Time: 17:30

Rbare: Bare-hull resistance (lbs)

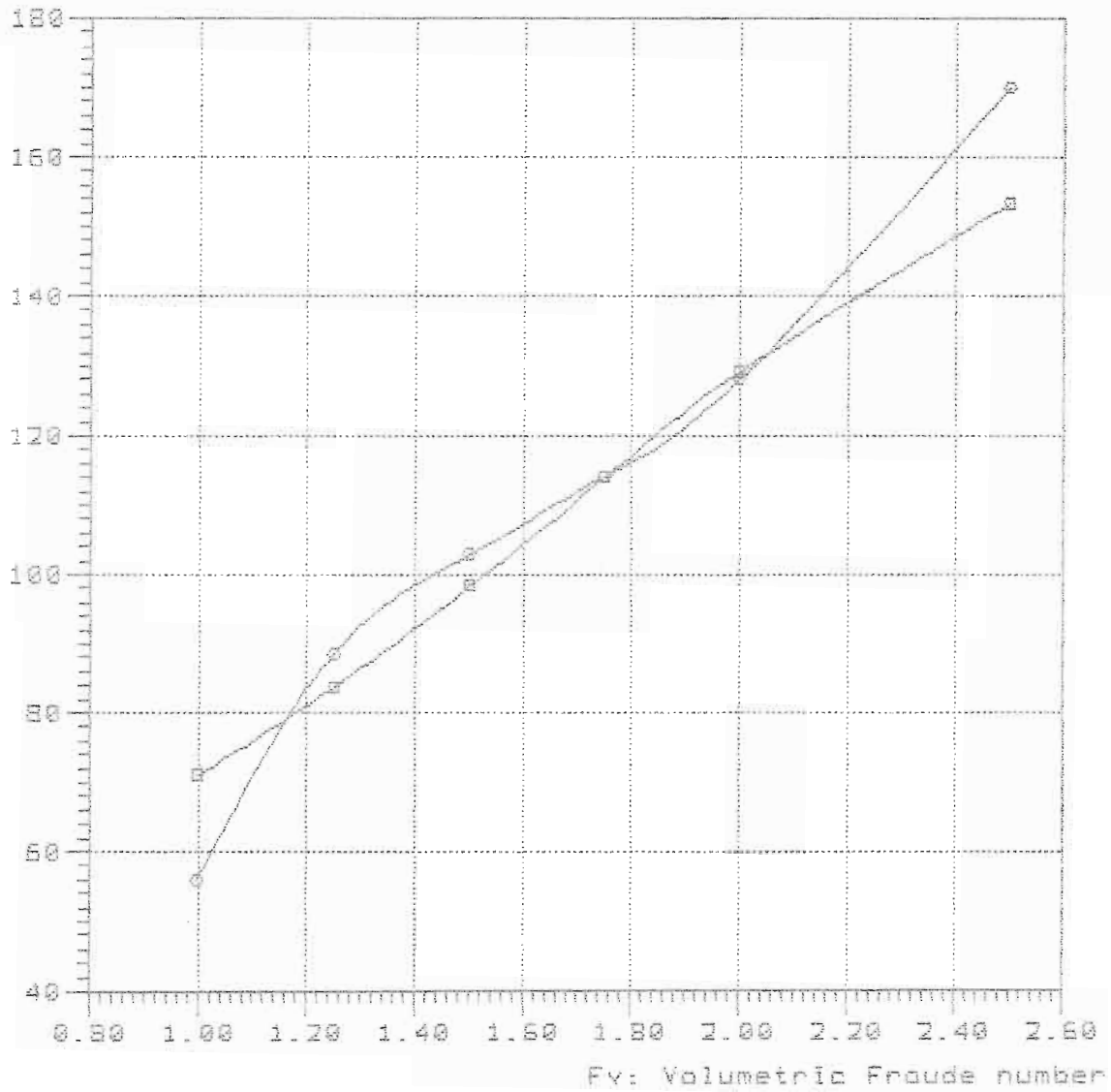


Curve legend

—□—

—○— TNB-65B Lpx/Bpx=4.650 Ap/Vol=5.650 Lpx/Ap=6.372 Log/Lpx=0.340

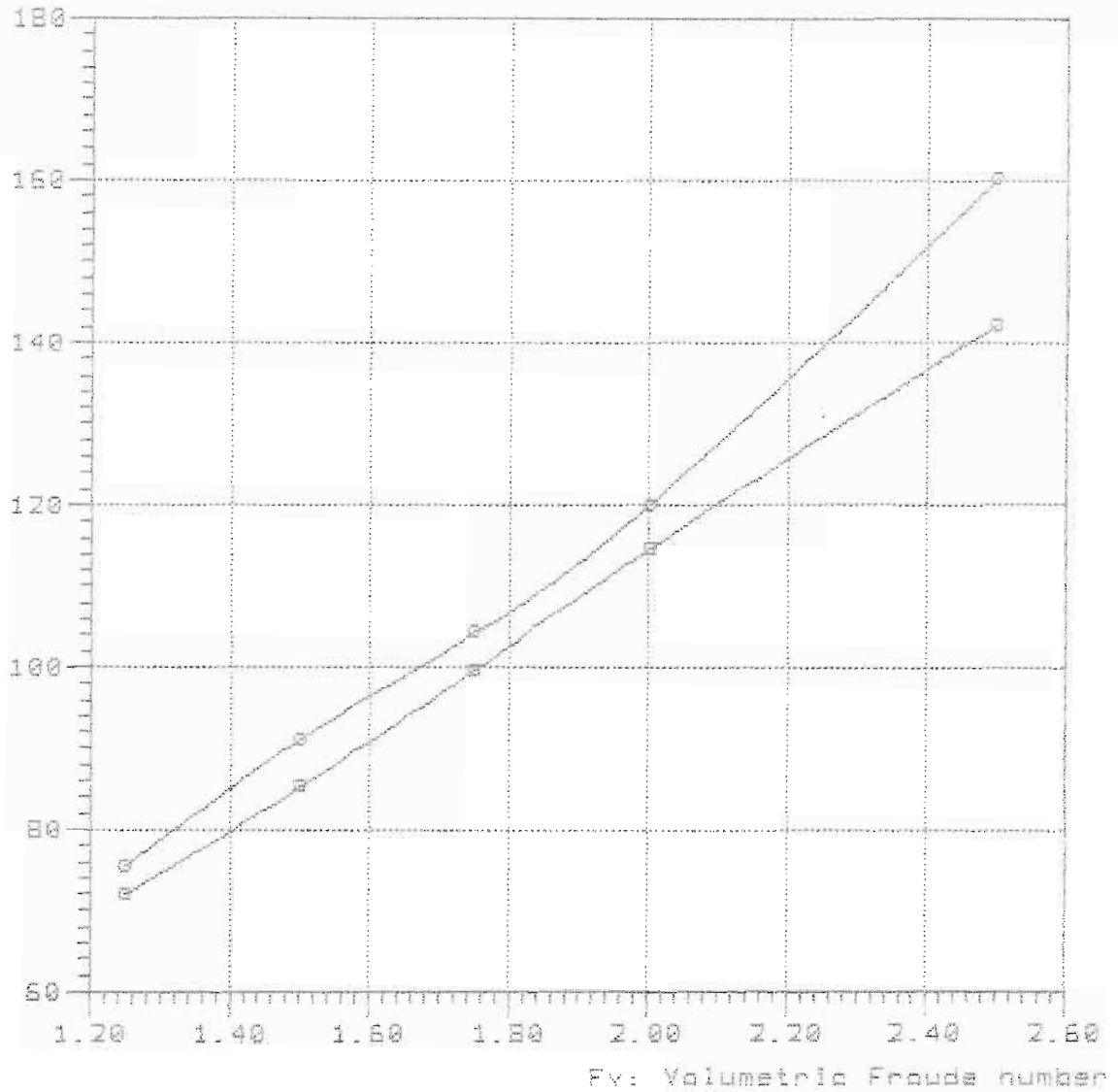
Rbare: Bare-hull resistance (lbs)



—□—

—○— TME-65B Lpx/Bpx=4.690 Ap/Vol=5.650 Lpx/Ap=6.373 Log/Lpx=0.380

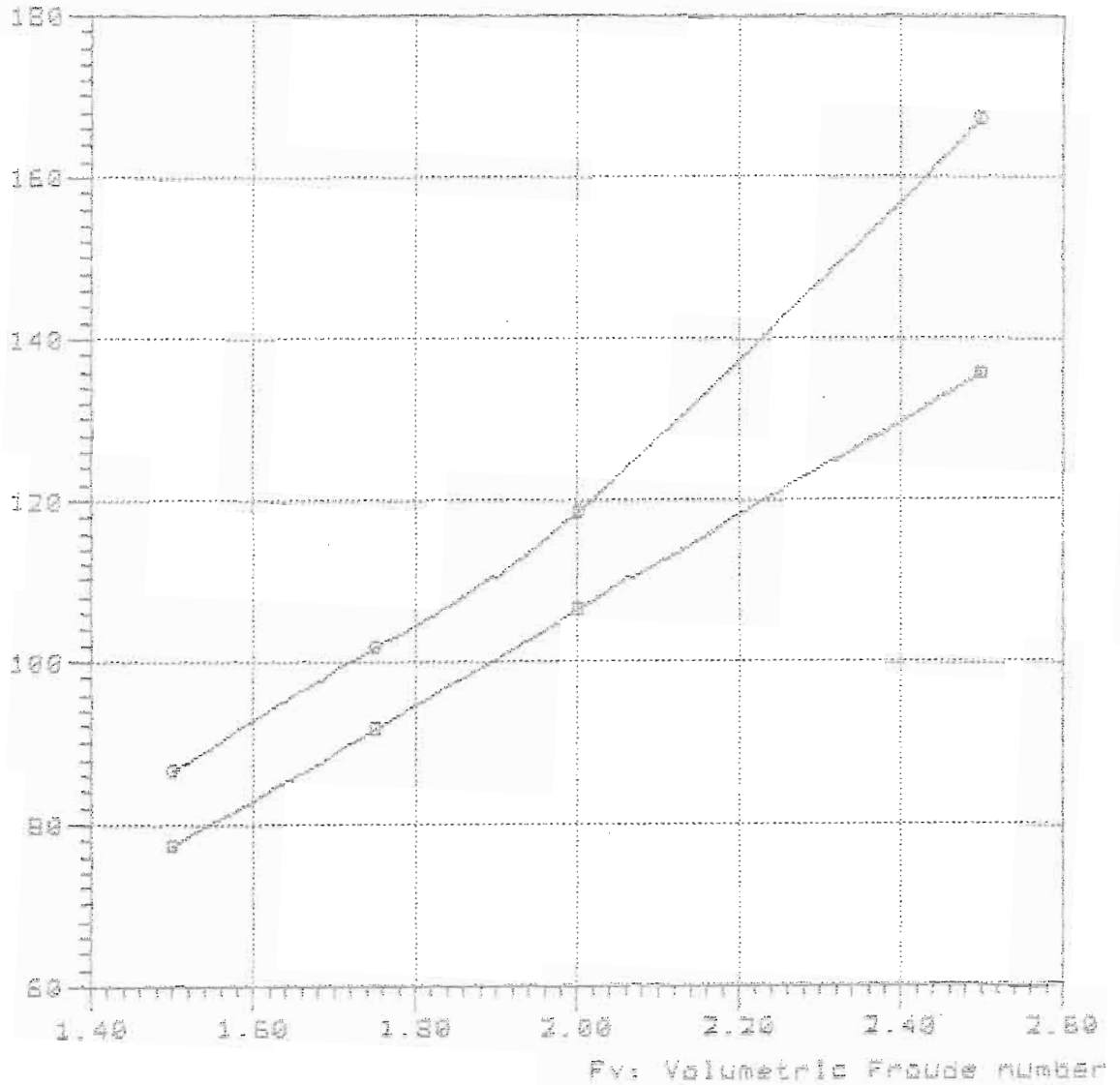
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-55B Lpx/Epx=4.690 Ap/Val=5.650 Lpx/Ap=6.372 Lcg/Lpx=0.420

Rbare: Bare-pull resistance (lbs)

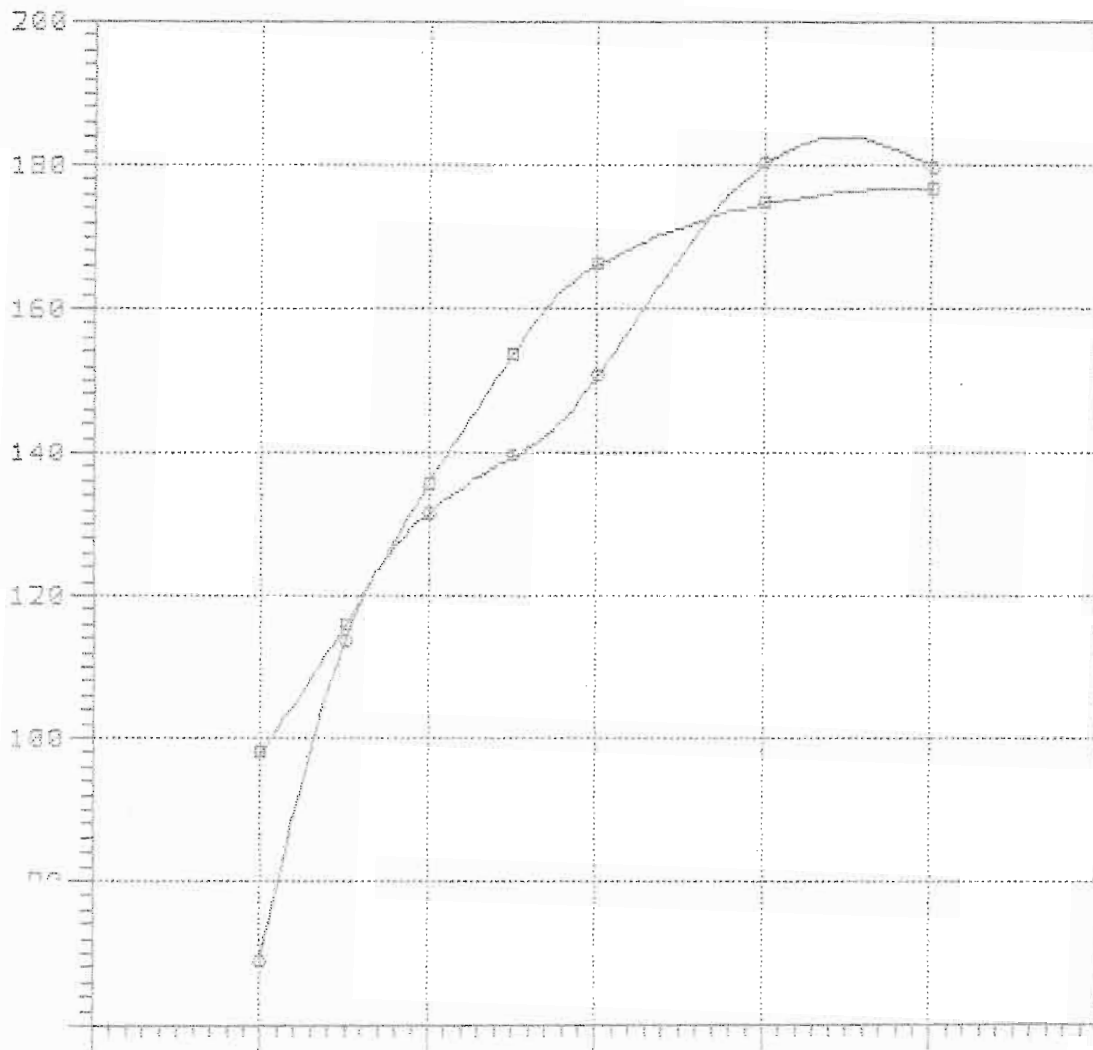


—■— TMB-65% Lpx/Bpx=4.698 Ap/Vol=5.658 Lpx/Sp=6.372 Log/Lpx=0.468

Model	=	5184
Ref	=	NSRDC
Friction	=	<del>A</del> TTC Ca=4e-4
Lpx	=	16.200 ft
Lwl	=	16.005 ft
Bpx	=	3.454 ft
Ap	=	41.186 sqft
Vcg	=	1.062 ft
Disp.	=	1000.00 Lb
Deadrise	=	28.70 degree
Twist Angle	=	6.20 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc

Lpx/Bpx	=	4.690
Lpx/Ap	=	6.372
Ap /Vol	=	6.589
Lpx/Vol	=	6.482
Cvload	=	0.379
Lbload	=	0.030
Disp-Lpx	=	105.004

Rbare: Bare-hull resistance (lbs)



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—○—

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### Bare-hull resistance

vs.

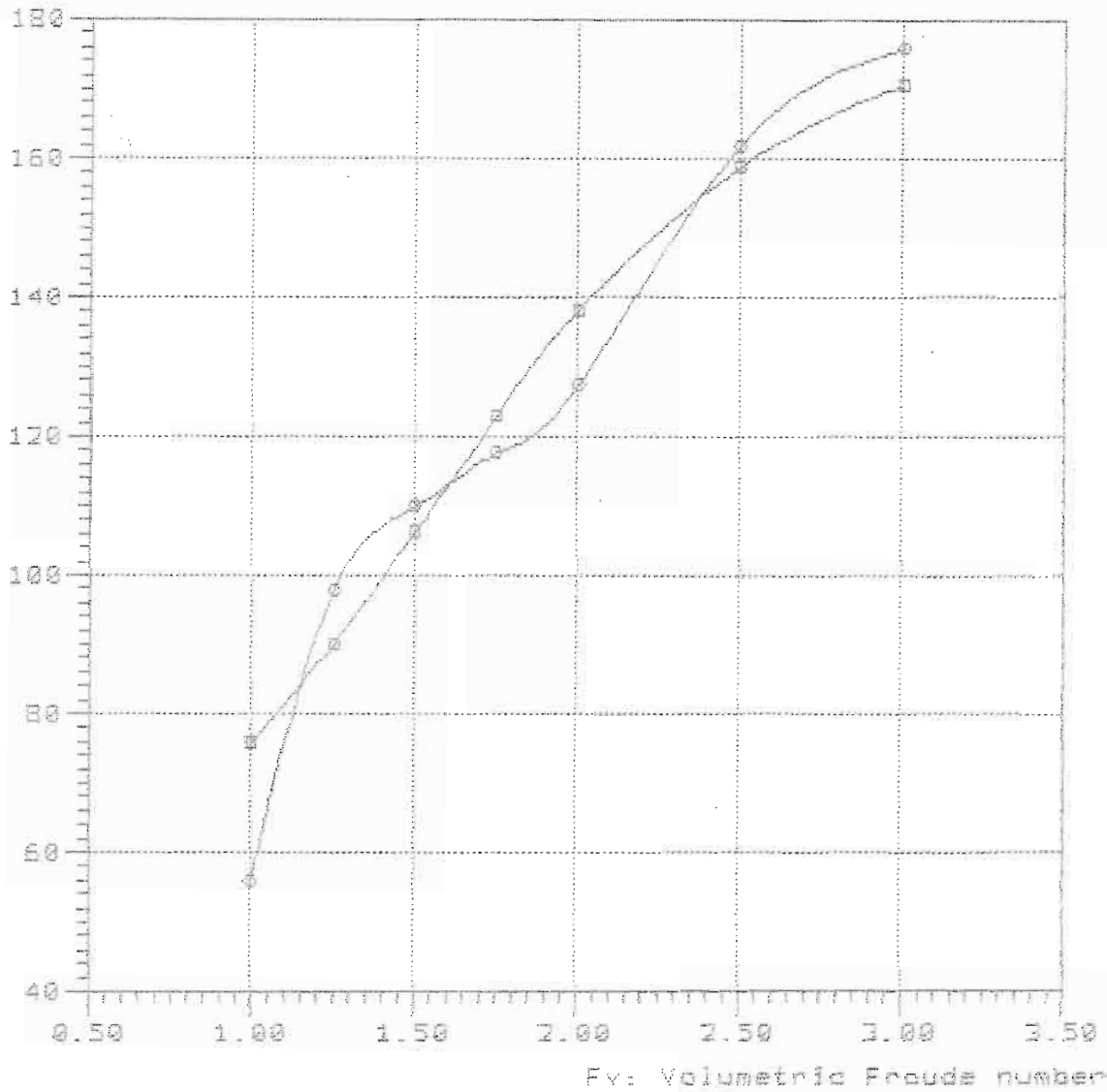
### Volumetric Froude number

File: 7-85-340.mdl

Date: 1 Mar 98

Time: 17:46

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-65B Lpx/Bpx=4.690 Ap/Vol=6.590 Lpx/Ap=6.372 Log/Lpx=0.340



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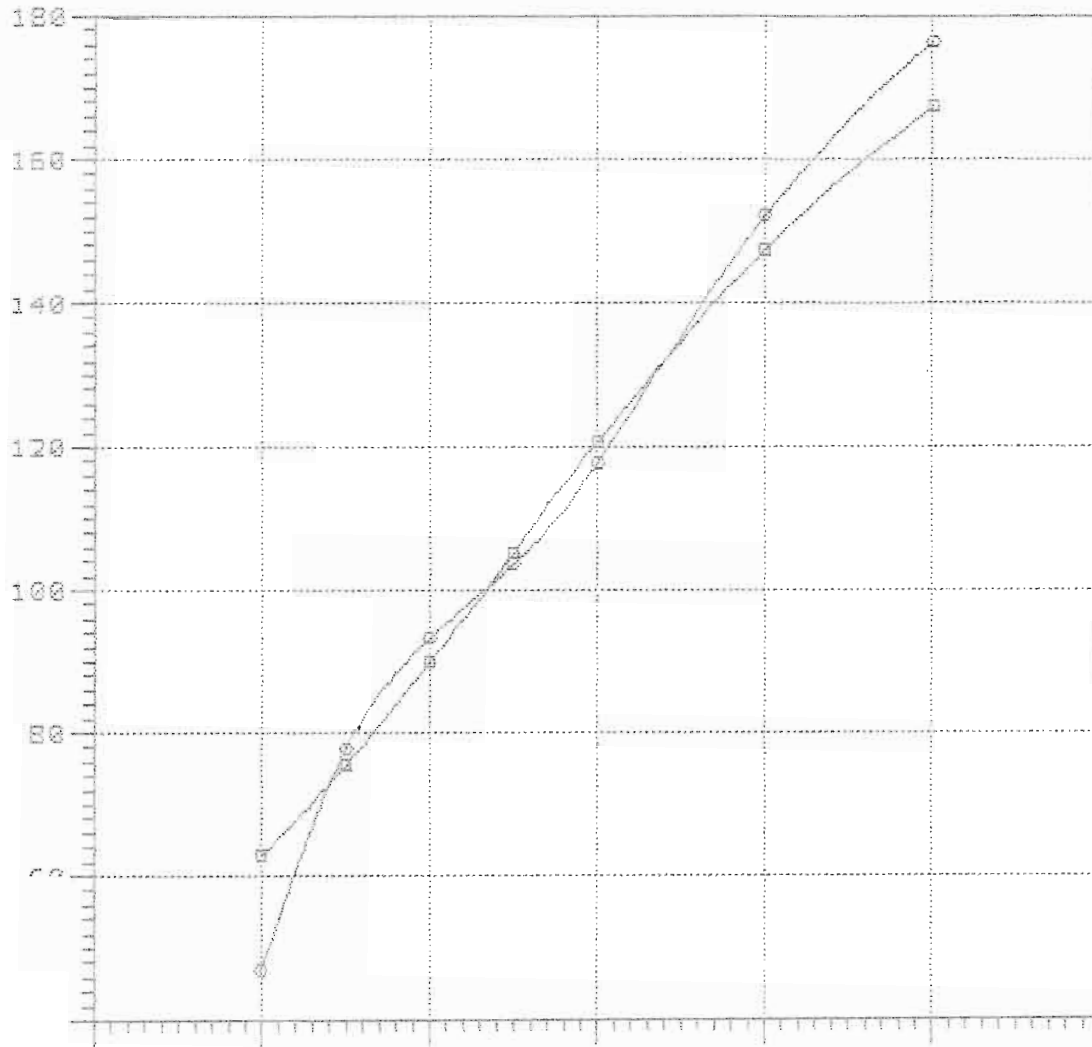
HydroComp, Inc.

File: 7-65-388.mdl

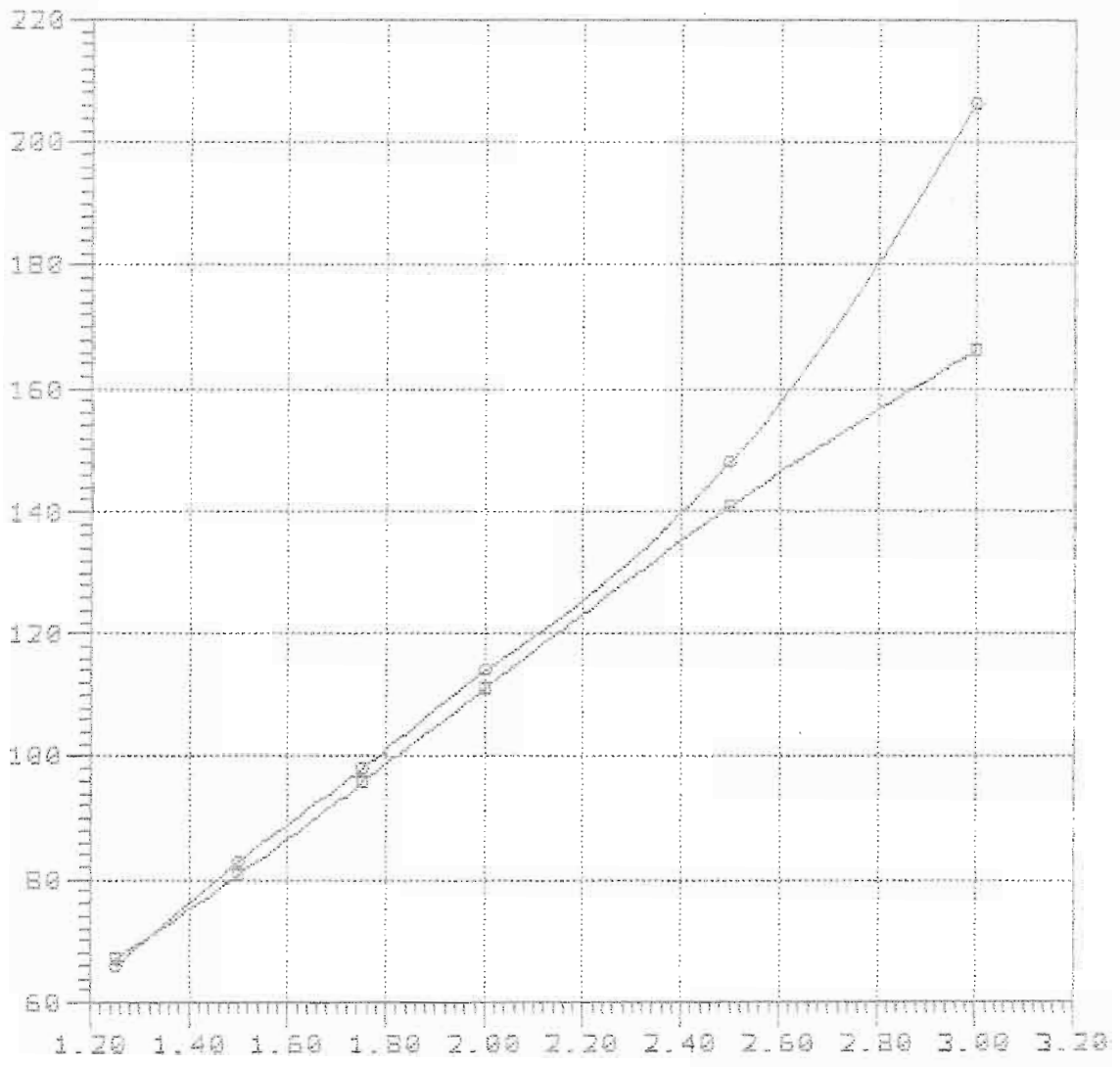
Date: 1 Mar 88

Time: 17:47

Rbare: Bare-hull resistance (lbs)



Rbare: Bare-hull resistance (lba)

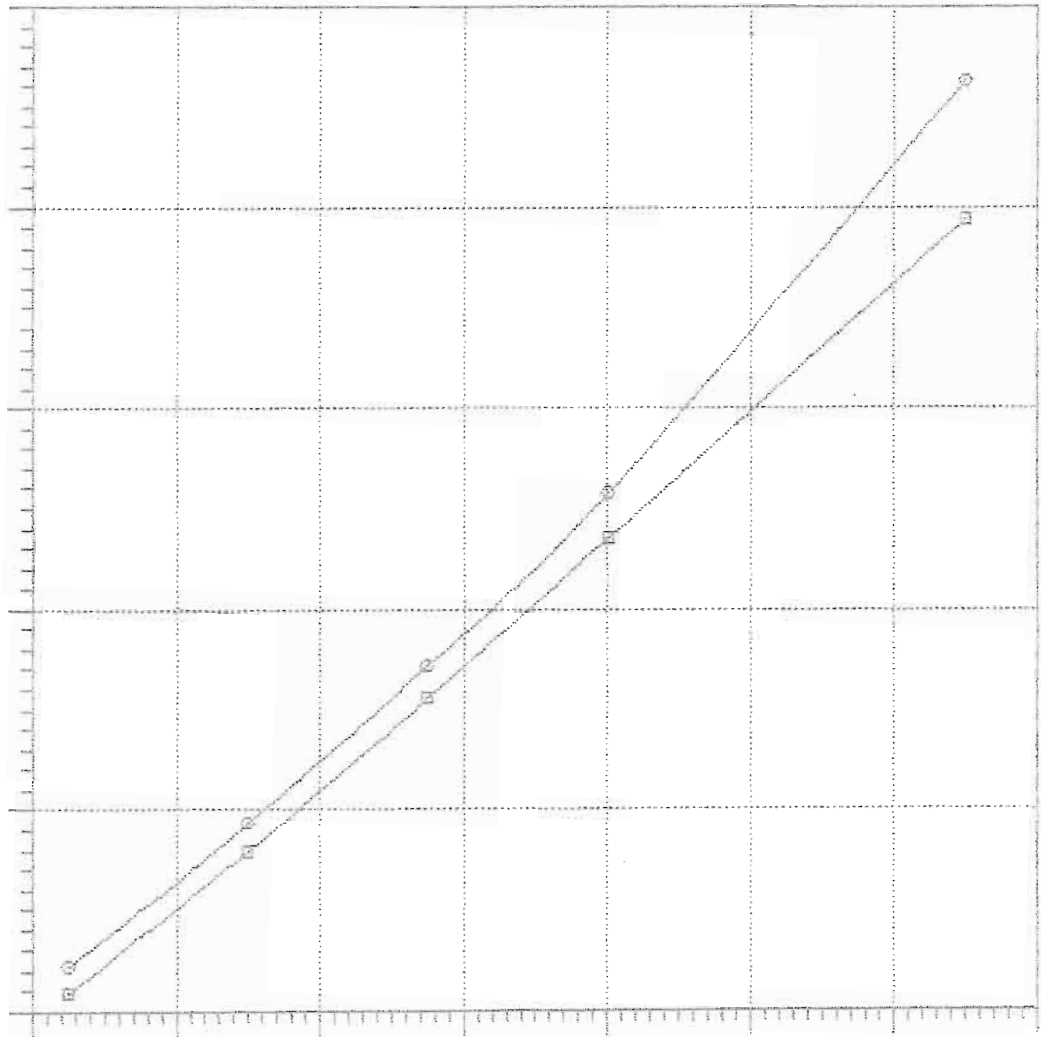


Fv: Volumetric Froude number



TMB-658 Lpx/Bpx=4.690 Ap/Vol=6.590 Lpx/Ap=6.372 Lcg/Lpx=0.420

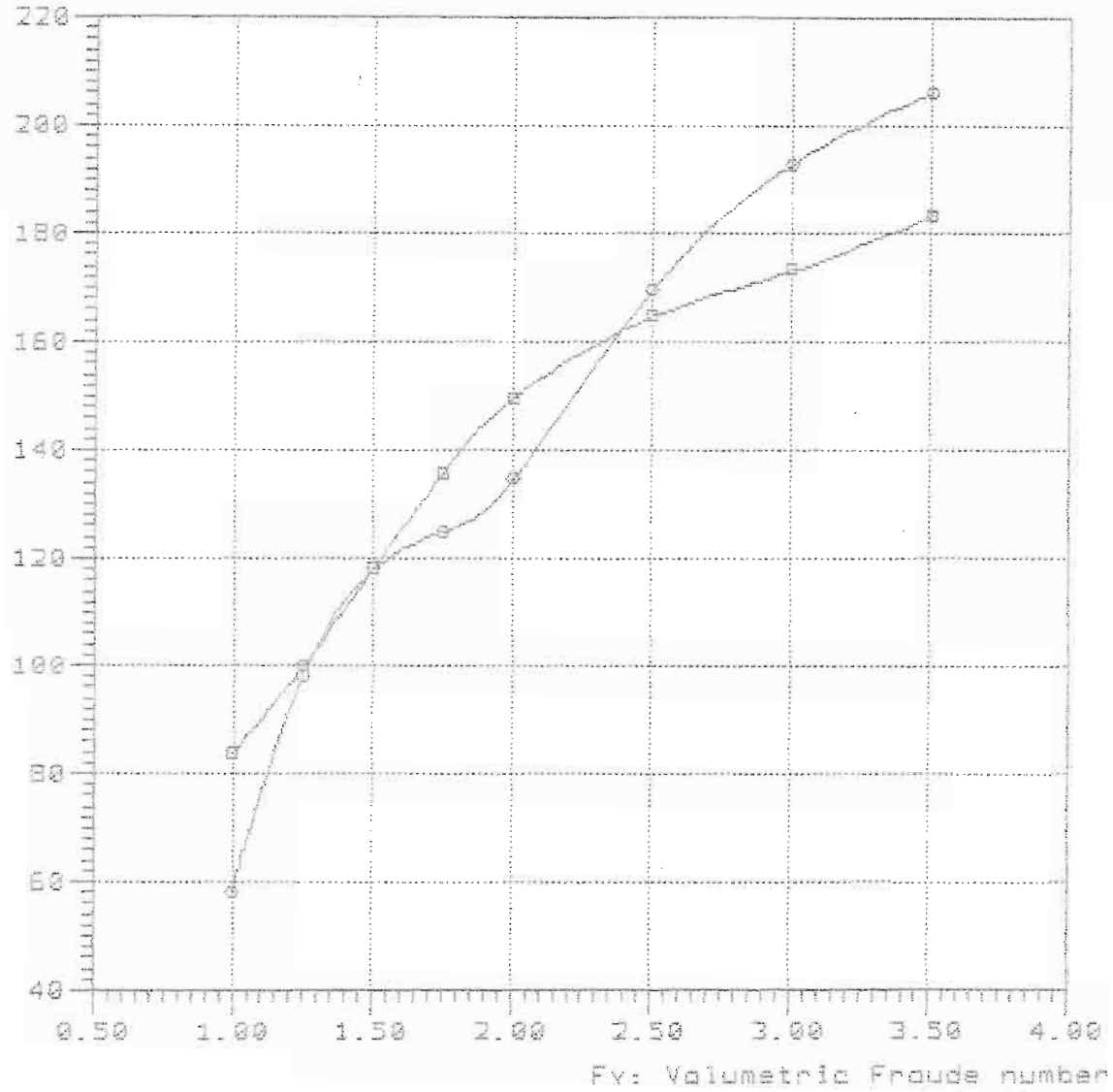
7-65-460



—○—  
—□—

Model	=	5184
Ref	=	NSRDC
Friction	=	ATTC Ca=4e-4
Lpx	=	17.500 ft
Lwl	=	17.289 ft
Bpx	=	3.731 ft
Ap	=	48.062 sqft
Vcg	=	1.147 ft
Disp.	=	1000.00 Lb
Deadrise	=	28.70 degree
Twist Angle	=	6.20 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.690
Lpx/Ap	=	6.372
Ap /Vol	=	7.689
Lpx/Vol	=	7.002
Cvload	=	0.301
Lbload	=	0.024
Disp-Lpx	=	83.299

Rbare: Bare-hull resistance (lbs)

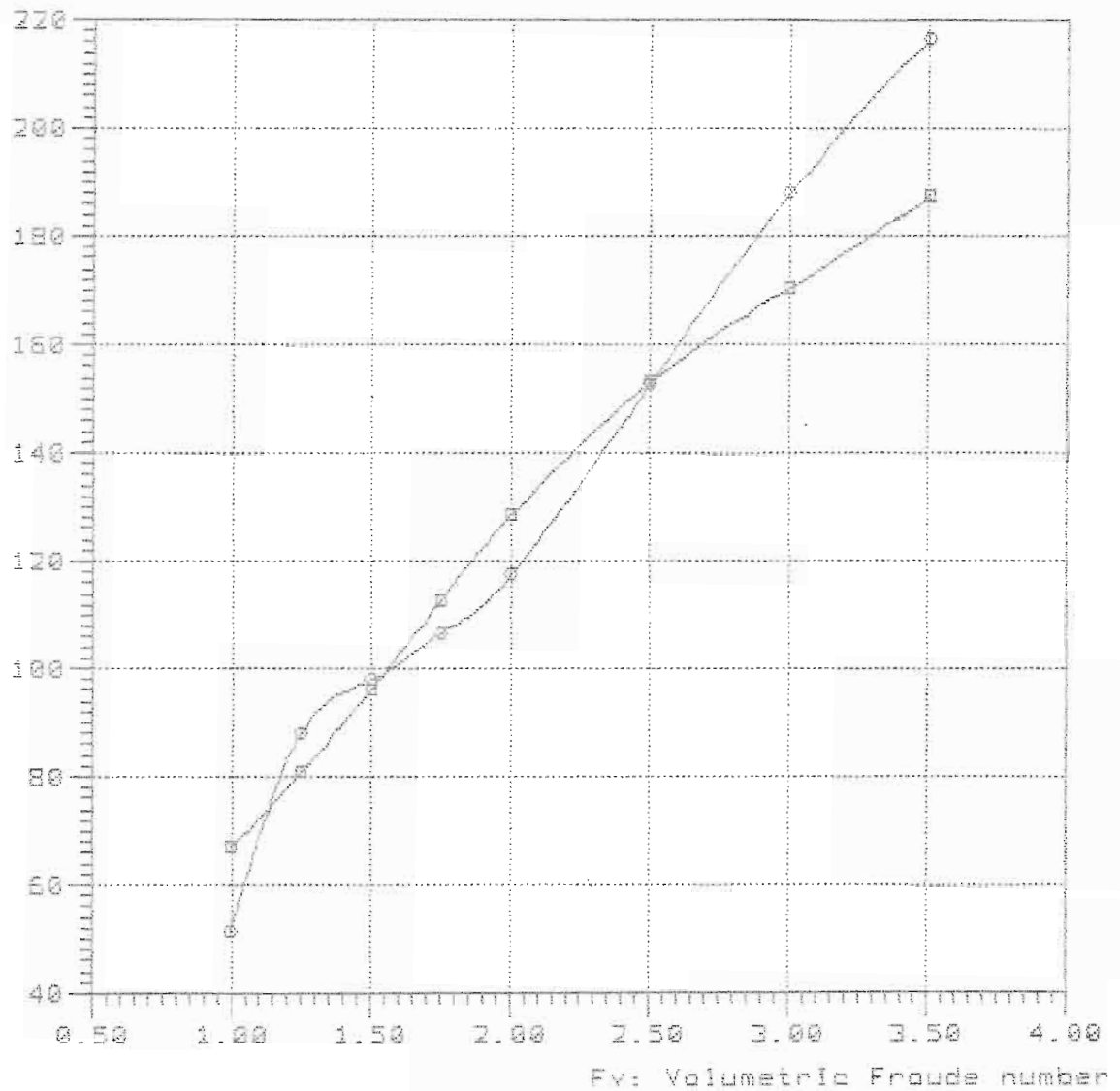


Curve legend

—□—

—○— TMB-63B Lpx/Bpx=4.650 Ap/Vol=7.690 Lpx/Ap=6.372 Lcg/Lpx=0.300

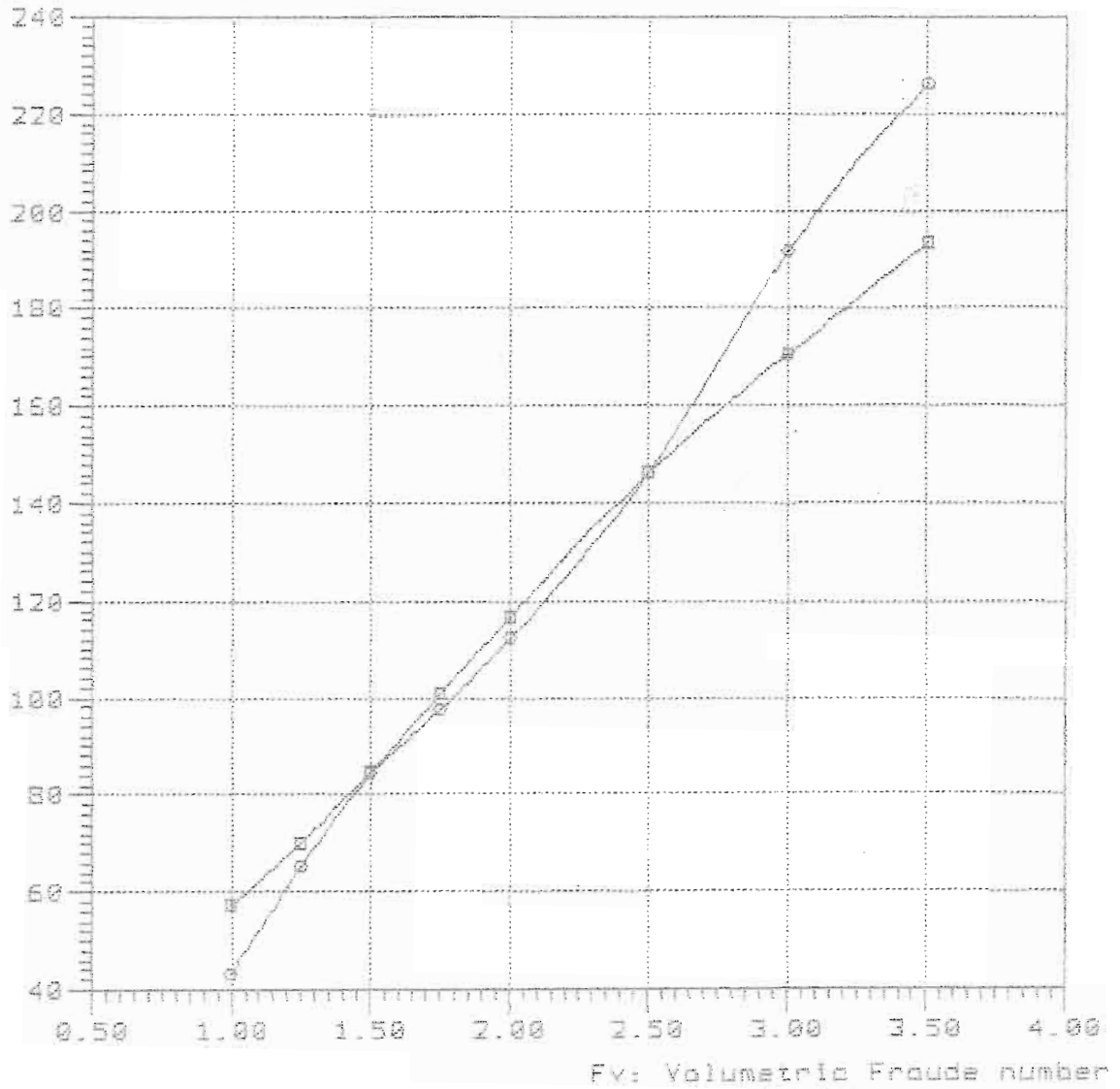
Rbare: Bare-hull resistance (lbs)

Curve legend

—■—

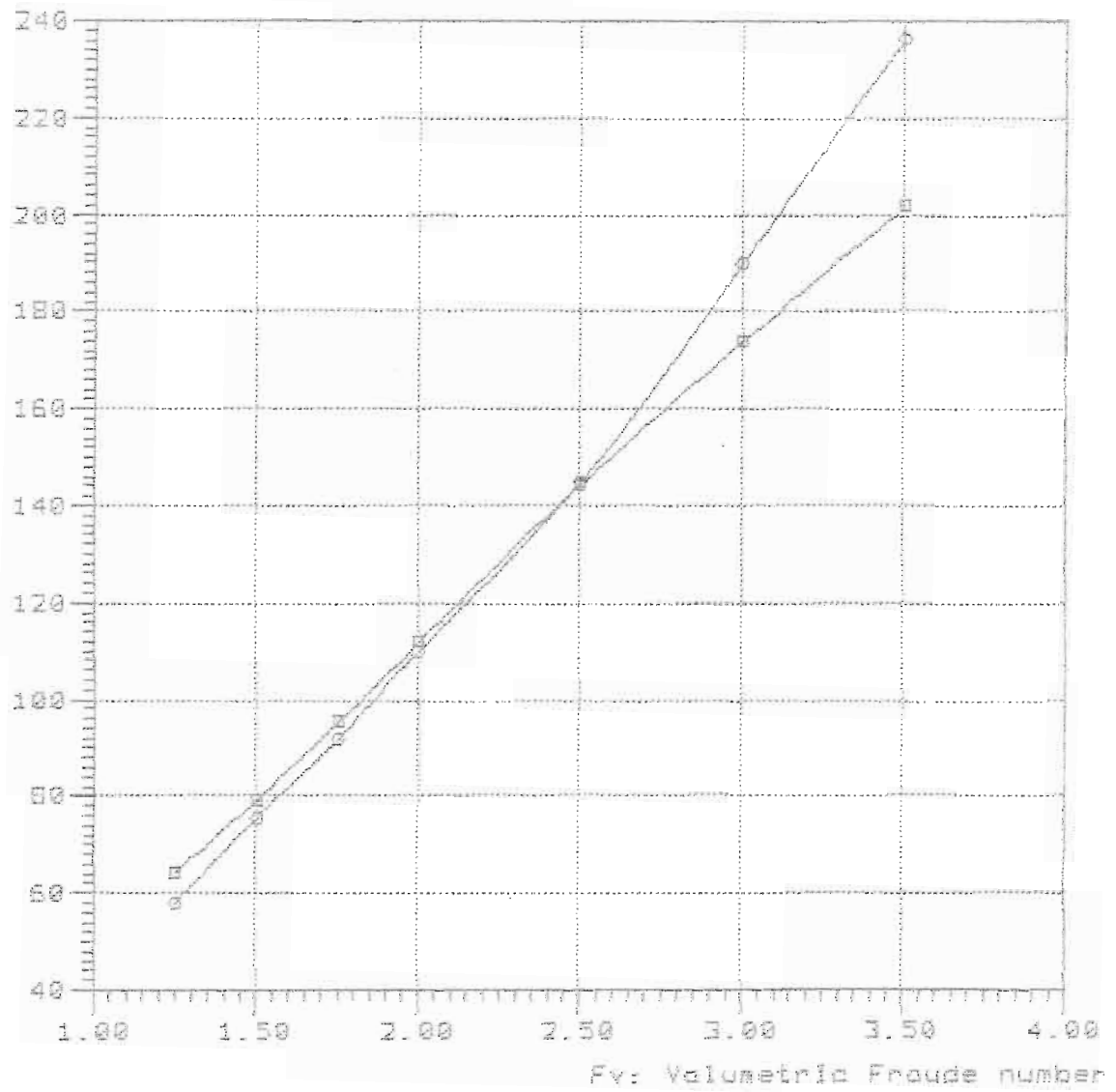
—●— TMB-65B Lpx/Bpx=4.690 Ap/Vol=7.690 Lpx/Ap=6.372 Lcg/Lpx=0.340

Rbare: Bare-hull resistance (lba)



—■—  
—●— TMB-53B Lpx/Bpx=4.690 Ap/Vol=7.690 Lox/Rp=6.372 Log/Lpx=0.380

Rbare: Bare-hull resistance (lbs)

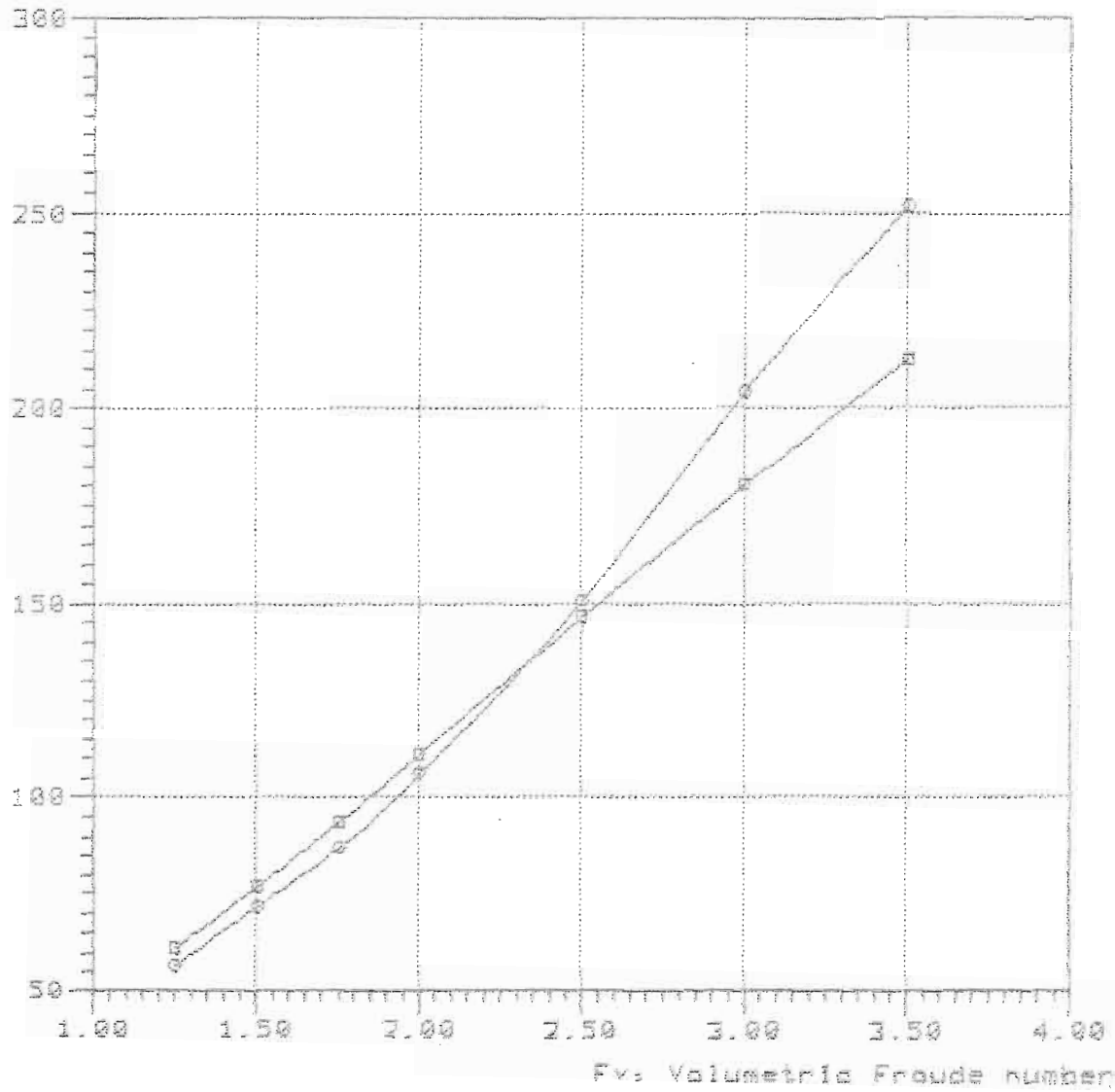


—□—

—○— 7MB-65B Lpx/Bpx=4.690 Ap/Val=7.690 Lpx/Ap=6.372 Lcg/Lpx=0.420



Rbare: Bare-hull resistance (lbs)



7.02.000 Lpx/Sp=4.000 Ap/Wal=7.000 Lpx/Rp=6.272 Log/Lpx=0.459

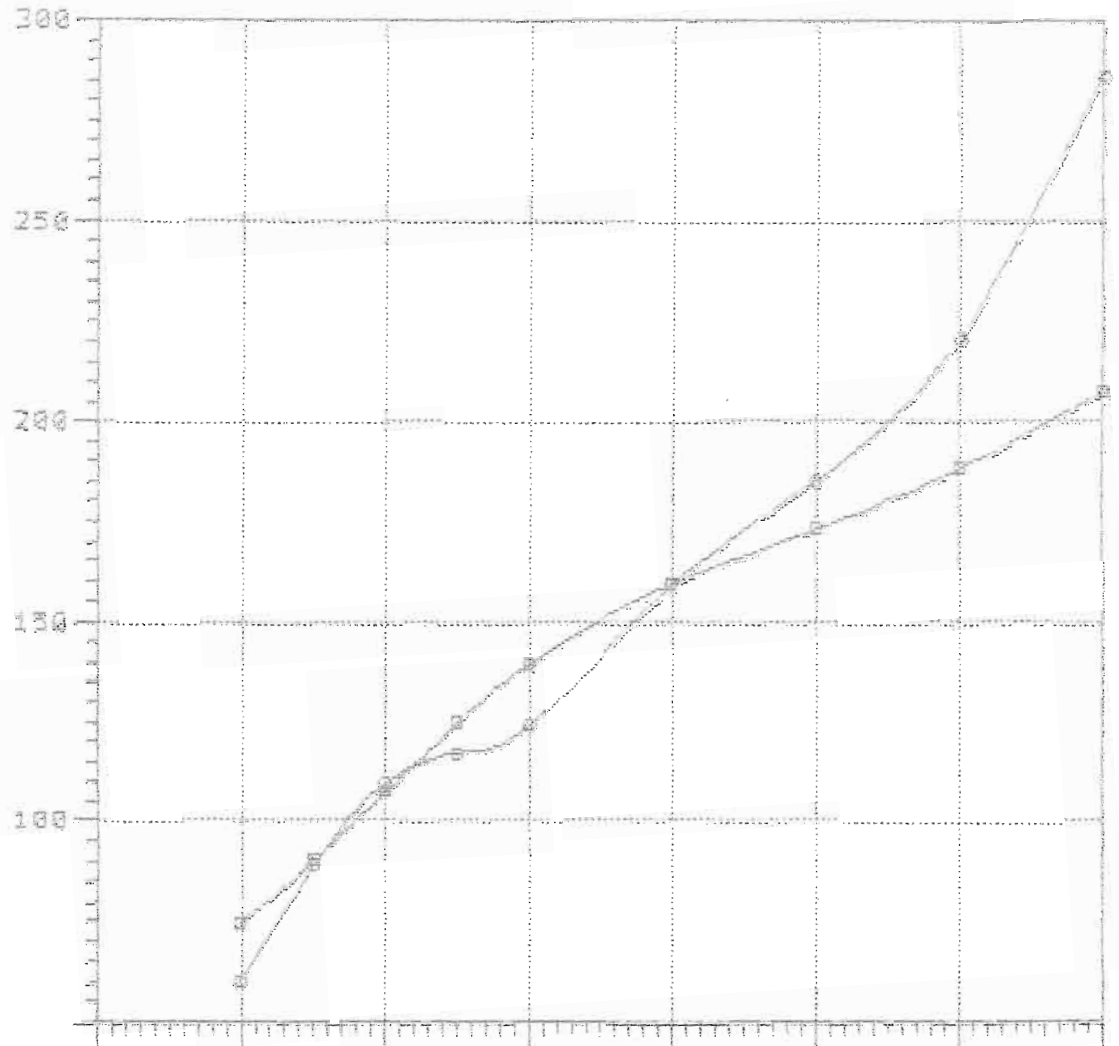
Model	=	5184
Ref	=	NSRDC
Friction	=	ATTC Ca=4e-4
Lpx	=	18.700 ft
Lwl	=	18.475 ft
Bpx	=	3.987 ft
Ap	=	54.879 sqft
Vcg	=	1.226 ft
Disp.	=	1000.00 Lb
Deadrise	=	28.70 degree
Twist Angle	=	6.20 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.690
Lpx/Ap	=	6.372
Ap /Vol	=	8.780
Lpx/Vol	=	7.482
Cvload	=	0.247
Lbload	=	0.020
Disp-Lpx	=	68.270

HydroComp, Inc.

Date: 1 Mar 88

Time: 18:04

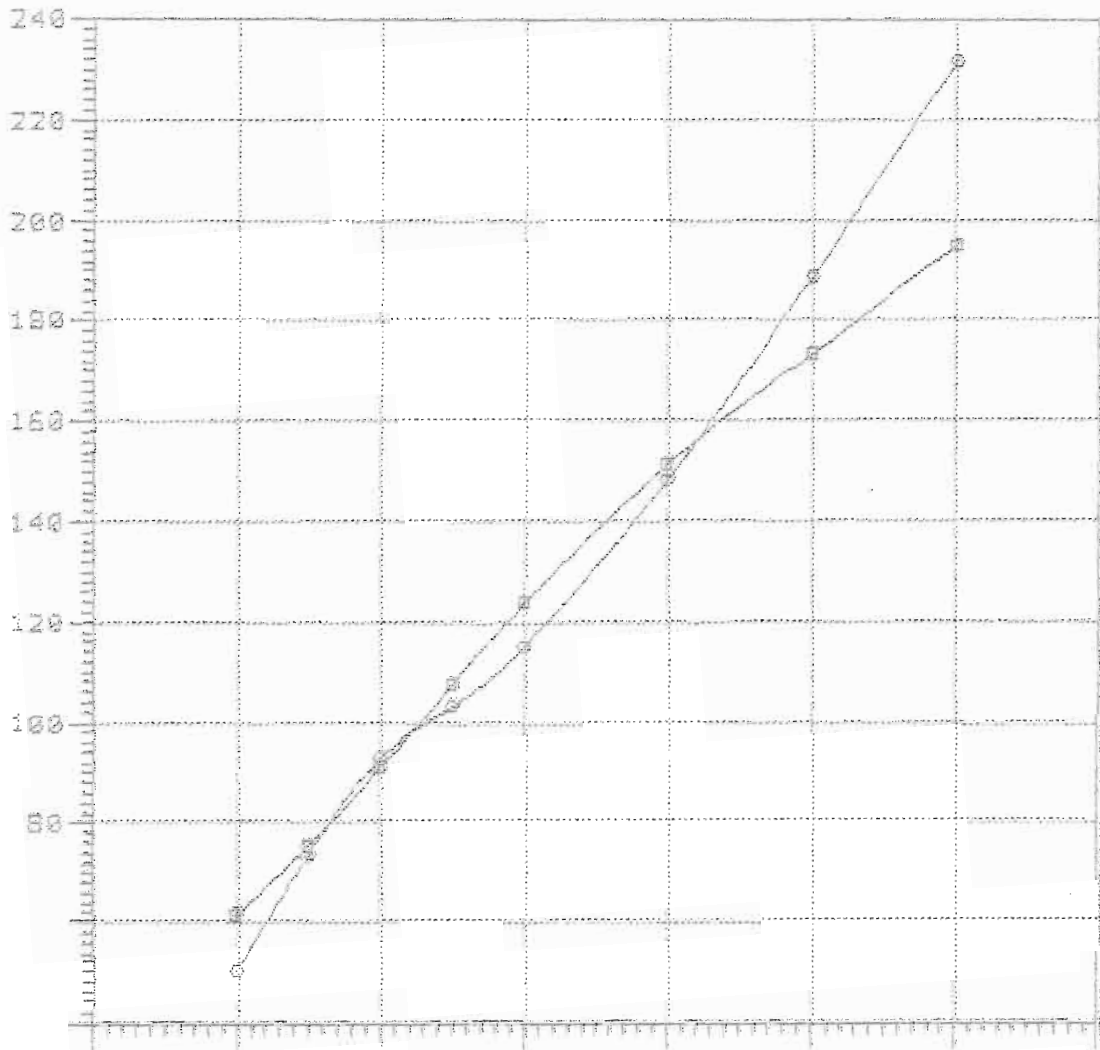
Rbare: Bare-hull resistance (lbs)



—○—

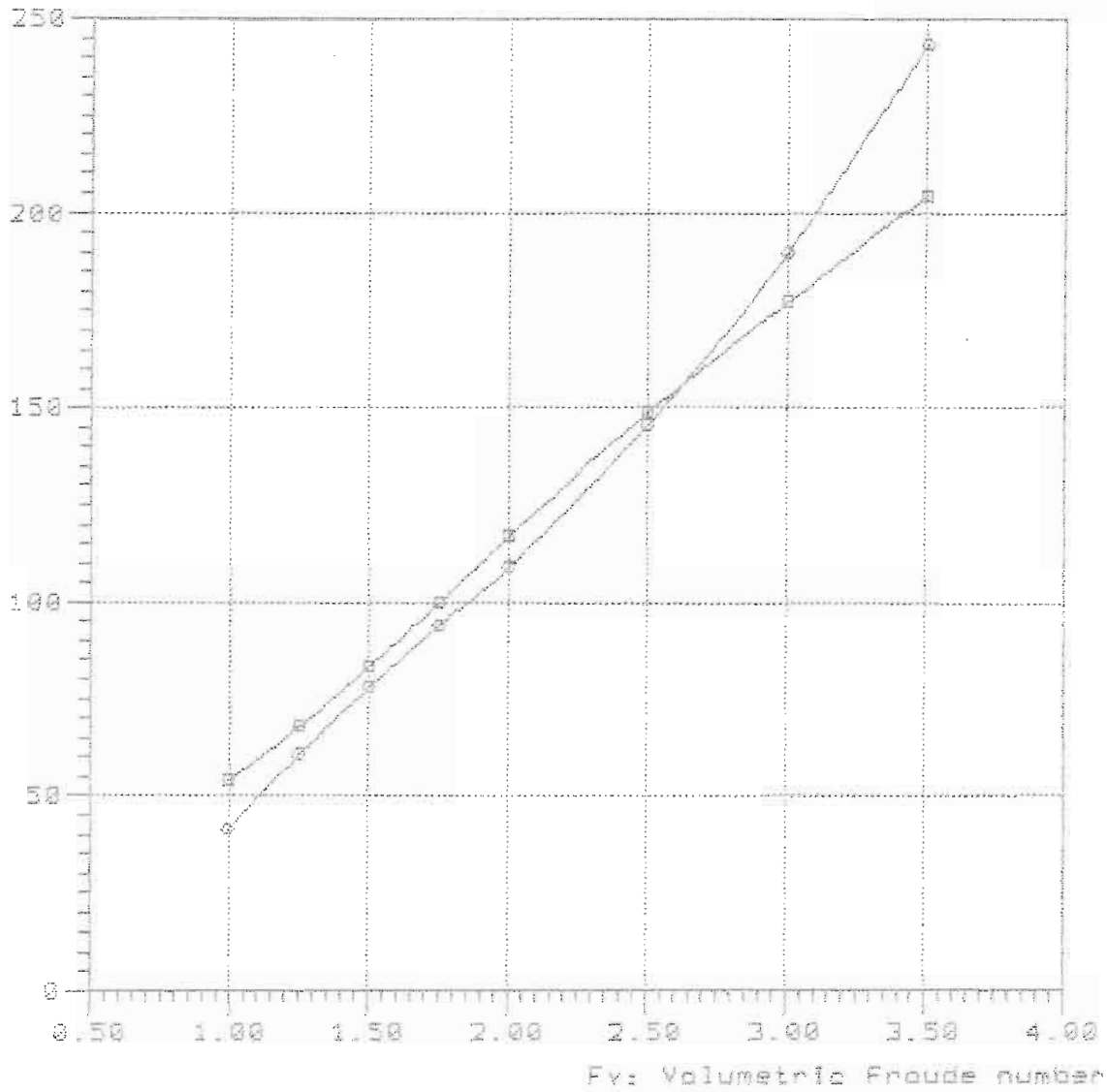
—□—

Rbare: Bare-hull resistance (lbs)



—○—  
—□—

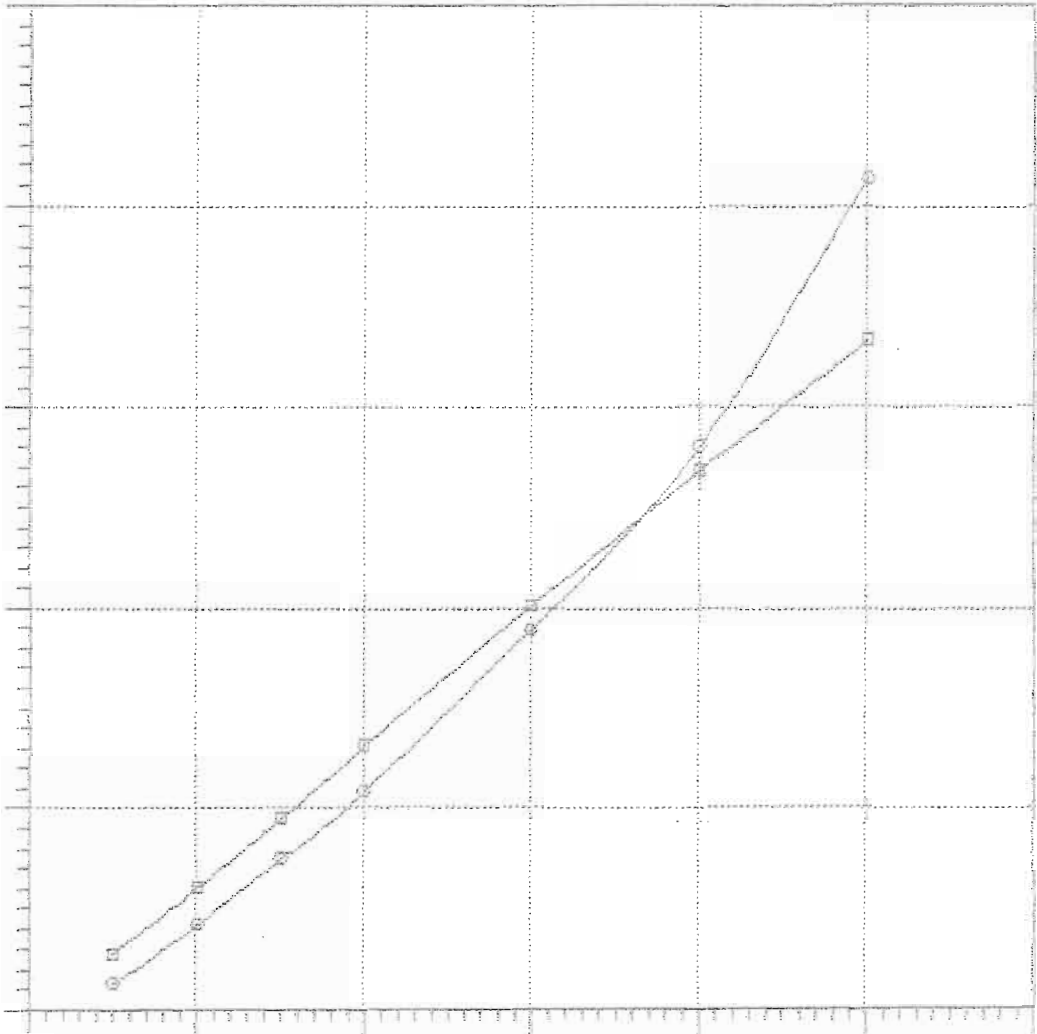
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-658 Lpx/Bpx=4.650 Ap/Vol=8.781 Lpx/Ap=6.372 Lcg/Lox=0.380

9-75-420  
mdl



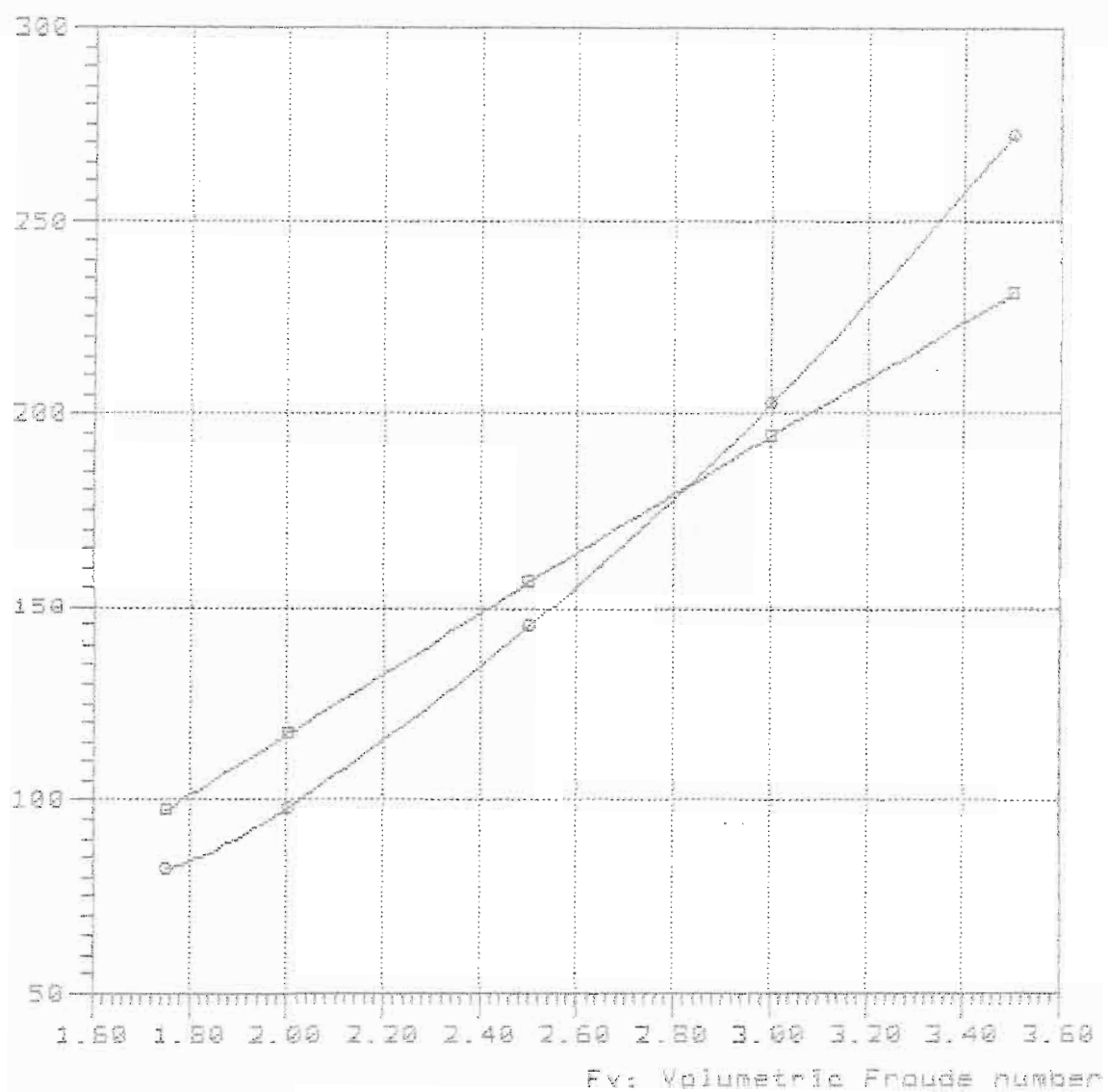
—□—  
—○—

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Bare-hull resistance  
vs.  
Volumetric Froude number

File: 9-75-460.mdi  
Date: 1 Mar 88  
Time: 18:35

Rbare: Bare-hull resistance (lbs)



Curve legend

- 
- TMB-65B Lpx/Bpx=4.690 Ap/Vol=8.781 Lpx/Ap=6.372 Lcg/Lpx=0.468

Model	=	5184
Ref	=	NSRDC
Friction	=	ATTC Ca=4e-4
Lpx	=	20.000 ft
Lwl	=	19.759 ft
Bpx	=	4.264 ft
Ap	=	62.775 sqft

Vcg	=	1.311 ft
Disp.	=	1000.00 Lb
Deadrise	=	28.70 degree
Twist Angle	=	6.20 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc

Lpx/Bpx	=	4.690
Lpx/Ap	=	6.372
Ap /Vol	=	10.043
Lpx/Vol	=	8.002
Cvload	=	0.202
Lbload	=	0.016
Disp-Lpx	=	55.804



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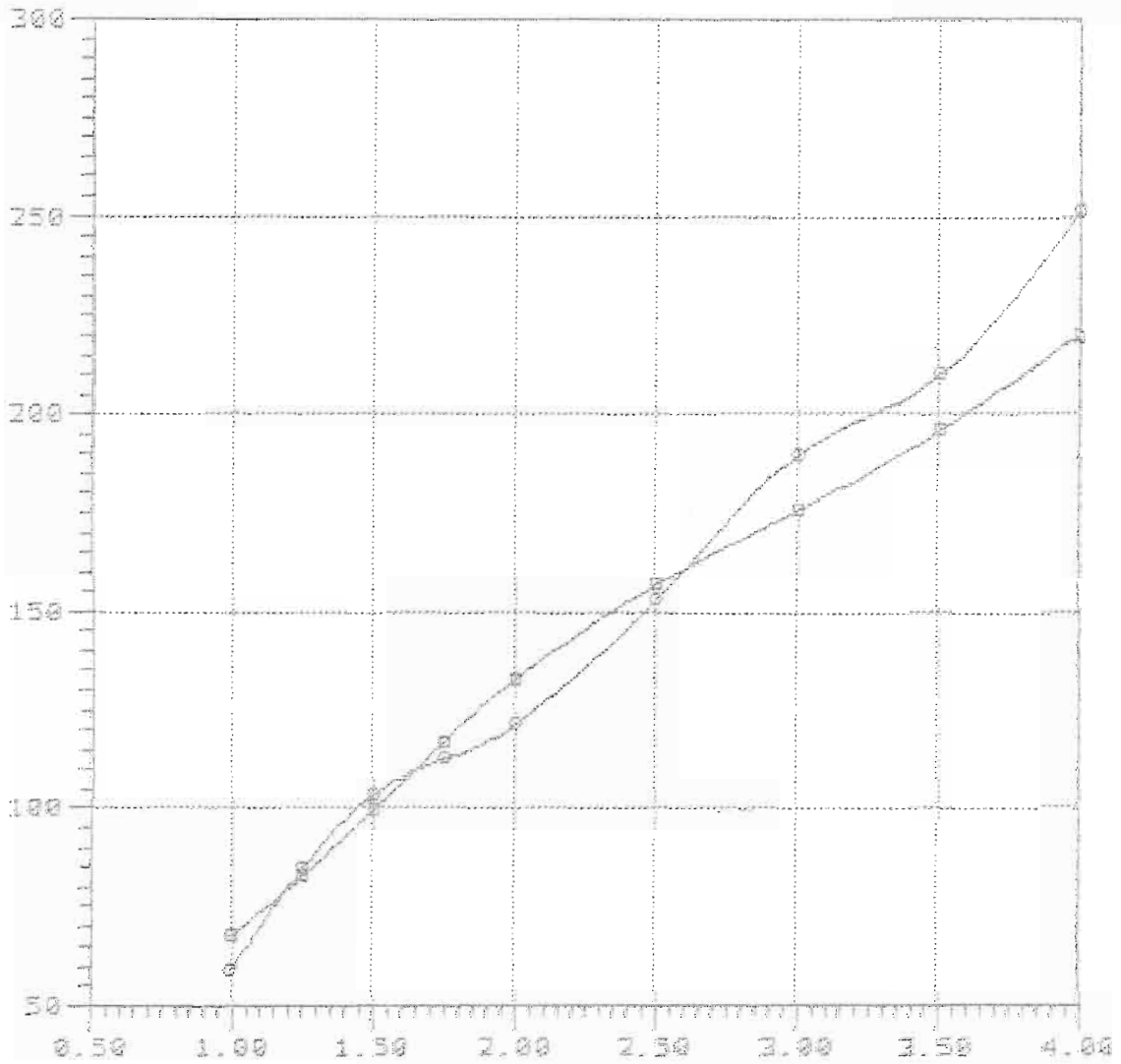
HydroComp, Inc.

File: 10-80-30.mdl

Date: 1 Mar 88

Time: 15:48

Rbare: Bare-hull resistance (lba)

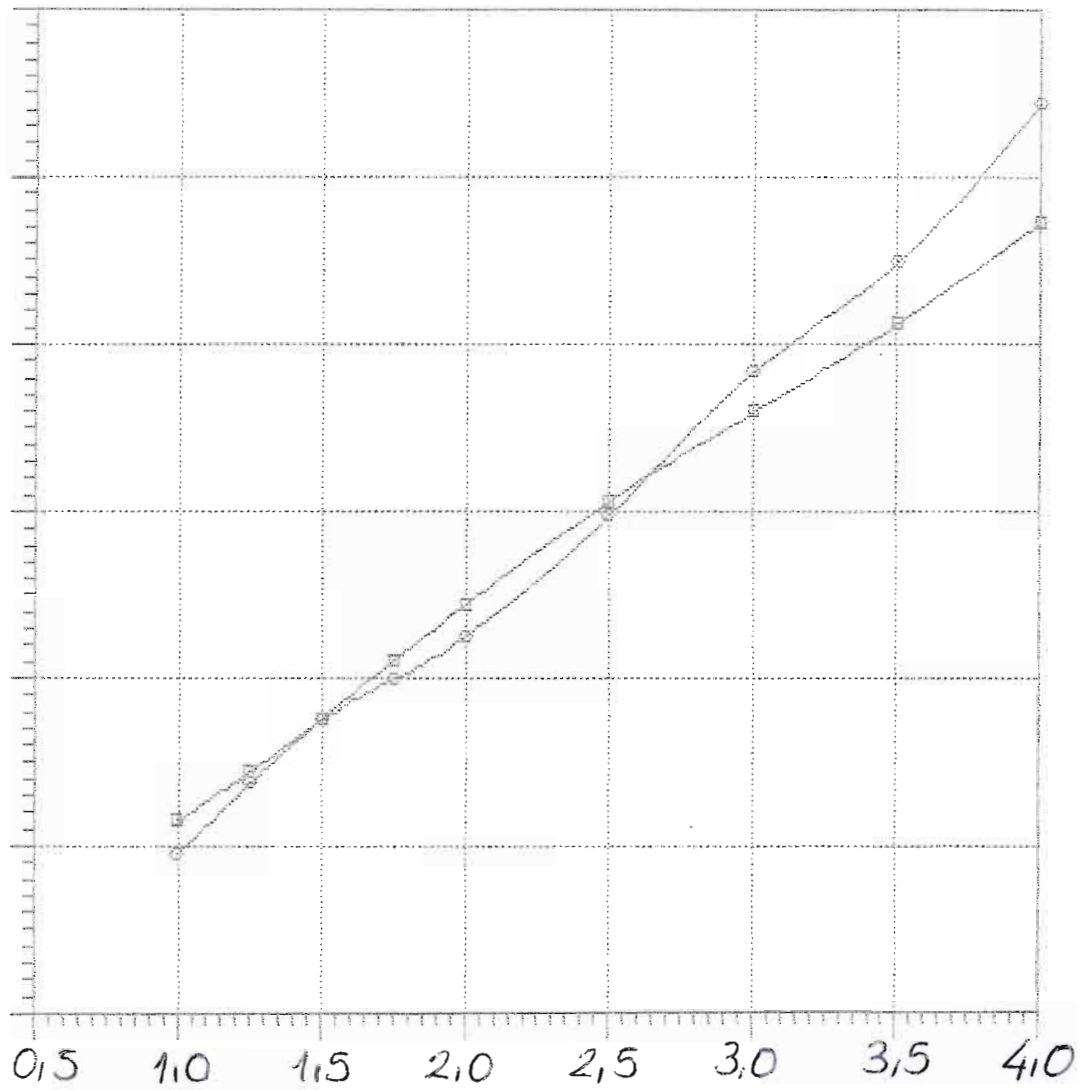


Fx: Volumetric Froude number

—■—

—●— TMB-65B Lpx/Bpx=4.690 Ap/Vol=10.044 Lpx/Ap=6.372 Log/Lpx=0.300

10-80-34  
mdl



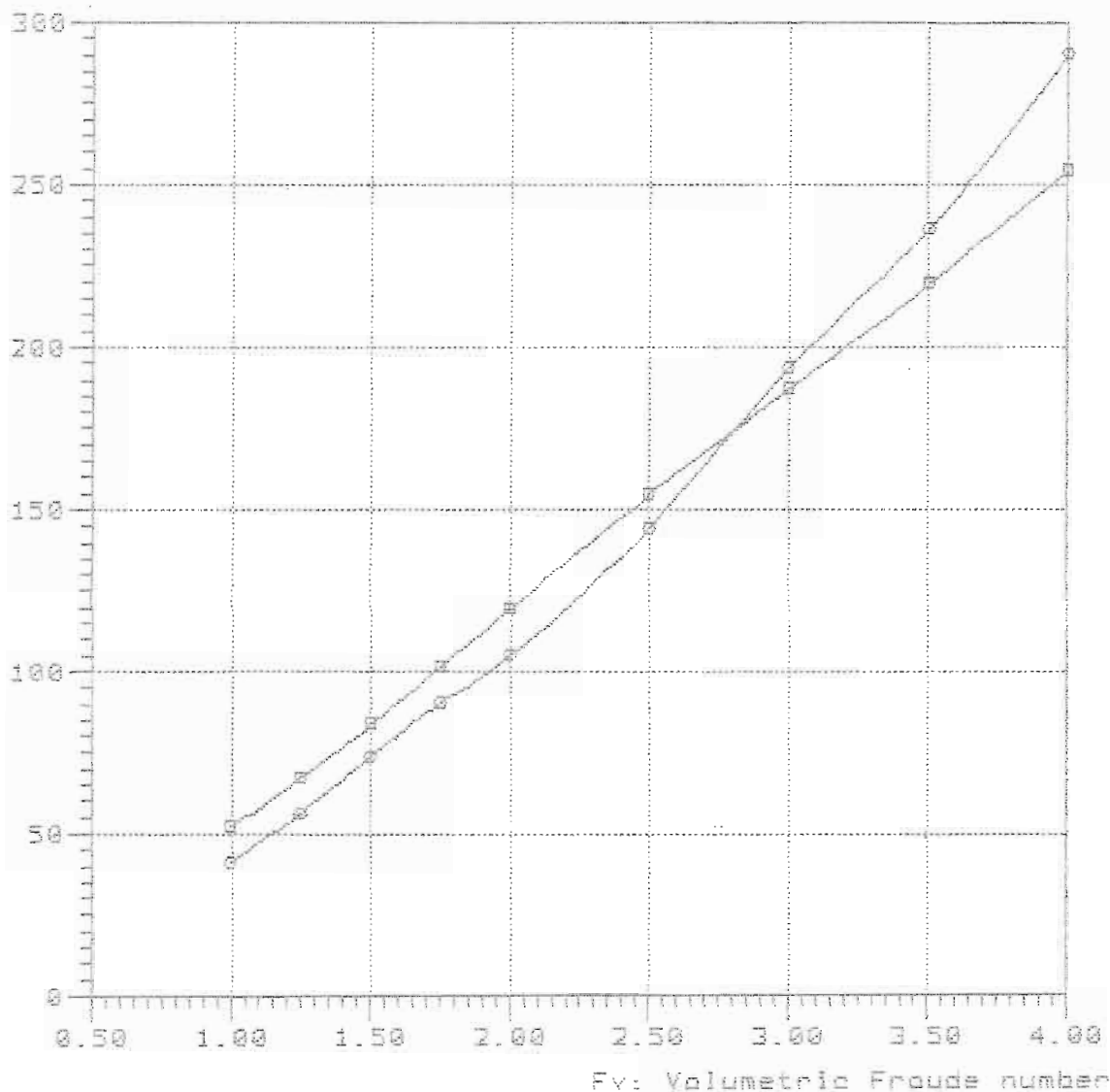
— □ —  
— ○ —

Bare-hull resistance

vs.

Volumetric Froude number

Rbare: Bare-hull resistance (lba)



Curve legend

—■—

—●— TMB-65B Lpx/Bpx=4.690 Ap/Vol=10.044 Lpx/Ap=6.372 Log/Lpx=0.380

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### Bare-hull resistance

vs.

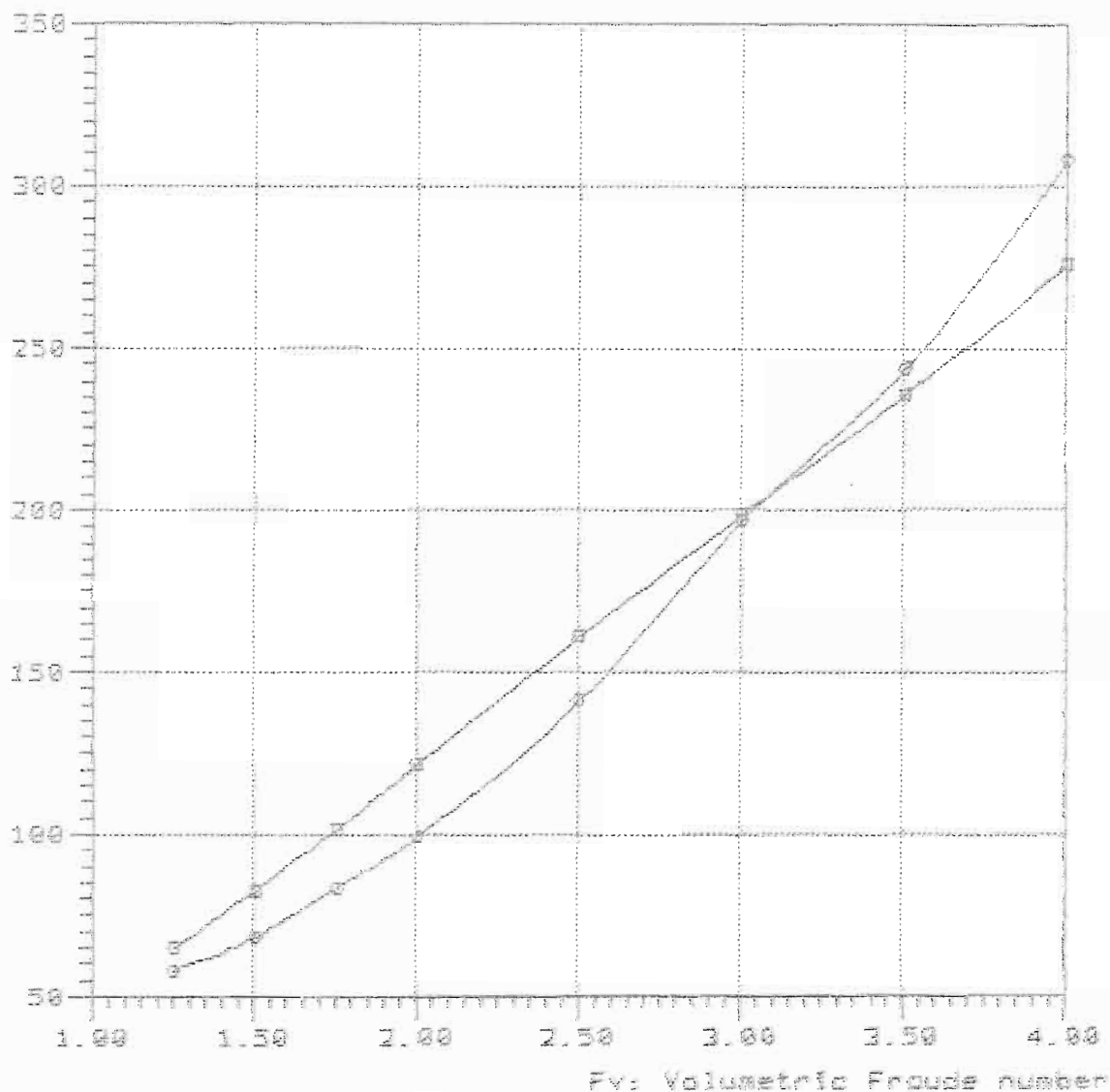
### Volumetric Froude number

File: 10-50-42.mdl

Date: 1 Mar 88

Time: 15:51

Rbare: Bare-hull resistance (lbs)

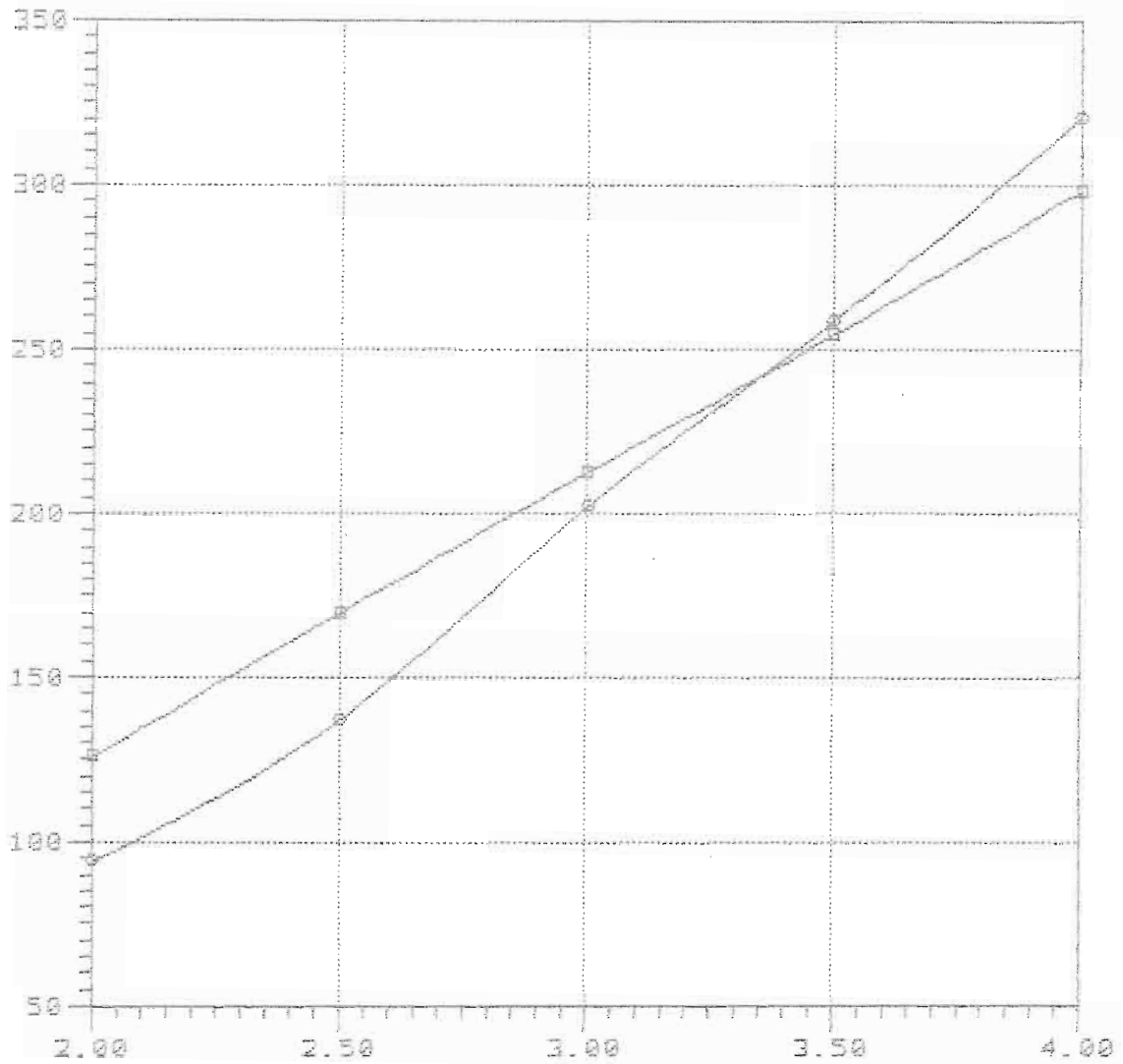


#### Curve legend

—■—

—○— TNE-658 Lpx/Bpx=4.630 Ap/Vol=10.044 Lpx/Rp=5.372 Lcg/Lpx=0.420

Rbare: Bare-hull resistance (lbs)



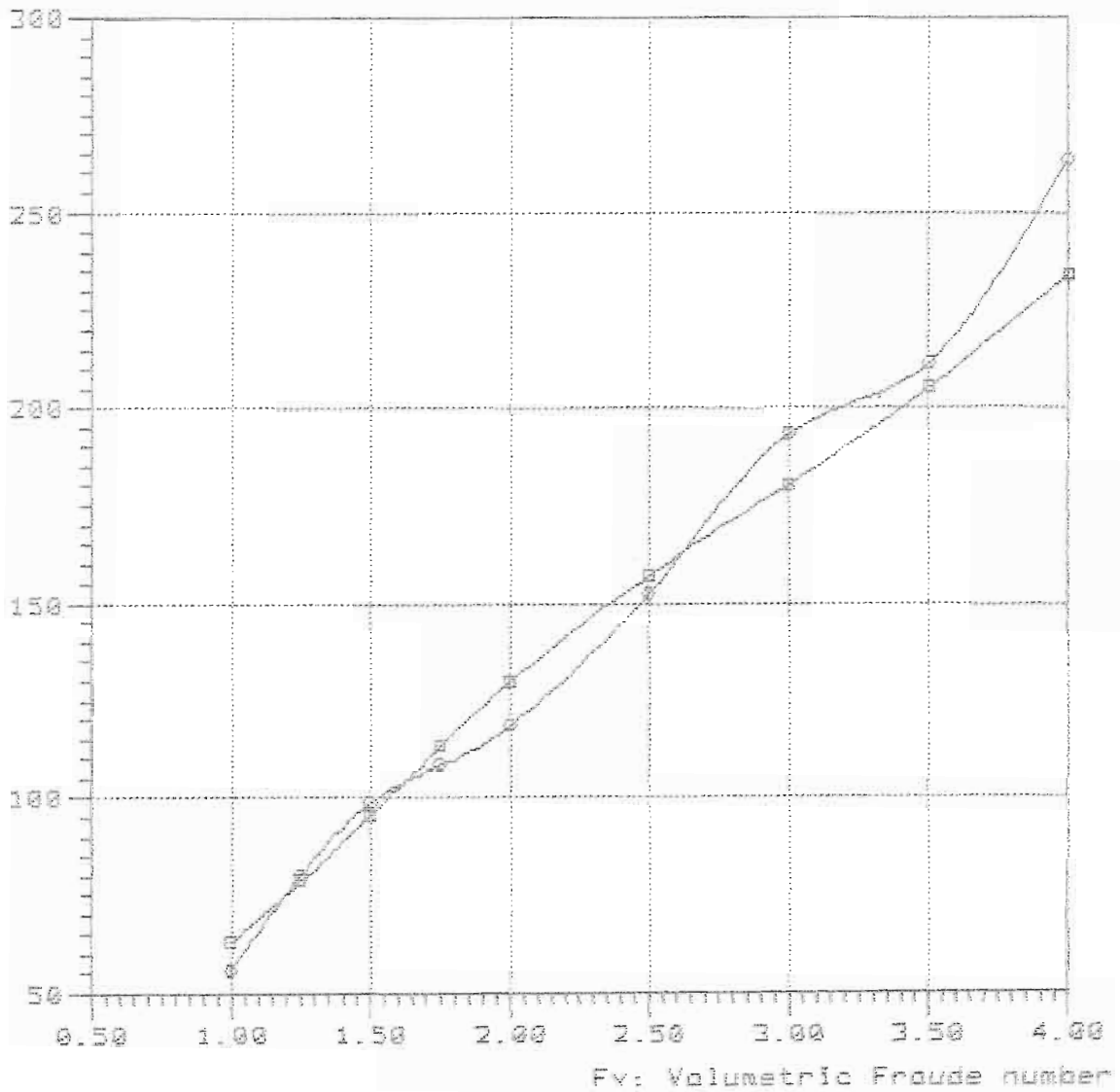
Fv: Volumetric Froude number

—■—

—●— TMB-65B Lpx/Bpx=4.690 Rp/Vol=10.044 Lpx/Rp=6.372 Lcg/Lpx=0.460

Model	=	5184
Ref	=	NSRDC
Friction	=	<del>A</del> TTC Ca=4e-4
Lpx	=	21.200 ft
Lwl	=	20.945 ft
Bpx	=	4.520 ft
Ap	=	70.534 sqft
Vcg	=	1.390 ft
Disp.	=	1000.00 Lb
Deadrise	=	28.70 degree
Twist Angle	=	6.20 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.690
Lpx/Ap	=	6.372
Ap /Vol	=	11.284
Lpx/Vol	=	8.483
Cvload	=	0.169
Lbload	=	0.014
Disp-Lpx	=	46.854

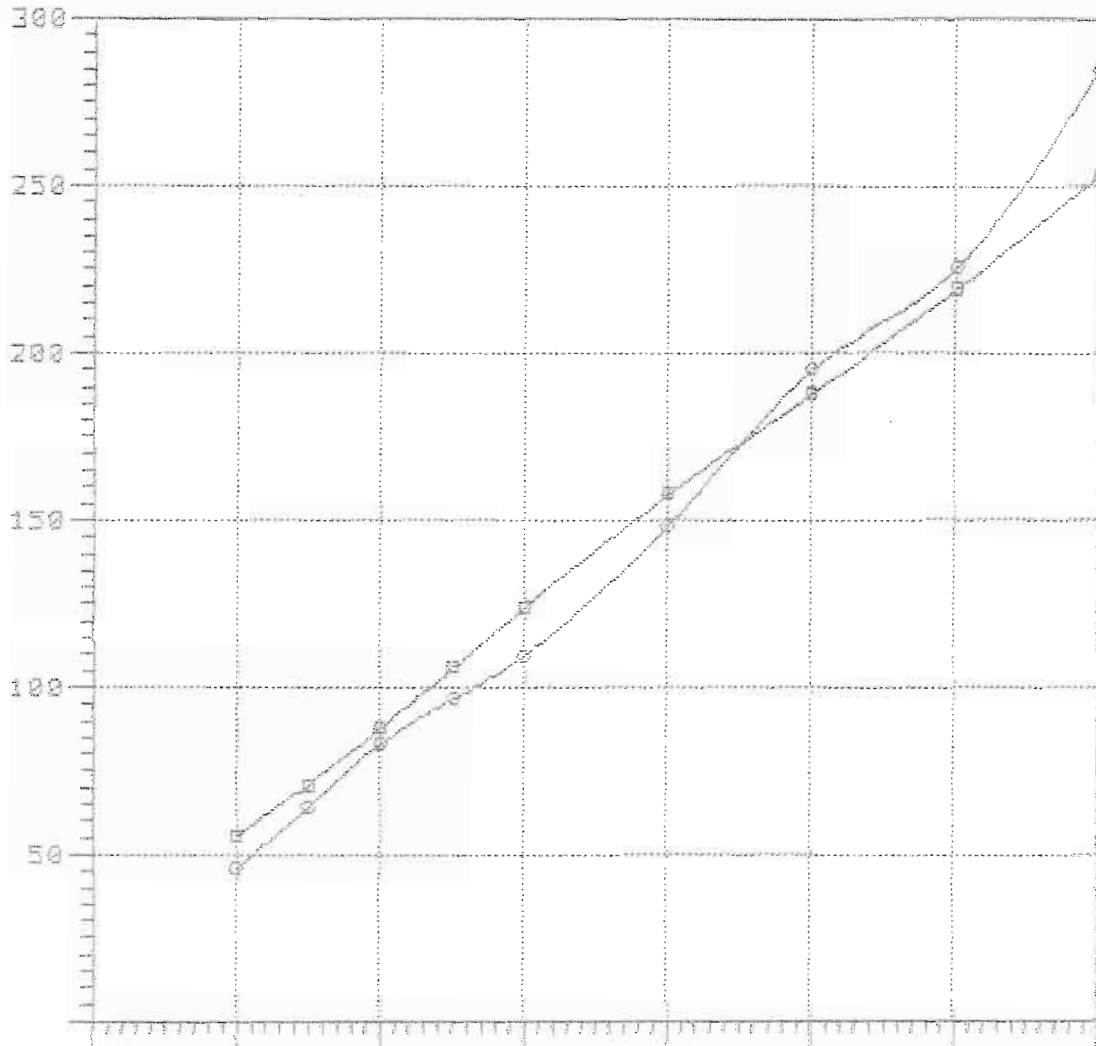
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=4.636 Ap/Vol=11.285 Lpx/Ap=6.372 Lcg/Lpx=8.366

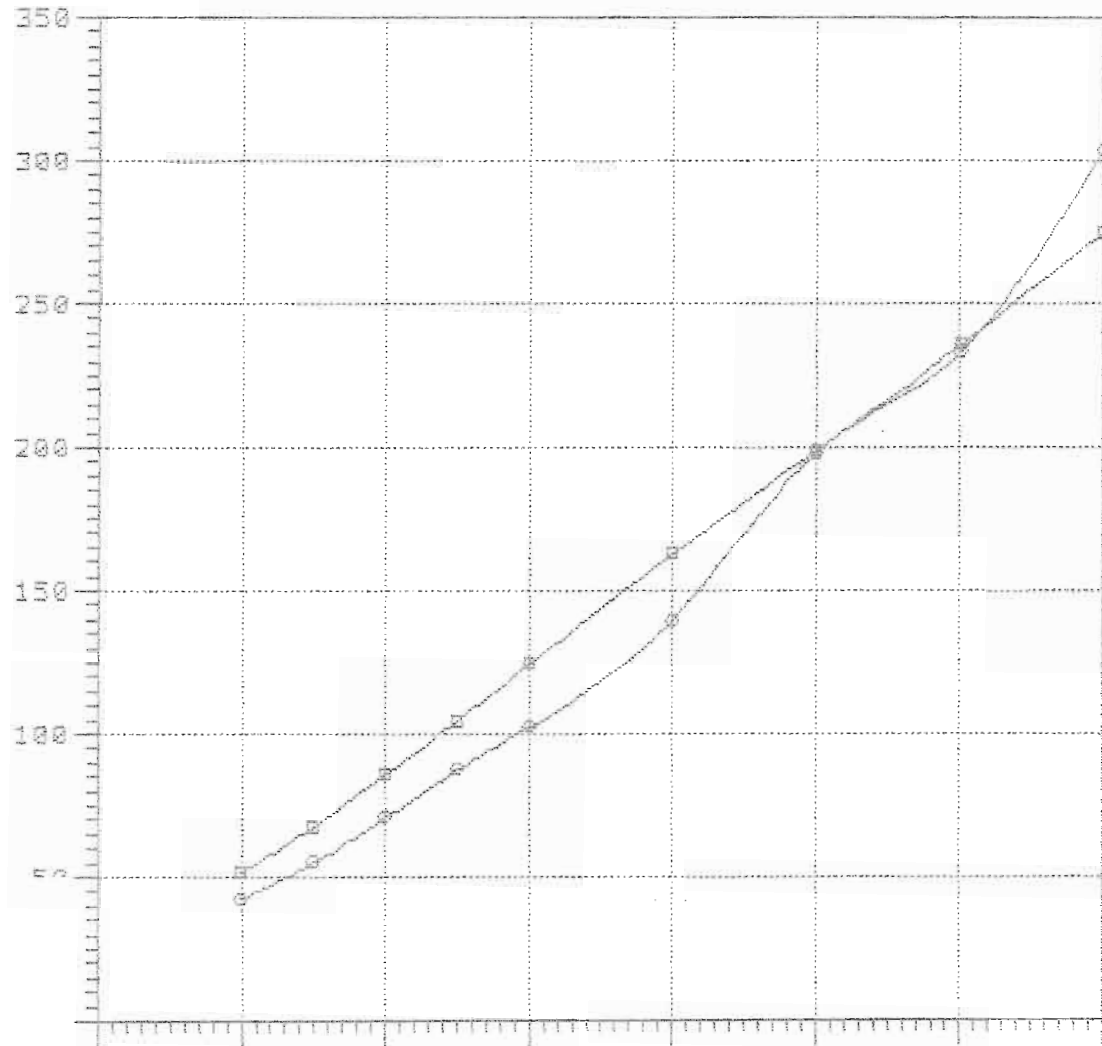
Rbare: Bare-hull resistance (lbs)



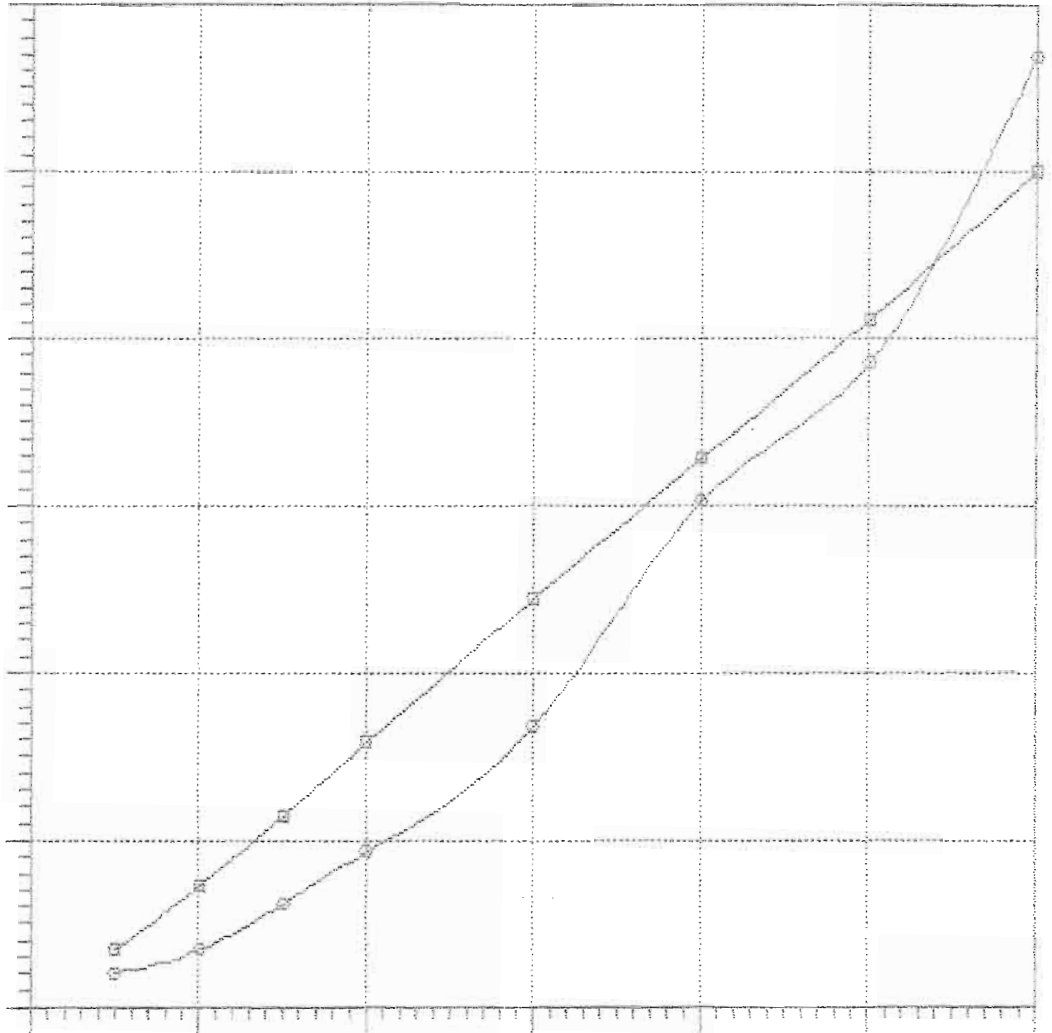
—□—  
—○—



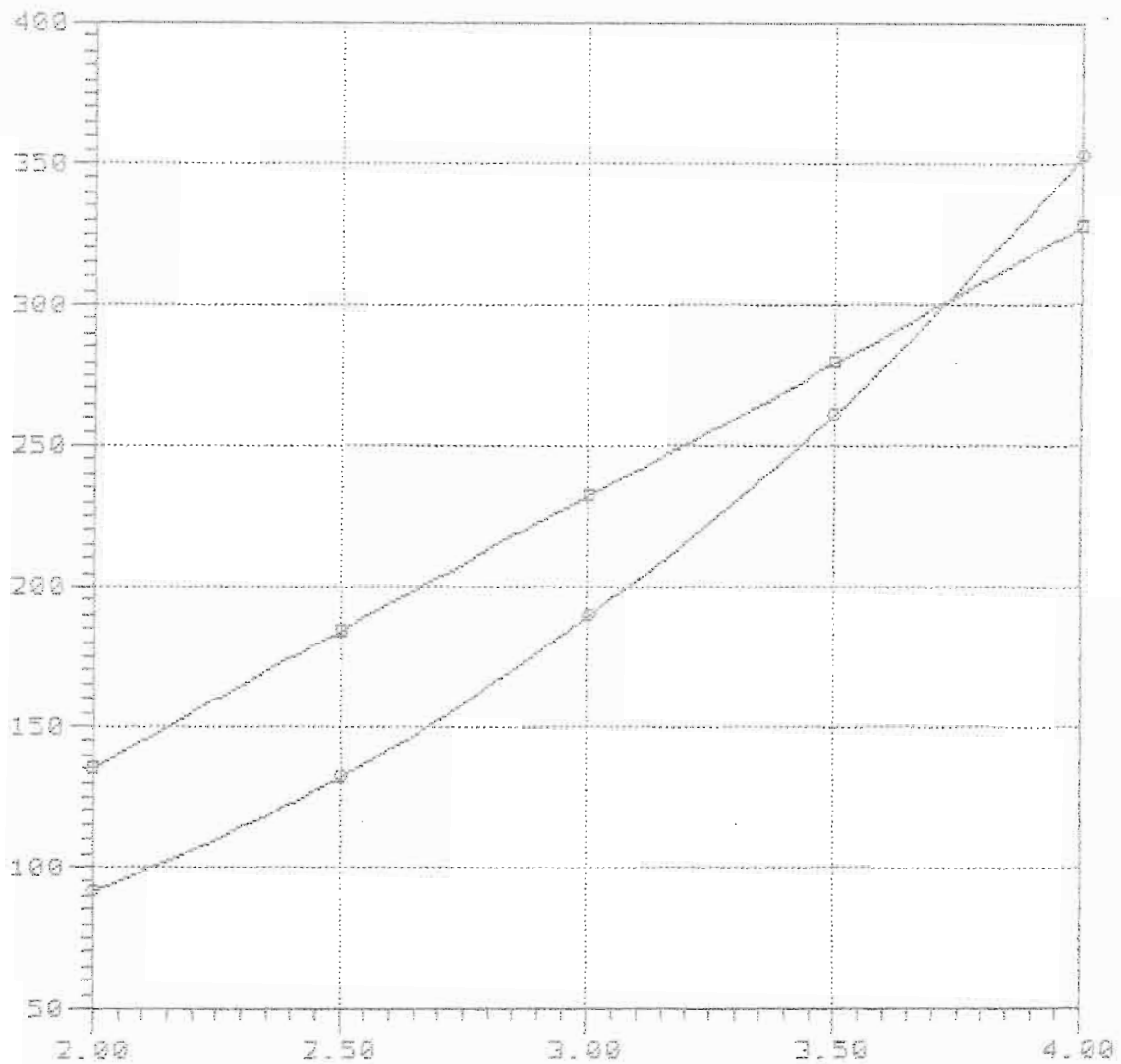
Rbare: Bare-hull resistance (lba)



11-85-42



Rbare: Bare-hull resistance (lbs)



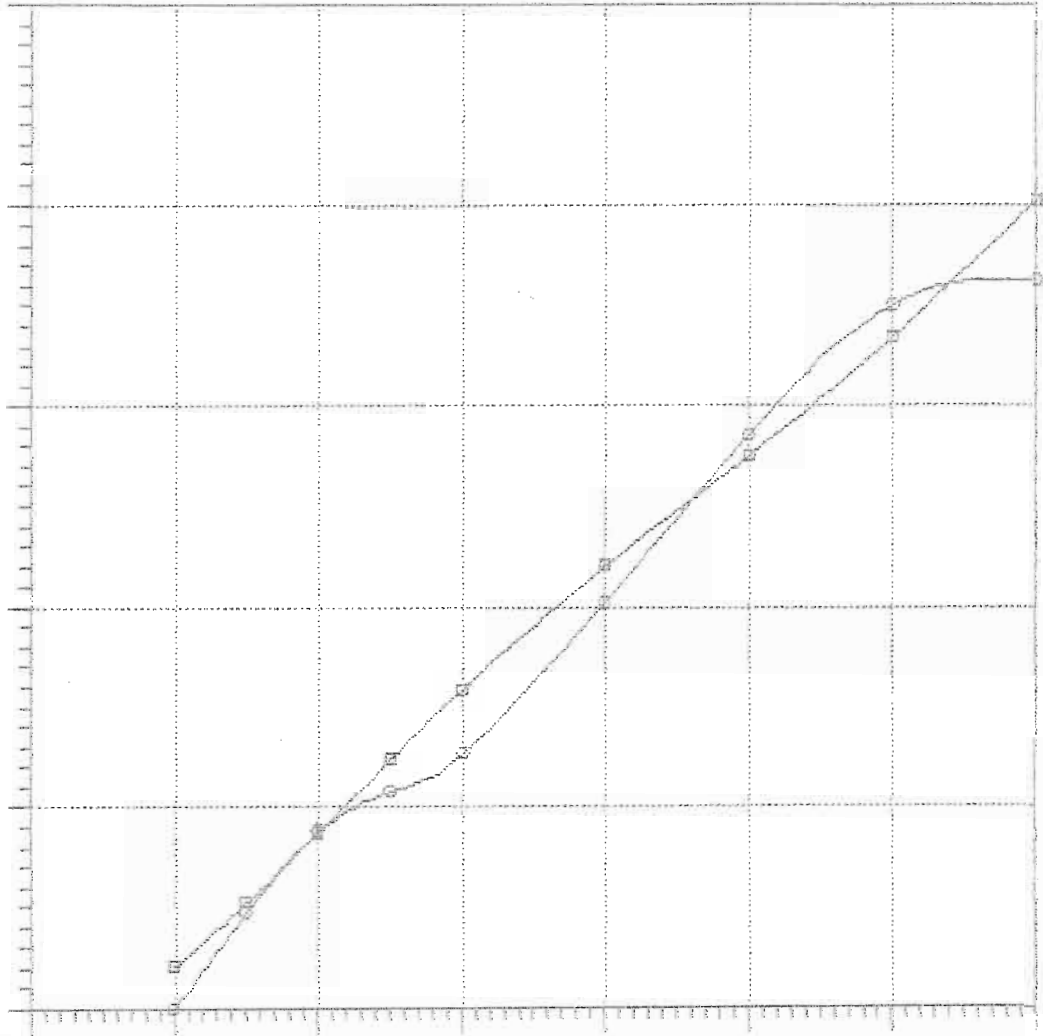
Fv: Volumetric Froude number

—■—

—●— TMB-65B Lpx/Epx=4.636 Ap/Vol=11.285 Lpx/Ap=6.372 Lcg/Lpx=0.466

Model	=	5184
Ref	=	NSRDC
Friction	=	<del>A</del> TTC Ca=4e-4
Lpx	=	22.500 ft
Lwl	=	22.229 ft
Bpx	=	4.797 ft
Ap	=	79.449 sqft
Vcg	=	1.475 ft
Disp.	=	1000.00 Lb
Deadrise	=	28.70 degree
Twist Angle	=	6.20 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.690
Lpx/Ap	=	6.372
Ap /Vol	=	12.710
Lpx/Vol	=	9.003
Cvload	=	0.142
Lbload	=	0.011
Disp-Lpx	=	39.193

13-90-30



10  
0

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Bare-hull resistance

vs.

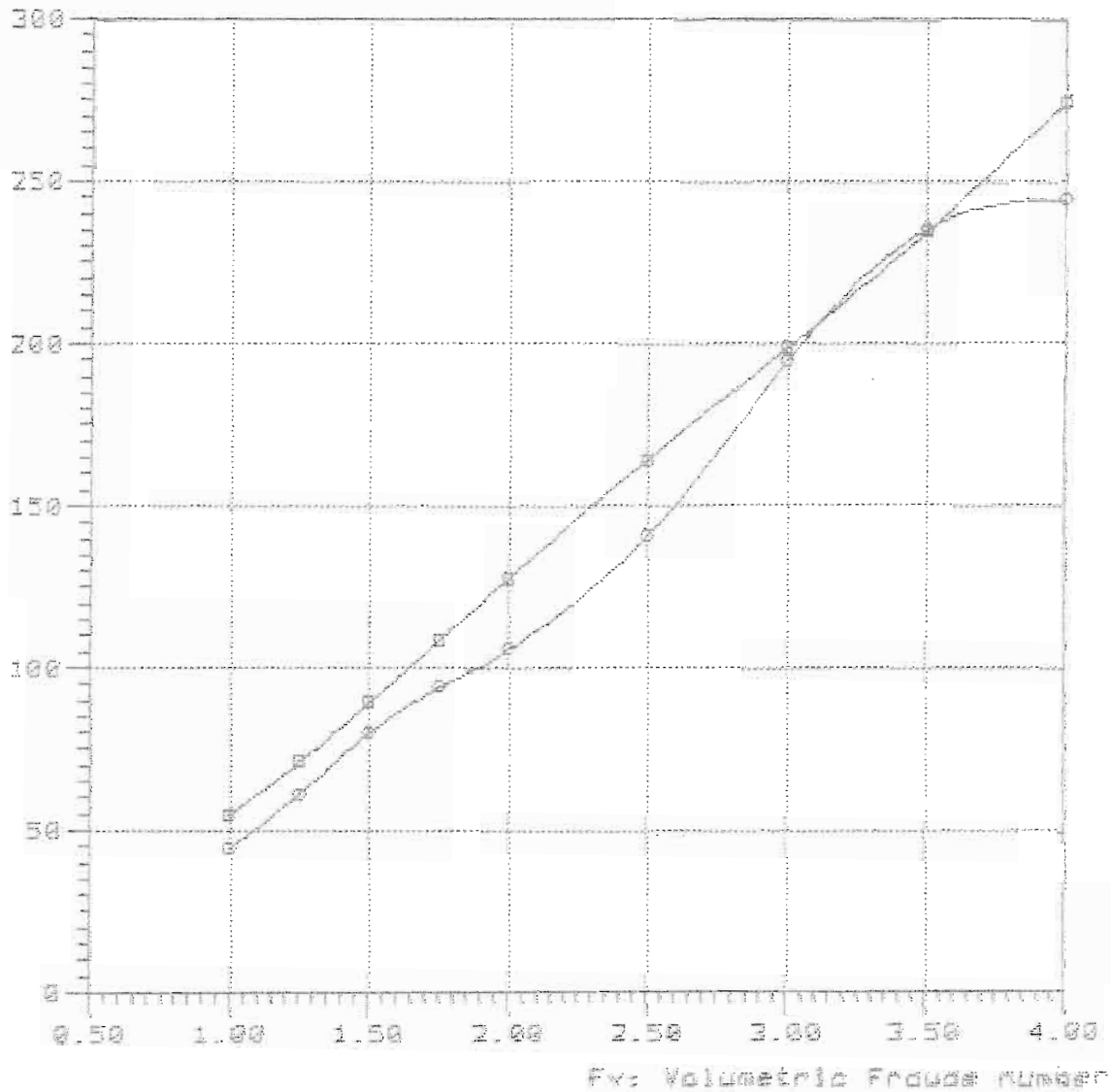
Volumetric Froude number

File: 13-90-34.mdl

Date: 1 Mar 00

Time: 16:29

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—●—

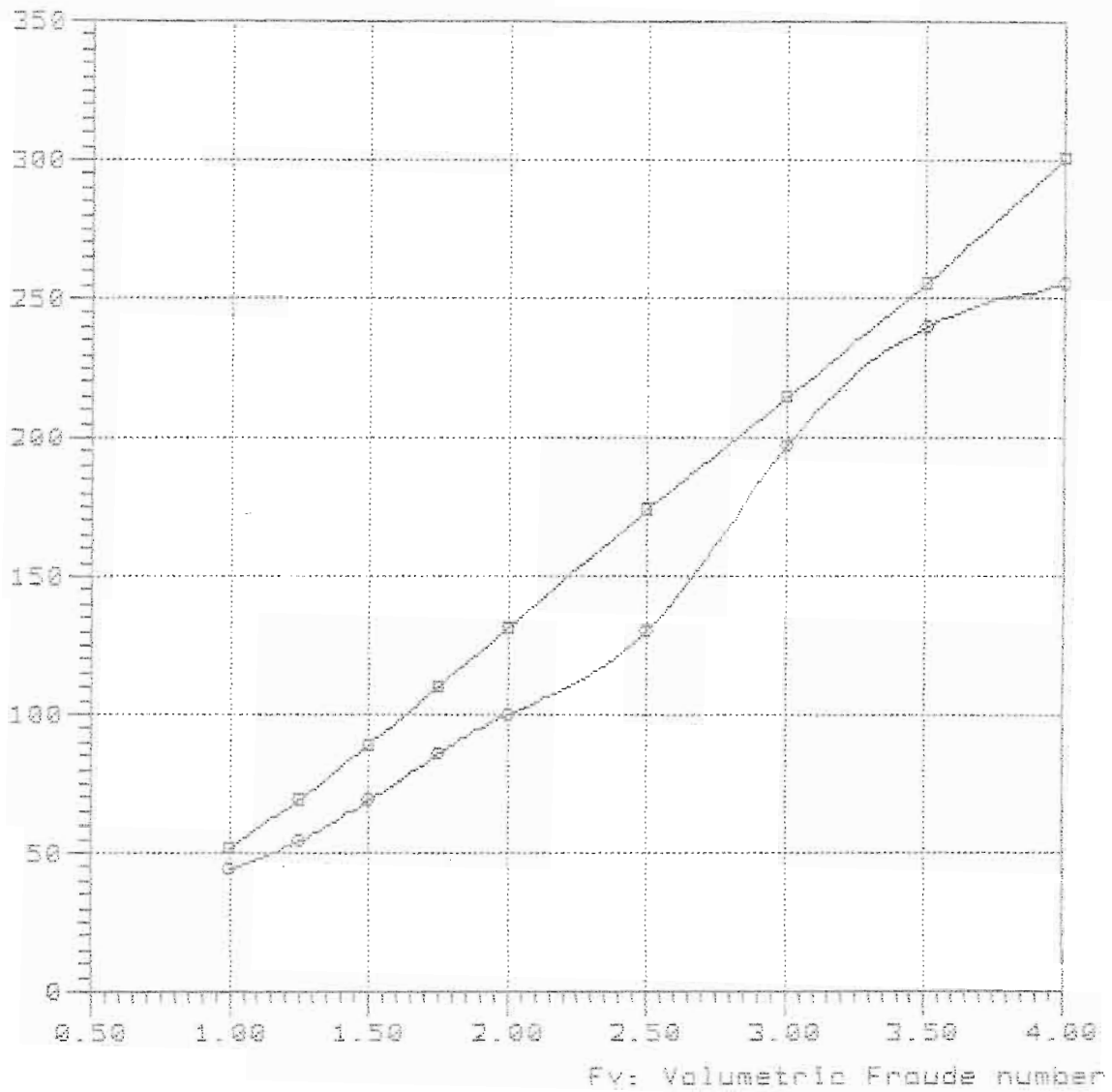
TMB-658 Lpx/Bpx=4.694 Ap/Vol=12.712 Lpx/Bp=6.372 Log/Lpx=0.348

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)

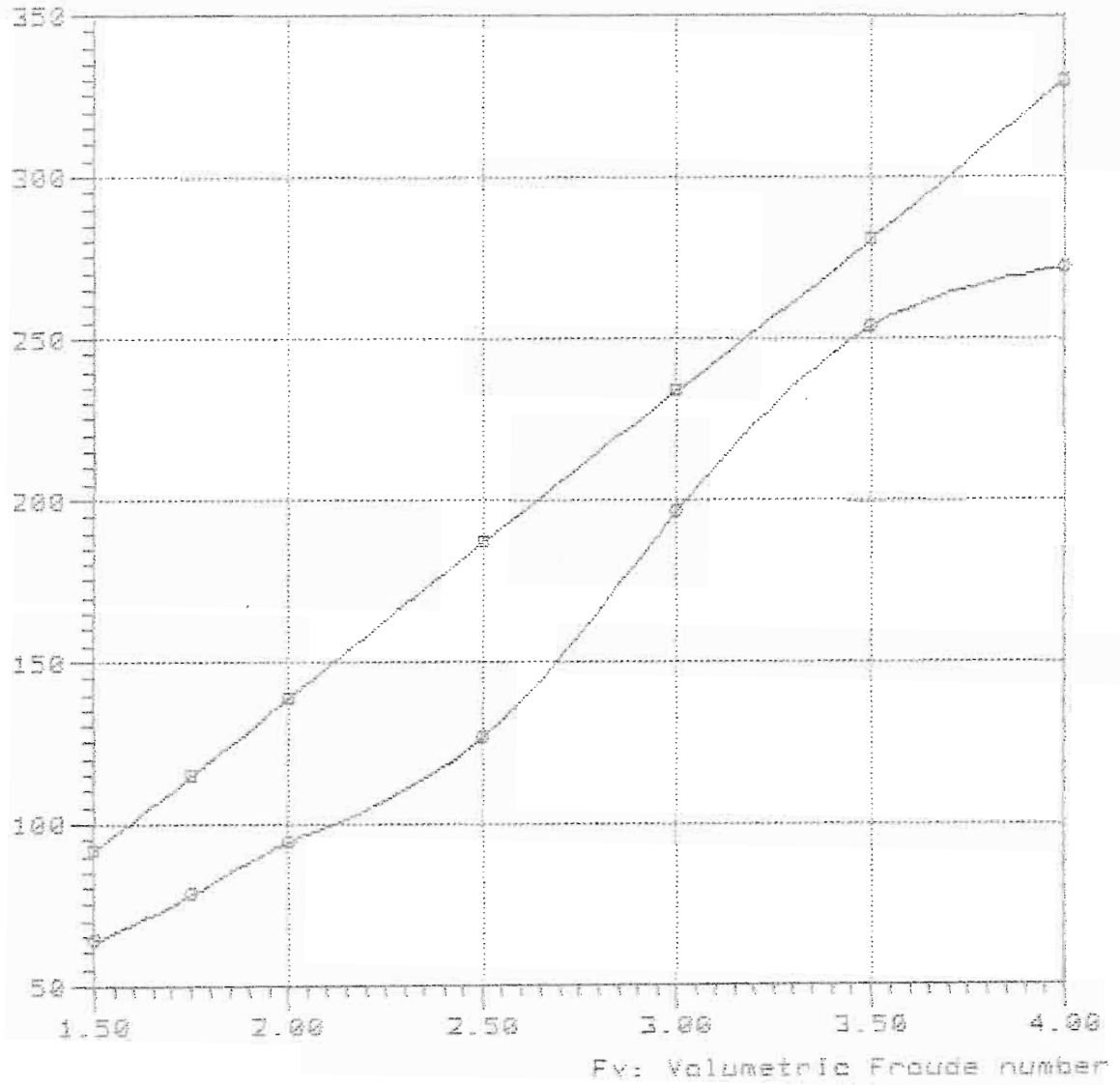


#### Curve legend

—■—

—●— TMB-65B Lpx/Bpx=4.690 Ap/Vol=12.712 Lox/Ap=6.372 Log/Lpx=0.360

Rbare: Bare-hull resistance (lbs)

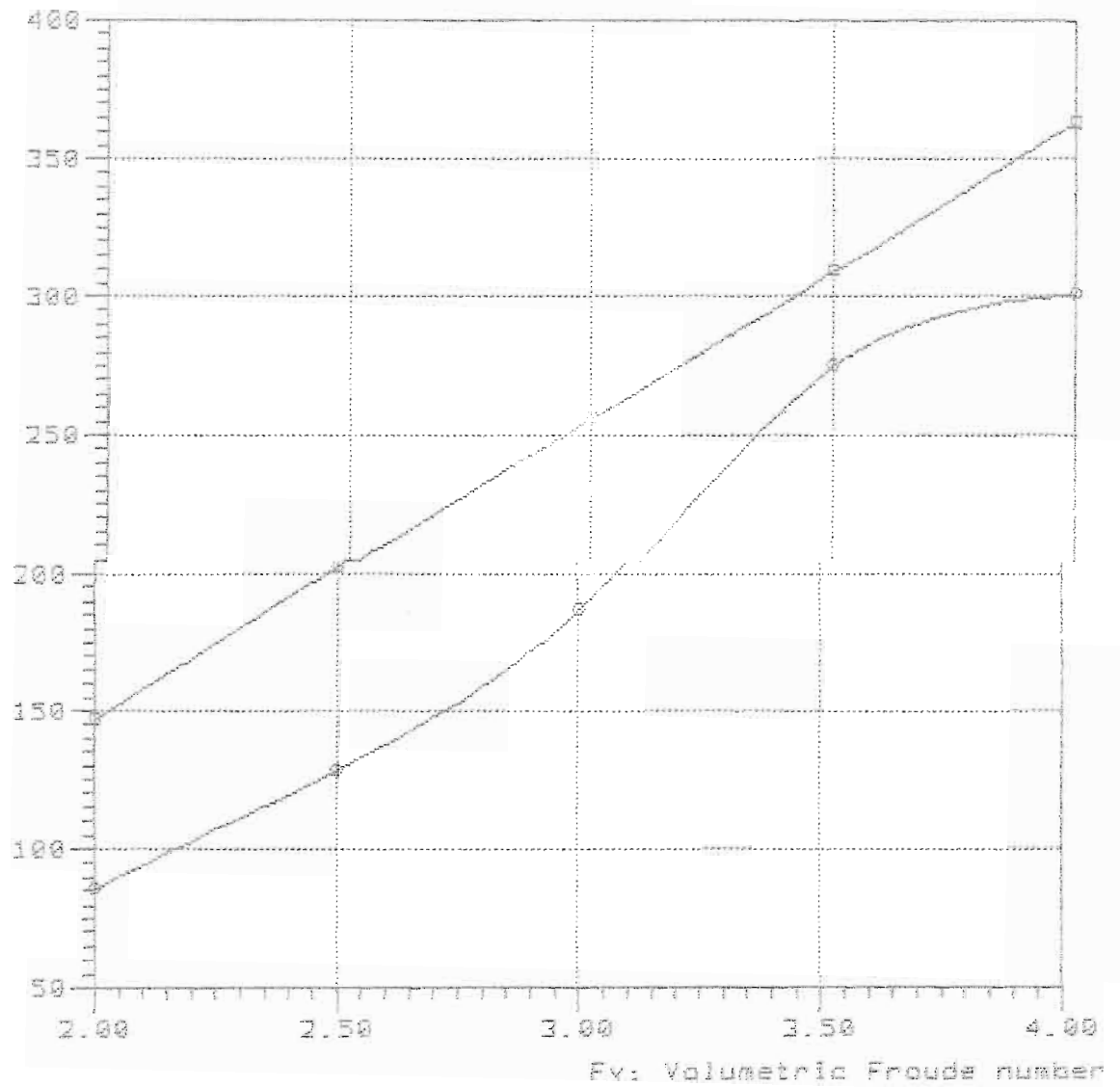


—□—

—○— TMB-65B Lpx/Bpx=4.690 Ap/Vol=13.712 Lpx/Ap=6.372 Lcg/Lpx=0.420



Rbare: Bare-hull resistance (lbs)



—■—

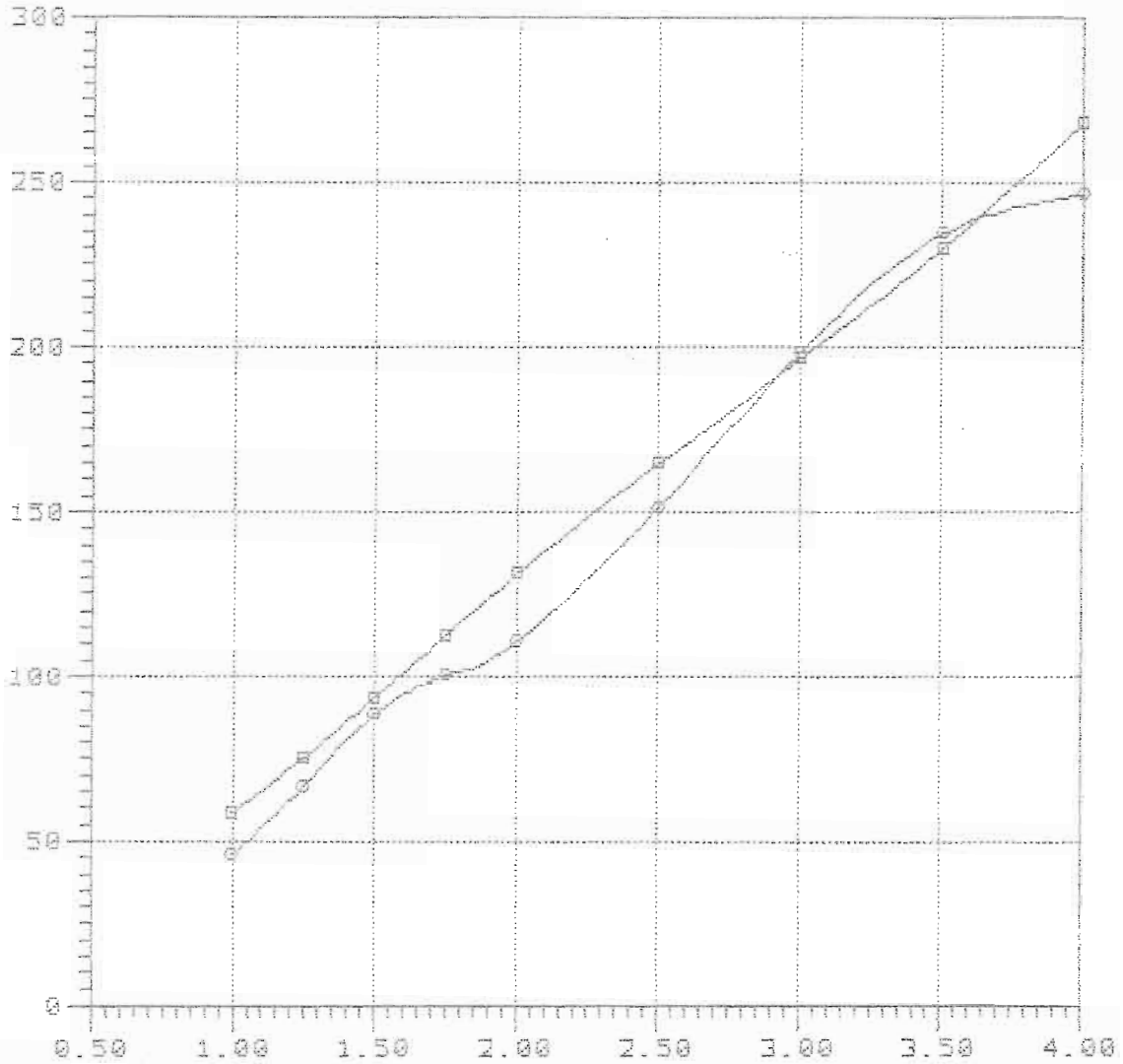
—○— TMB-65B Lpx/Box=4.690 Ap/Vol=12.712 Lpx/Ap=6.372 Log/Lpx=0.460

Model = 5184  
Ref = NSRDC

Friction = ~~A~~TTC Ca=4e-4

Lpx	=	23.700 ft
Lwl	=	23.414 ft
Bpx	=	5.053 ft
Ap	=	88.150 sqft
Vcg	=	1.554 ft
Disp.	=	1000.00 Lb
Deadrise	=	28.70 degree
Twist Angle	=	6.20 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.690
Lpx/Ap	=	6.372
Ap /Vol	=	14.102
Lpx/Vol	=	9.483
Cvload	=	0.121
Lbload	=	0.010
Disp-Lpx	=	33.536

Rbare: Bare-hull resistance (lbs)

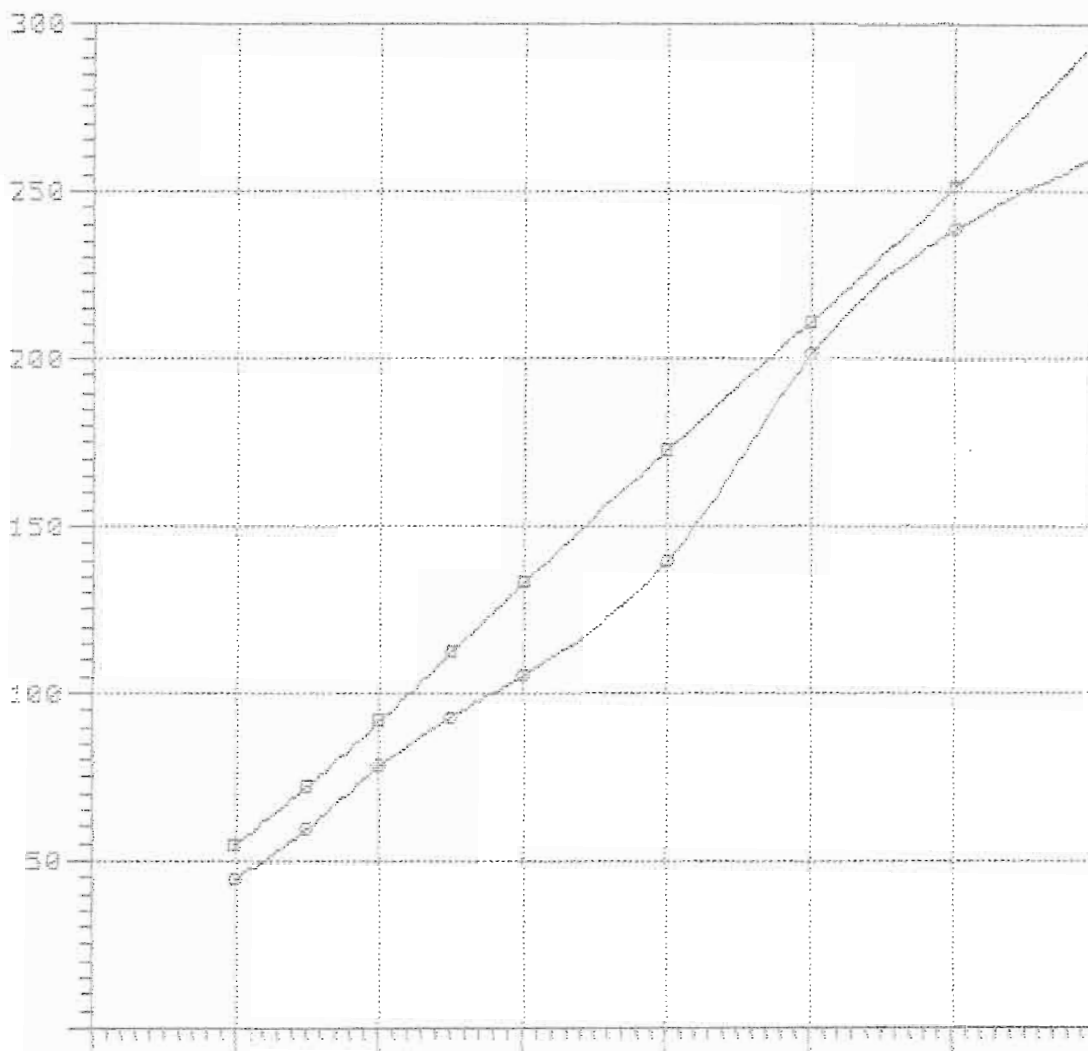


Fv: Volumetric Froude number

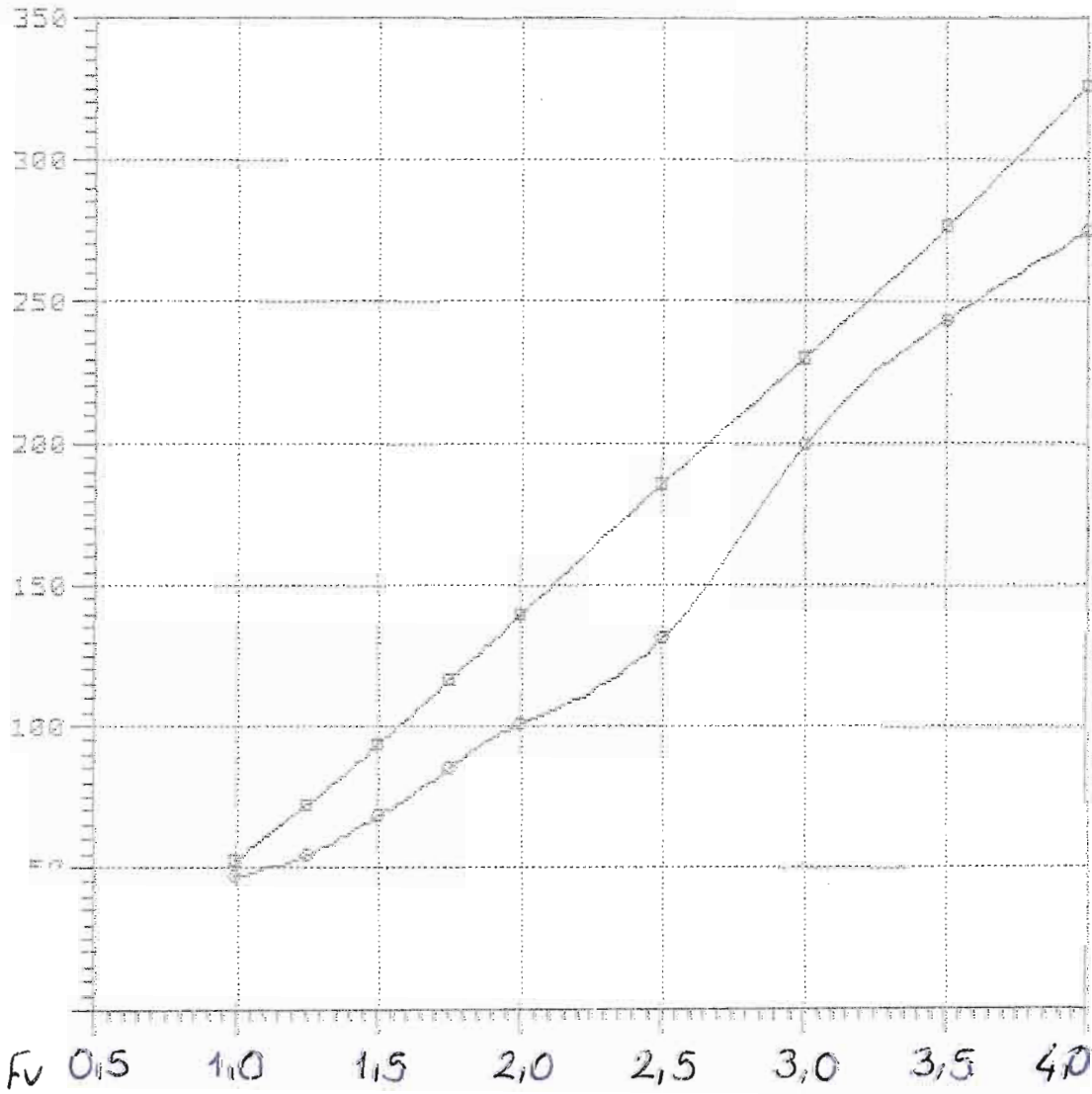
—■—

—●— TMB-65B Lpx/Bpx=4.690 Ap/Vol=14.104 Lpx/Ap=6.372 Lcg/Lpx=0.300

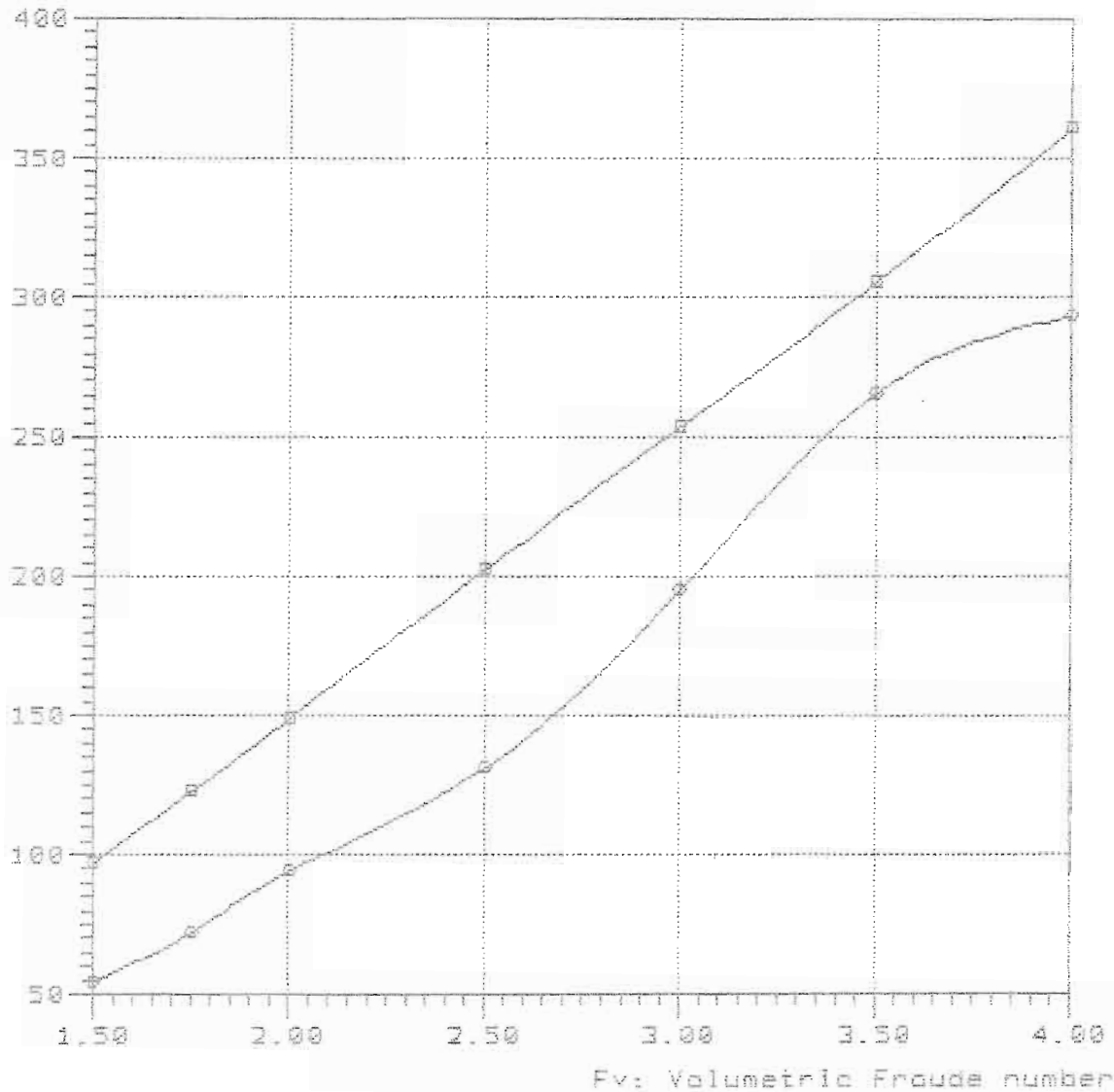
Rbare: Bare-hull resistance (lbs)



Rbare: Bare-hull resistance (lbs)



Rbare: Bare-hull resistance (lbs)



—■—

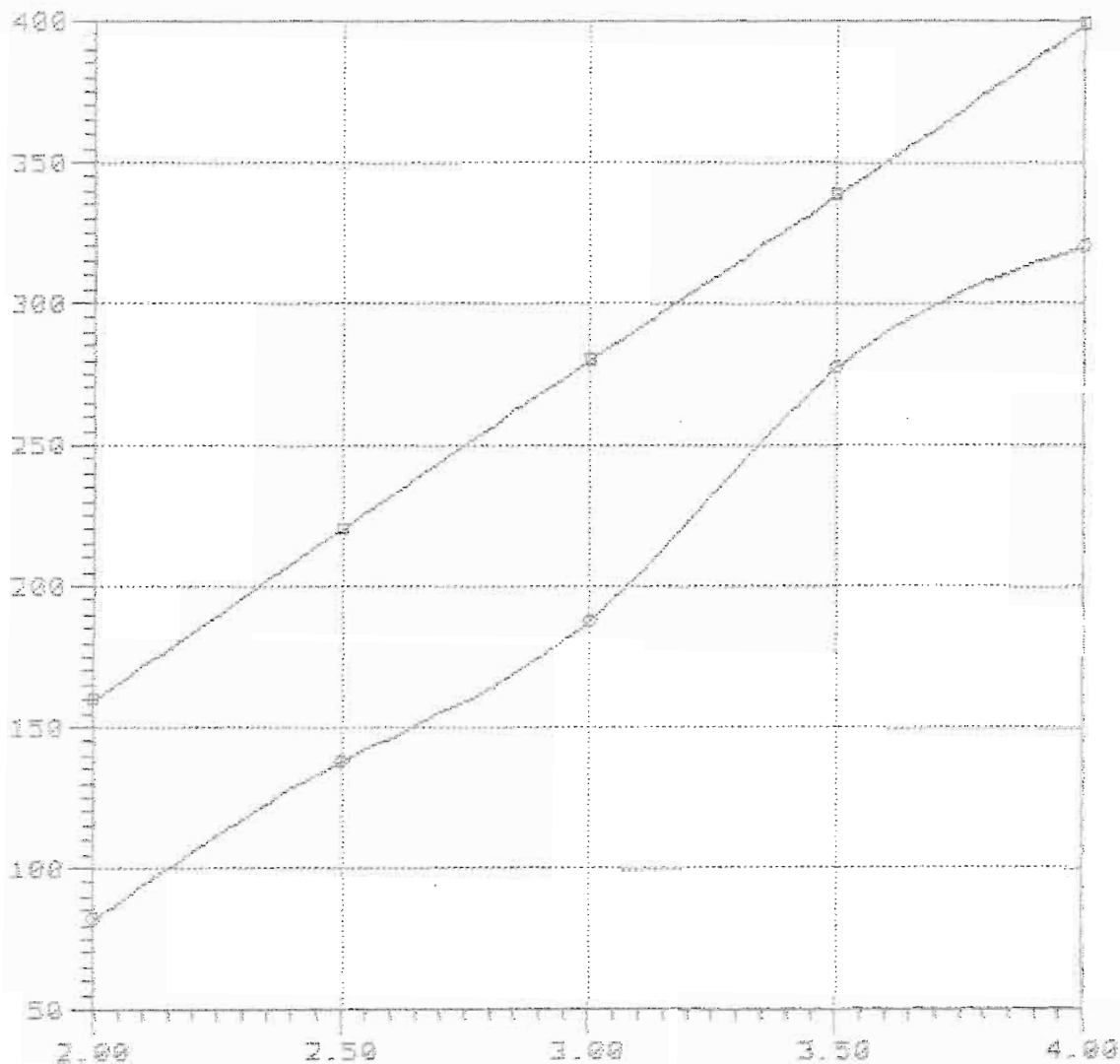
—●— TMB-658 Lpx/Epv=4.650 Ap/Vol=14.104 Lpx/Ap=6.372 Lcg/Lpx=0.420

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

#### Curve legend

—■—

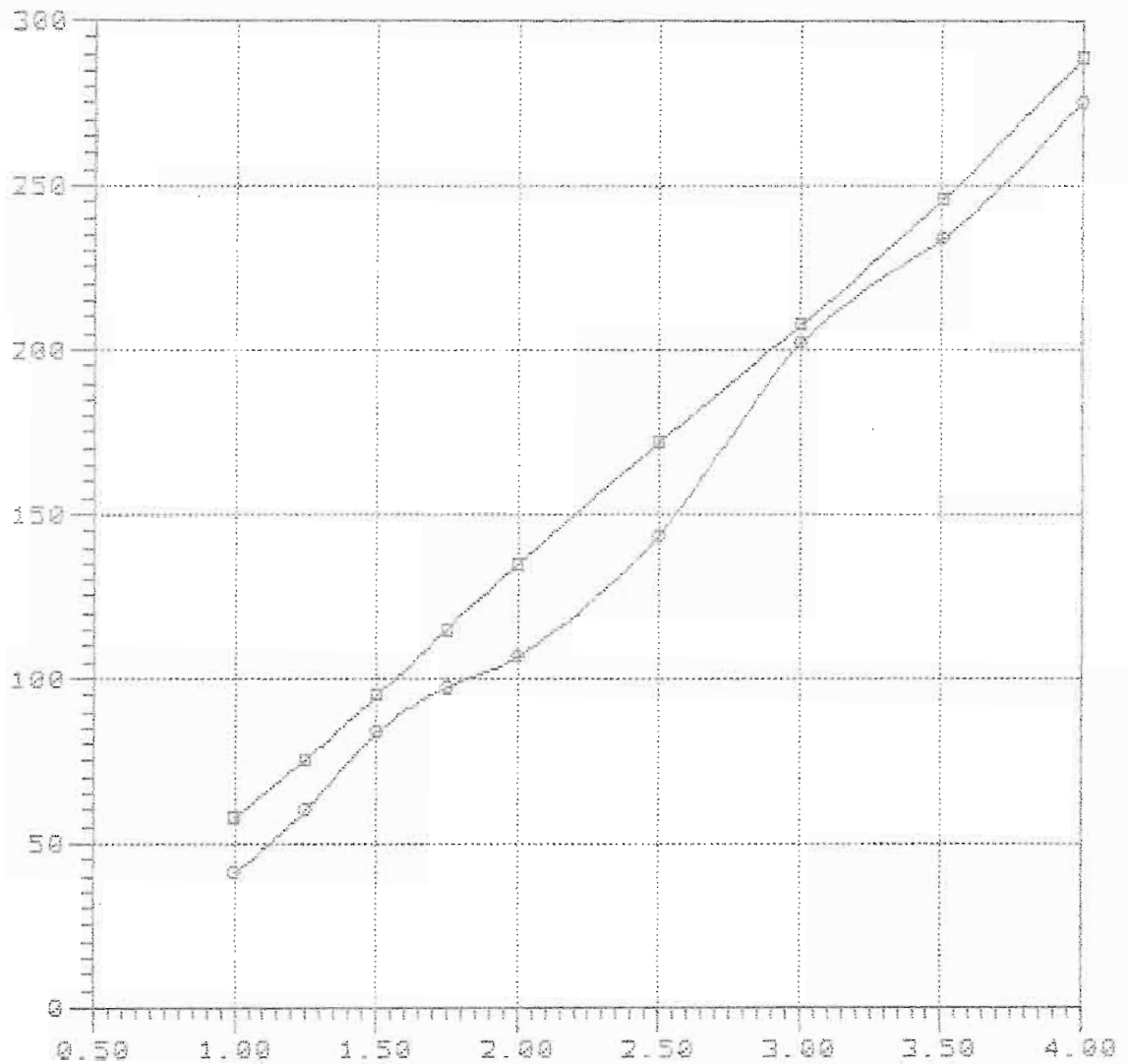
—●— TMB-65B Lpx/Bpx=4.690 Ap/Yol=14.104 Lpx/Ag=6.372 Lag/Lpx=0.460

03/01/2000 19:03:03

Model	=	5184
Ref	=	NSRDC
Friction	=	<del>A</del> TTC Ca=4e-4
Lpx	=	25.000 ft
Lwl	=	24.699 ft
Bpx	=	5.330 ft
Ap	=	98.085 sqft
Vcg	=	1.650 ft
Disp.	=	1000.00 Lb
Deadrise	=	28.70 degree
Twist Angle	=	6.20 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.690
Lpx/AP	=	6.372
Ap /Vol	=	15.692
Lpx/Vol	=	10.003
Cvload	=	0.103
Lbload	=	0.008
Disp-Lpx	=	28.571



Rbare: Bare-hull resistance (lbs)



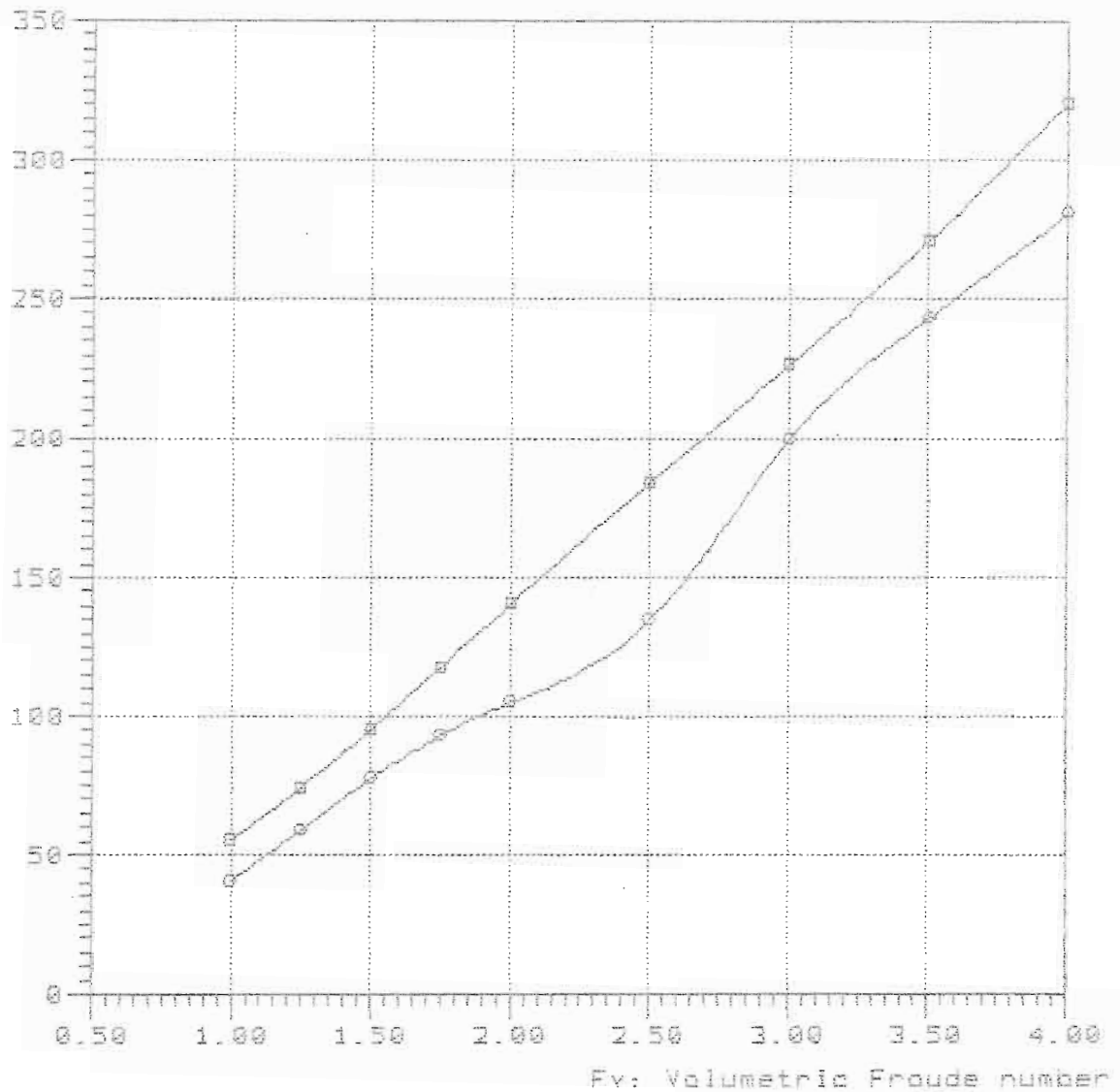
Fv: Volumetric Froude number

Curve legend

—□—

—○— TMB-65B Lpx/Bpx=4.690 Ap/Vol=15.693 Lpx/Ap=6.372 Log/Lpx=0.300

Rbare: Bare-hull resistance (lbs)

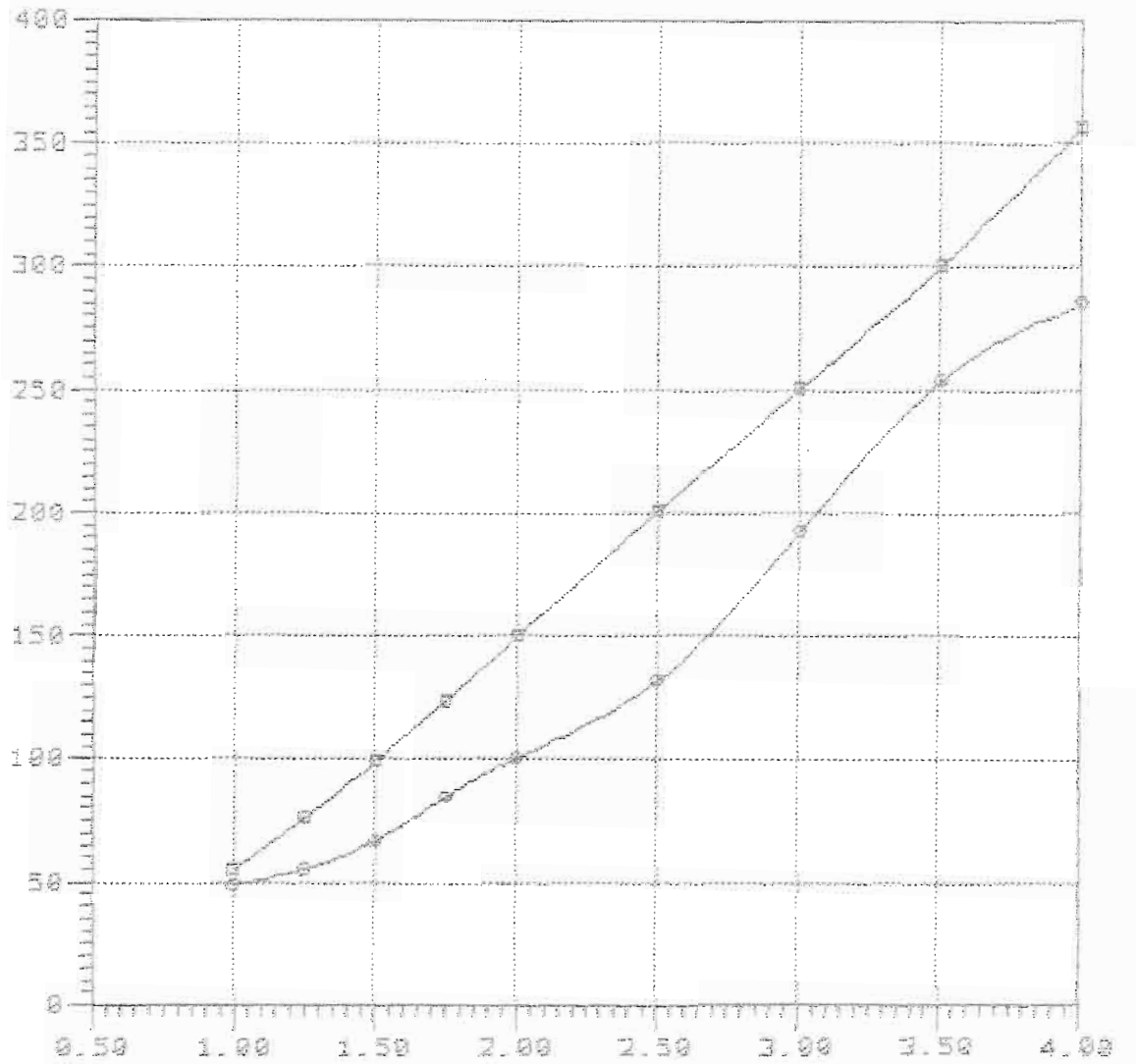


Curve legend

—○—

—□— TMB-65B Lpx/Bpx=4.690 Ap/Vol=15.693 Lpx/Ap=6.372 Log/Lpx=0.340

Rbare: Bare-hull resistance (lbs)

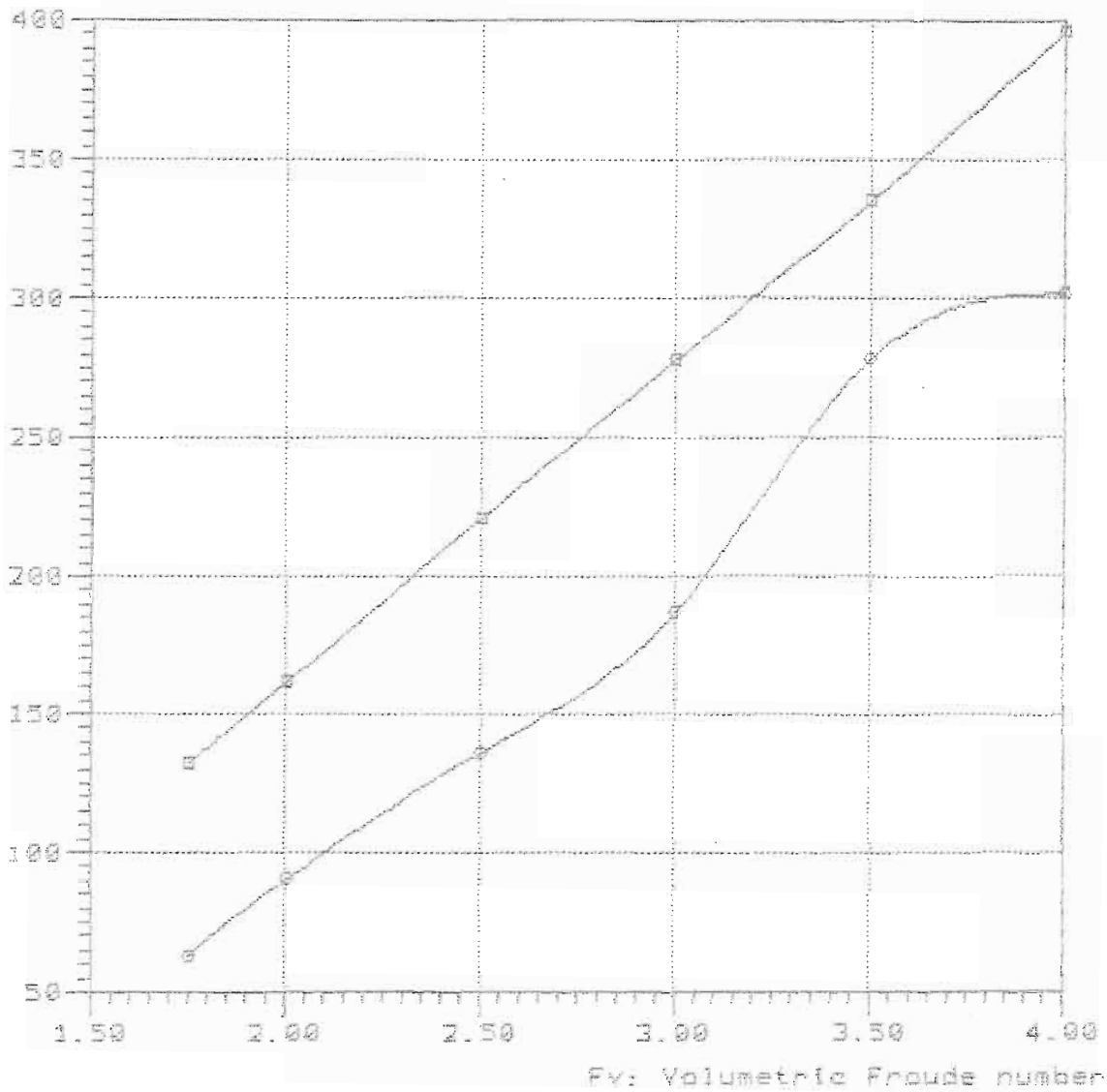


Fv: Volumetric Froude number

—■—

—●— 7MS-658 Lpx/Bpx=4.688 Rp/Vol=15.893 Lpx/Rp=6.372 Log/Lpx=0.388

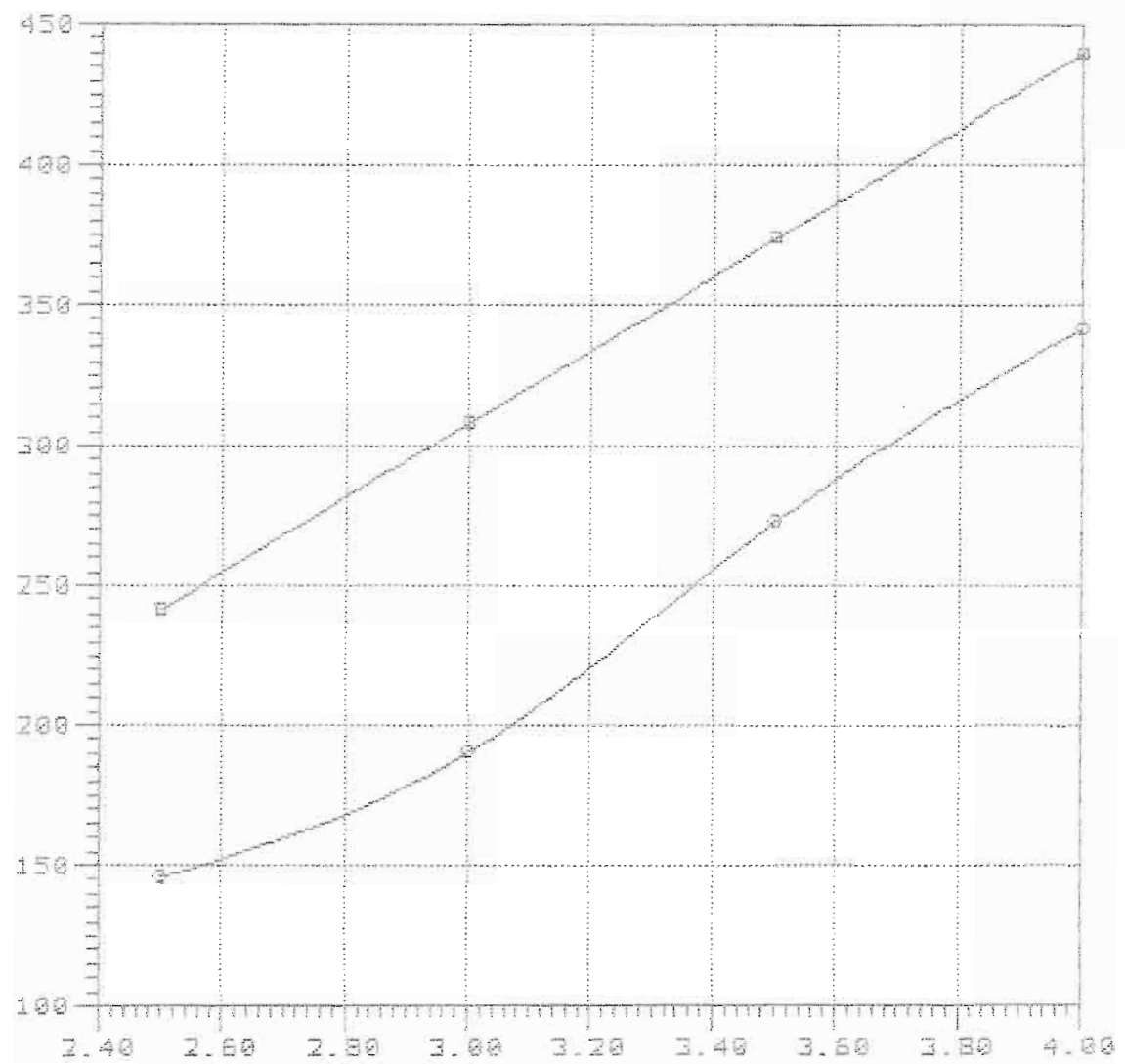
Rbare: Bare-hull resistance (lbs)



—■—

—●— THB-558 Lpx/Bpx=4.690 Rp/Vol=15.593 Lpx/Rp=6.372 Log/Lpx=0.420

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—  
—●— TMB-65B Lpx/Bpx=4.550 Ap/Vol=15.693 Lpx/Ap=6.372 Log/Lpx=0.460

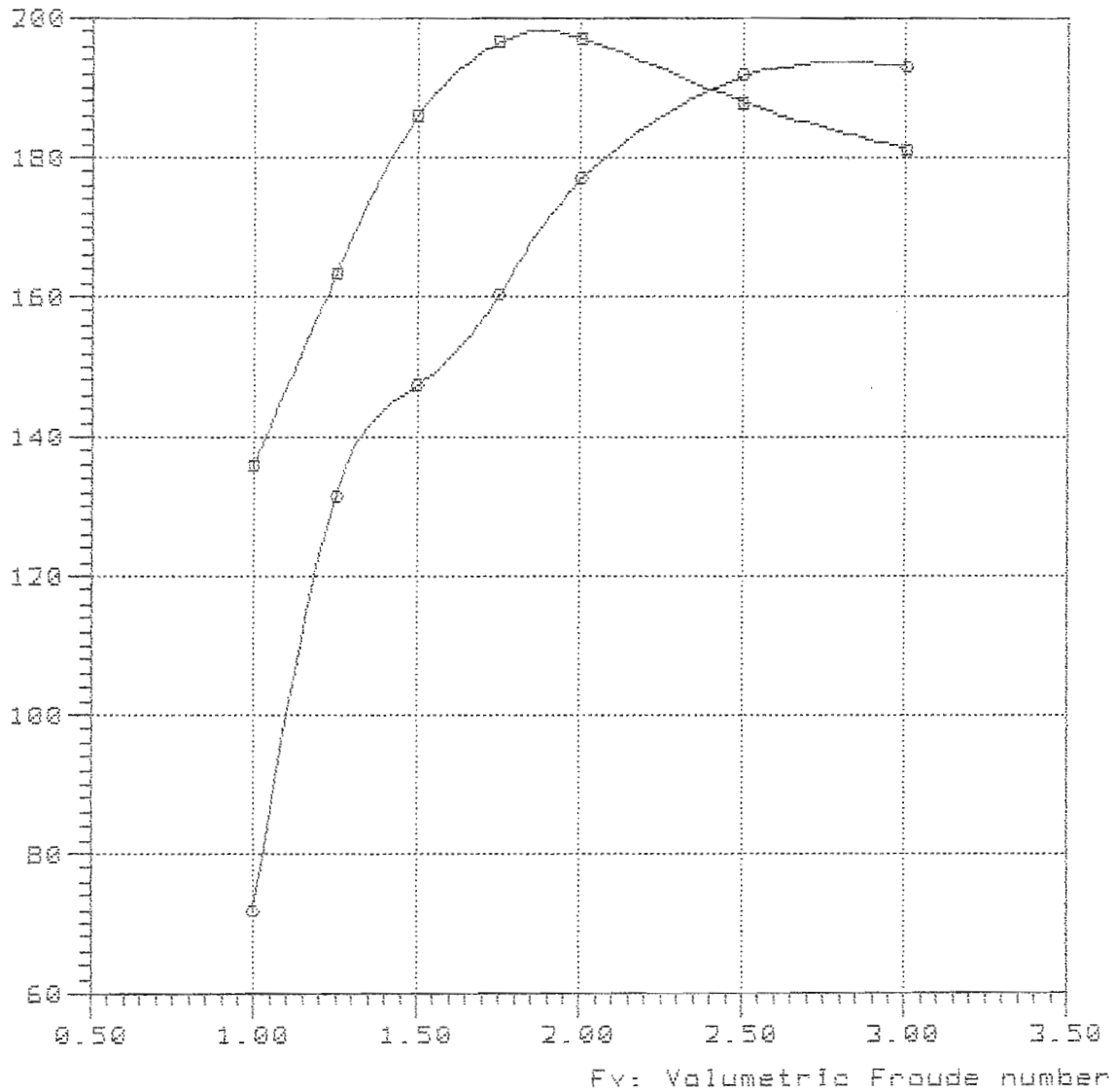
5186

Model = 5186  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 12.500 ft  
Lwl = 12.349 ft  
Bpx = 3.765 ft  
Ap = 34.707 sqft  
Vcg = 1.157 ft  
Disp = 1000.00 Lb  
Deadrise = 28.70 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 5.552  
Lpx/Vol = 5.015  
Cvload = 0.293  
Lbload = 0.040

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=3.320 Ap/Vol=5.553 Lpx/Ap=4.502 Log/Lpx=0.340



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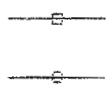
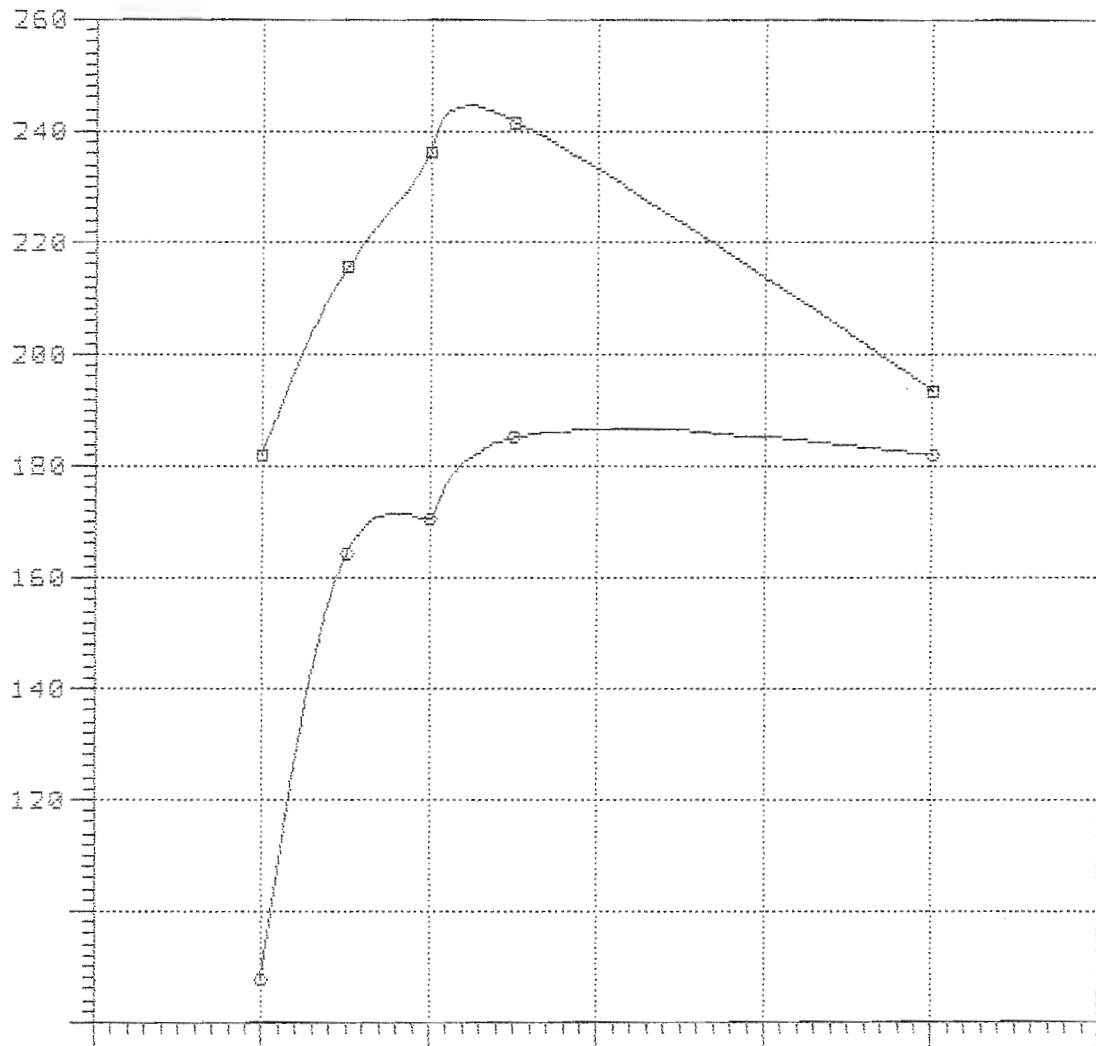
HydroComp, Inc.

File: 5-45-346.mdl

Date: 24 Feb 00

Time: 12:05

Rbare: Bare-hull resistance (lbs)



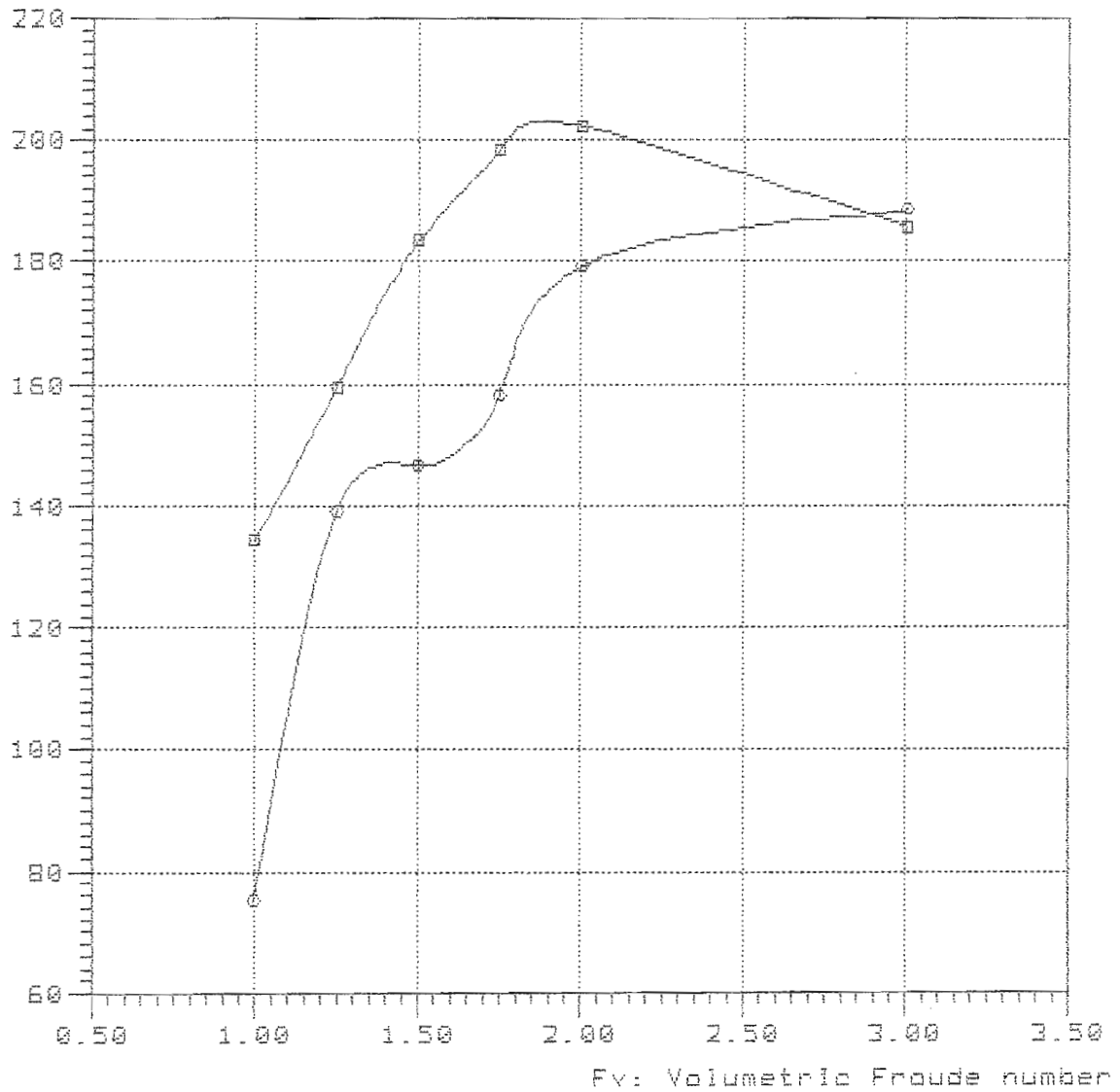
Model = 5186  
Ref = NSRDC  
Friction =  $\mu$ TTC Ca=4e-4

Lpx = 11.200 ft  
Lwl = 11.065 ft  
Bpx = 3.373 ft  
Ap = 27.863 sqft  
Vcg = 1.036 ft  
Disp = 1000.00 Lb  
Deadrise = 28.70 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 4.458  
Lpx/Vol = 4.493  
Cvload = 0.407  
Lbload = 0.056

**Bu ölçüler dizaya ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCİ DENİZCİLİĞE Aittir  
Bu doküman veya bunun bir kısmı  
üçüncü şahıslara verilemez, başka  
veya kopya edilemez ve her ne şekilde  
olsa, olursa olsun maksadı dışında  
izinsiz kullanılamaz.**

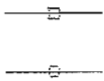
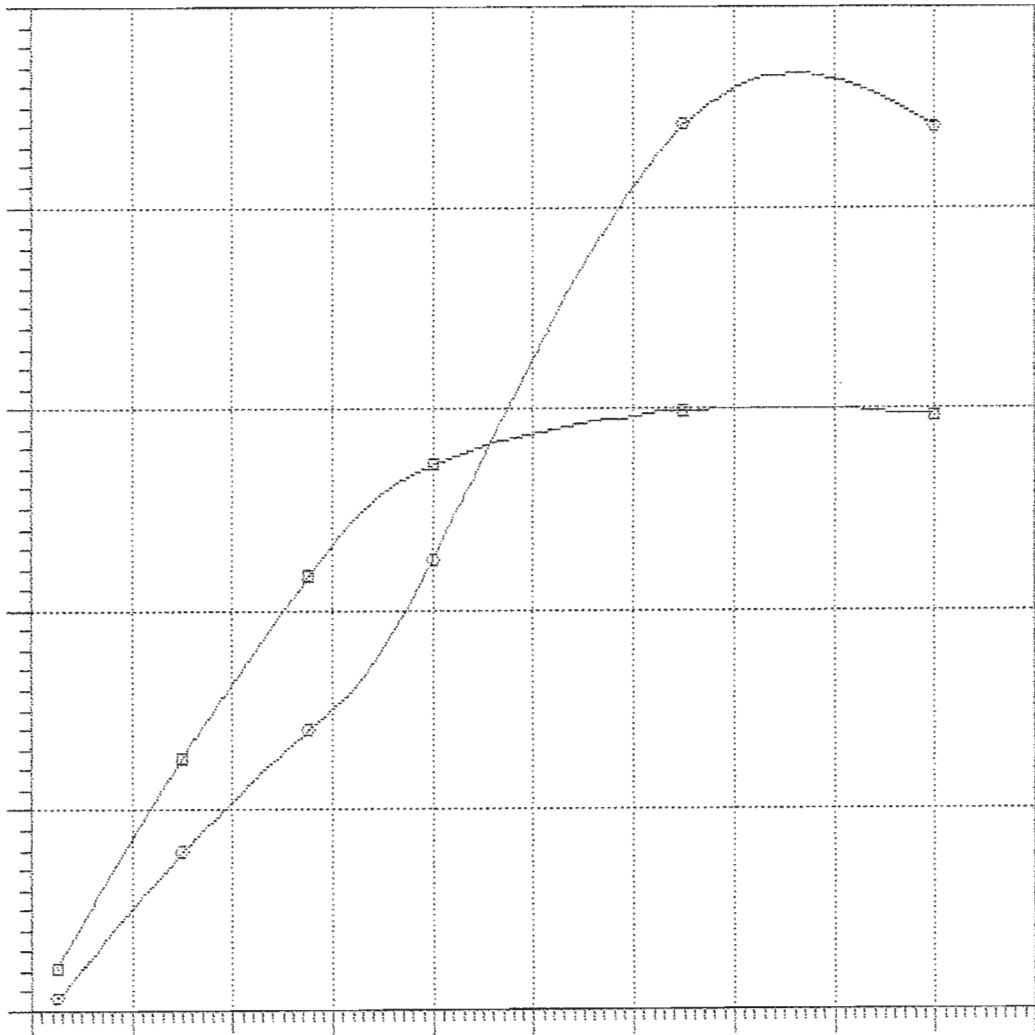
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65B Lpx/Bpx=3.320 Ap/Vol=4.458 Lpx/Ap=4.582 Lcg/Lpx=0.380

5-45-420



NavCad(tm) 3.1d

### Bare-hull resistance

File: 5-45-460.mdl

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vs.

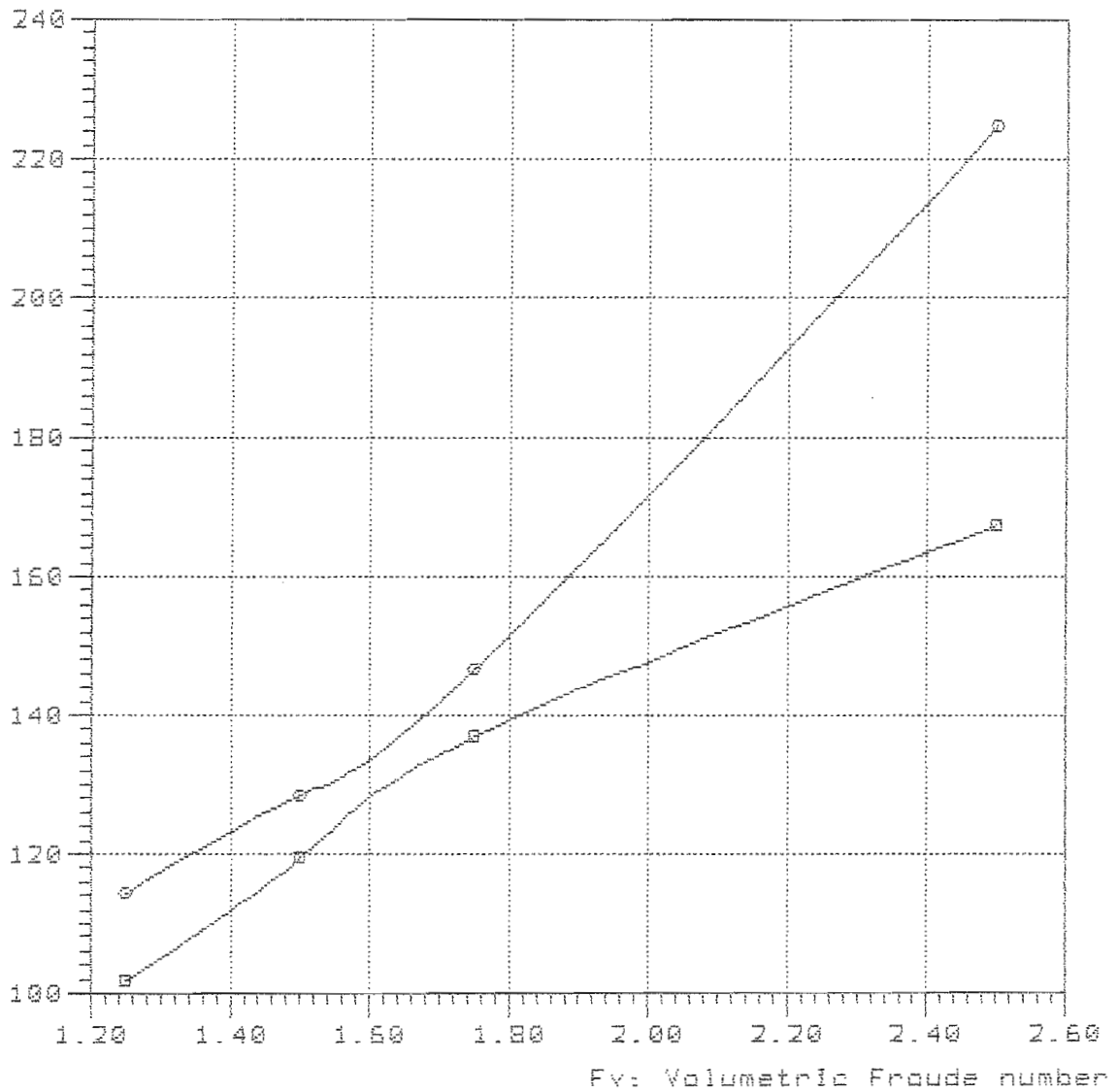
Date: 24 Feb 88

HydroComp, Inc.

### Volumetric Froude number

Time: 12:17

Rbare: Bare-hull resistance (lbs)

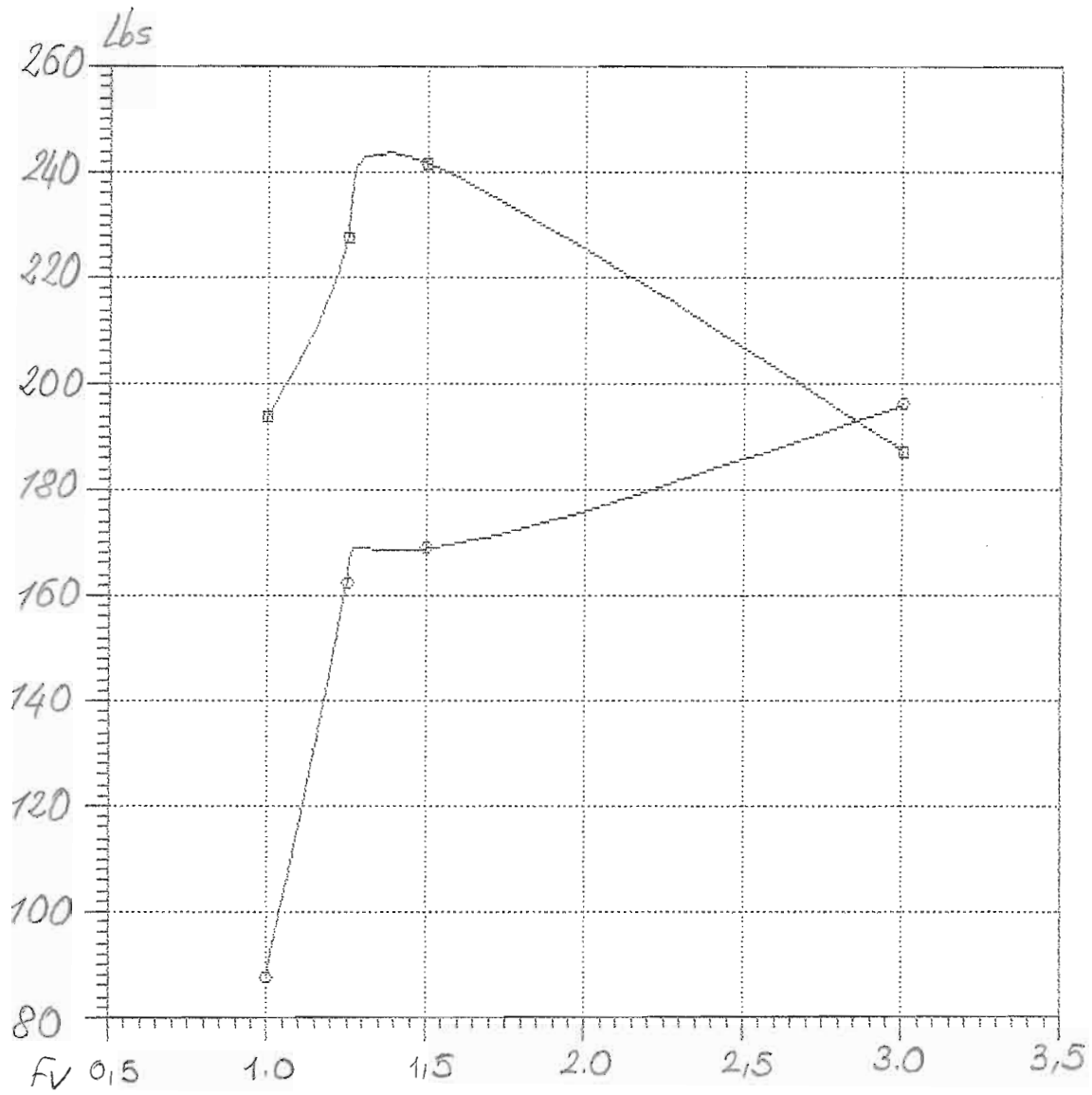


#### Curve legend

—□—

—○— TMB-65B Lpx/Bpx=3.320 Ap/Vol=4.458 Lpx/Ap=4.582 Log/Lpx=0.468

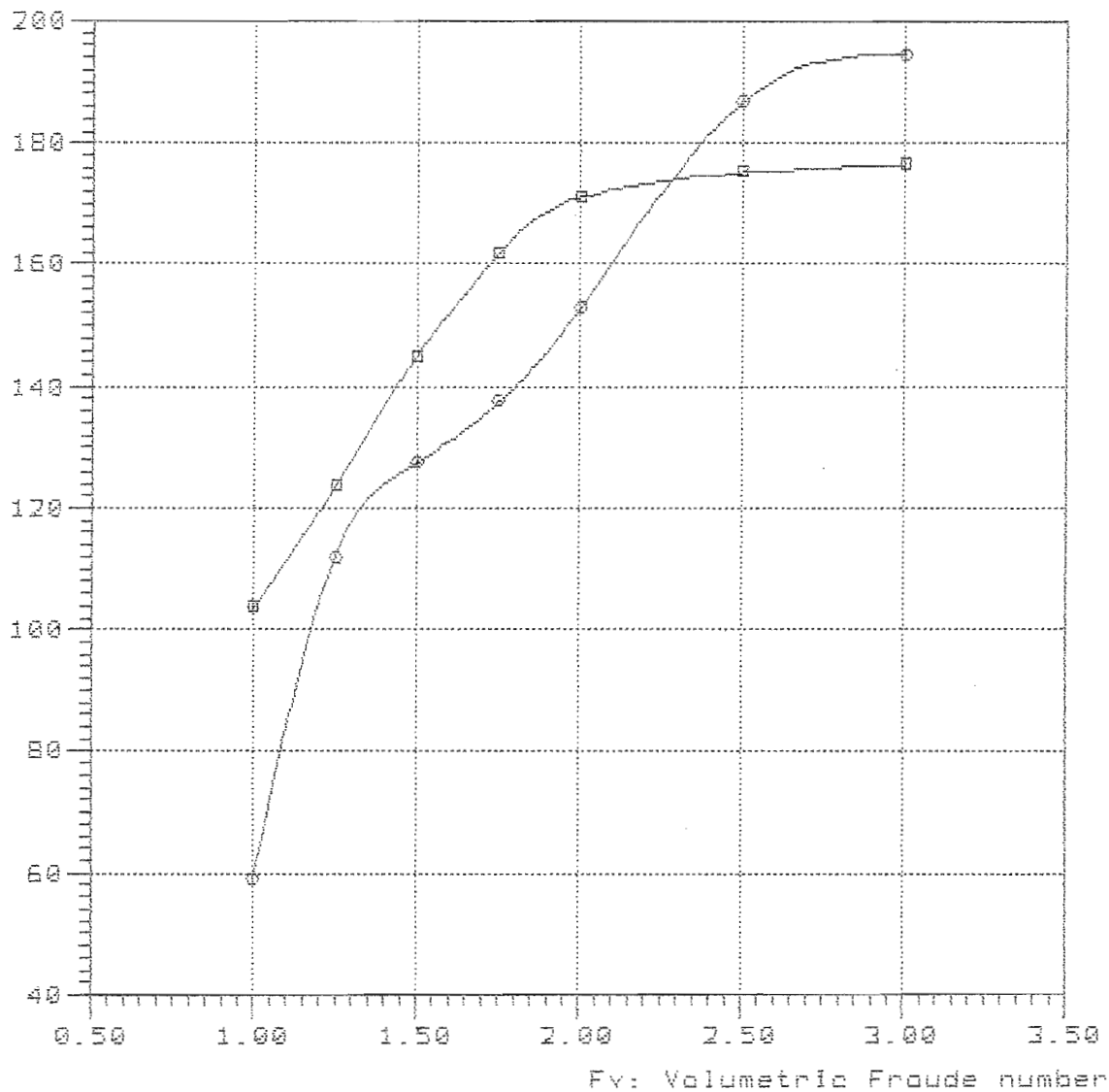
6-50-300



—□—

—○—

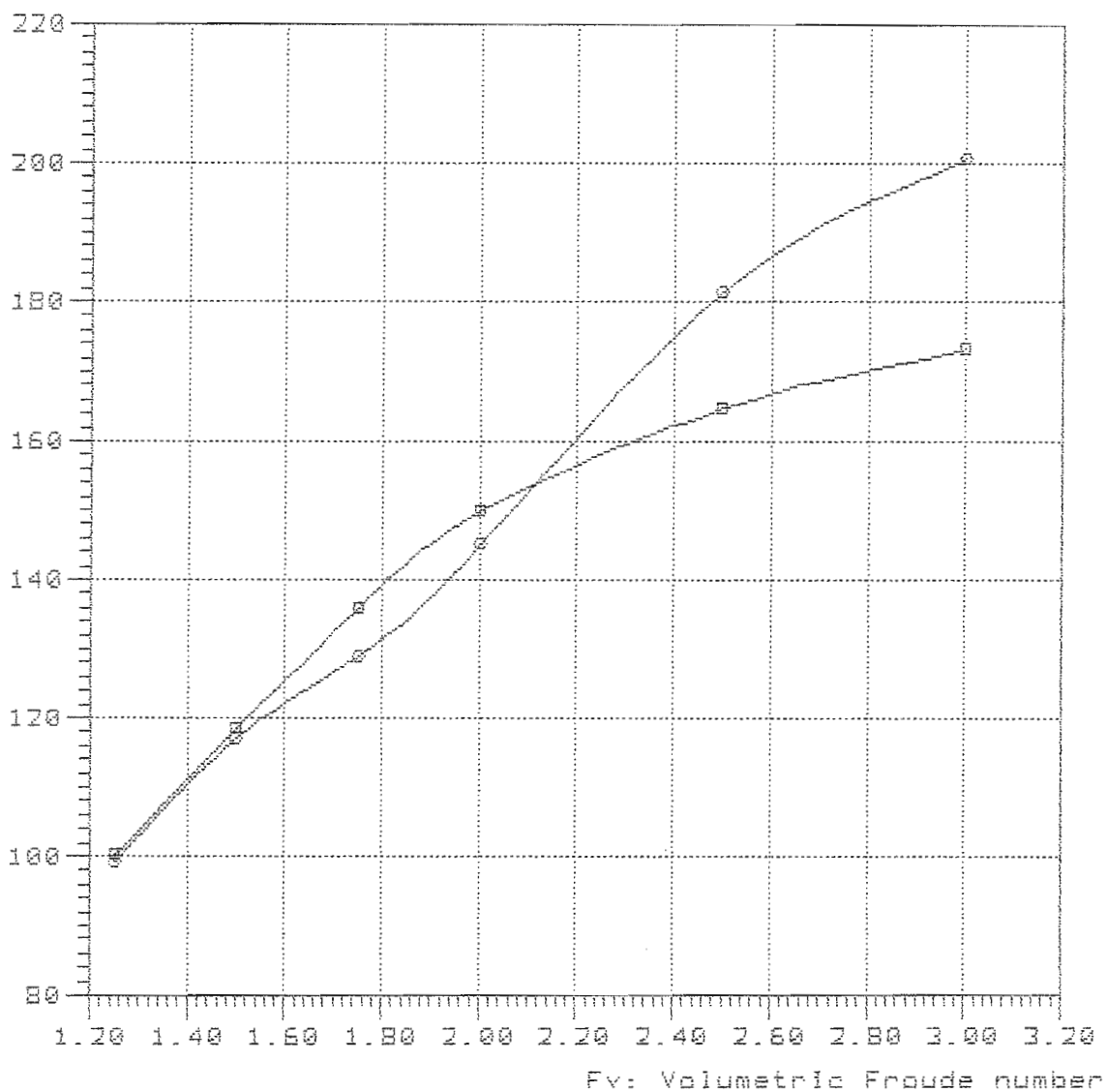
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=3.320 Ap/Vol=5.553 Lpx/Ap=4.502 Lcg/Lpx=0.380

Rbare: Bare-hull resistance (lbs)

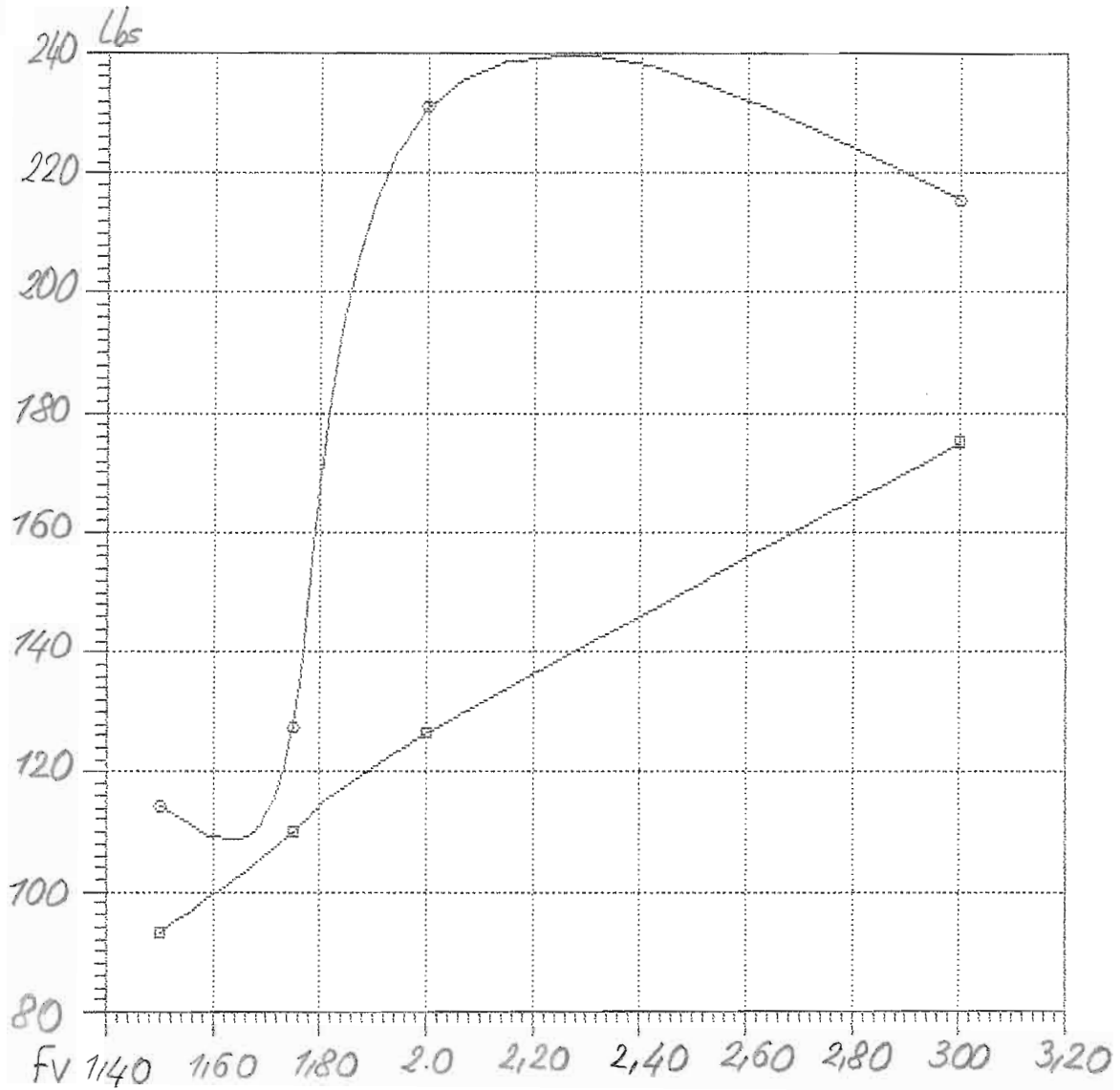


—■—

—○— TMB-65B Lpx/Bpx=3.320 Ap/Vol=5.553 Lpx/Ap=4.502 Log/Lpx=0.420



6-50-460



—□—

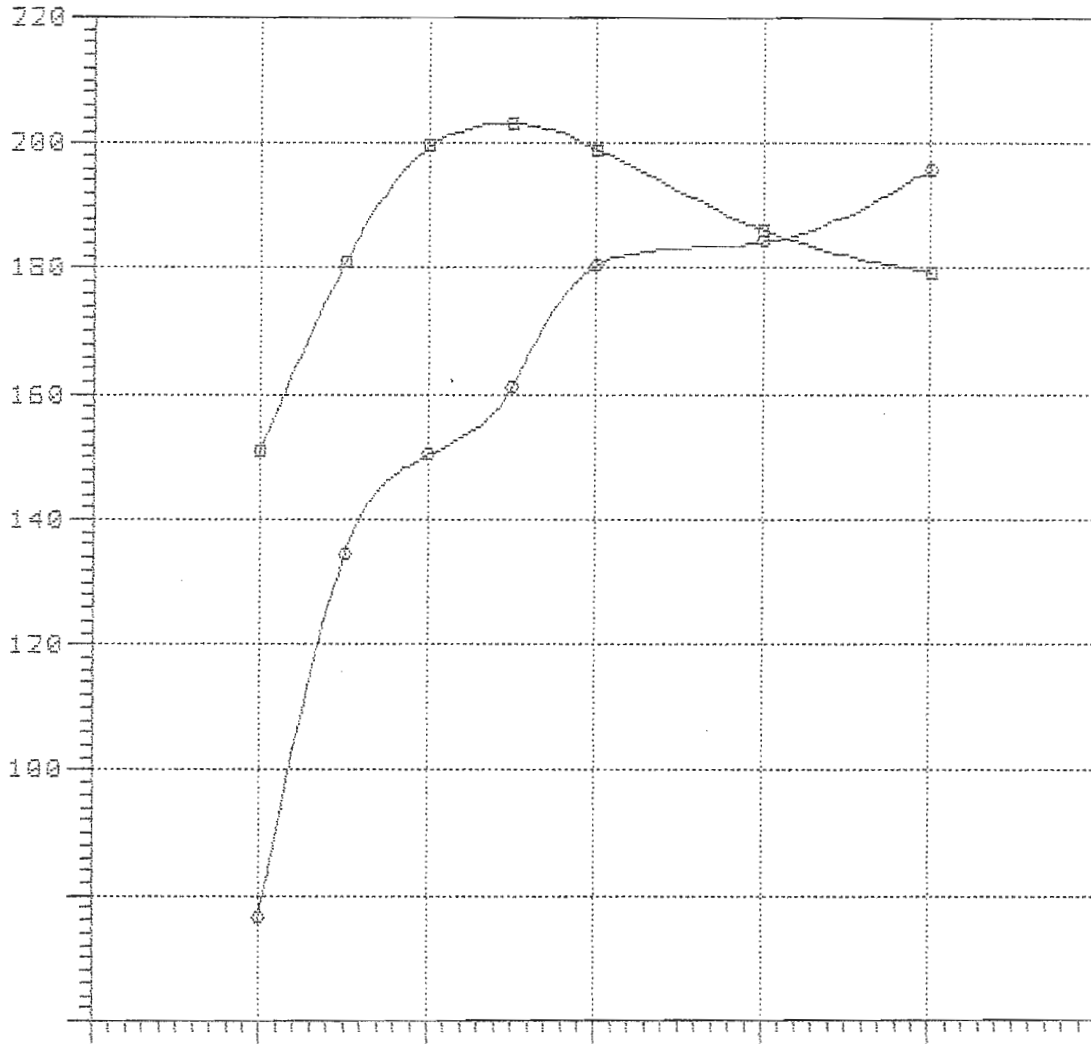
—○—

Model = 5186  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 13.700 ft  
Lwl = 13.535 ft  
Bpx = 4.127 ft  
Ap = 41.690 sqft  
Vcg = 1.268 ft  
Disp = 1000.00 Lb  
Deadrise = 28.70 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 6.670  
Lpx/Vol = 5.496  
Cvload = 0.222  
Lbload = 0.030

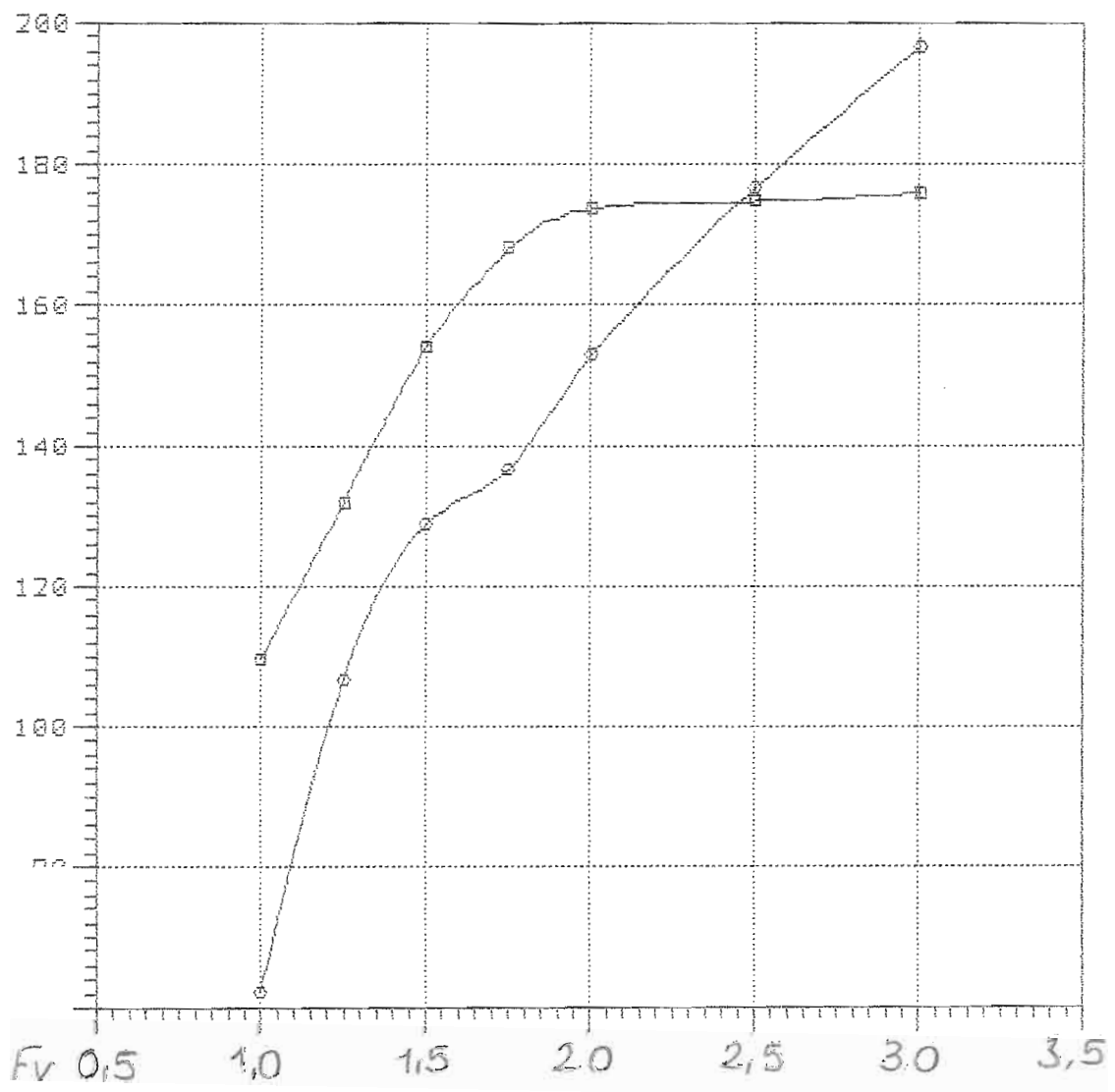
Rbare: Bare-hull resistance (lbs)



—■—

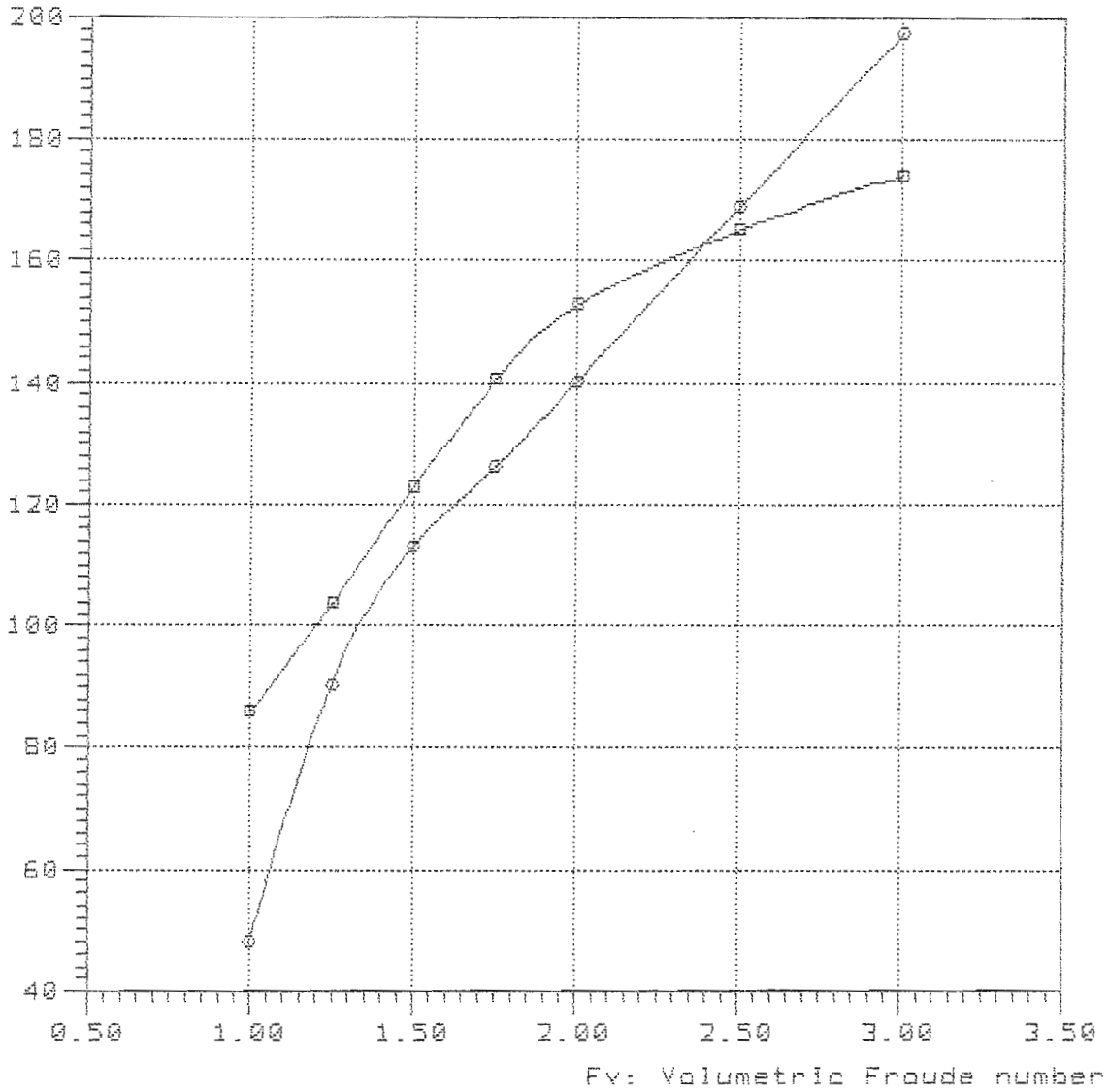
—◆—

Rbare: Bare-hull resistance (lbs)



—■—  
—○—

Rbare: Bare-hull resistance (lbs)



—■—

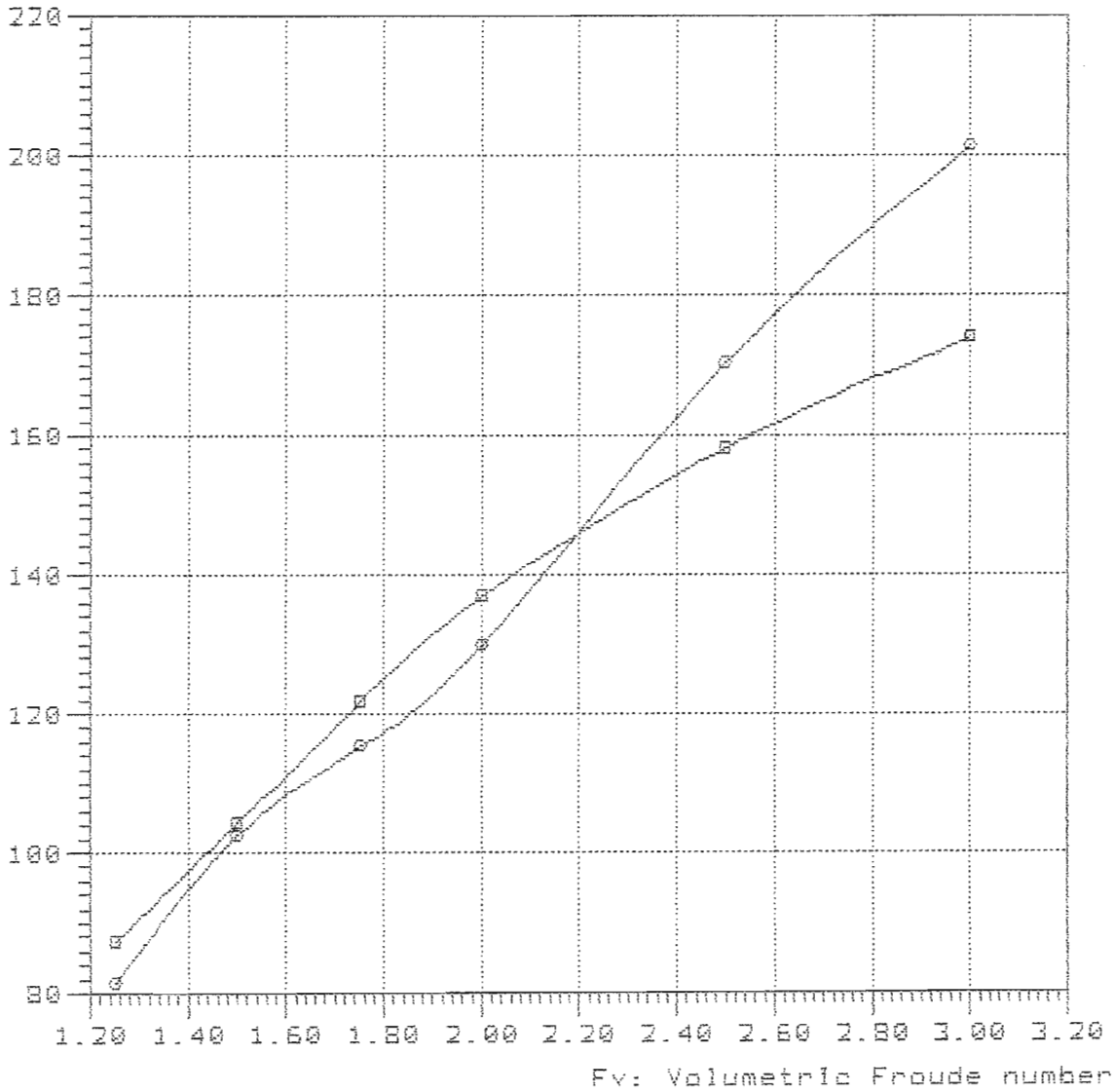
—○— TMS-658 Lpx/Bpx=3.320 Ap/Vol=6.670 Lpx/Ap=4.502 Log/Lpx=0.380

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Bare-hull resistance  
vs.  
Volumetric Froude number

File: 7-55-420.mdl  
Date: 24 Feb 00  
Time: 12:49

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—○— TMB-65B Lpx/Bpx=3.320 Ap/Vol=6.670 Lpx/Ap=4.502 Log/Lpx=0.420

NavCad(tm) 3.1d

Bare-hull resistance

File: 7-55-460.mdl

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vs.

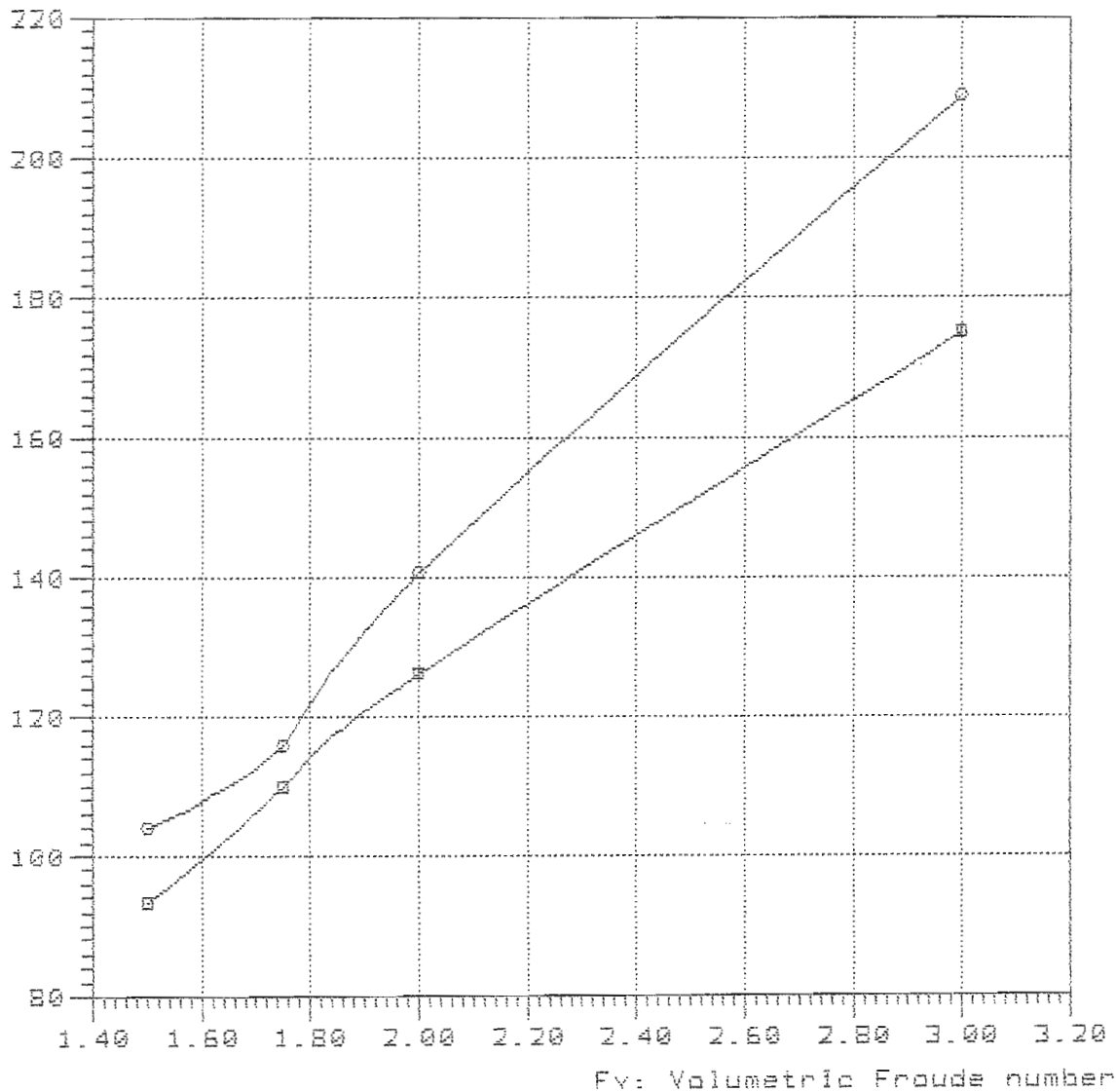
Date: 24 Feb 00

HydroComp, Inc.

Volumetric Froude number

Time: 12:52

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—○— TMB-65B Lpx/Bpx=3.320 Ap/Vol=6.670 Lpx/Ap=4.502 Lcg/Lpx=0.460

Model = 5186  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 15.000 ft  
Lwl = 14.819 ft  
Bpx = 4.518 ft  
Ap = 49.978 sqft  
Vcg = 1.395 ft  
Disp = 1000.00 Lb  
Deadrise = 28.70 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 7.996  
Lpx/Vol = 6.018  
Cvload = 0.169  
Lbload = 0.023



NavCad(tm) 3.1d

### Bare-hull resistance

File: B-50-300.mdl

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vs.

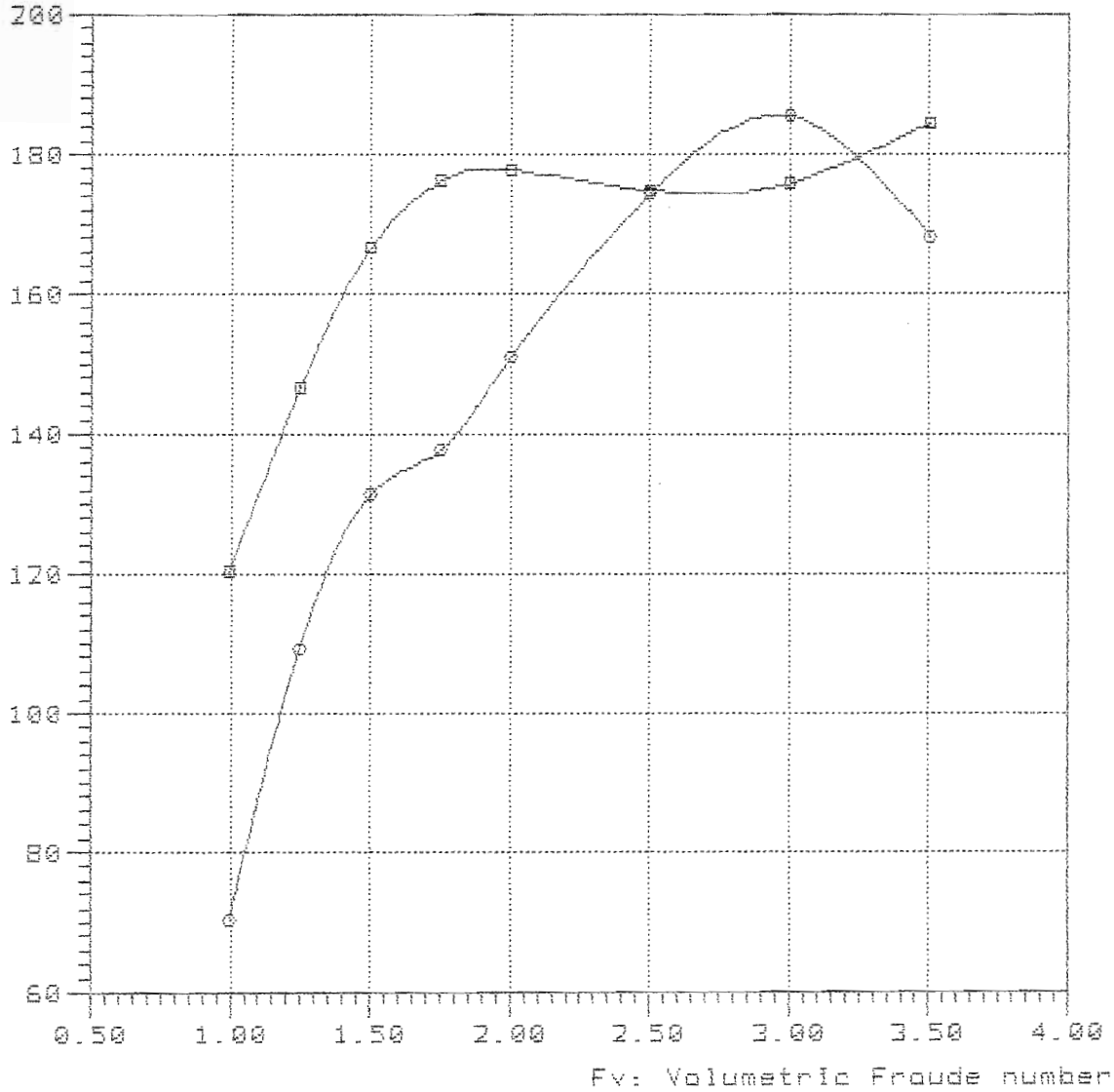
Date: 24 Feb 00

HydraComp, Inc.

### Volumetric Froude number

Time: 12:57

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-65B Lpx/Bpx=3.320 Ap/Vol=7.996 Lpx/Ap=4.502 Lcg/Lpx=0.300

NavCad(tm) 3.1d

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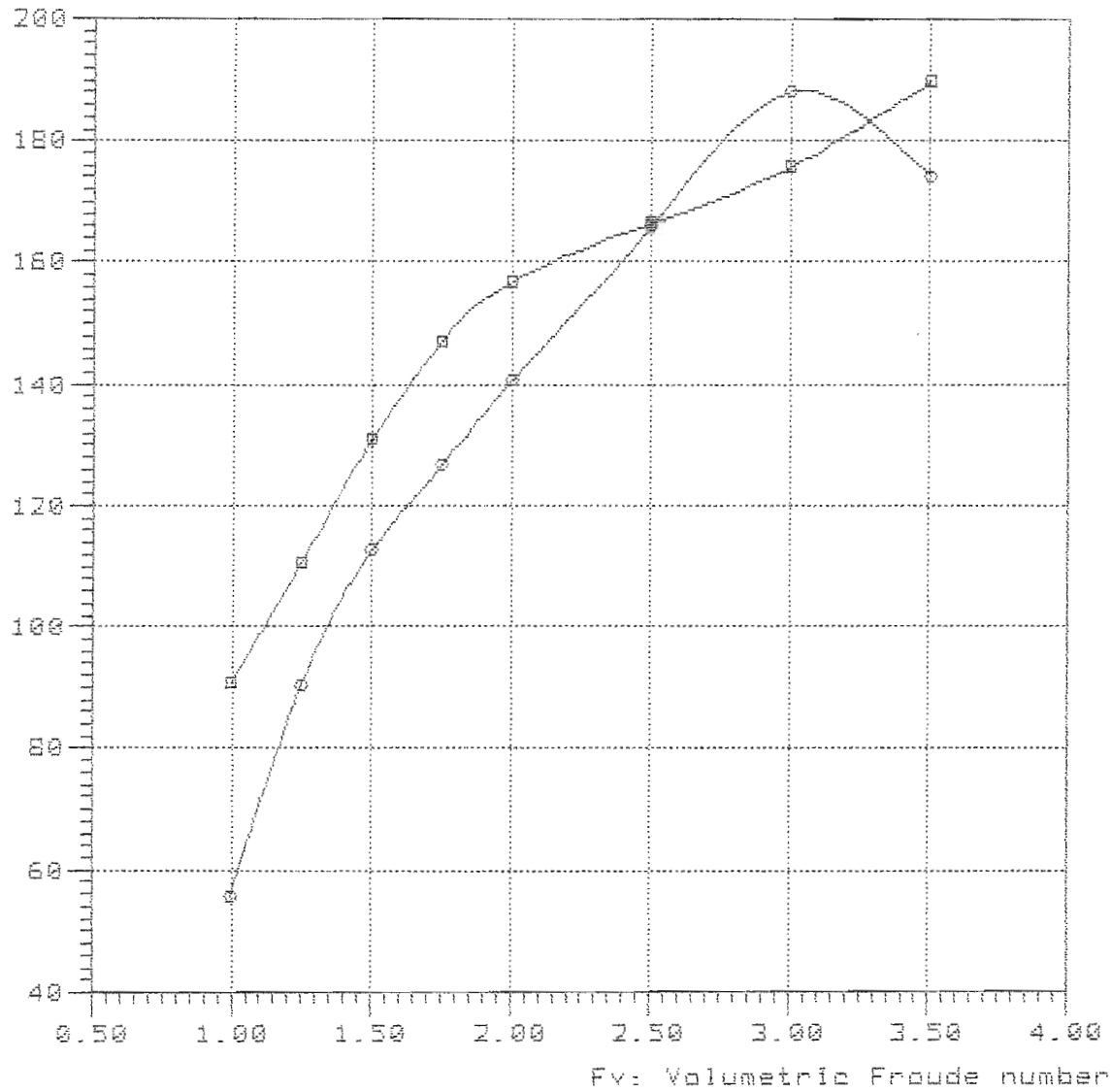
HydroComp, Inc.

File: B-60-340.mdl

Date: 24 Feb 00

Time: 13:16

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65B Lpx/Bpx=3.320 Ap/Vol=7.996 Lpx/Ap=4.502 Log/Lpx=0.340

NavCad(tm) 3.1d

Bare-hull resistance

File: 8-60-380.mdl

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vs.

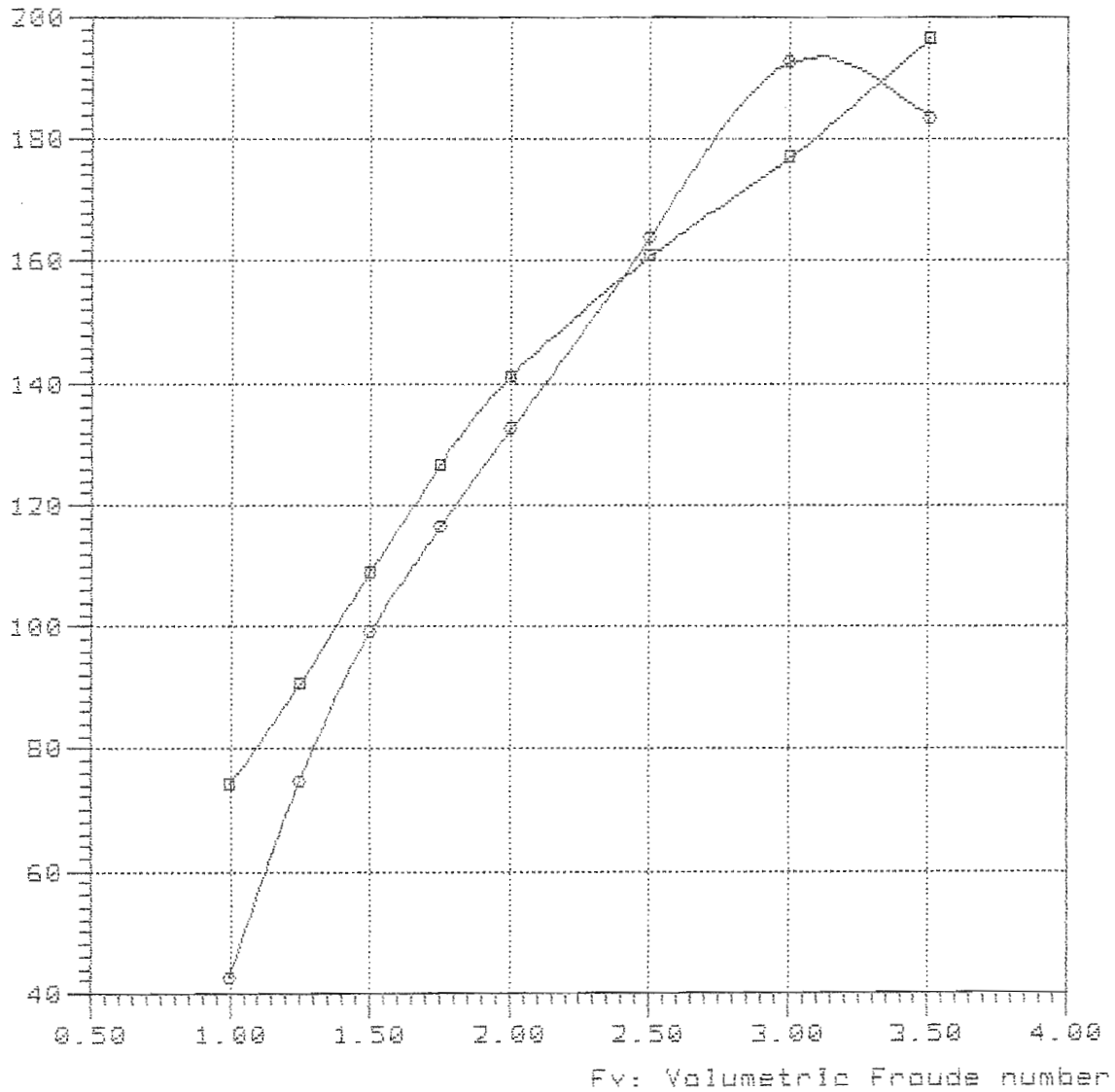
Date: 24 Feb 98

HydroComp, Inc.

Volumetric Froude number

Time: 13:20

Rbare: Bare-hull resistance (lbs)



Curve Legend

—■—

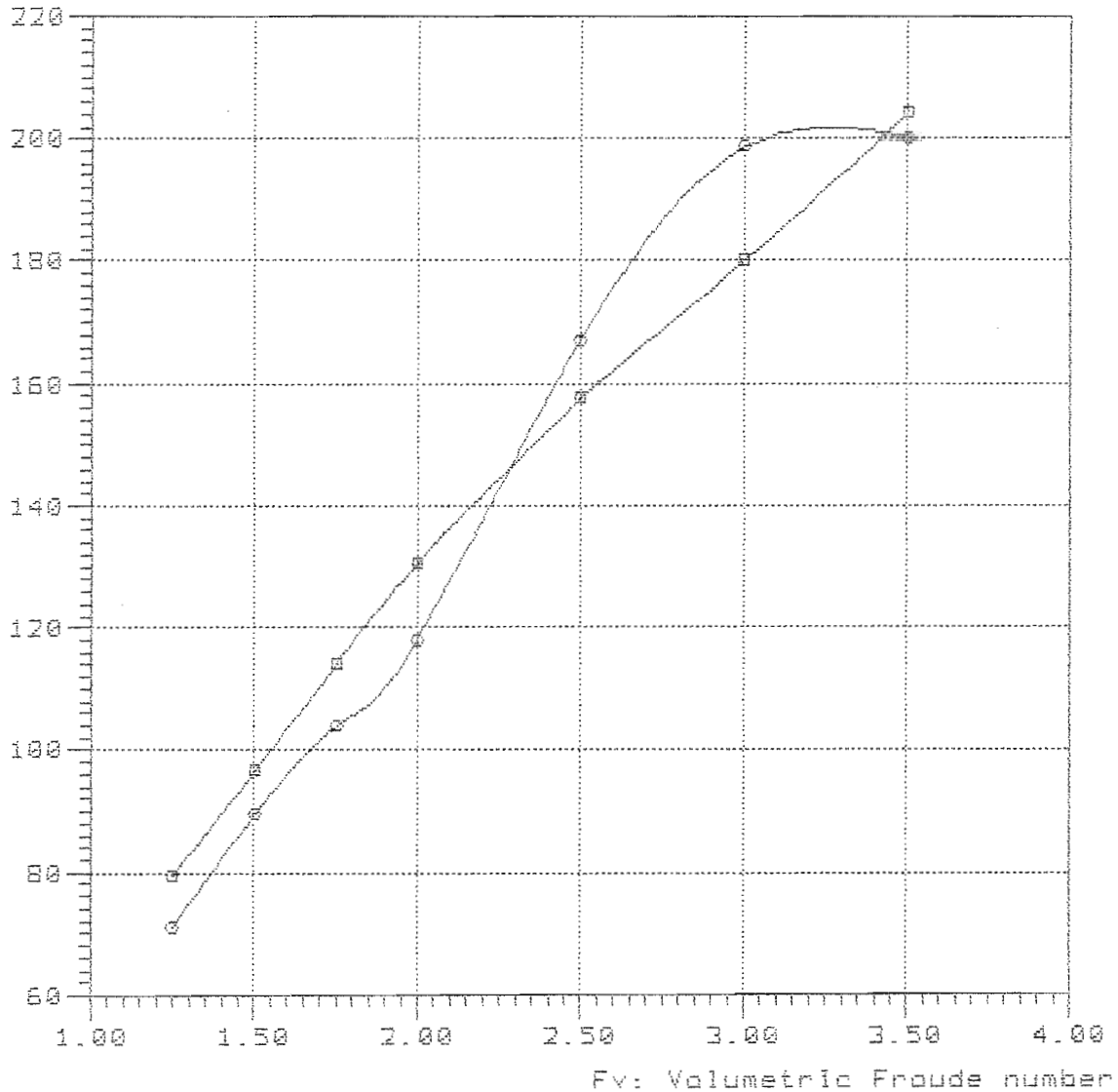
—○— TMB-65B Lpx/Bpx=3.320 Ap/Vol=7.996 Lpx/Ap=4.502 Log/Lpx=0.380

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—●— TMB-65B Lpx/Bpx=3.320 Ap/Val=7.996 Lpx/Ap=4.502 Log/Lpx=0.420

NavCad(tm) 3.1d

### Bare-hull resistance

File: 8-60-460.mdl

(c) Copyright 1995

vs.

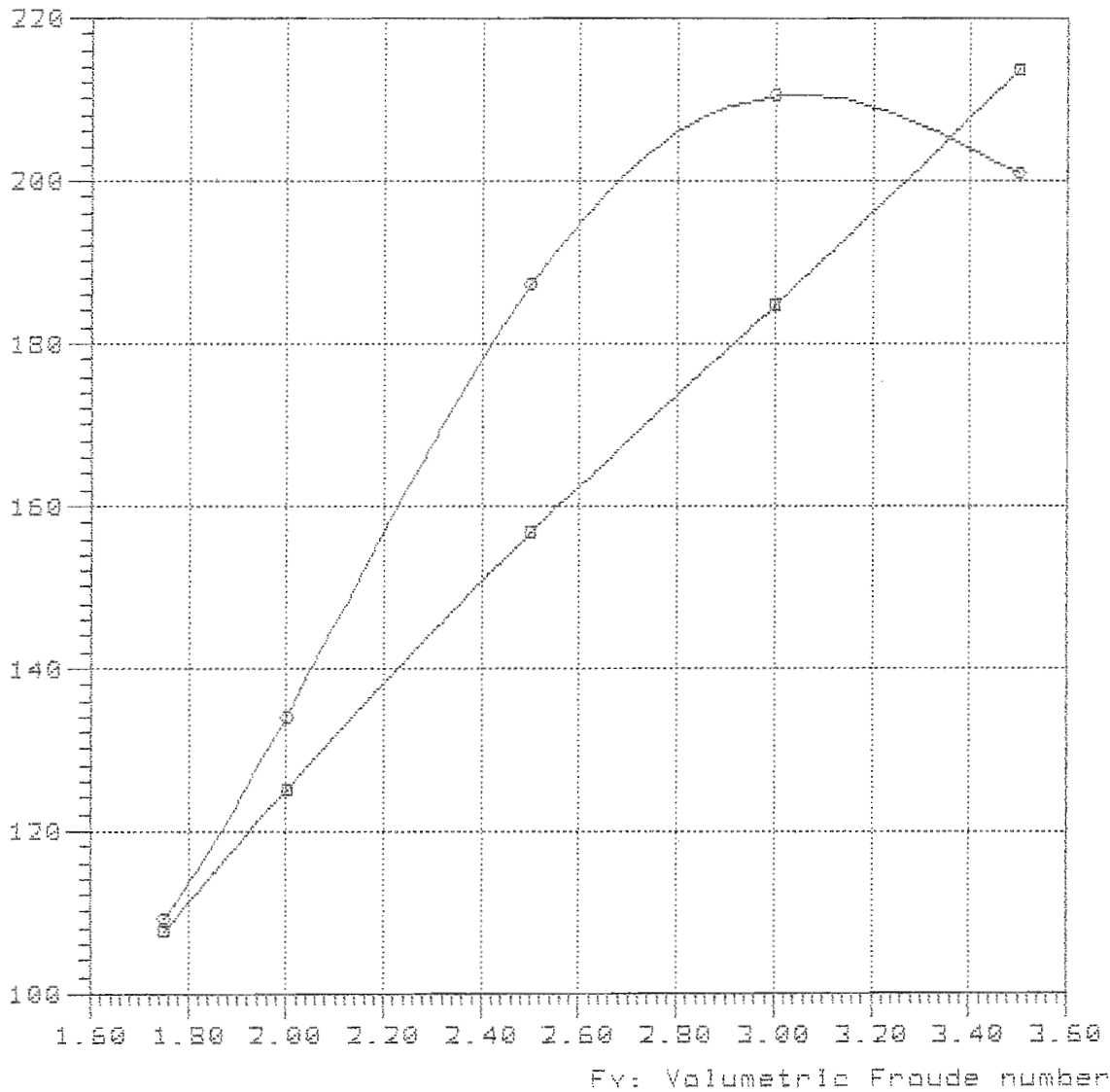
Date: 24 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 13:26

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

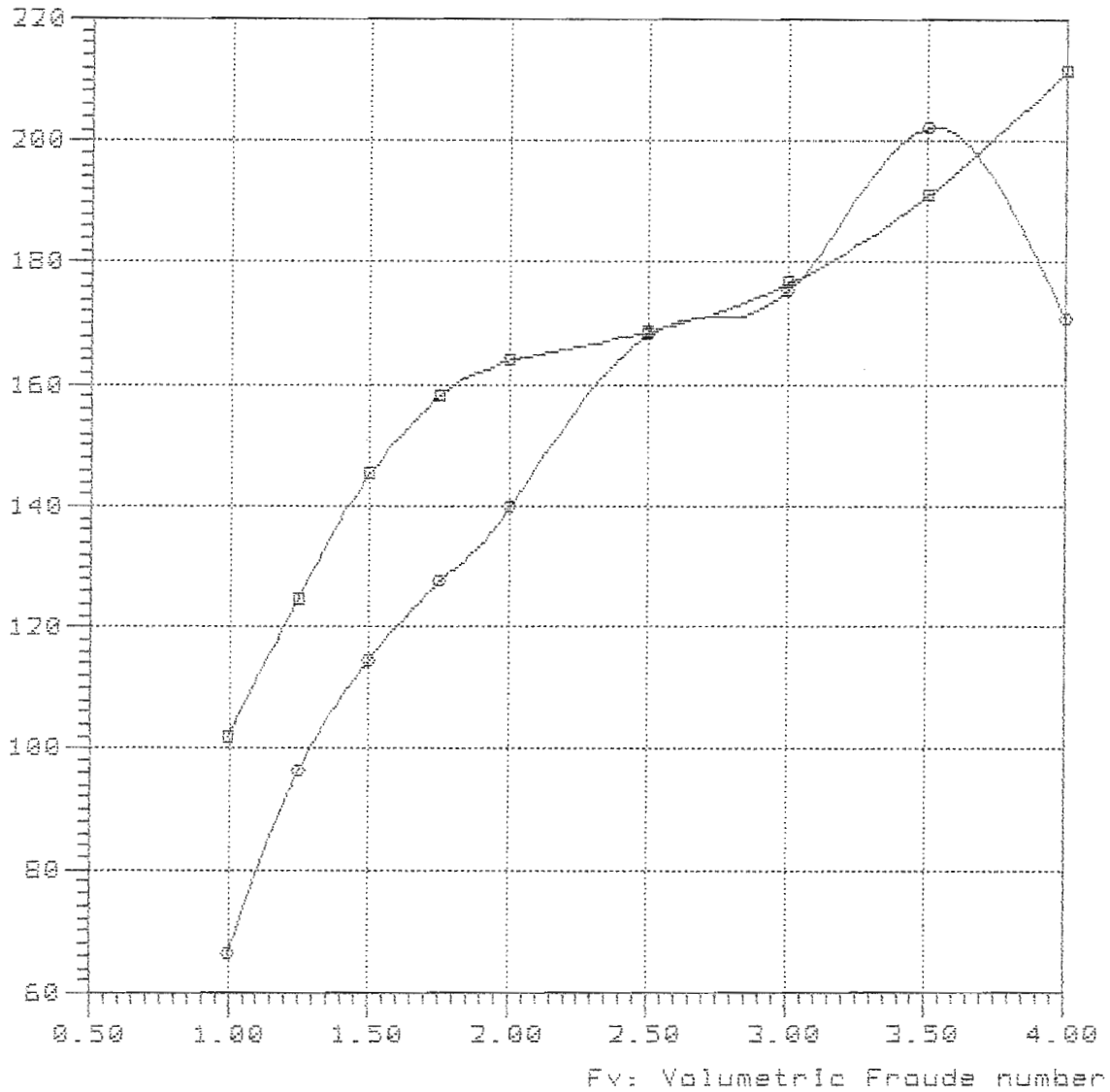
—○— TMB-65E Lpx/Bpx=3.320 Ap/Vol=7.996 Lpx/Ap=4.502 Lcg/Lpx=0.460

Model = 5186  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 16.200 ft  
Lwl = 16.005 ft  
Bpx = 4.880 ft  
Ap = 58.294 sqft  
Vcg = 1.499 ft  
Disp = 1000.00 Lb  
Deadrise = 28.70 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 9.326  
Lpx/Vol = 6.499  
Cvload = 0.134  
Lbload = 0.018

Rbare: Bare-hull resistance (lbs)

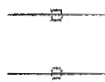
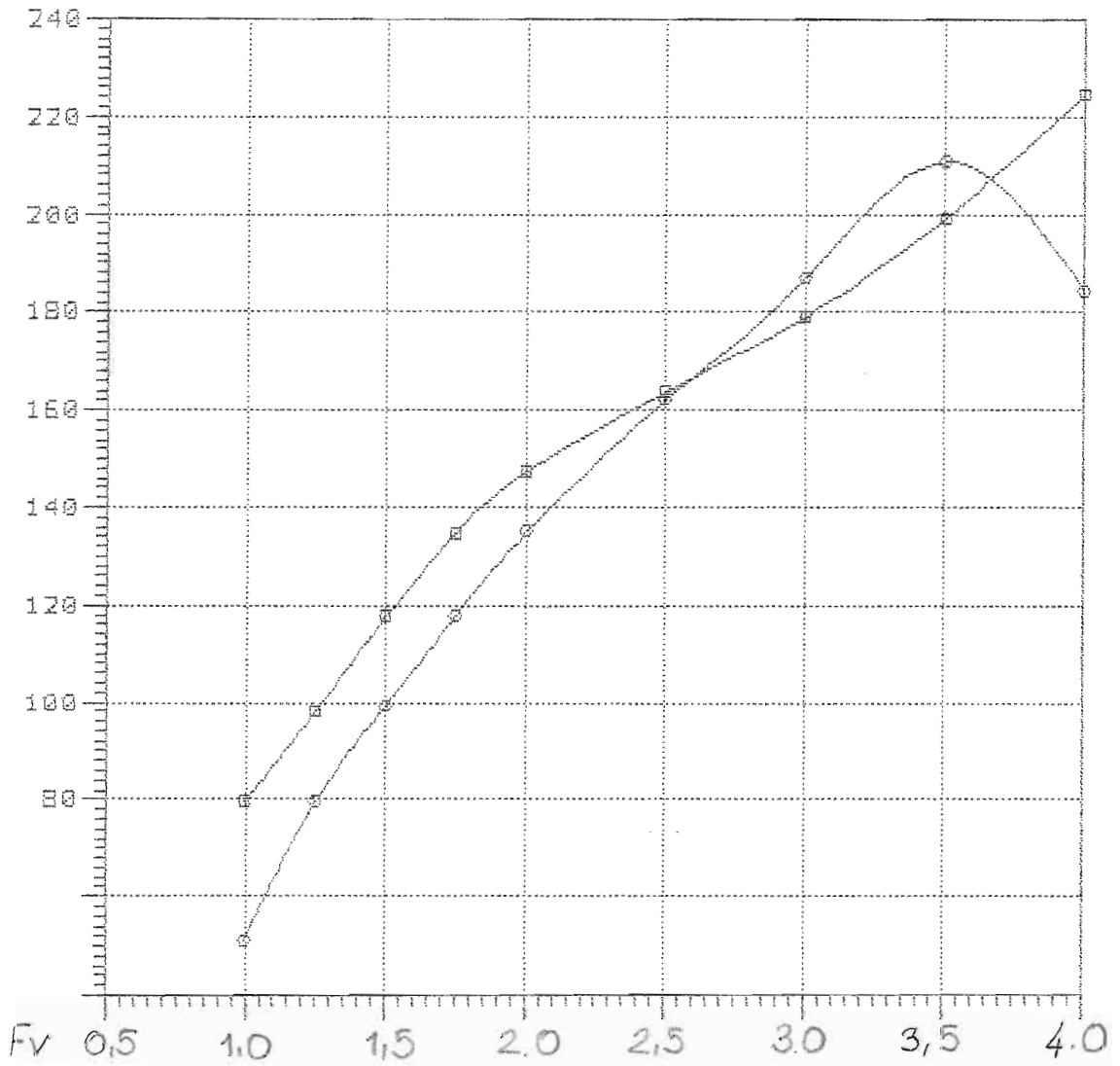


Curve legend

—■—

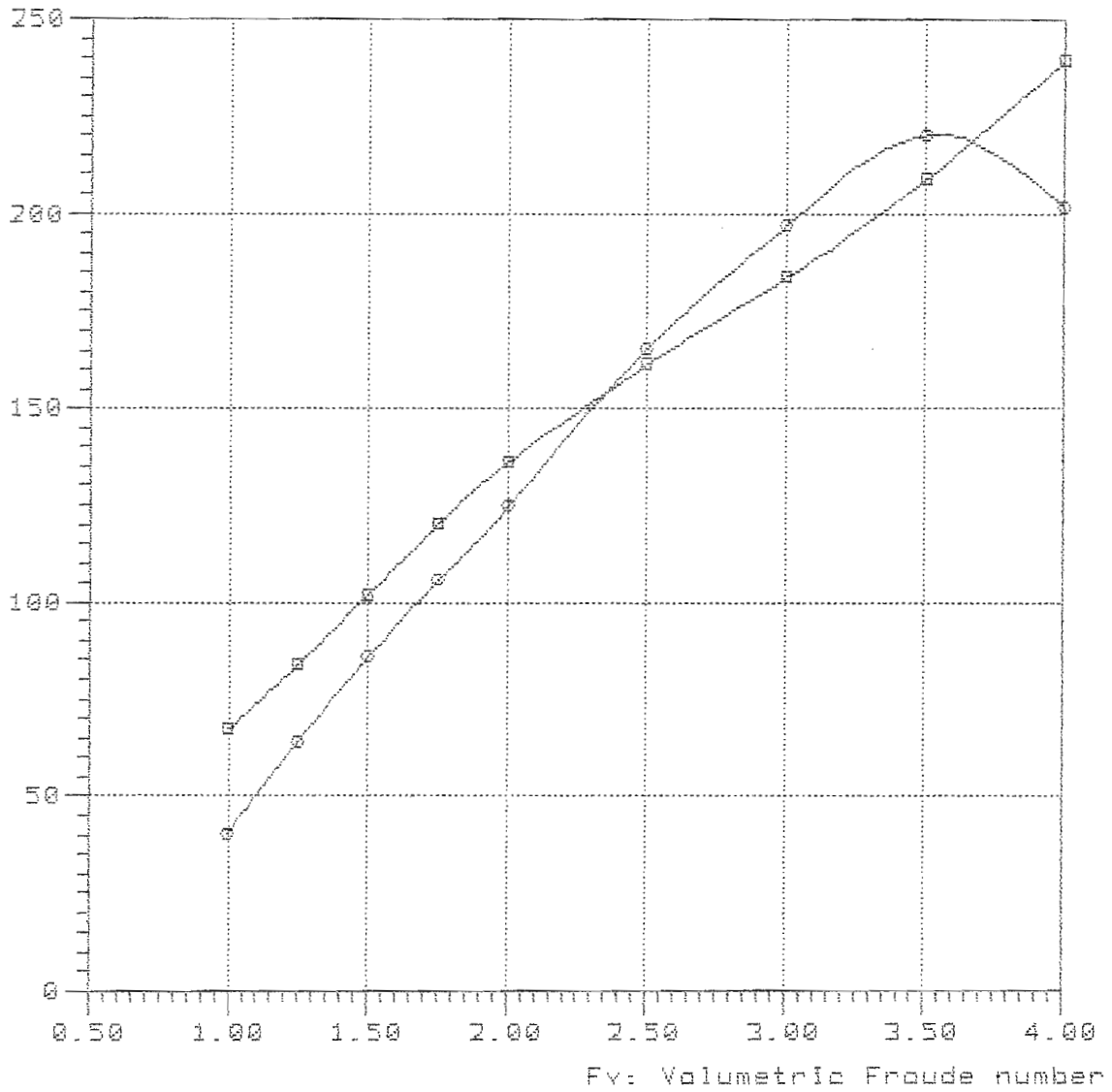
—●— TMB-65B Lpx/Bpx=3.320 Ap/Vol=9.327 Lpx/Ap=4.502 Lcg/Lpx=0.300

Rbare: Bare-hull resistance (lbs)





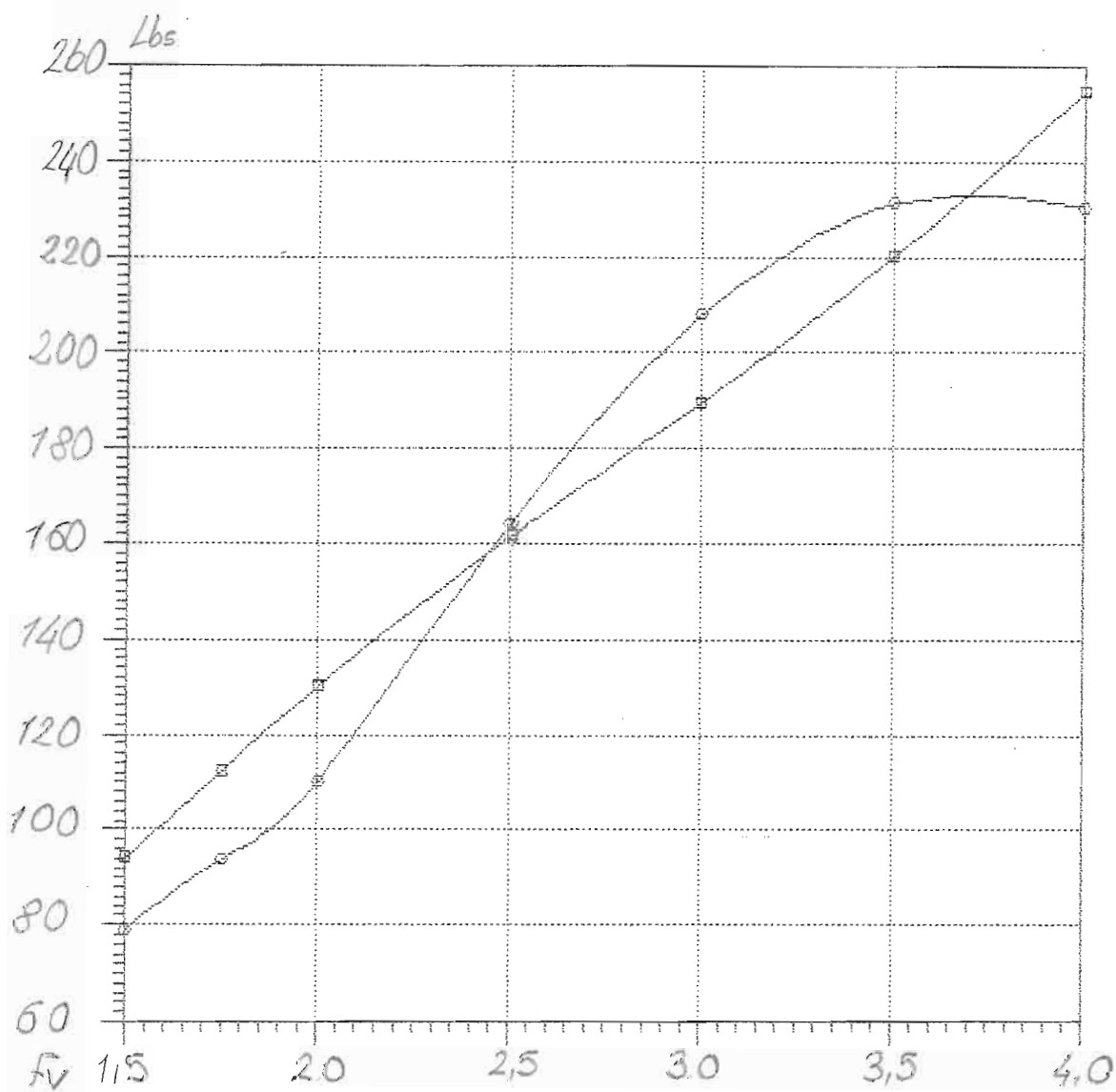
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=3.320 Ap/Val=9.327 Lpx/Ap=4.502 Log/Lpx=0.380

9-65-420



—□—  
—○—

Model = 5186  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 17.500 ft  
Lwl = 17.289 ft  
Bpx = 5.271 ft  
Ap = 68.025 sqft

Vcg = 1.619 ft  
Disp = 1000.00 Lb  
Deadrise = 28.70 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 10.883  
Lpx/Vol = 7.021  
Cvload = 0.107  
Lbload = 0.015

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### Bare-hull resistance

File: 11-70-30.mdl

(c) Copyright 1995

vs.

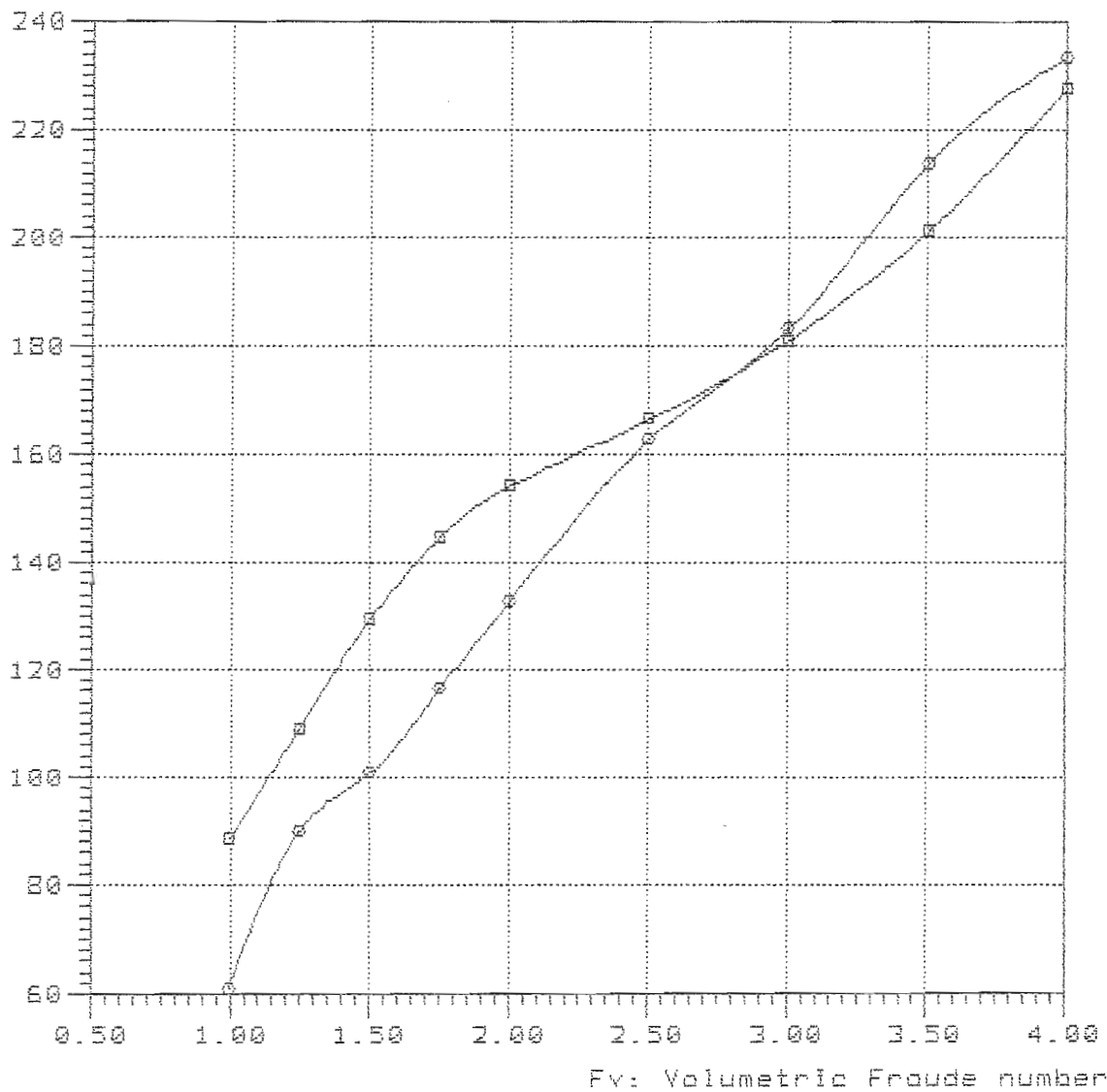
Date: 24 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 11:45

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-65B Lpx/Bpx=3.320 Ap/Vol=10.884 Lpx/Ap=4.502 Lcg/Lpx=0.300

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(c) Copyright 1985

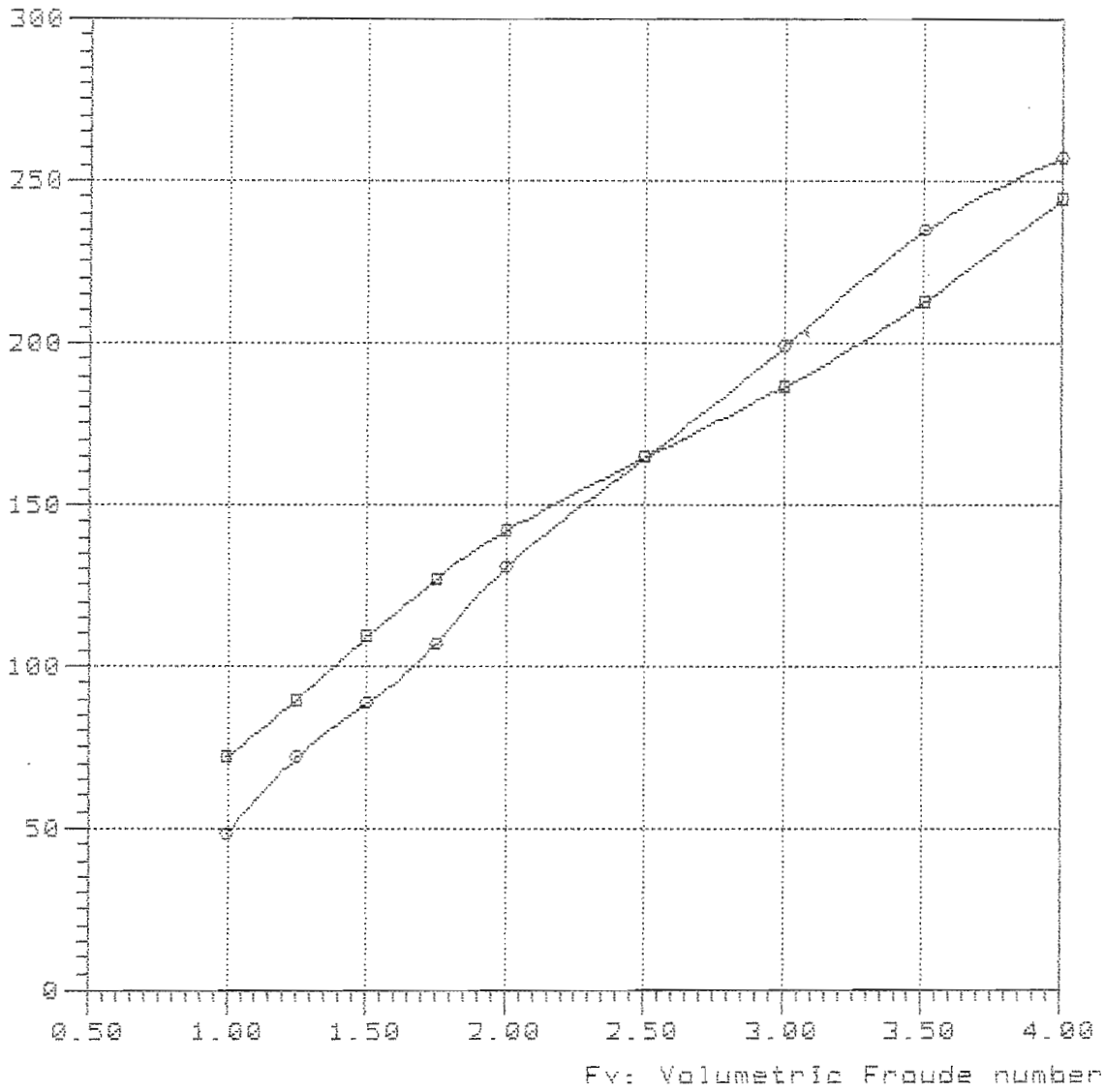
HydroComp, Inc.

File: 11-70-34.mdl

Date: 24 Feb 88

Time: 11:48

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=3.320 Ap/Vol=10.884 Lpx/Ap=4.502 Log/Lpx=0.340

NavCad(tm) 3.1d

(c) Copyright 1995

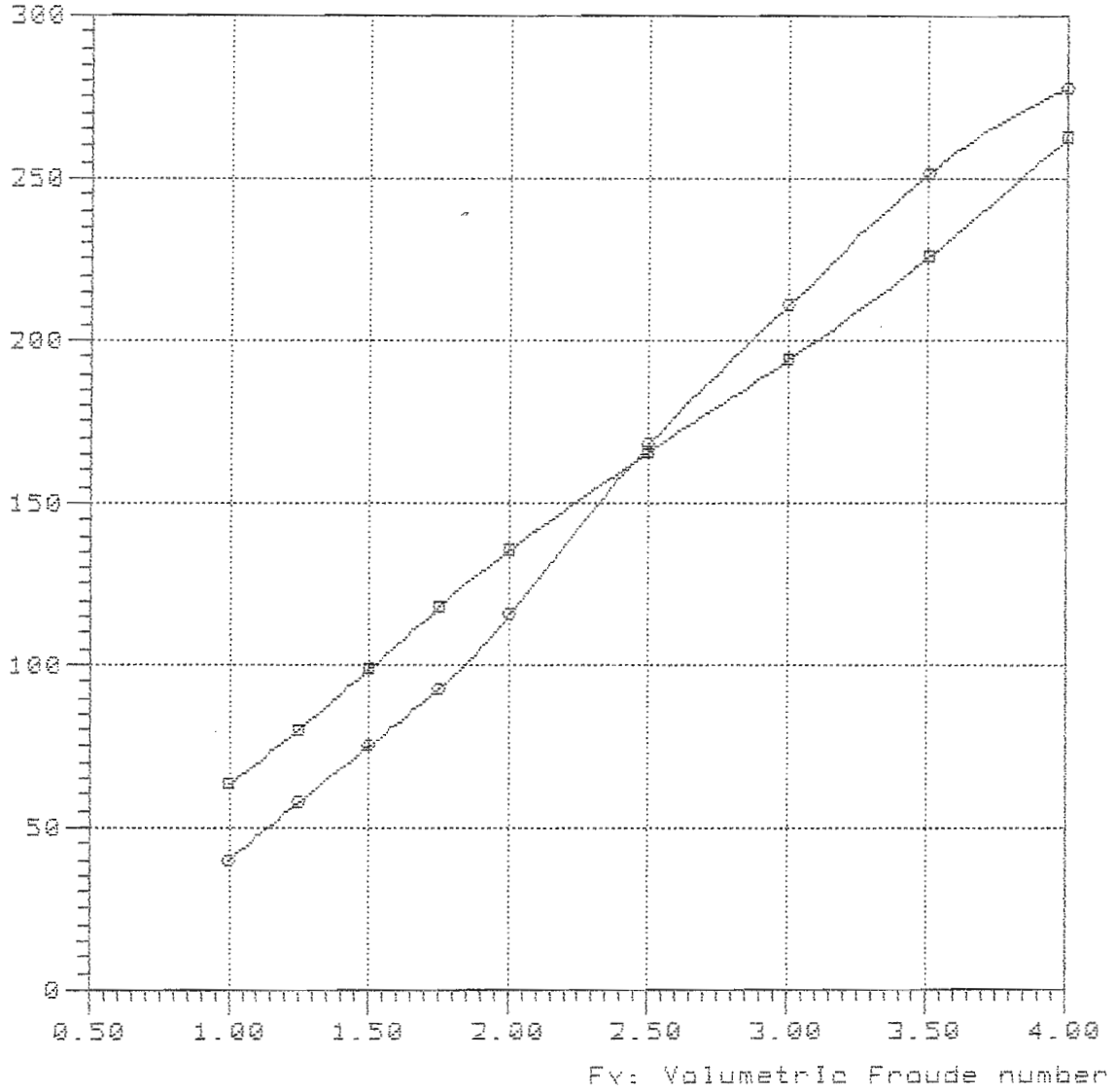
HydraComp, Inc.

File: 11-70-38.mdl

Date: 24 Feb 00

Time: 11:55

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=3.320 Ap/Vol=10.884 Lpx/Ap=4.502 Log/Lpx=0.380

NavCad(tm) 3.1d

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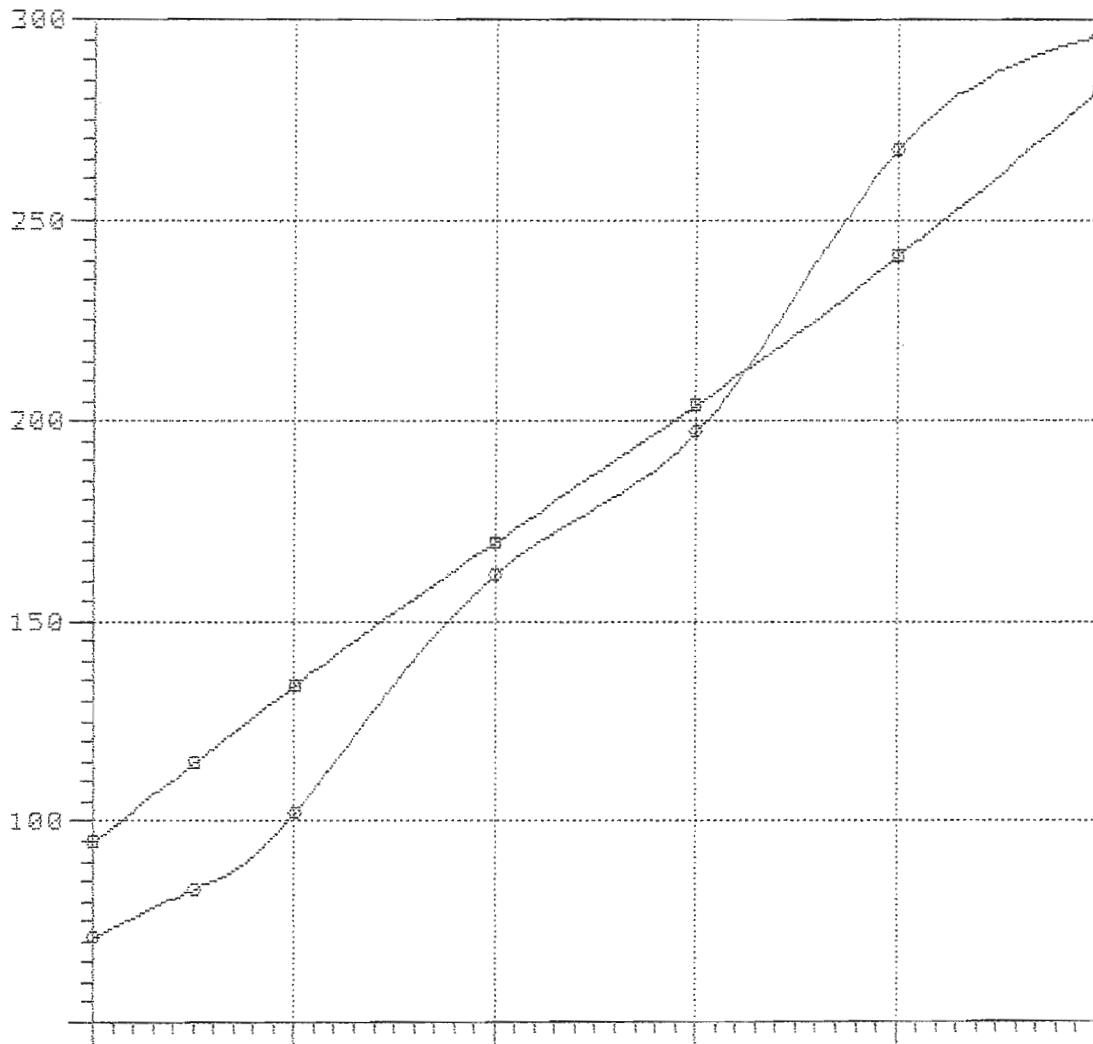
HydroComp, Inc.

File: 11-70-42.mdl

Date: 24 Feb 00

Time: 12:02

Rbare: Bare-hull resistance (lbs)



—□—

—○—

5198



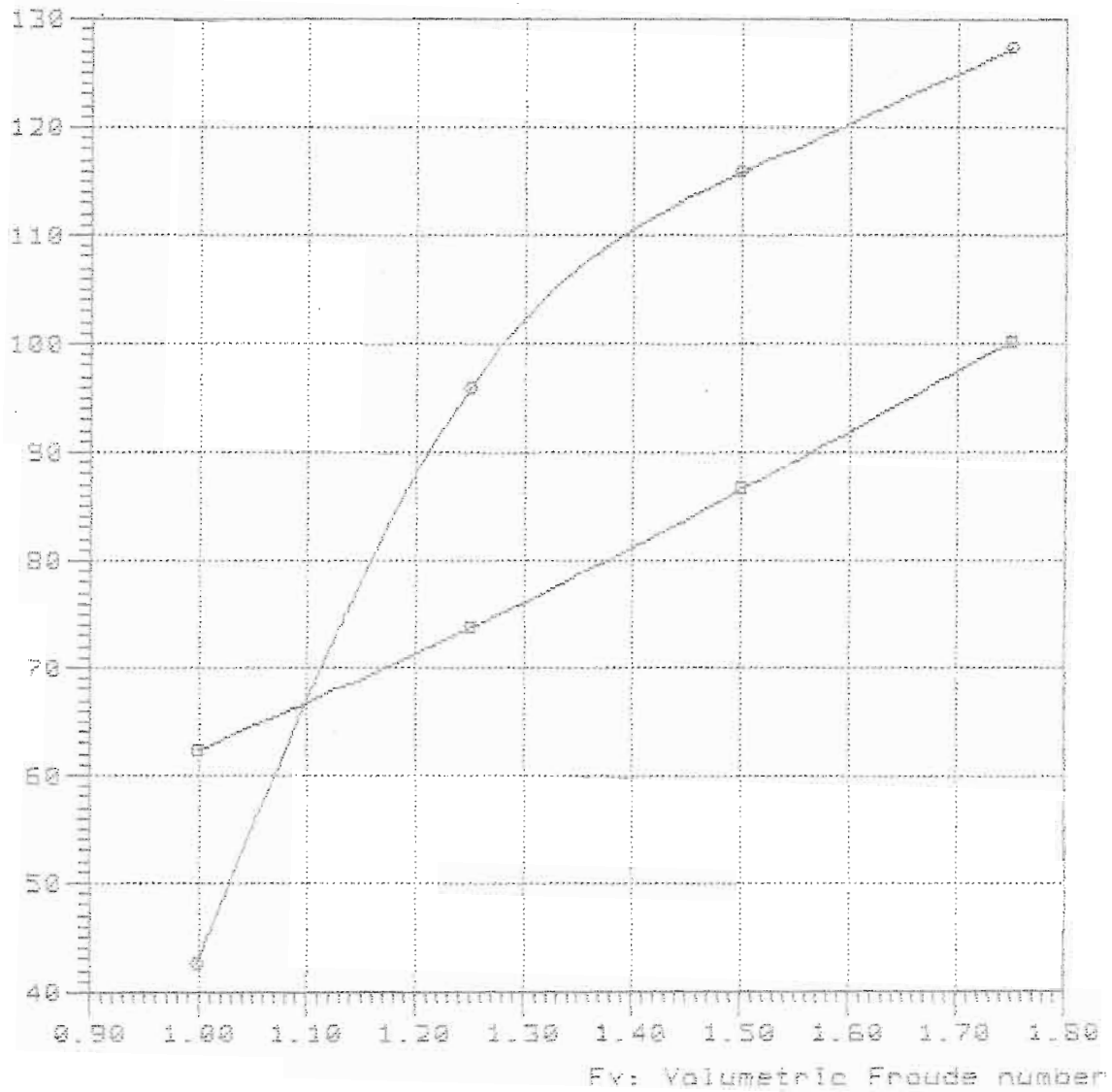
Model = 5198  
Ref = NSRDC  
Friction = ~~A~~ATTC Ca=4e-4

Lpx = 15.000 ft  
Lwl = 14.910 ft  
Bpx = 3.219 ft  
Ap = 34.938 sqft  
Vcg = 0.990 ft  
Disp. = 1000.00 Lb  
Deadrise = 22.50 degree  
Twist Angle = 2.00 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.660  
Lpx/AP = 6.440  
Ap /Vol = 5.589  
Lpx/Vol = 6.002  
Cvload = 0.468  
Lbload = 0.038  
Disp-Lpx = 132.275

**Bu ölçüler dizayn ve bununla ilgili Resimlerin telif hakları ÇEMBERCİ DENİZCİLİĞE Aittir Bu döküman veya bunun bir kısmı üçüncü şahıslara verilemez, kopya veya kopya edilemez ve her ne maksadla olursa olsun maksadı dışında izinsiz kullanılamaz.**

Rbare: Bare-hull resistance (lba)

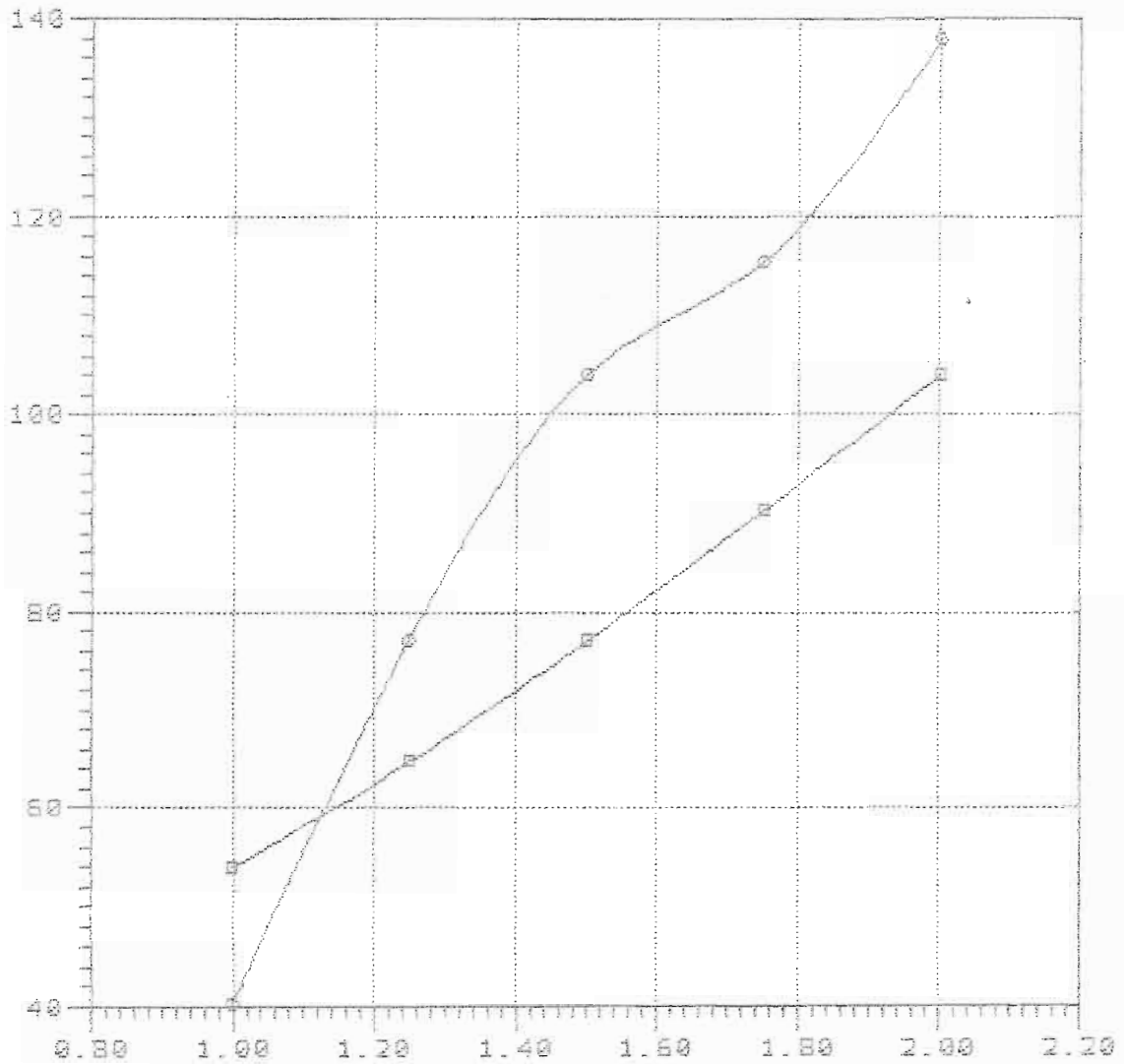


—□—

—○—

TMB-65A Lpx/Bpx=4.66 Ap/Vol=5.59 Lpx/Rp=6.440 Lcg/Lpx=0.40

Rbare: Bare-hull resistance (lbs)

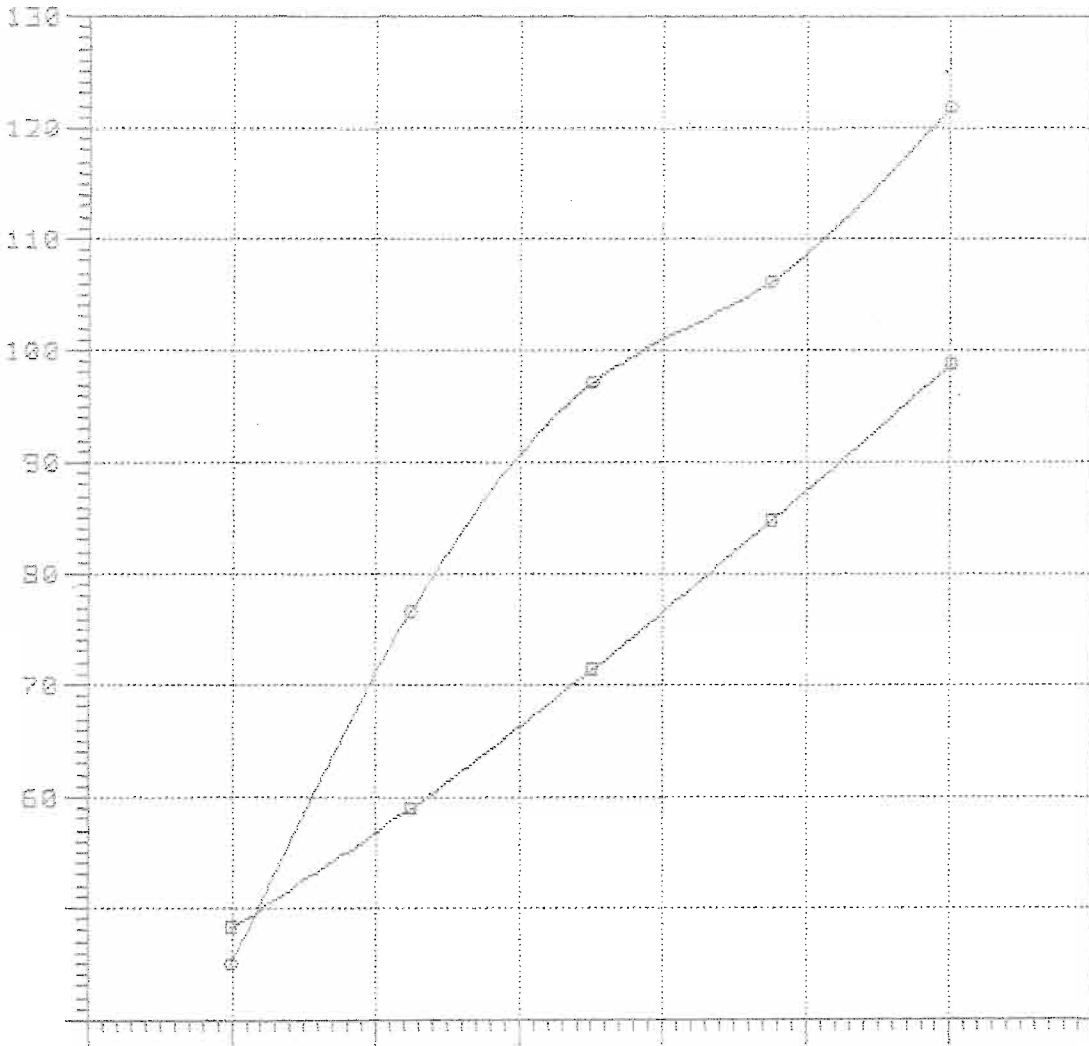


Fv: Volumetric Froude number

—■—

—○— TMB-65R Lpx/Bpx=4.66 Ap/Vol=5.59 Lpx/Ar=6.440 Lcg/Lpx=0.440

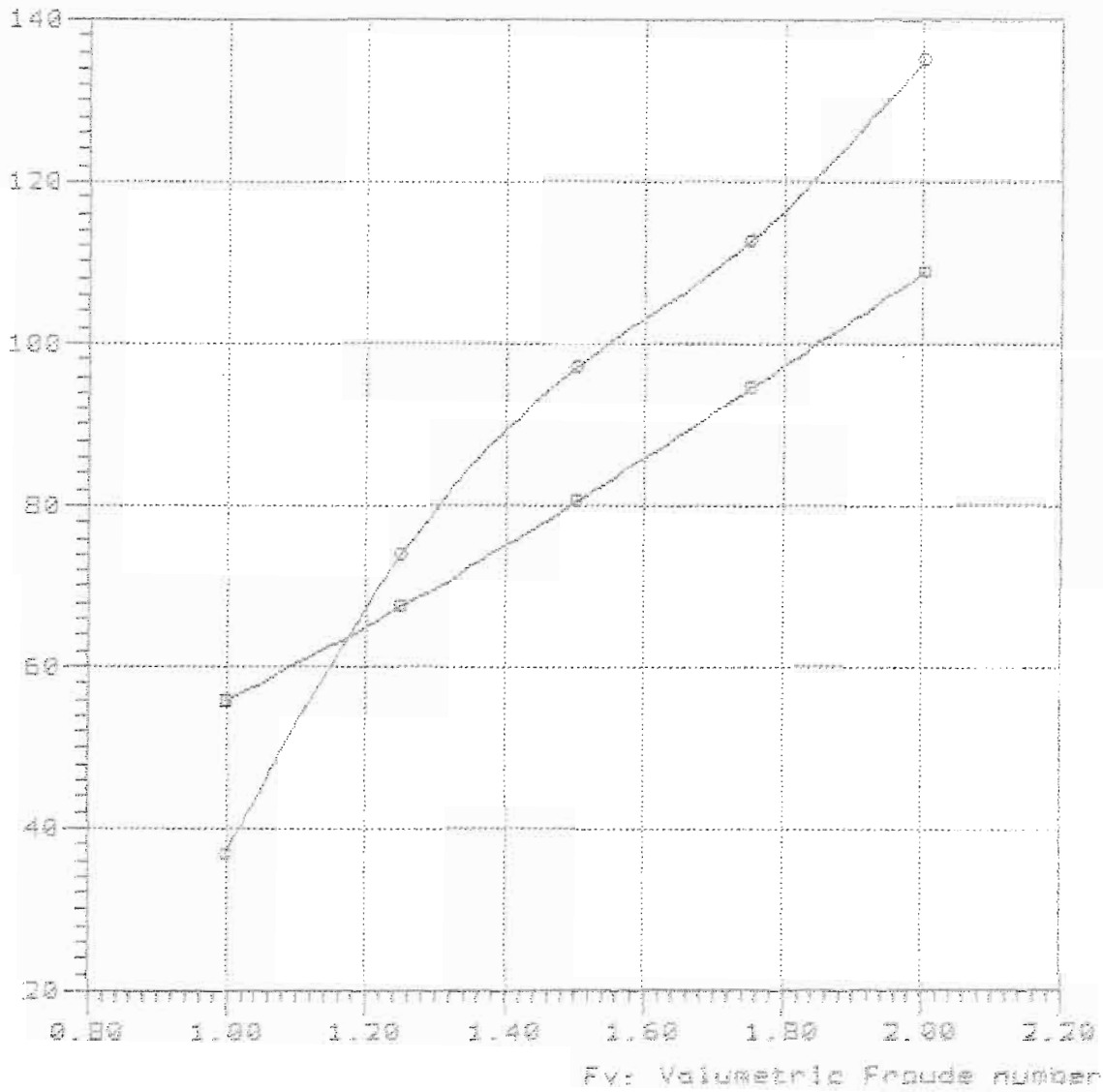
Rbare: Bare-hull resistance (lbs)



—□—  
—○—

Model	=	5198
Ref	=	NSRDC
Friction	=	<del>A</del> TTC Ca=4e-4
Lpx	=	16.200 ft
Lwl	=	16.102 ft
Bpx	=	3.476 ft
Ap	=	40.752 sqft
Vcg	=	1.069 ft
Disp.	=	1000.00 Lb
Deadrise	=	22.50 degree
Twist Angle	=	2.00 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.661
Lpx/Ap	=	6.440
Ap /Vol	=	6.520
Lpx/Vol	=	6.482
Cvload	=	0.372
Lbload	=	0.030
Disp-Lpx	=	105.004

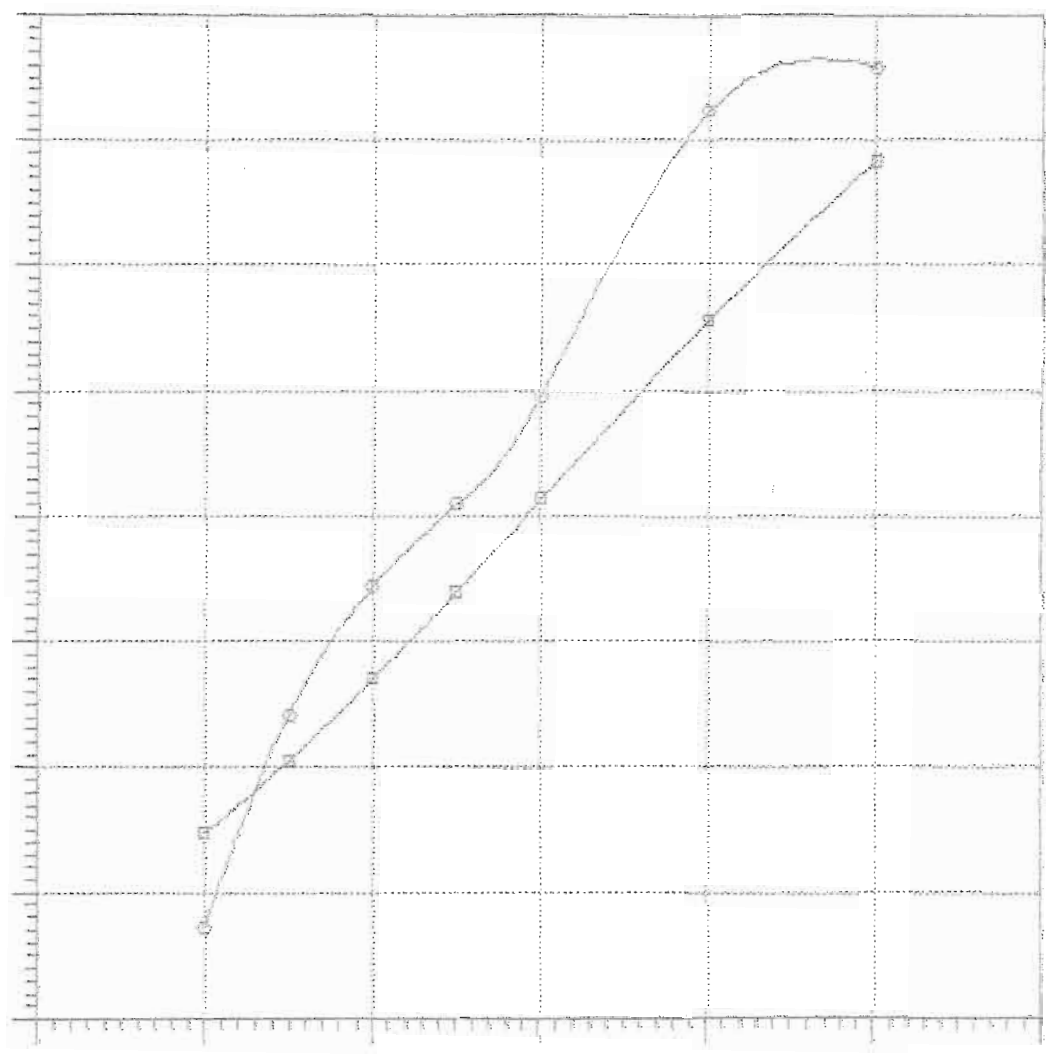
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMS-65R Lpx/Bpx=4.65 Ap/Vol=5.520 Lpx/Ap=6.440 Log/Lpx=0.400

7-65-440  
md l



□  
○

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Bare-hull resistance

vs.

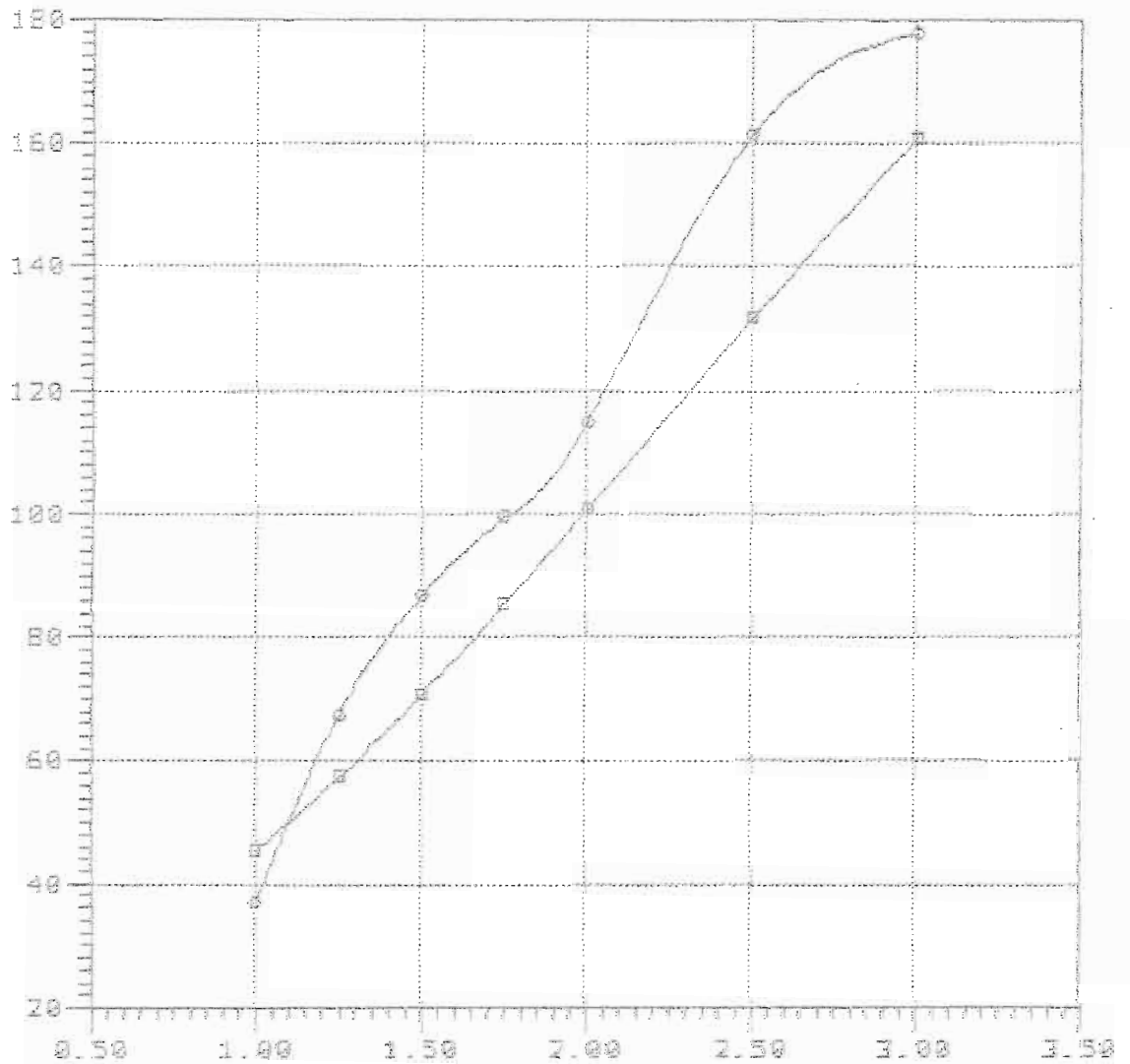
Volumetric Froude number

File: 7-65-480.mdl

Date: 1 Mar 88

Time: 14:15

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

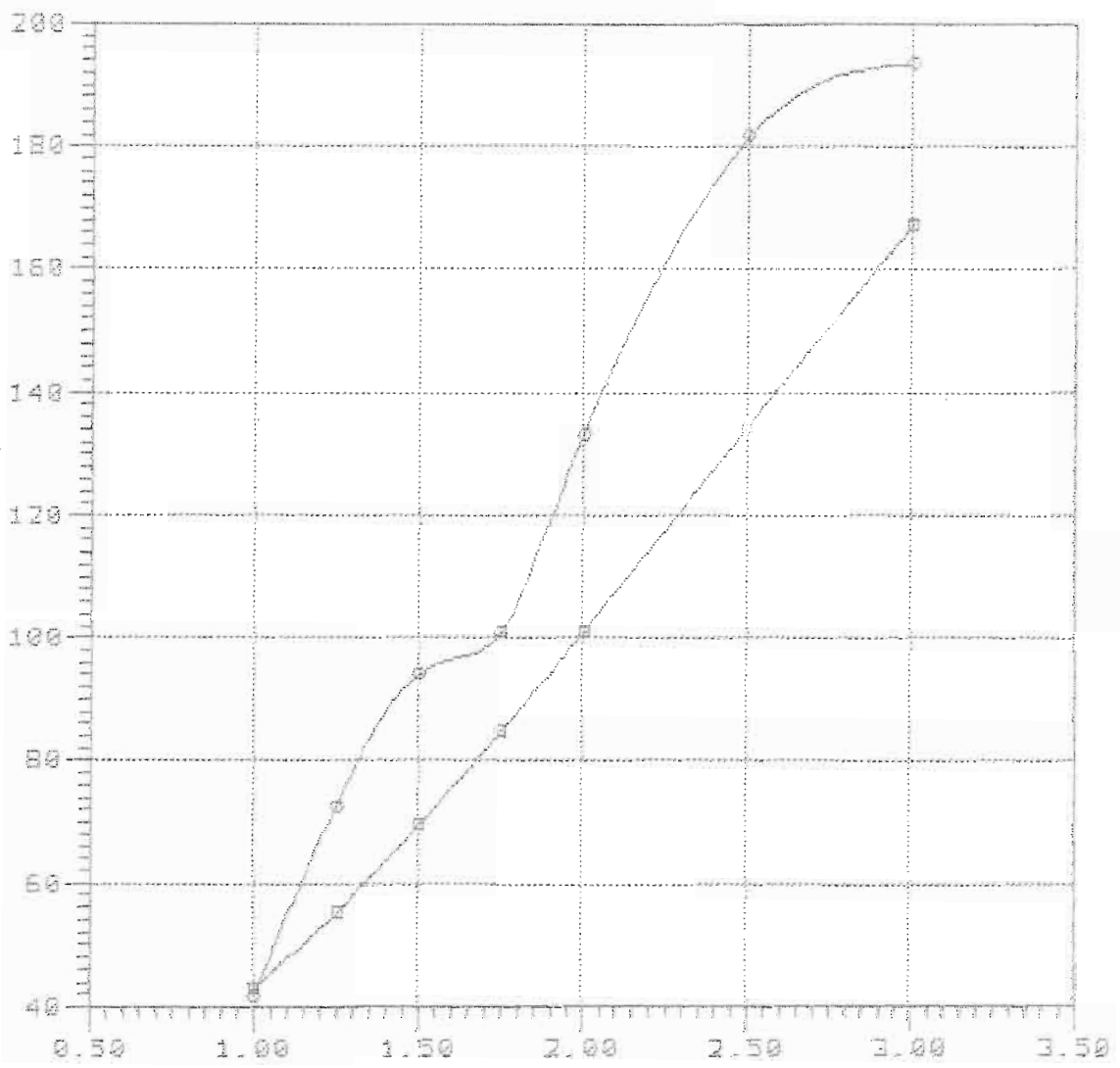
Curve legend

—■—

—○— TMB-65A Lox/Bpx=4.66 Ro/Vol=6.520 Lox/Rp=6.440 Lrg/Lox=0.458



Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

Curve legend

—■—

—●— TMB-65A Lpx/Bpx=4.66 Ap/Vol=6.520 Lpx/Ap=6.440 Log/Lpx=0.520

03/01/2000

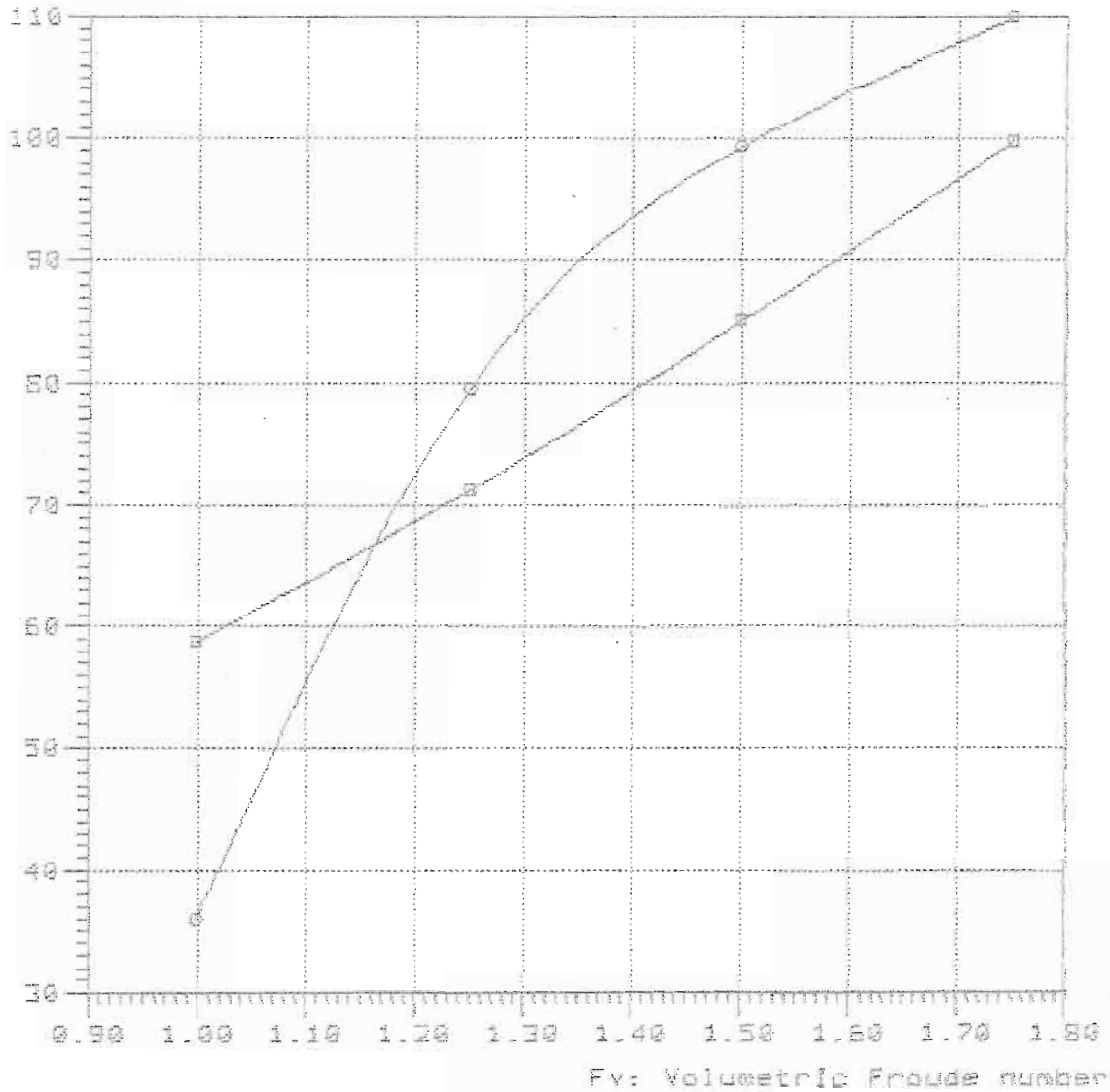
15:25:01

Model = 5198  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4'  
Lpx = 17.500 ft  
Lwl = 17.395 ft  
Bpx = 3.755 ft  
Ap = 47.554 sqft  
Vcg = 1.154 ft

Disp. = 1000.00 Lb  
Deadrise = 22.50 degree  
Twist Angle = 2.00 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.660  
Lpx/AP = 6.440  
Ap /Vol = 7.608  
Lpx/Vol = 7.002  
Cvload = 0.295  
Lbload = 0.024  
Disp-Lpx = 83.299

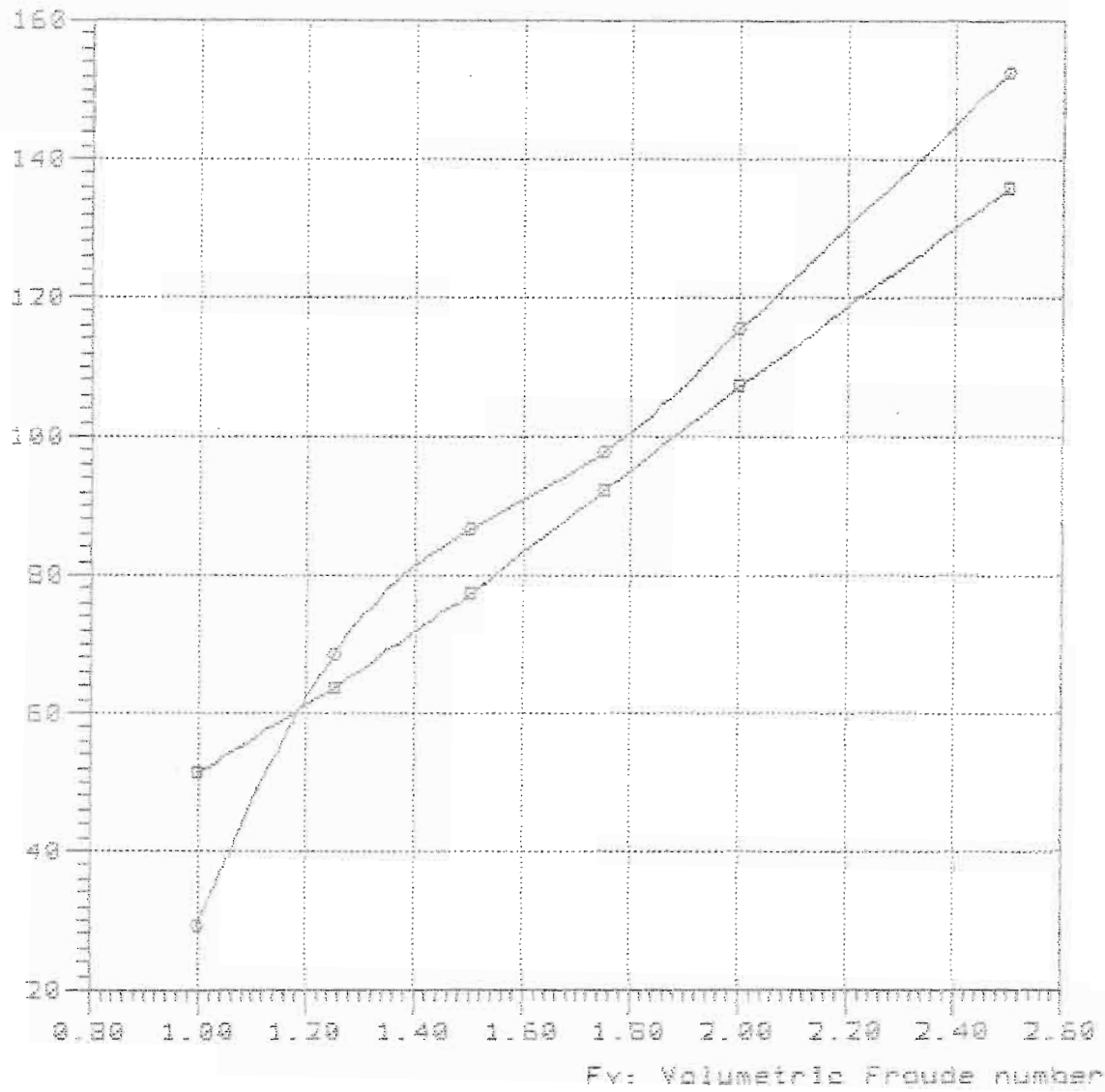
Rbare: Bare-hull resistance (lbs)



—■—

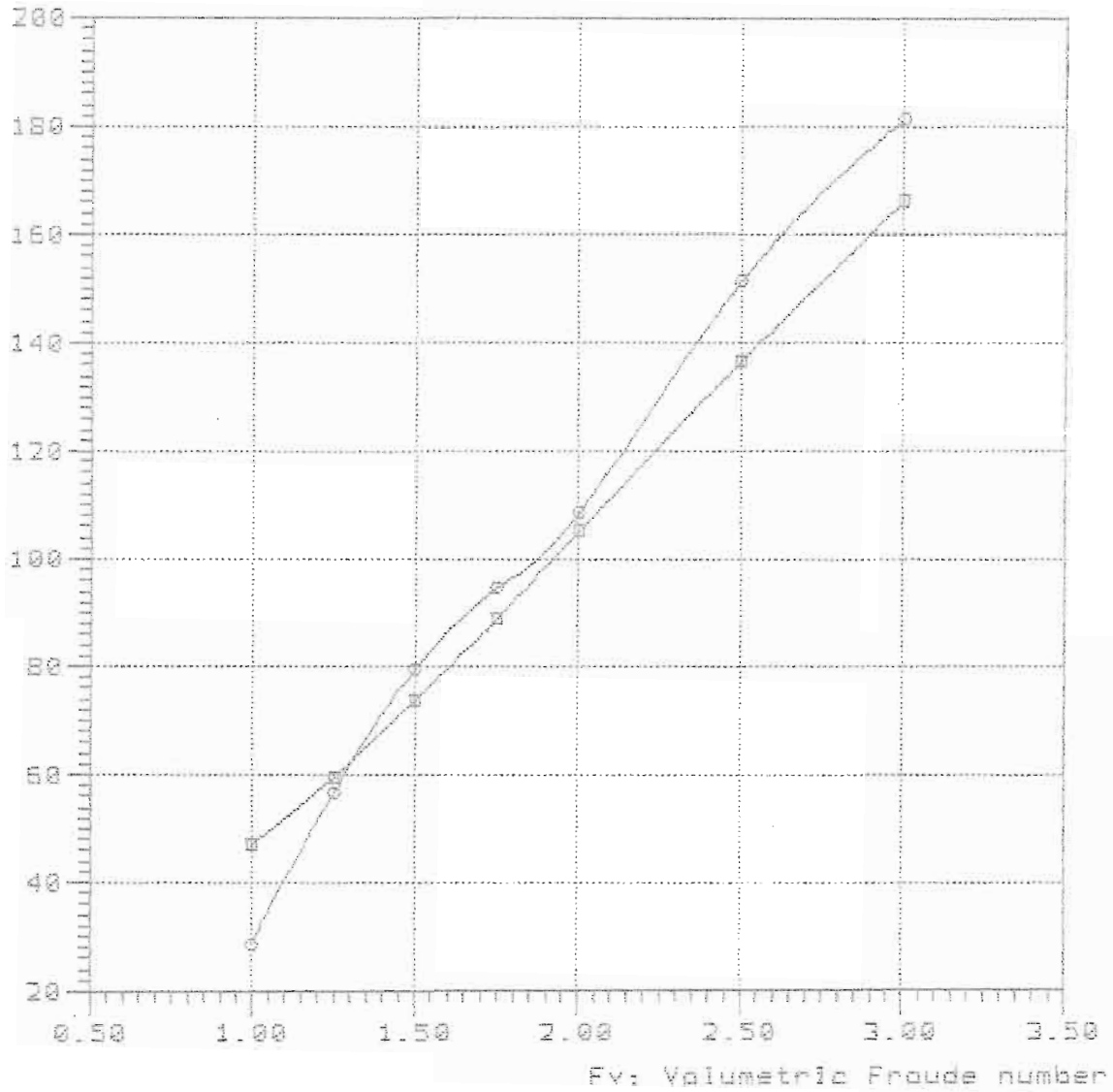
—●— THB-65A Lpx/Bpx=4.660 Ap/Vol=7.689 Lpx/Ap=5.440 Lcg/Lpx=0.368

Rbare: Bare-hull resistance (lba)



—■—  
—●— TMB-65A Lpx/Bpx=4.660 Rp/Vol=7.699 Lpx/Rp=6.440 Log/Lpx=0.400

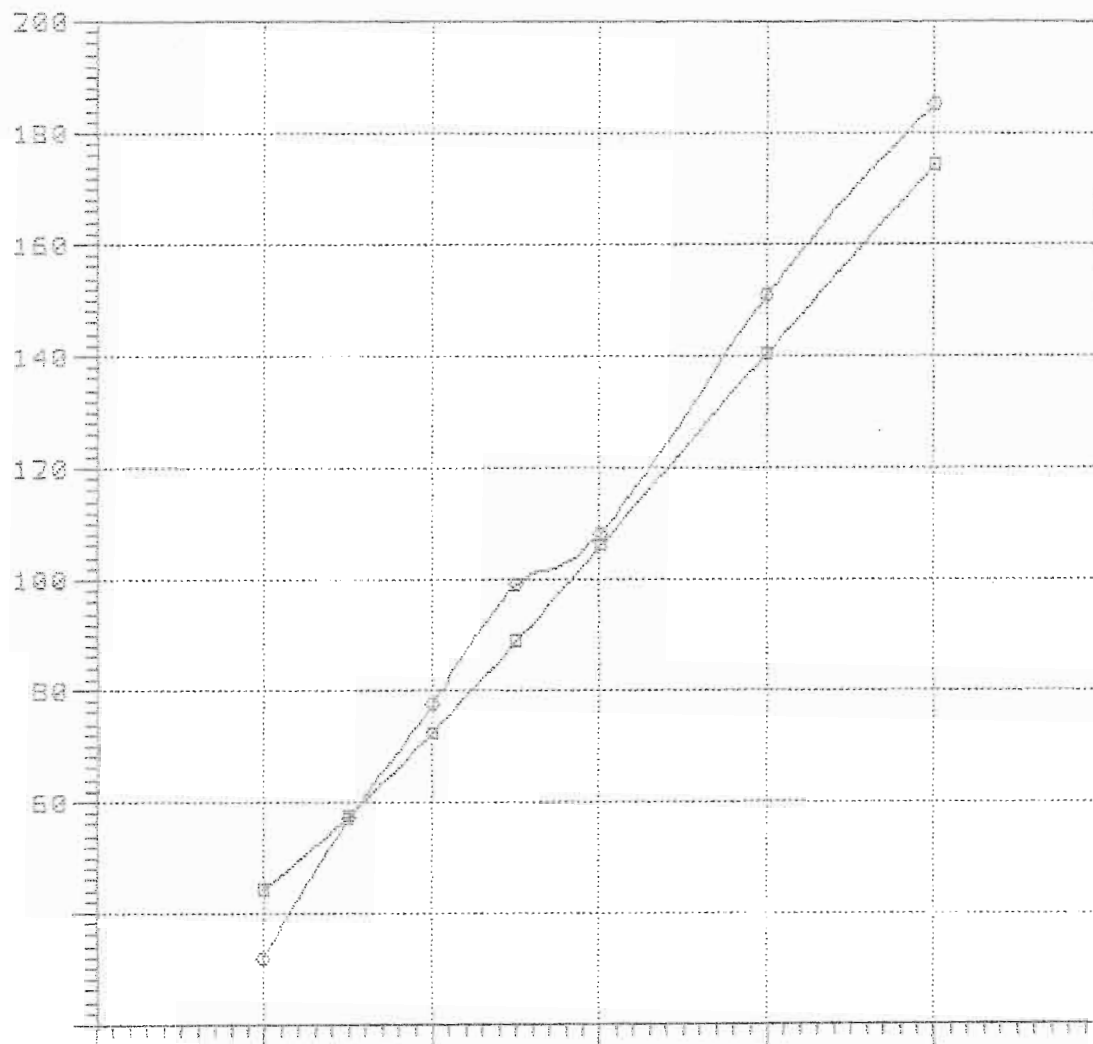
Rbare: Bare-hull resistance (lbs)



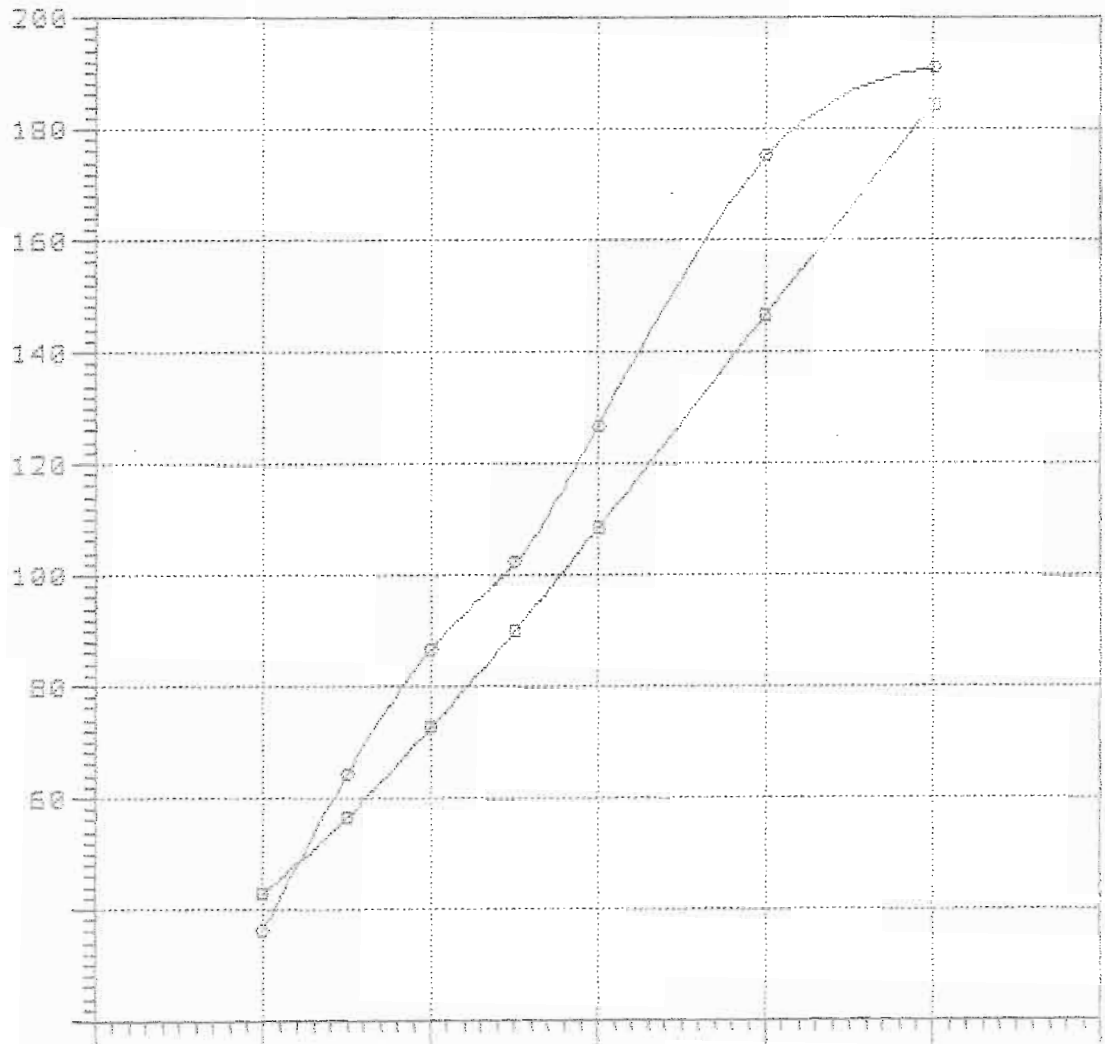
—■—

—○— TMB-65A Lpx/Bpx=4.660 Ap/Vol=7.669 Lpx/Rp=6.440 Lcg/Lpx=0.440

Rbare: Bare-hull resistance (lbs)



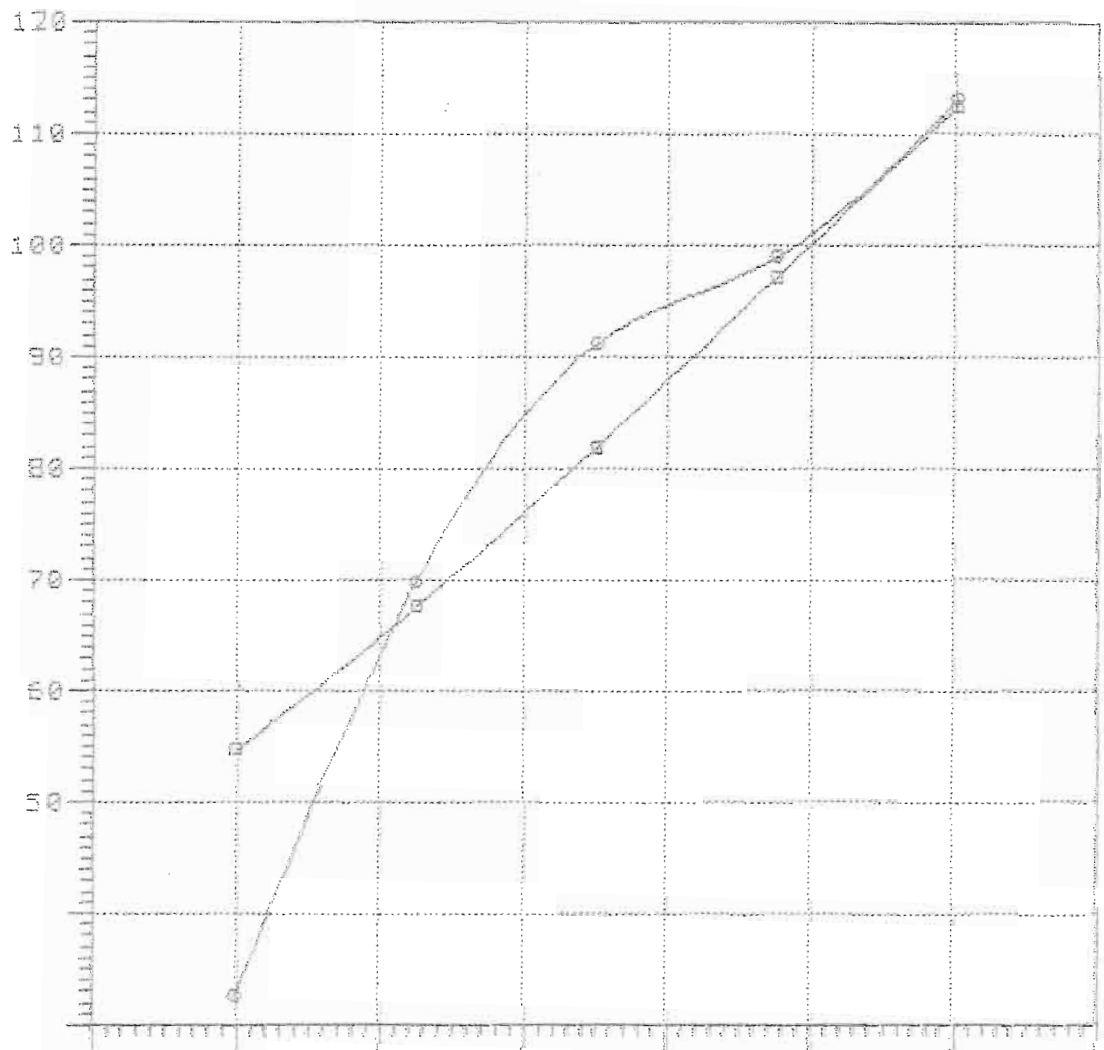
Rbare: Bare-hull resistance (lbs)



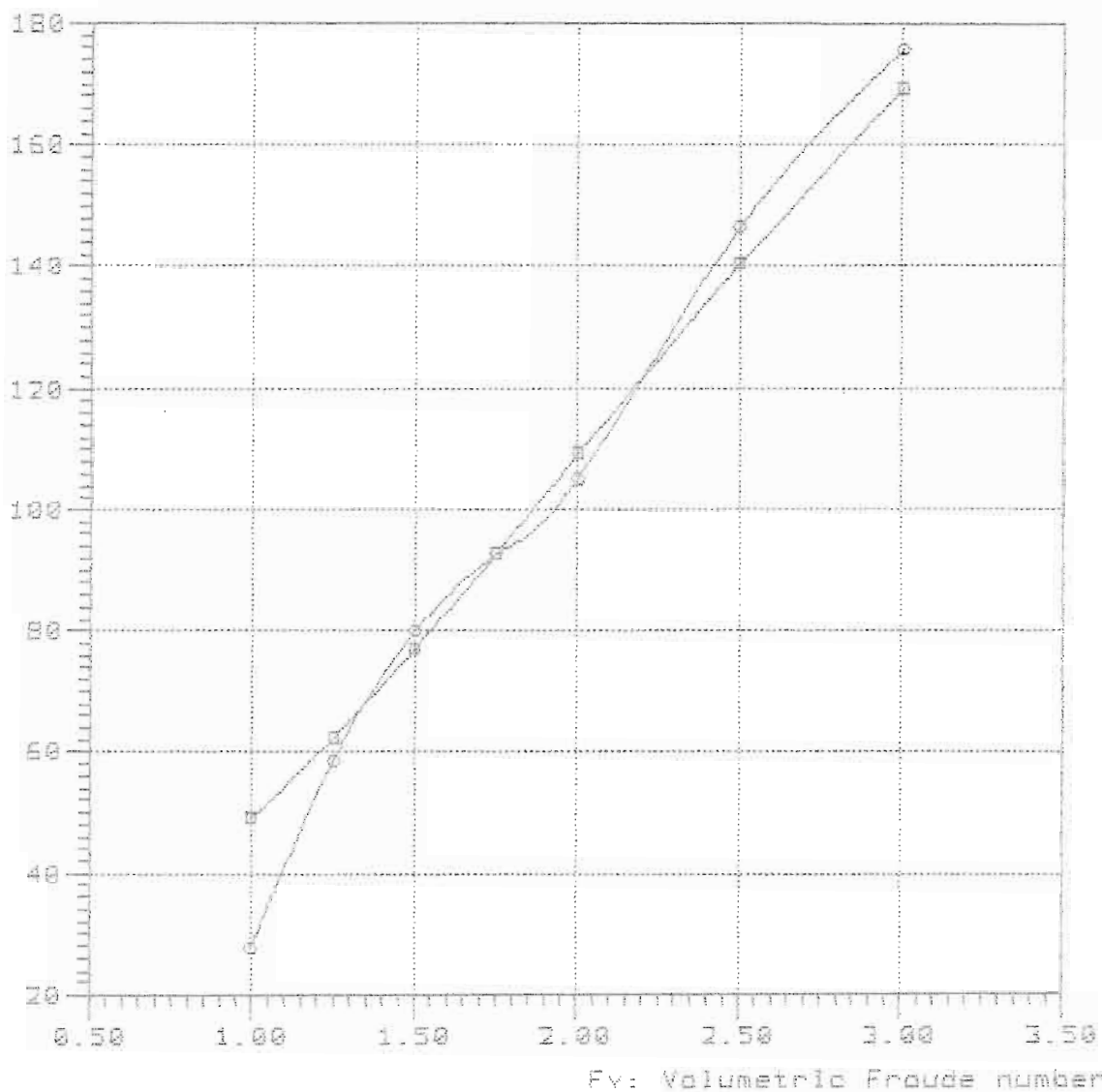
Model	=	5198
Ref	=	NSRDC
Friction	=	ATTC Ca=4e-4
Lpx	=	18.700 ft
Lwl	=	18.587 ft
Bpx	=	4.013 ft
Ap	=	54.300 sqft
Vcg	=	1.234 ft
Disp.	=	1000.00 Lb
Deadrise	=	22.50 degree
Twist Angle	=	2.00 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.660
Lpx/Ap	=	6.440
Ap /Vol	=	8.687
Lpx/Vol	=	7.482
Cvload	=	0.242
Lbload	=	0.020
Disp-Lpx	=	68.270



Rbare: Bare-hull resistance (lbs)



Rbare: Bare-hull resistance (lbs)



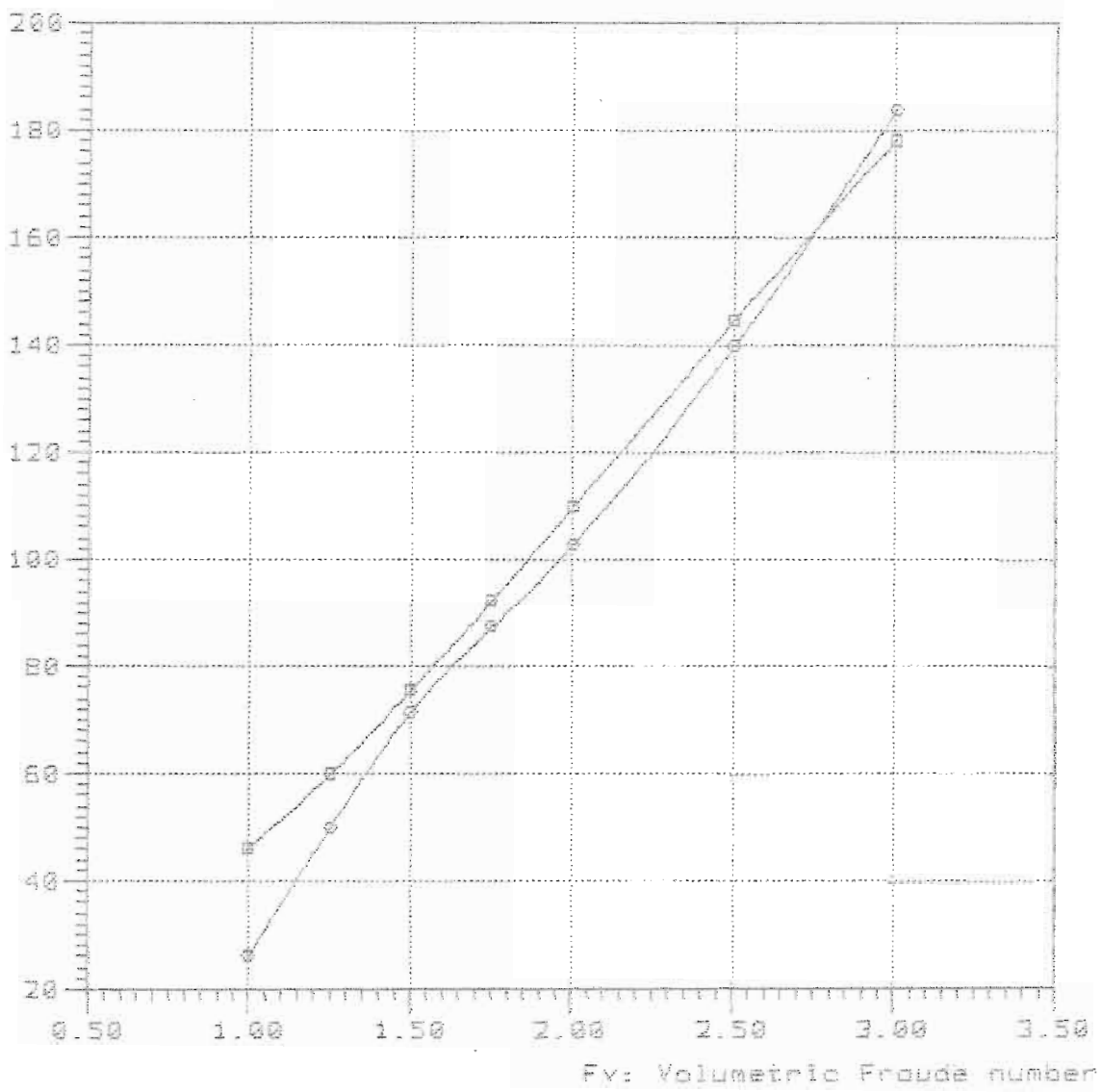
Curve legend

—□—

—○— TMB-65A Lpx/Bpx=4.660 Ap/Vol=8.688 Lpx/Ap=6.440 Log/Lpx=0.400

Bare-hull resistance  
vs.  
Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



Curve legend

- 
- TMB-65R Lpx/Bpx=4.660 Rp/Vol=8.688 Lpx/Rp=6.440 Lcg/Lpx=0.440

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### Bare-hull resistance

VB

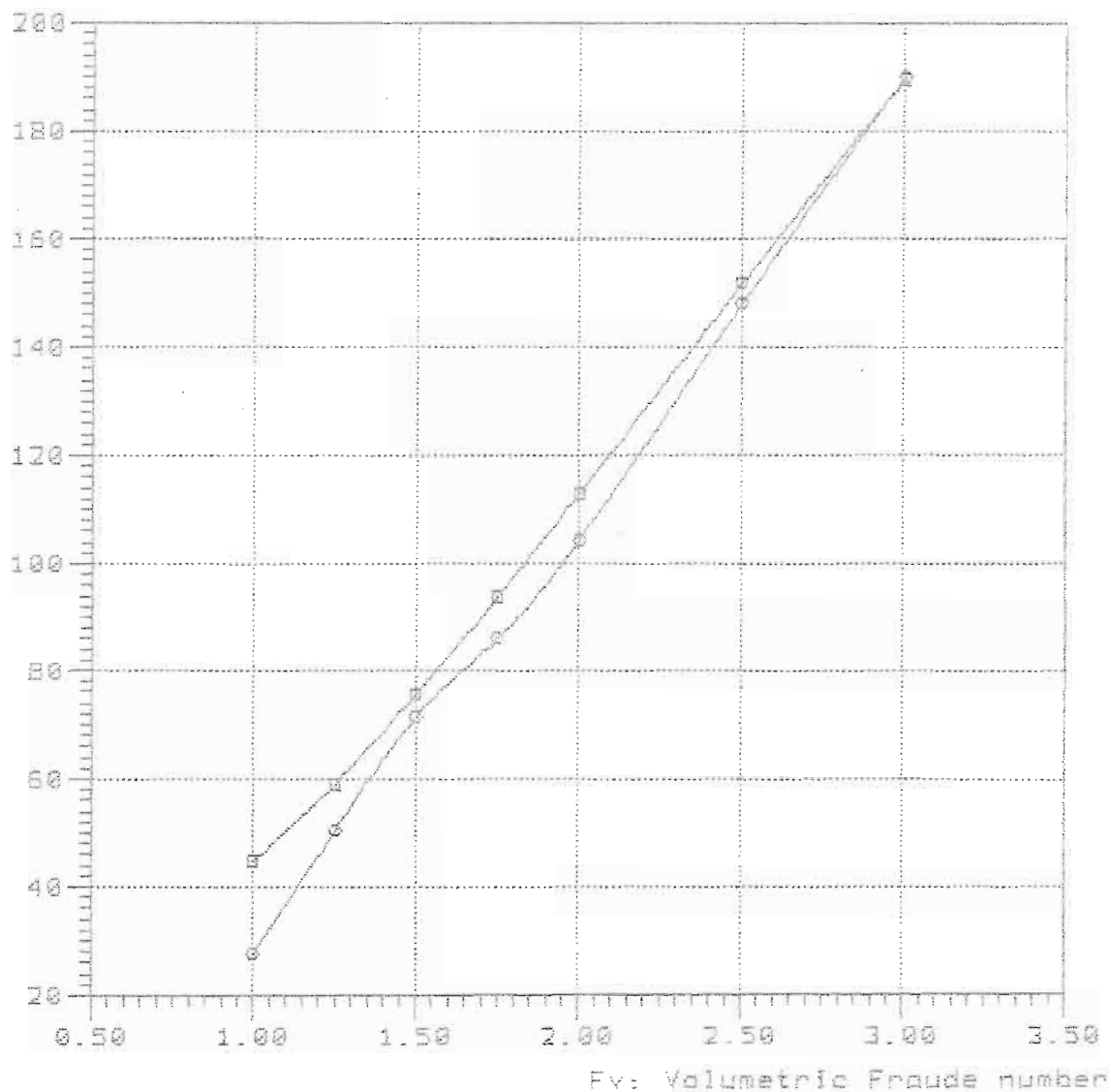
Volumetric Froude number

File: 9-75-480.md

Date: 1 Mar 99

Time: 15:02

Rbare: Bare-hull resistance (lbs)

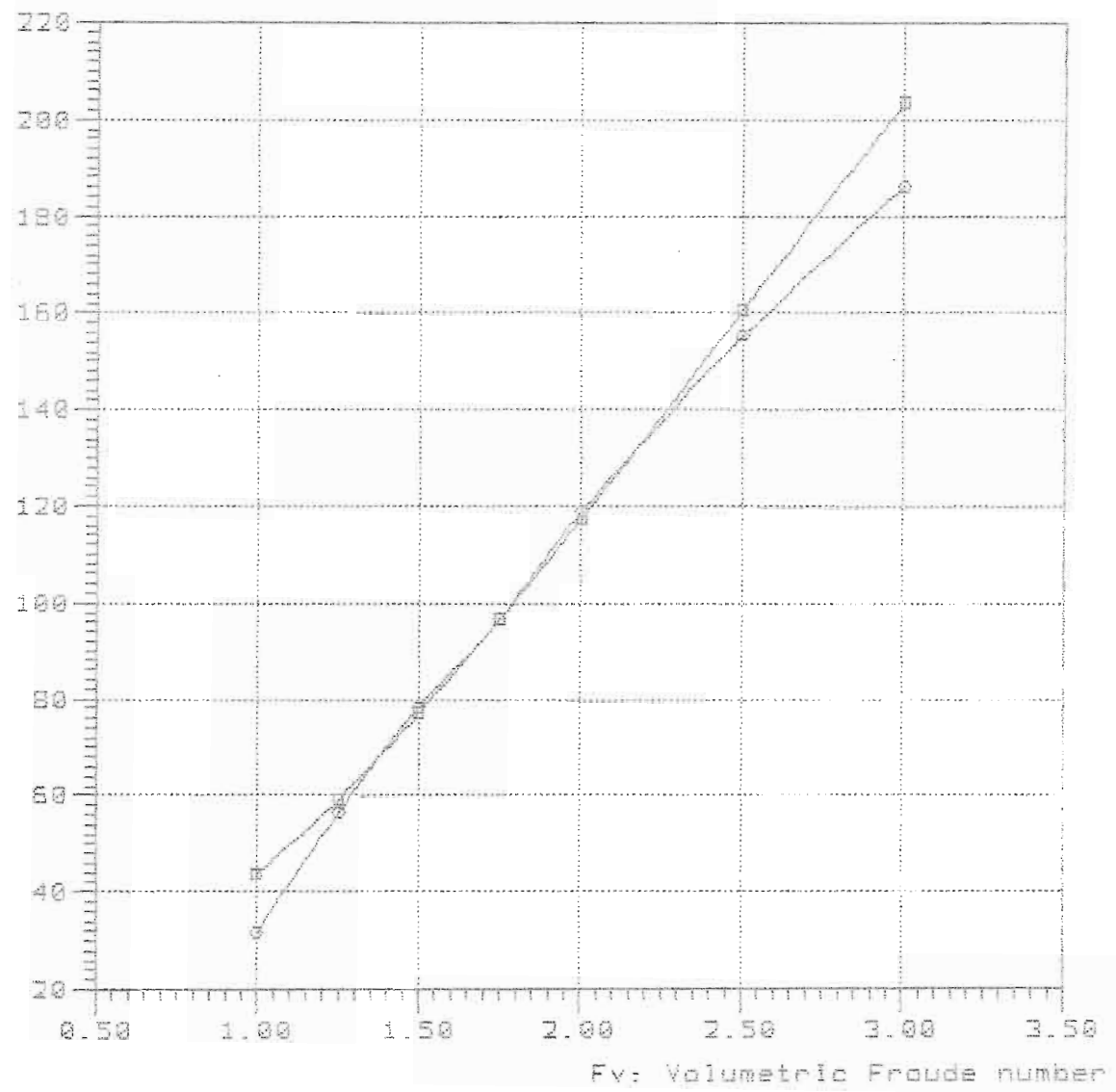


#### Curve legend

—■—

—●— TMB-65A Lpx/Bpx=4.660 Rp/Vol=6.688 Lpx/Rp=6.440 Lcg/Lpx=0.480

Rbare: Bare-hull resistance (lbs)



—■—  
—○— TMB-65A Lpx/Epx=4.660 Ap/Vol=8.688 Lpx/Rp=6.440 Lcg/Lpx=0.520

Model = 5198

Model = 5198

Ref = NSRDC

Friction = ~~ATTC~~ Ca=4e-4

Lpx = 20.000 ft

Lwl = 19.879 ft

Bpx = 4.292 ft

Ap = 62.112 sqft

Vcg = 1.319 ft

Disp. = 1000.00 Lb

Deadrise = 22.50 degree

Twist Angle = 2.00 degree

Shaft Angle = 0.00 degree

Vce = 0.00 inc

Lpx/Bpx = 4.660

Lpx/Ap = 6.440

Ap /Vol = 9.937

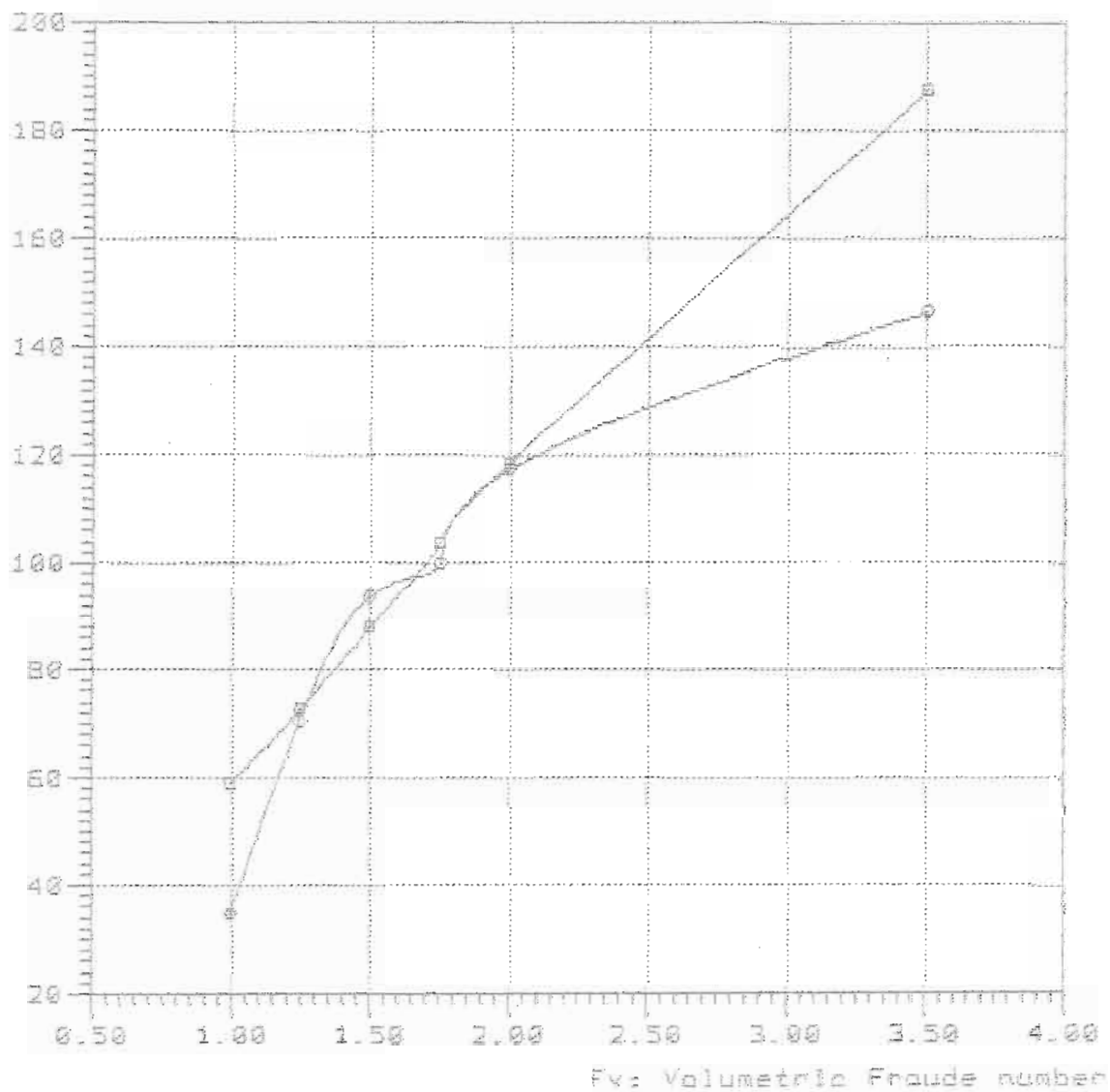
Lpx/Vol = 8.002

Cvload = 0.198

Lbload = 0.016

Disp-Lpx = 55,804

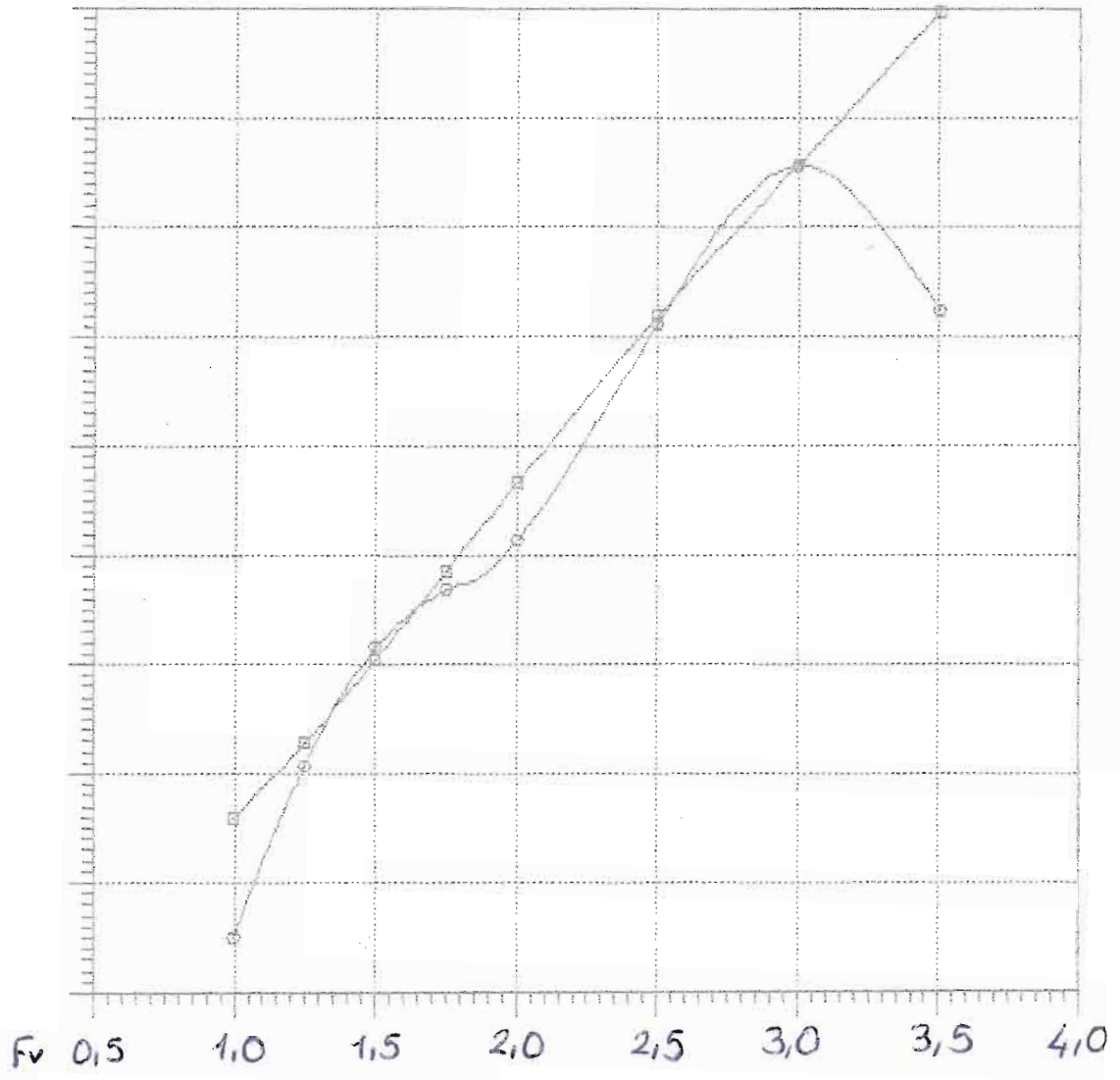
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65A Lpx/Bpx=4.660 Ap/Vol=9.938 Lpx/Ap=6.440 Lcy/Lpx=0.320

10-80-360  
mdl



—□—  
—○—

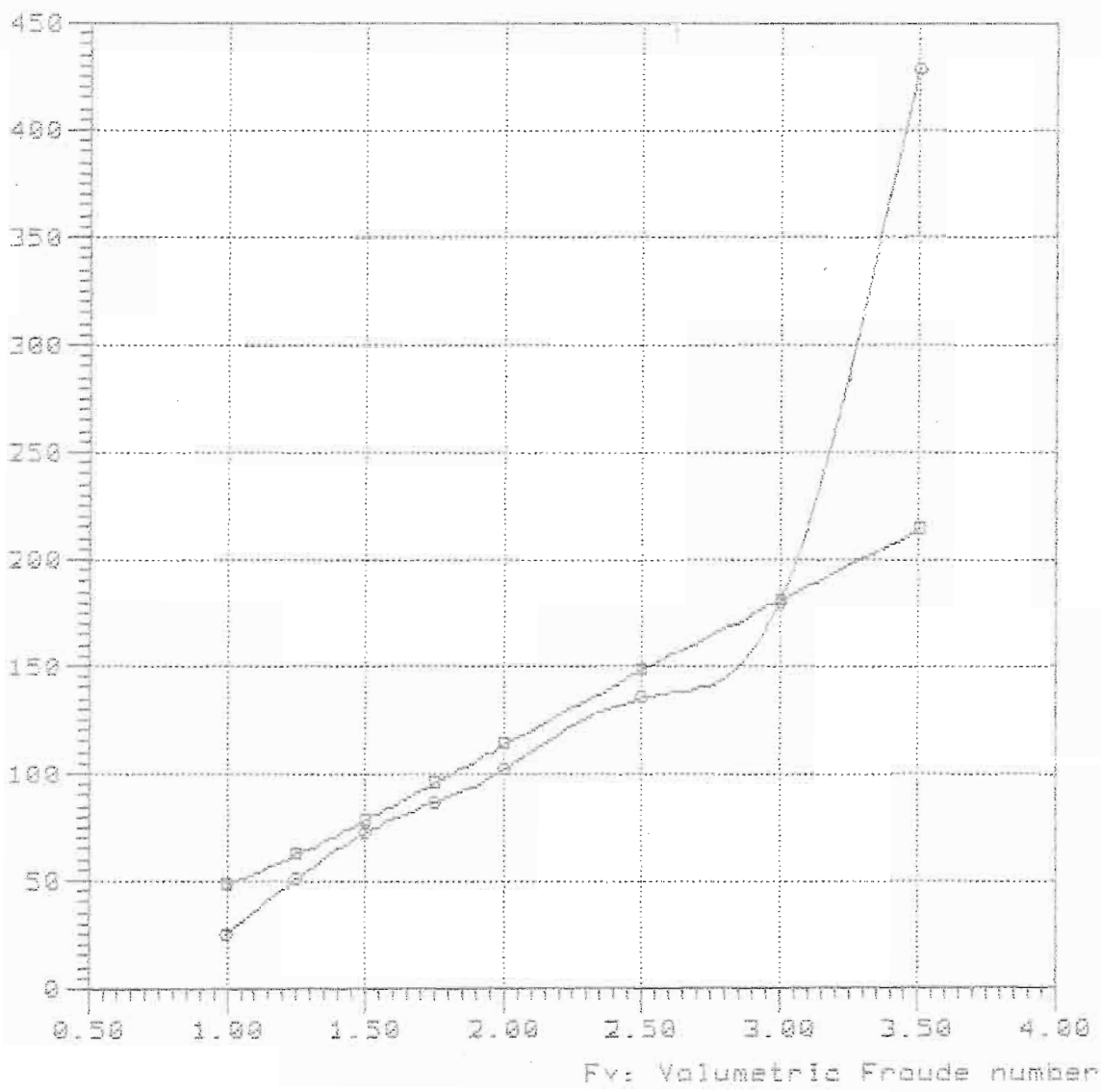


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Bare-hull resistance  
vs.  
Volumetric Froude number

File: 10-B0-40.mdl  
Date: 1 Mar 00  
Time: 12:15

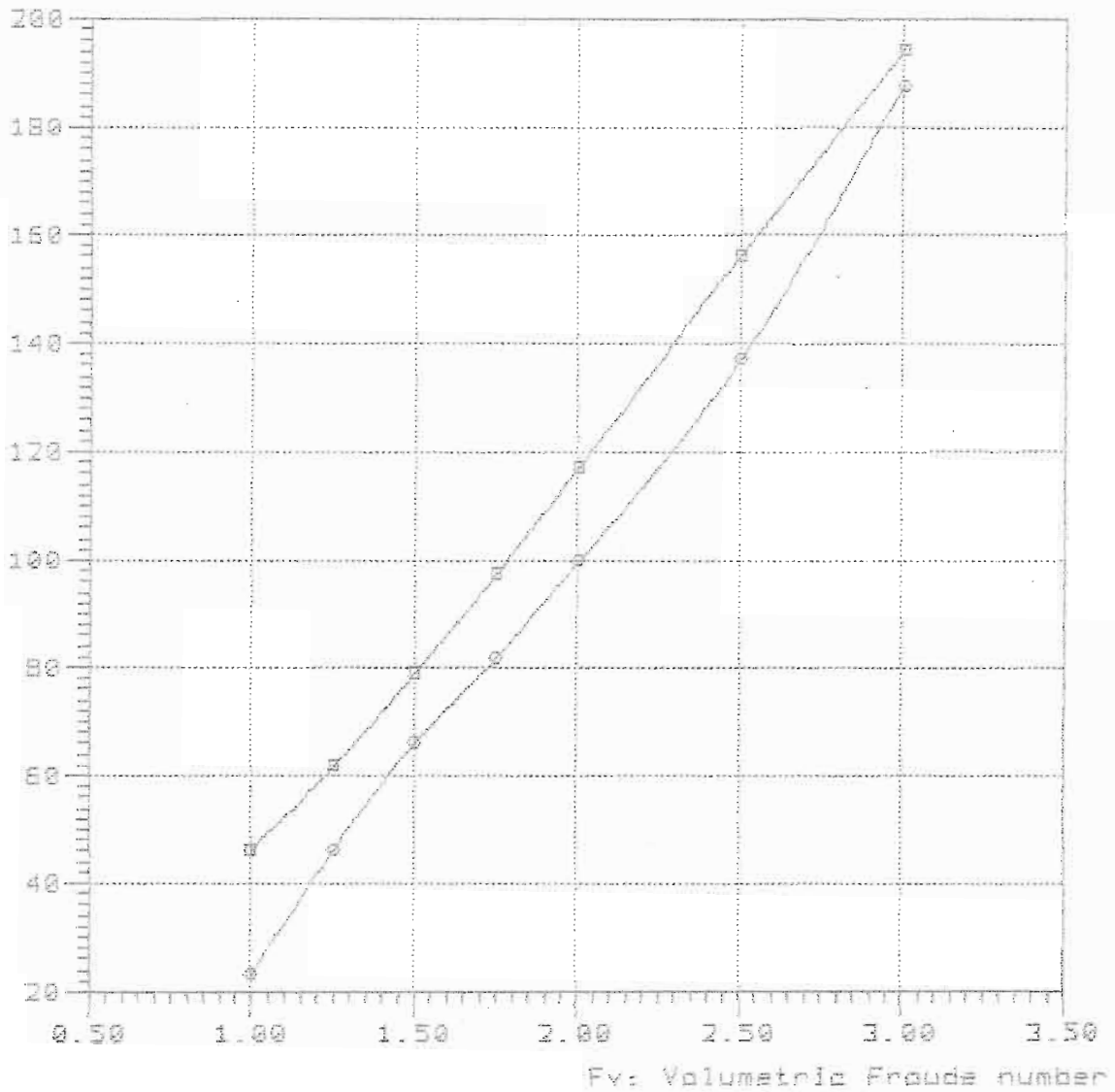
Rbare: Bare-hull resistance (lbs)



Curve legend

- 
- TMB-63A Lpx/Bpx=4.660 Ap/Vol=9.938 Lpx/Ap=6.440 Lcg/Lpx=0.400

Rbare: Bare-hull resistance (lbs)

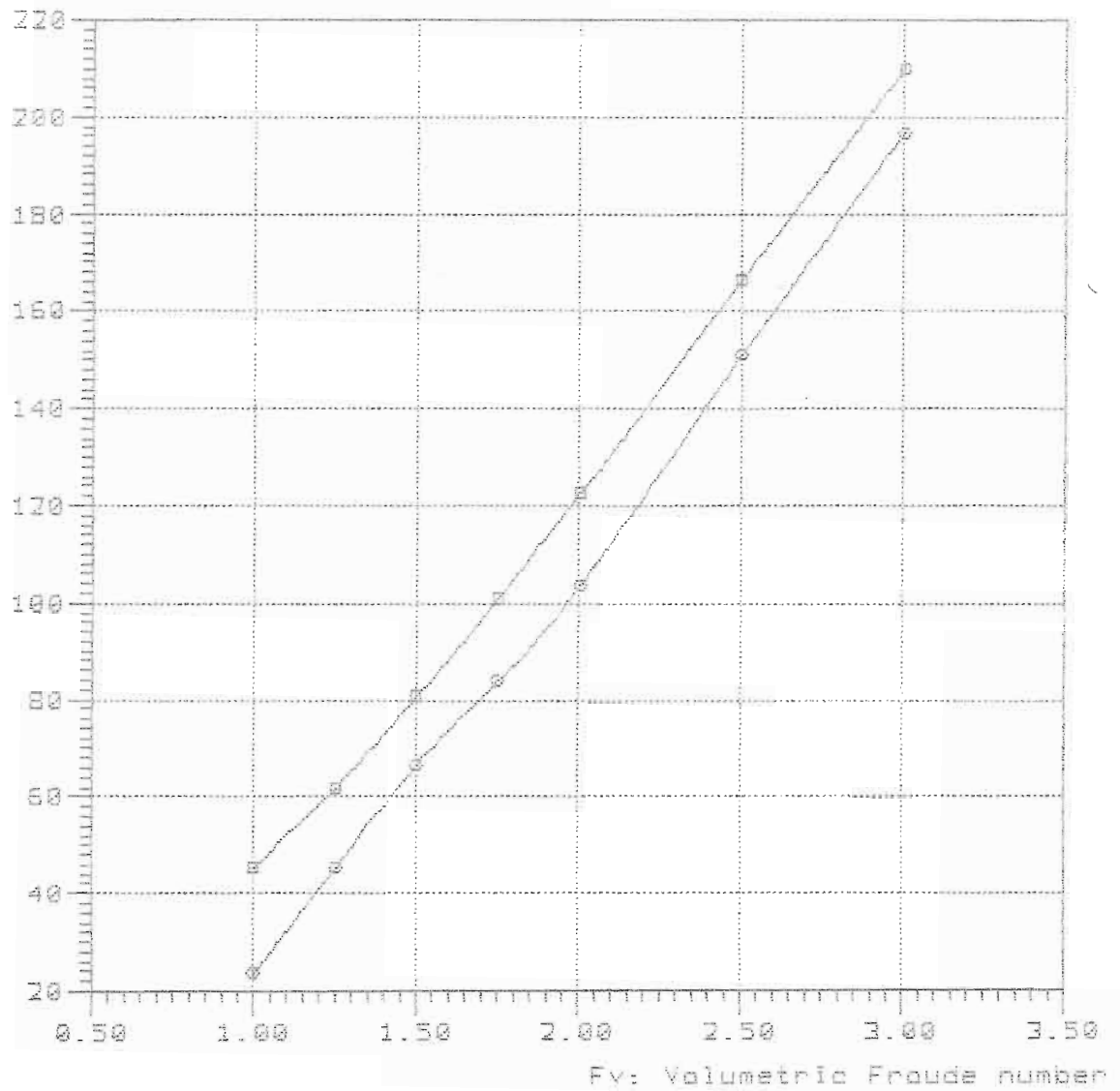


—■—

—○—

TMB-63A Lpx/Bpx=4.668 Rp/Vol=9.938 Lpx/Rp=6.448 Lcg/Lpx=0.448

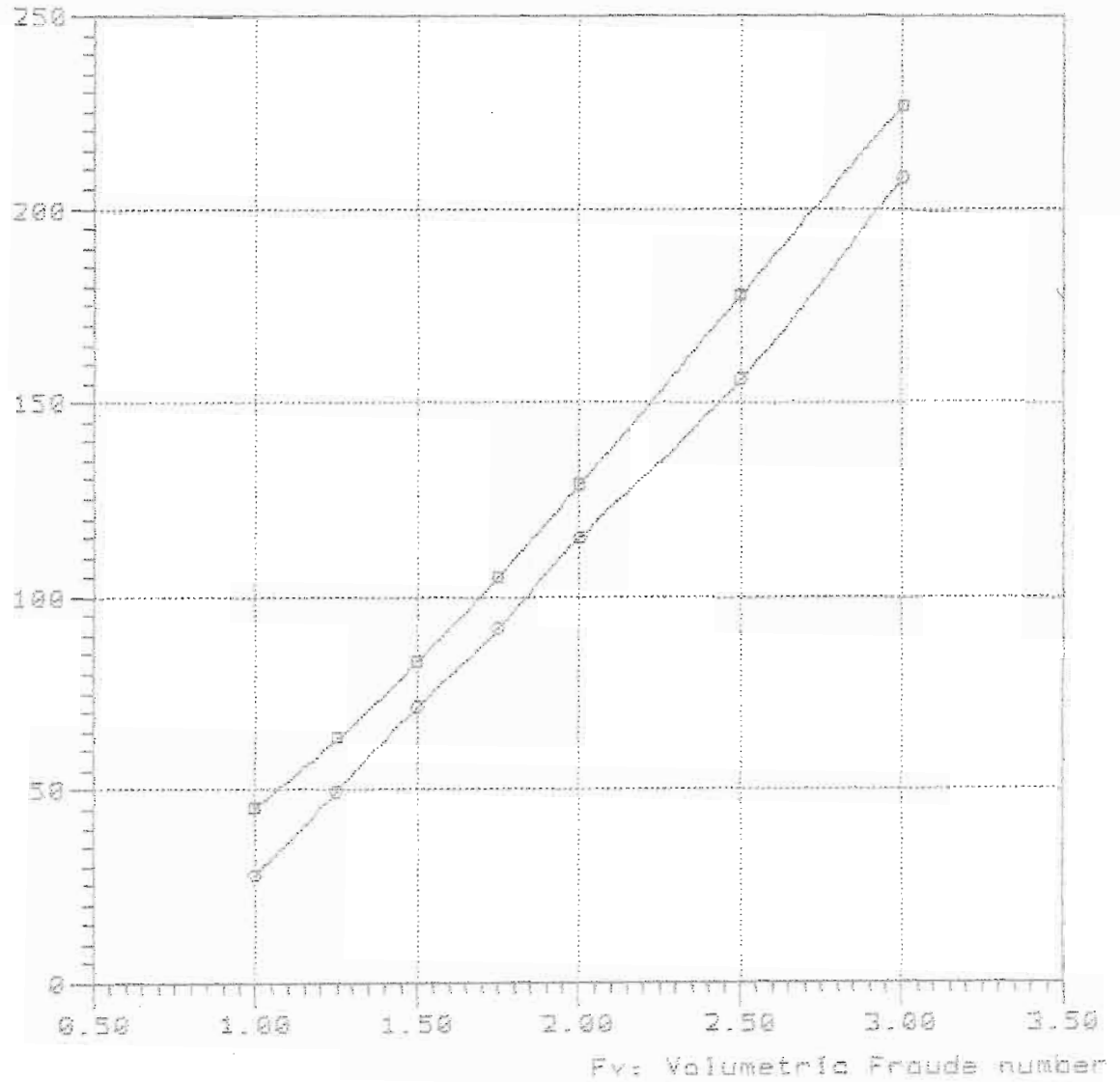
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A Lpx/Bpx=4.660 Ap/Val=9.938 Lpx/Ap=6.440 Lcg/Lpx=0.480

Rbare: Bare-hull resistance (lba)

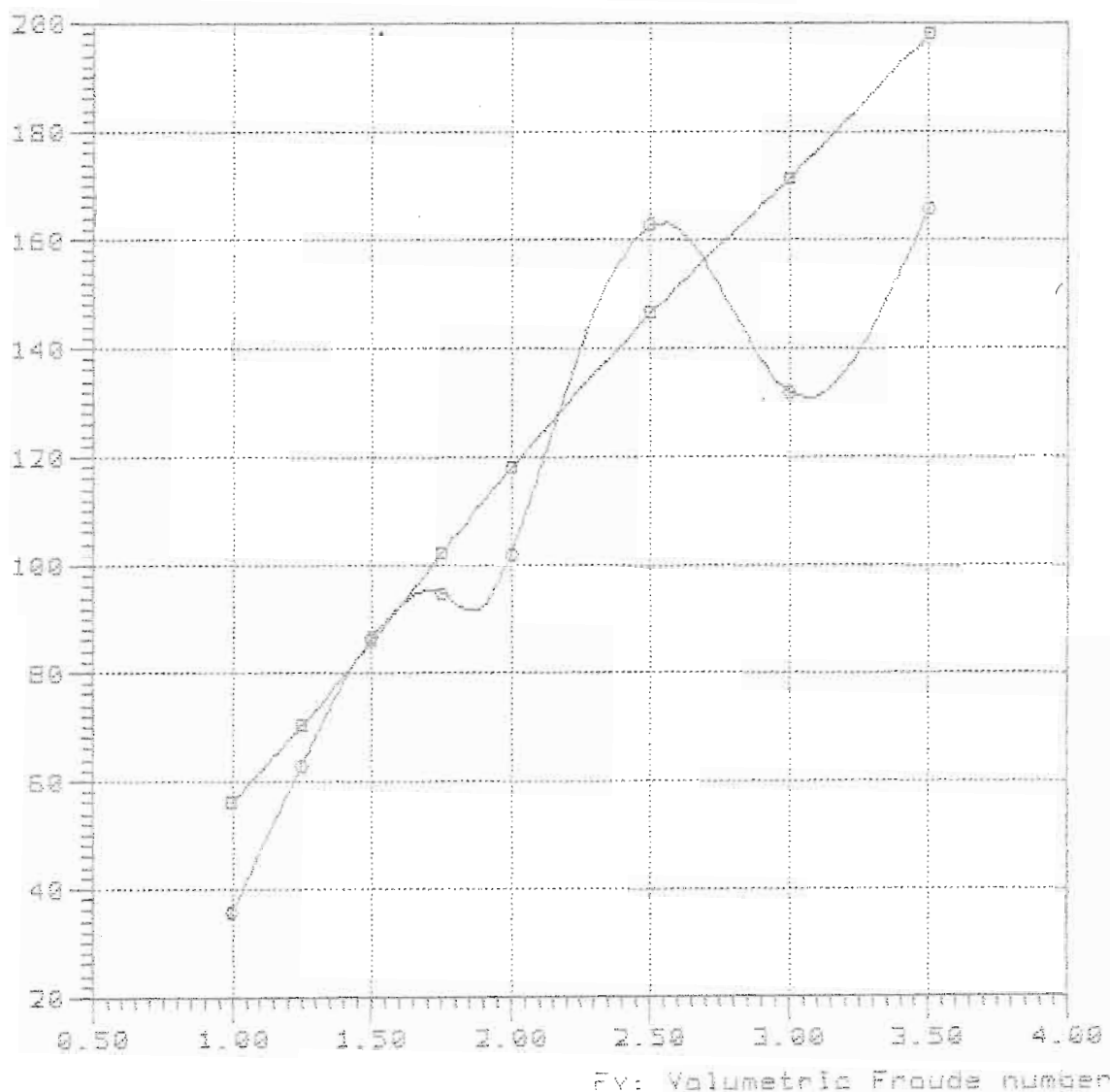


—■—

—●— TMB-55A Lpx/Bpx=4.660 Ap/Vol=9.935 Lpx/Sp=6.440 Lcg/Lpx=0.520

Model	=	5198
Ref	=	NSRDC
Friction	=	A TTC Ca=4e-4
Lpx	=	21.200 ft
Lwl	=	21.072 ft
Bpx	=	4.549 ft
Ap	=	69.789 sqft
Vcg	=	1.399 ft
Disp.	=	1000.00 Lb
Deadrise	=	22.50 degree
Twist Angle	=	2.00 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.660
Lpx/Ap	=	6.440
Ap /Vol	=	11.165
Lpx/Vol	=	8.483
Cvload	=	0.166
Lbload	=	0.013
Disp-Lpx	=	46.854

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A Lpx/Bpx=4.660 Ap/Vol=11.166 Lpx/Ap=6.440 Log/Lpx=0.320

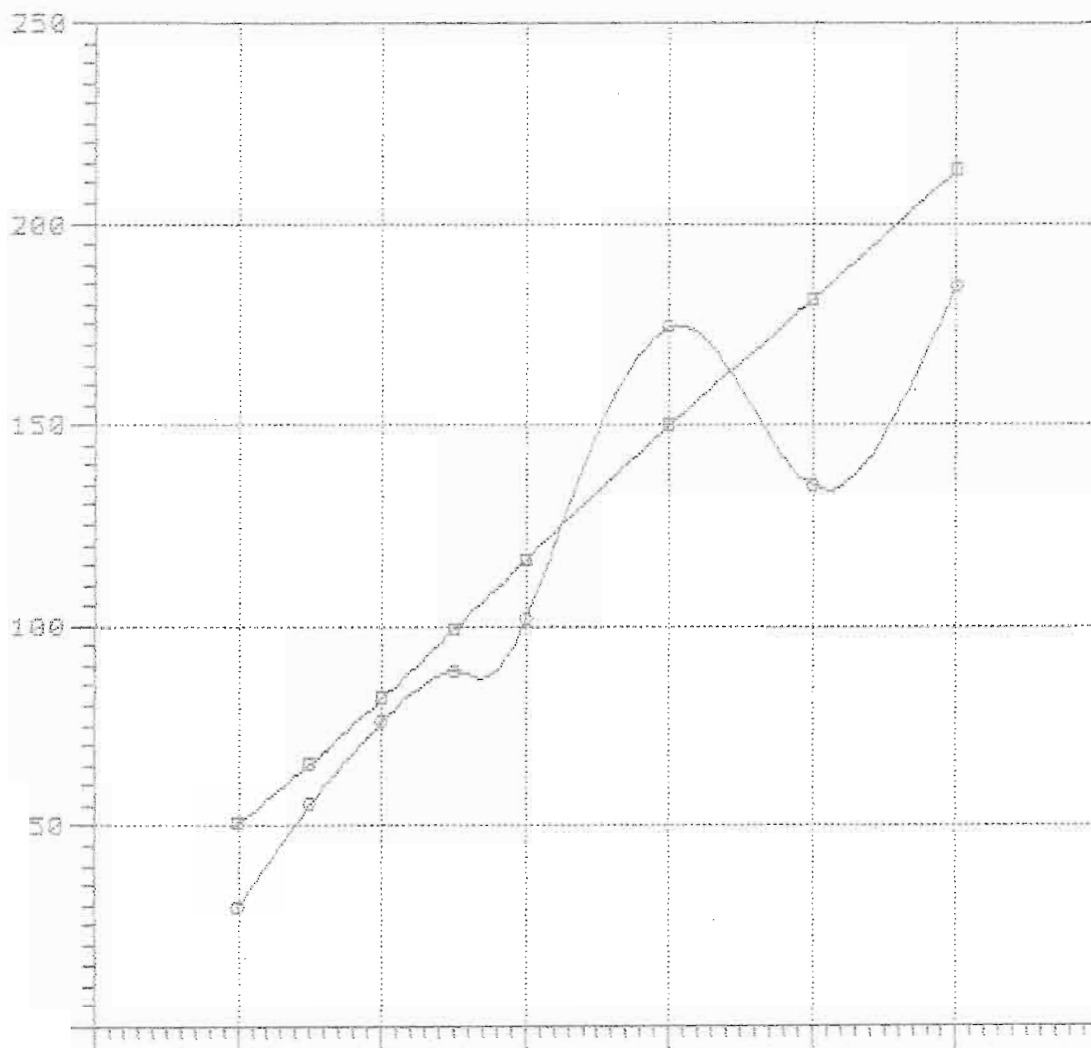
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HydroComp, Inc.

Date: 1 Mar 00

Time: 12:33

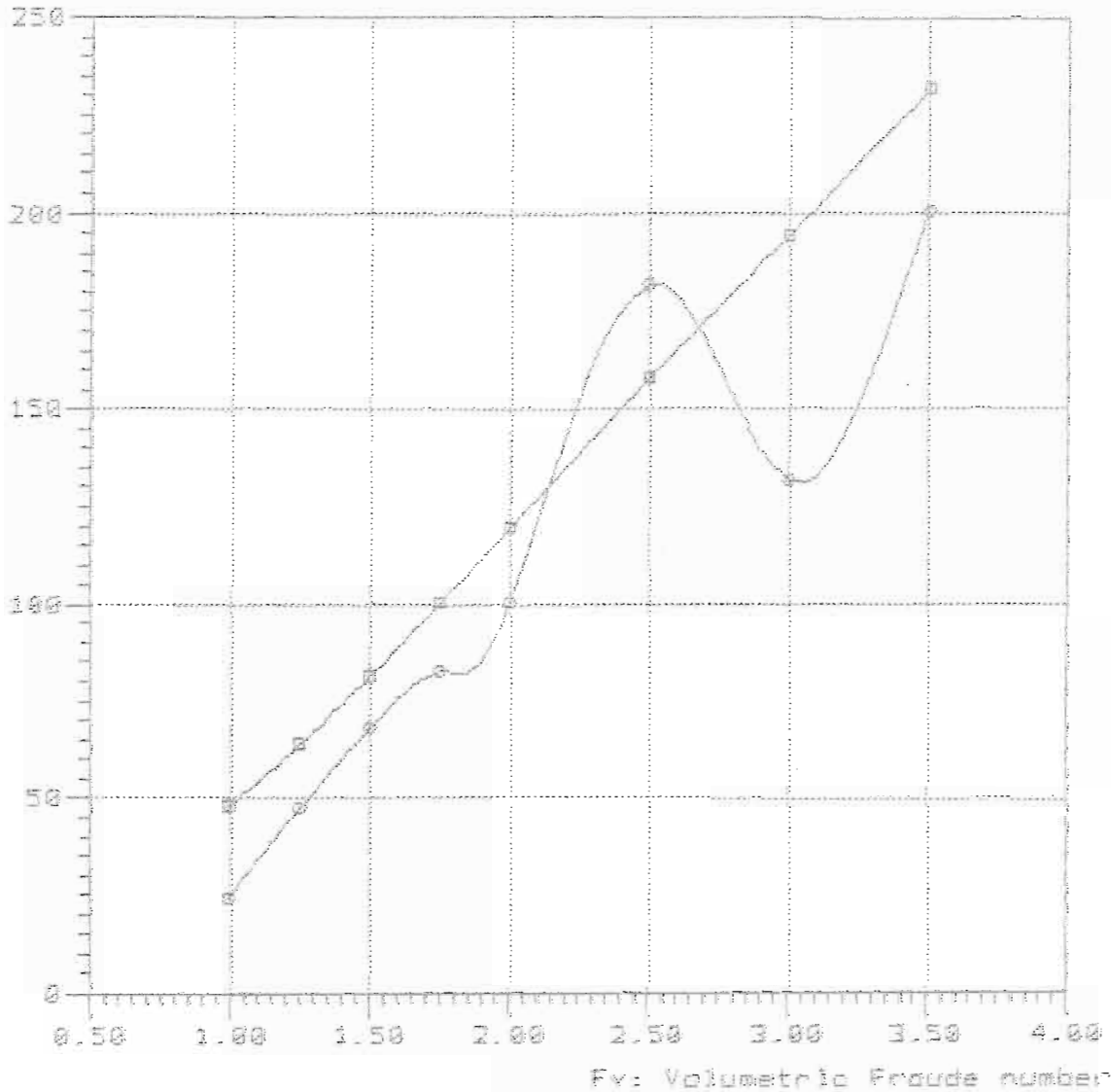
Rbare: Bare-hull resistance (lbs)



—□—

—○—

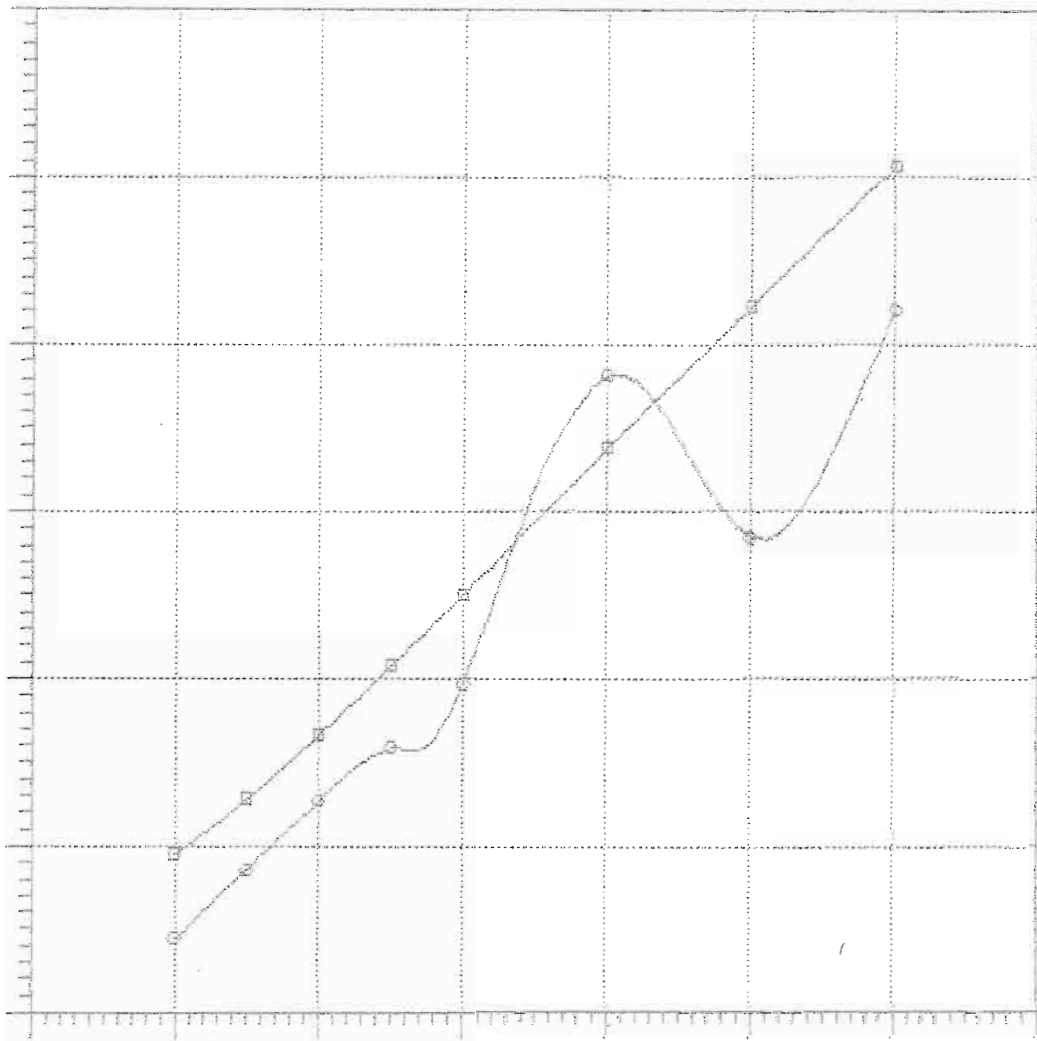
Rbare: Bare-hull resistance (lbs)



—■—  
—○— TMB-E38 Lpx/Bpx=4.668 Rp/Vol=11.165 Lpx/Rp=6.440 Lcg/Lpx=6.400

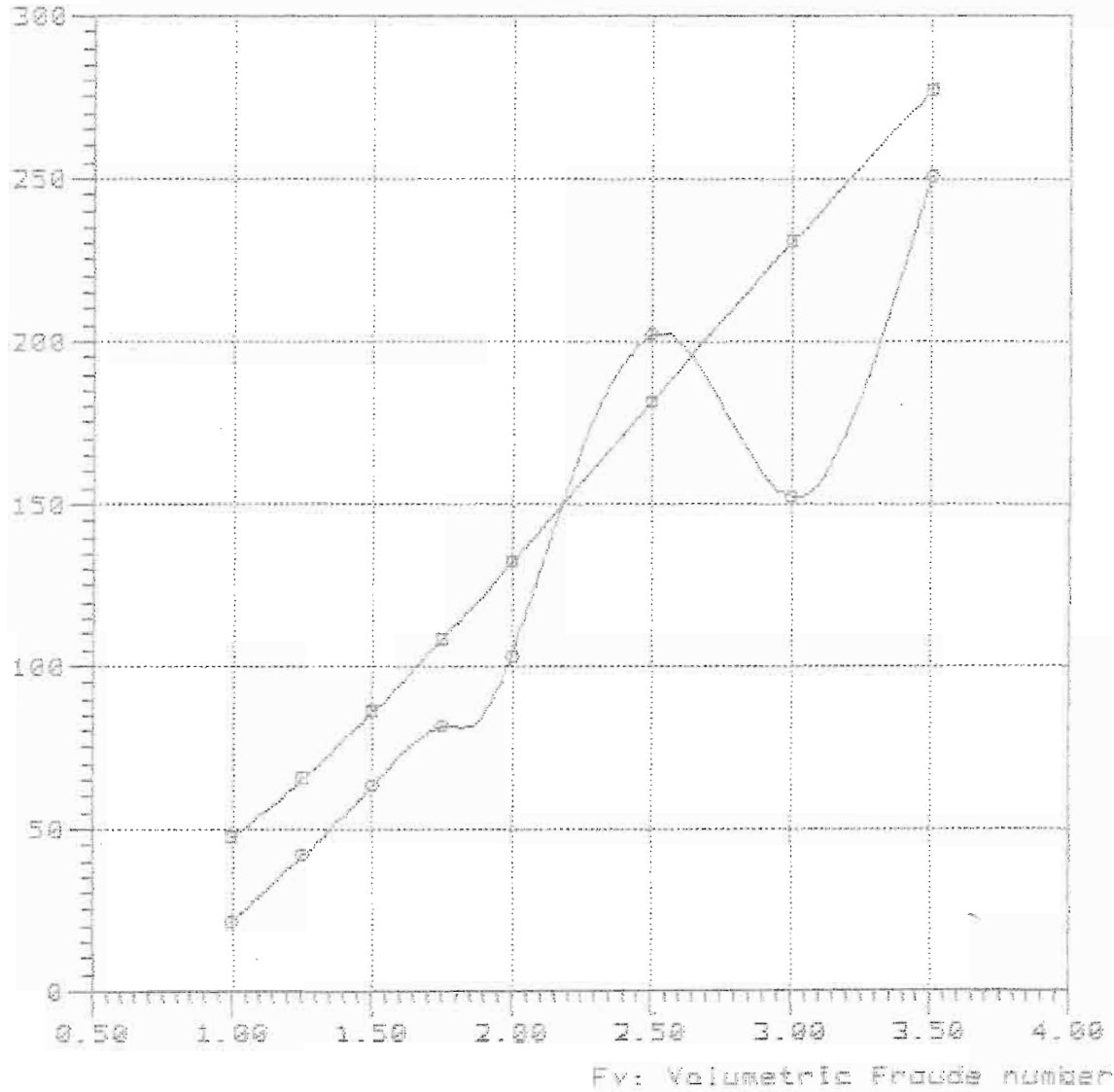


11-85-44



—○—  
—□—

Rbare: Bare-hull resistance (lbs)

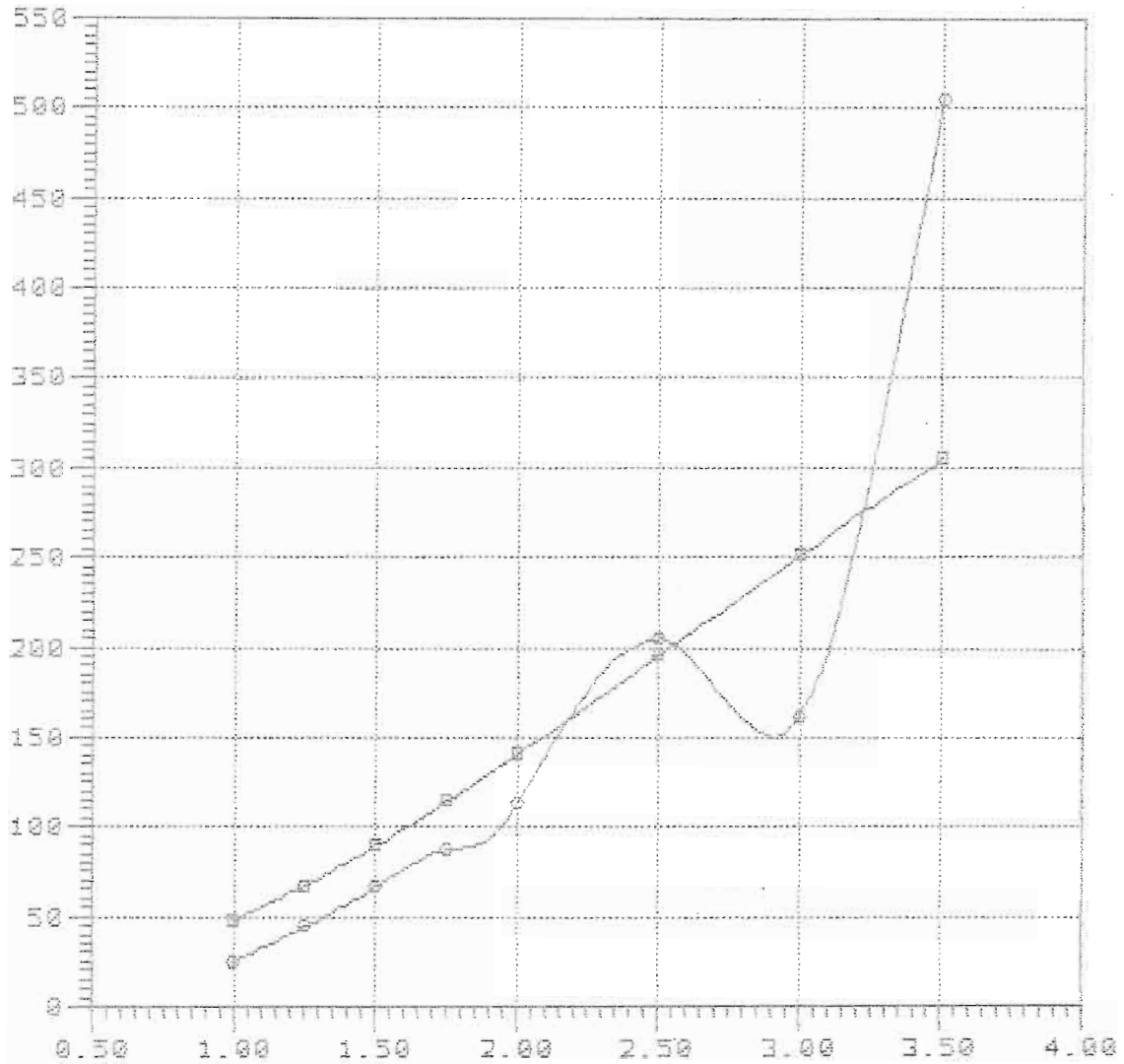


Curve legend

—■—

—●— TMB-65A Lcx/Bpx=4.660 Ap/Vol=11.166 Lpx/Sp=6.440 Lcg/Lpx=0.469

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

Curve legend

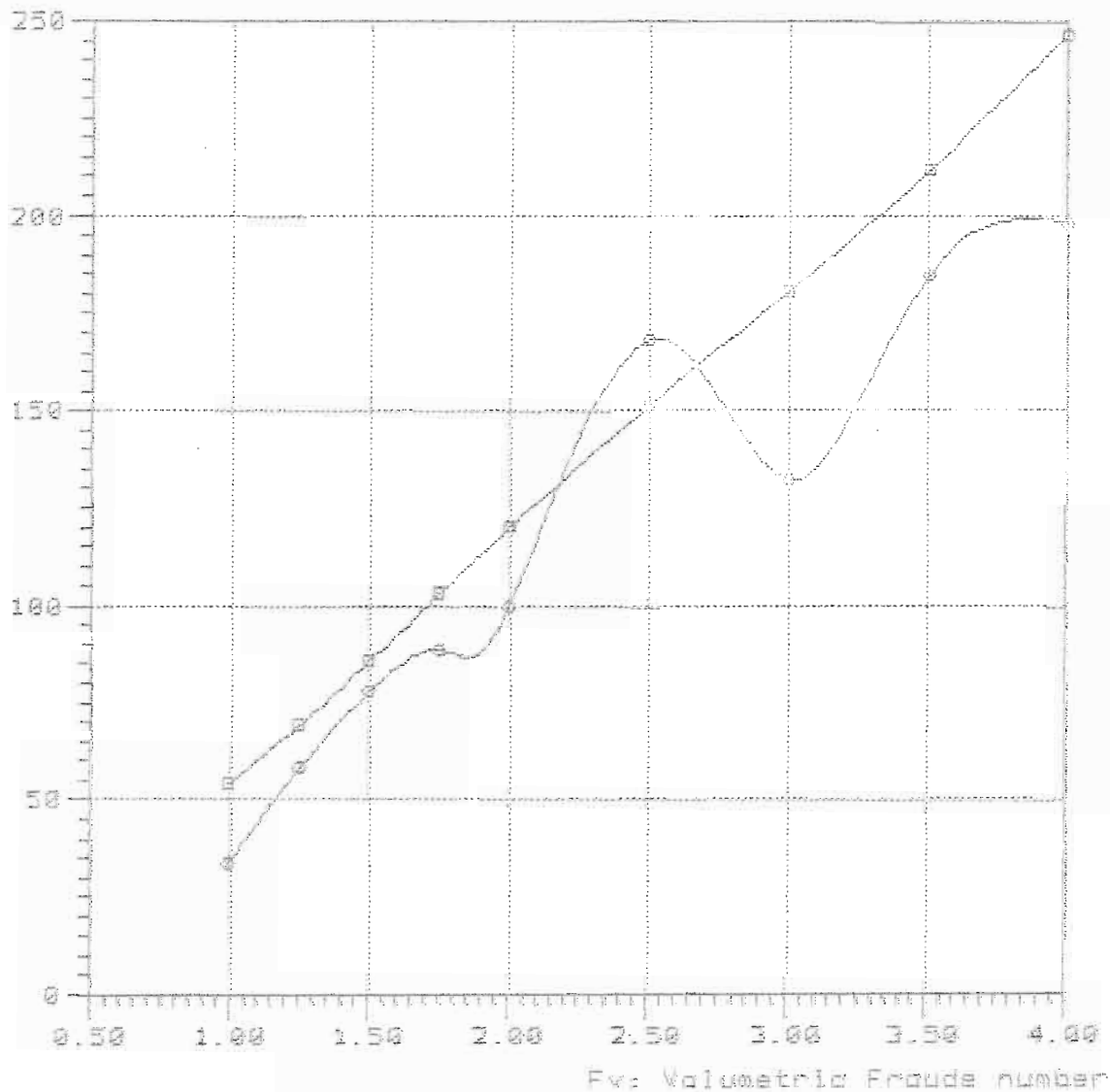
—■—

—○—

TMB-65A Lpx/Bpx=4.660 Ap/Vol=11.166 Lpx/Ap=6.440 Lcg/Lpx=0.520

Model	=	5198
Ref	=	NSRDC
Friction	=	<del>A</del> TTC Ca=4e-4
Lpx	=	22.500 ft
Lwl	=	22.364 ft
Bpx	=	4.828 ft
Ap	=	78.610 sqft
Vcg	=	1.484 ft
Disp.	=	1000.00 Lb
Deadrise	=	22.50 degree
Twist Angle	=	2.00 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.660
Lpx/Ap	=	6.440
Ap /Vol	=	12.576
Lpx/Vol	=	9.003
Cvload	=	0.139
Lbload	=	0.011
Disp-Lpx	=	39.193

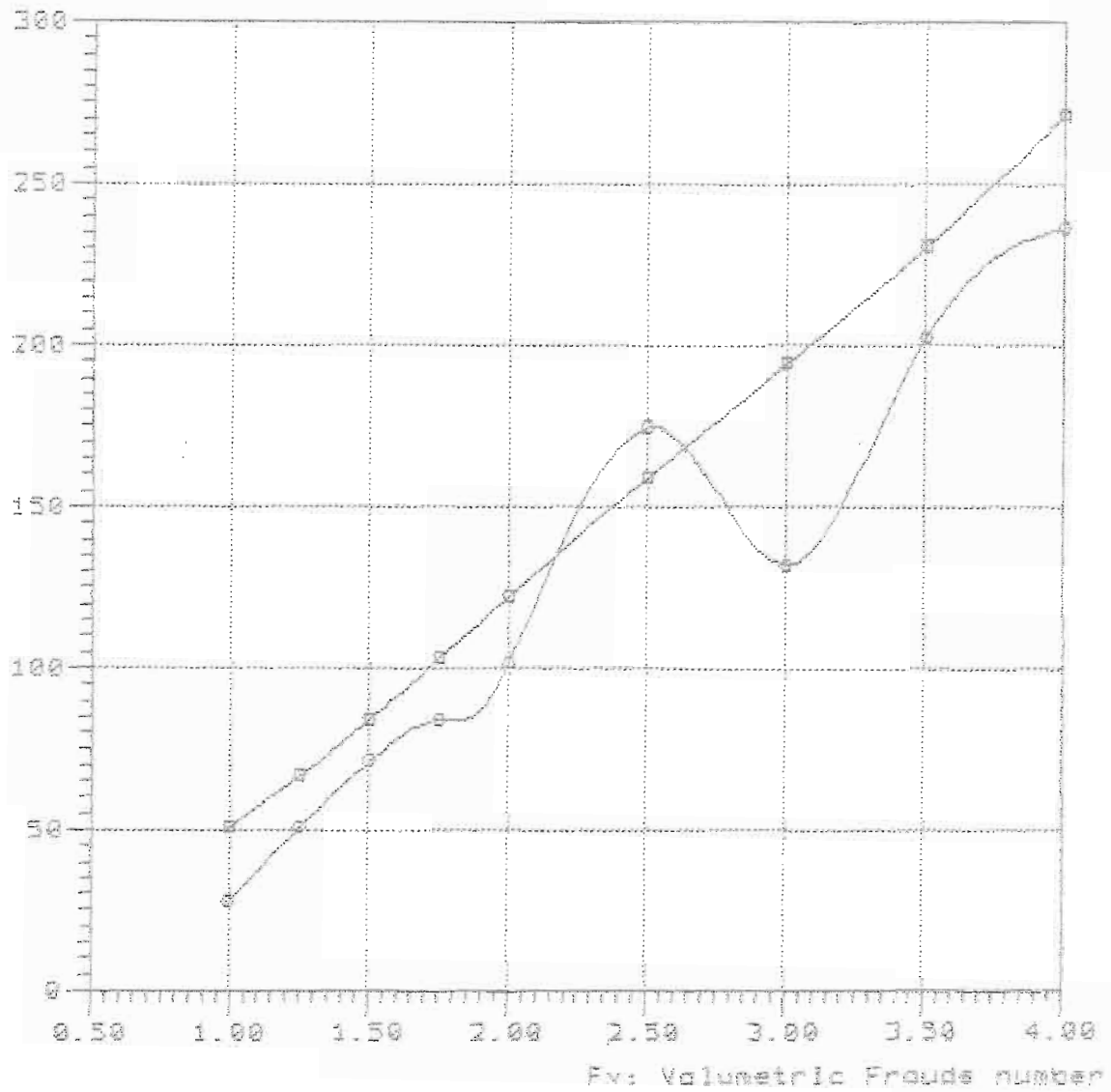
Rbare: Bare-hull resistance (lbf)



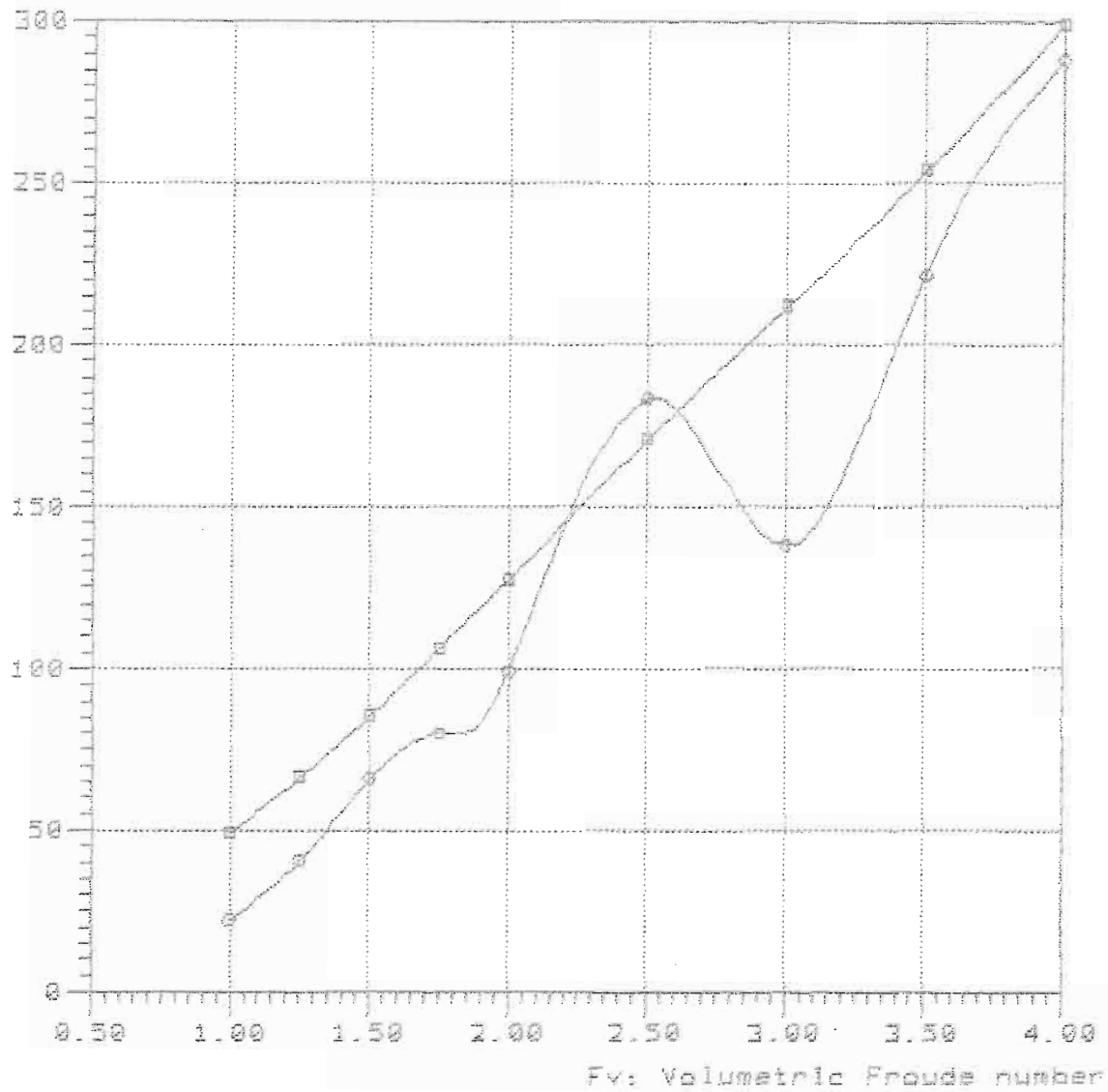
—□—

—○— TMB-65A Lpx/Bpx=4.560 Ap/Vol=12.577 Lpx/Ap=6.440 Log/Lpx=0.320

Rbare: Bare-hull resistance (lbs)

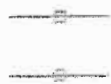
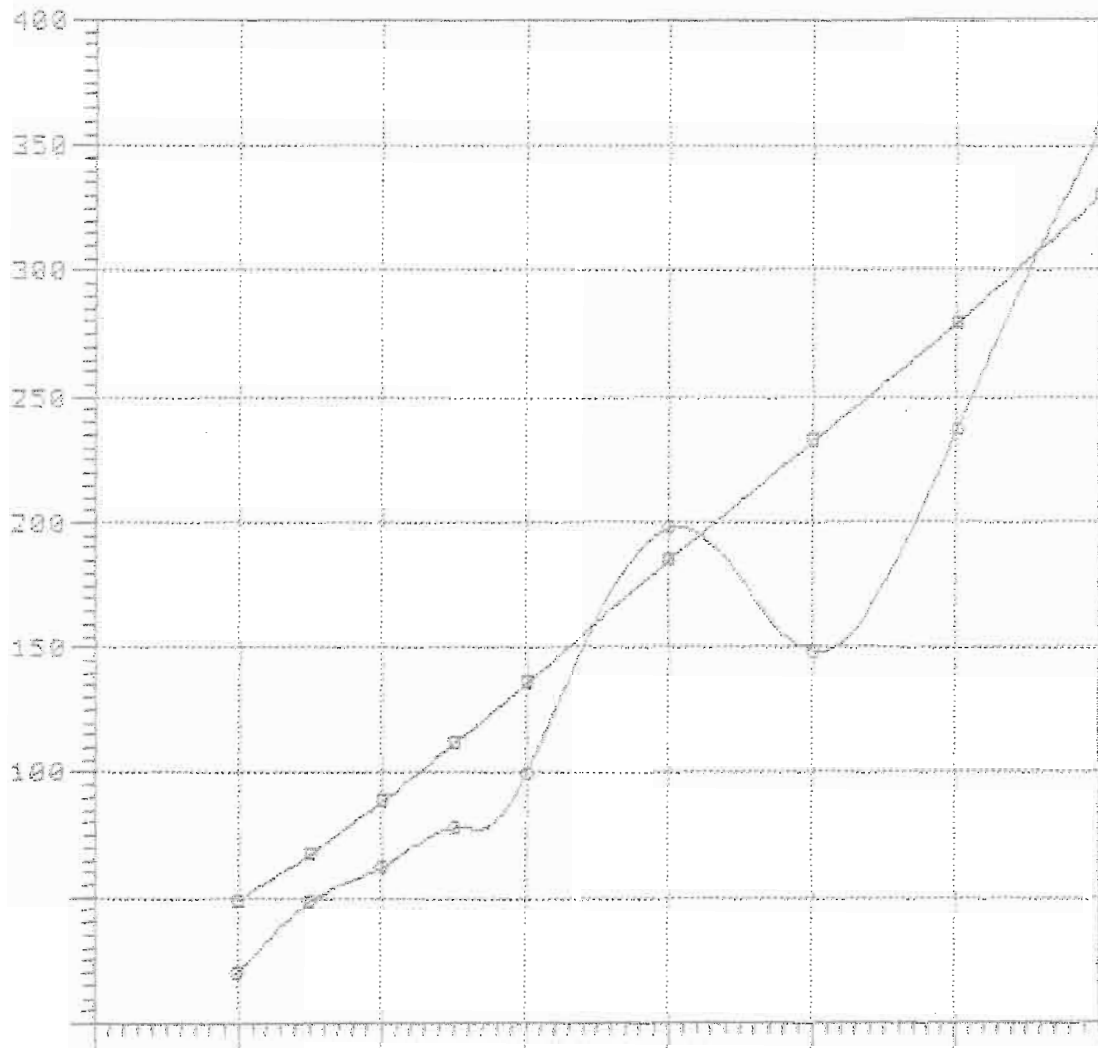


Rbare: Bare-hull resistance (lbs)



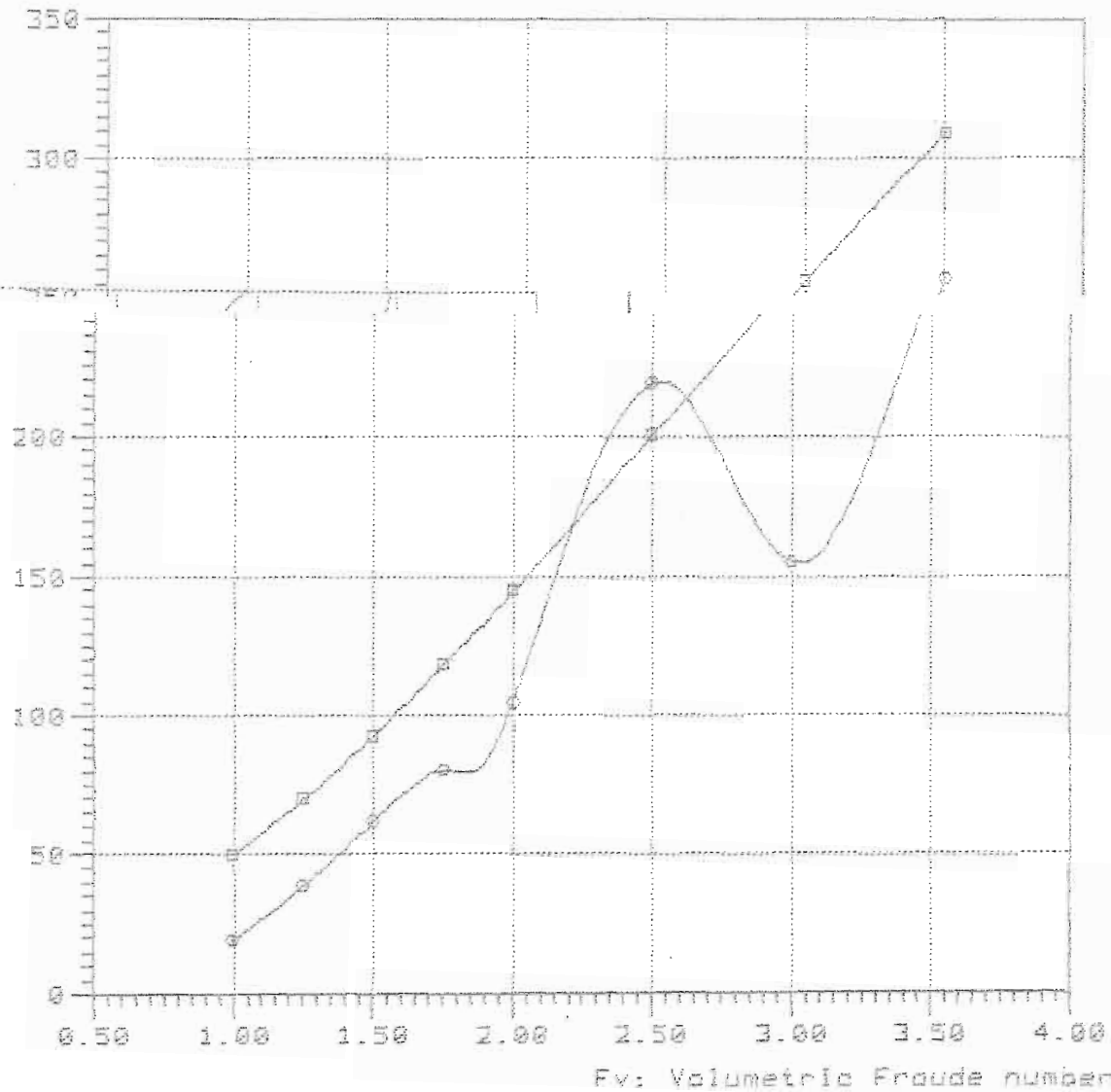
—■—  
—○— T1B-65A Lpx/Bpx=4.668 Rp/Vol=12.577 Lpx/Rp=6.448 Log/Lpx=0.400

Rbare: Bare-hull resistance (lbs)





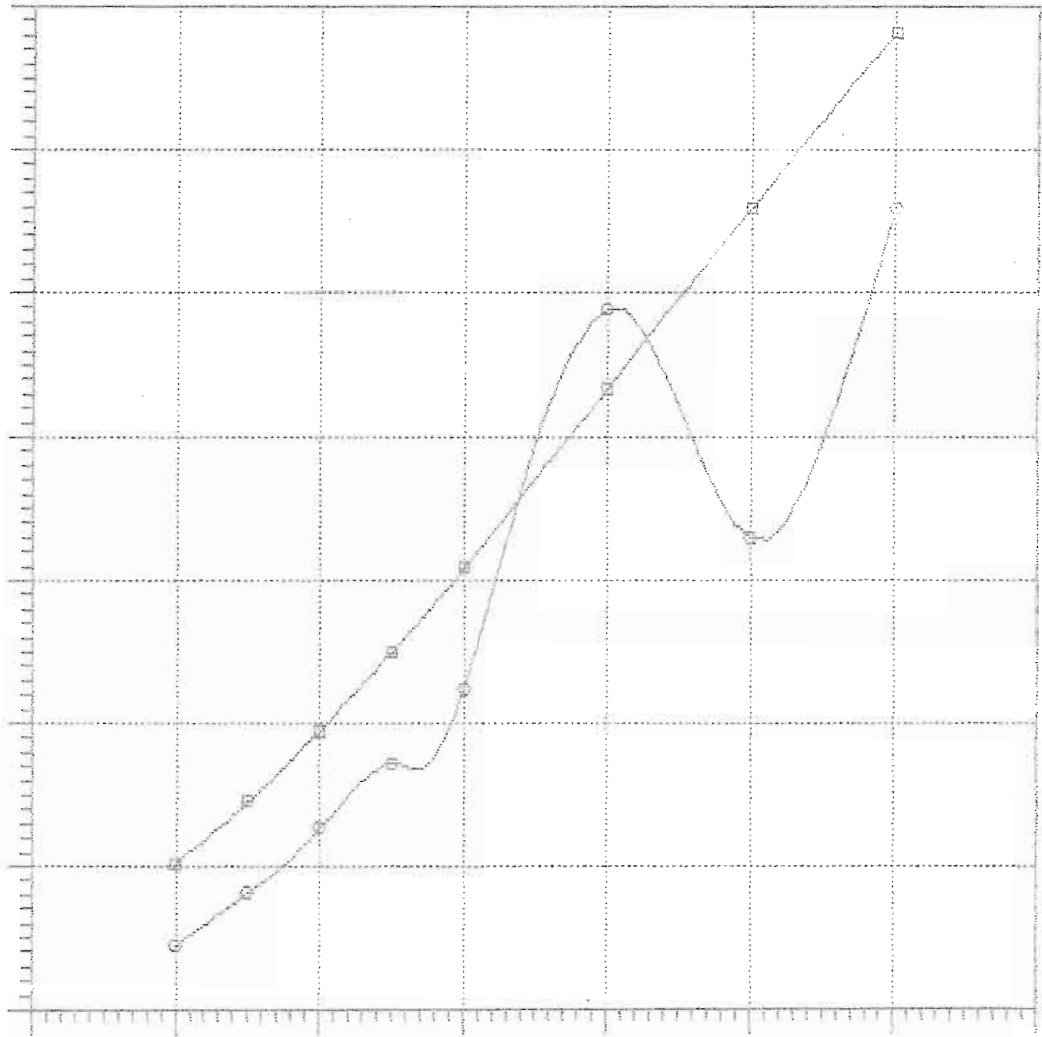
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65A Lpx/Bpx=4.668 Ap/Vol=12.577 Lpx/Ap=6.446 Lcg/Lpx=0.480

13-90-52



— □ —  
— ○ —

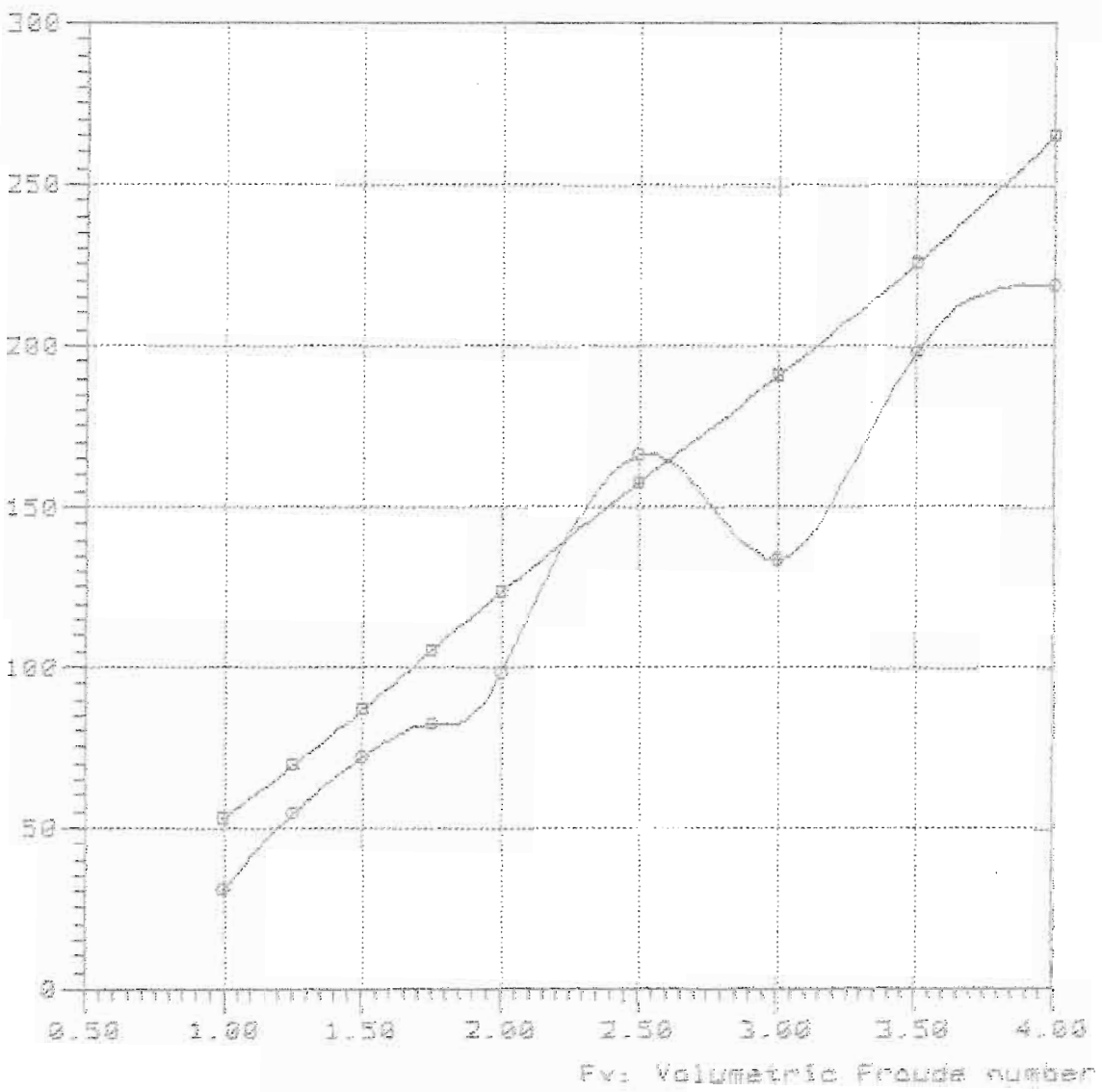
Model	=	5198
Ref	=	NSRDC
Friction	=	<del>A</del> TTC Ca=4e-4
Lpx	=	23.700 ft
Lwl	=	23.557 ft
Bpx	=	5.086 ft
Ap	=	87.219 sqft
Vcg	=	1.563 ft
Disp.	=	1000.00 Lb
Deadrise	=	22.50 degree
Twist Angle	=	2.00 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.660
Lpx/Ap	=	6.440
Ap /Vol	=	13.953
Lpx/Vol	=	9.483
Cvload	=	0.119
Lbload	=	0.010
Disp-Lpx	=	33.536

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Bare-hull resistance  
 vs.  
 Volumetric Froude number

File: 14-95-32.mdi  
 Date: 1 Mar 88  
 Time: 13:19

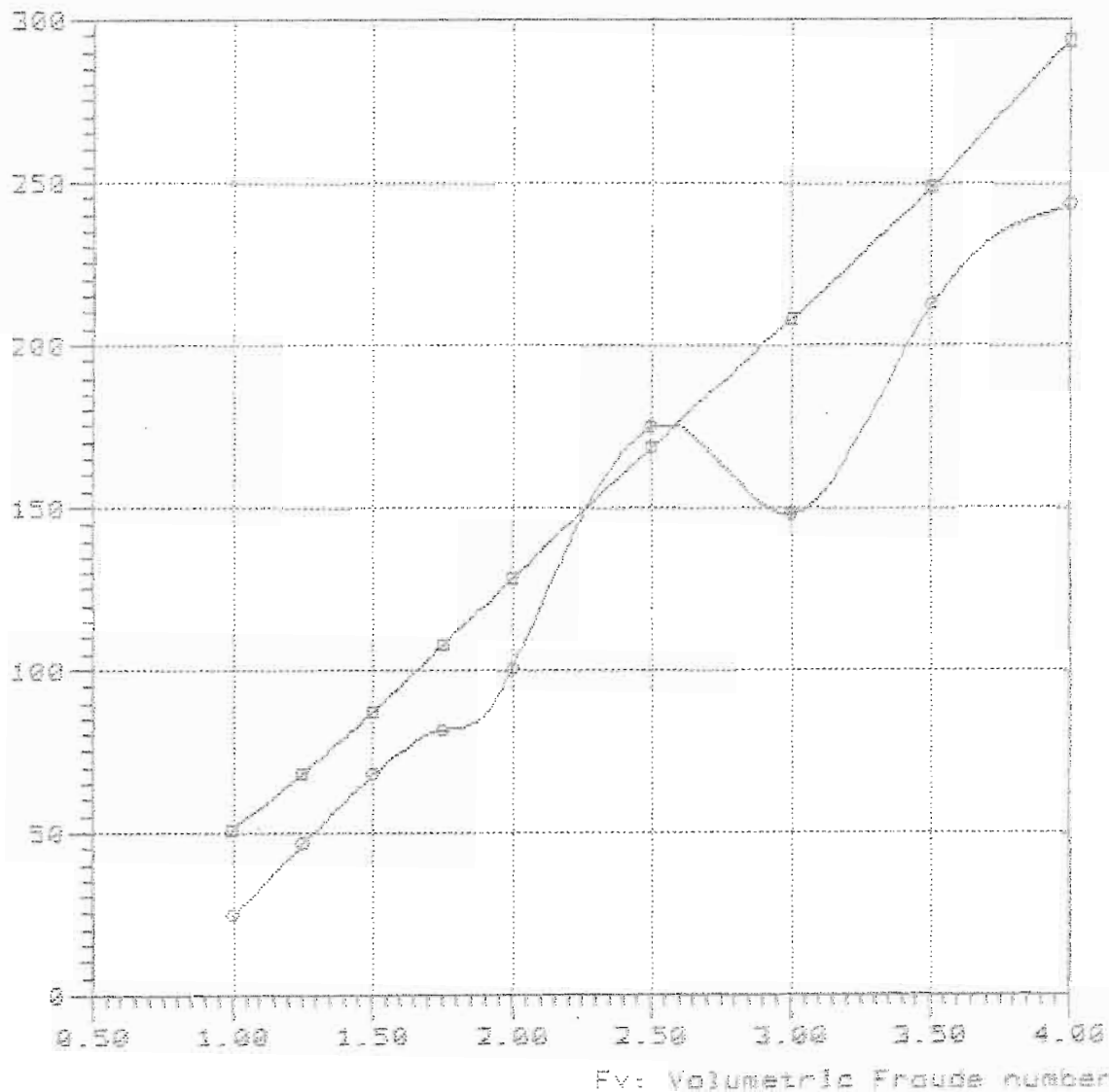
Rbare: Bare-hull resistance (lbs)



Curve legend

- 
- TMB-65A Lpx/Bpx=4.660 Ap/Vol=13.955 Lpx/Ap=6.440 Lcg/Lpx=6.368

Rbare: Bare-hull resistance (lbs)

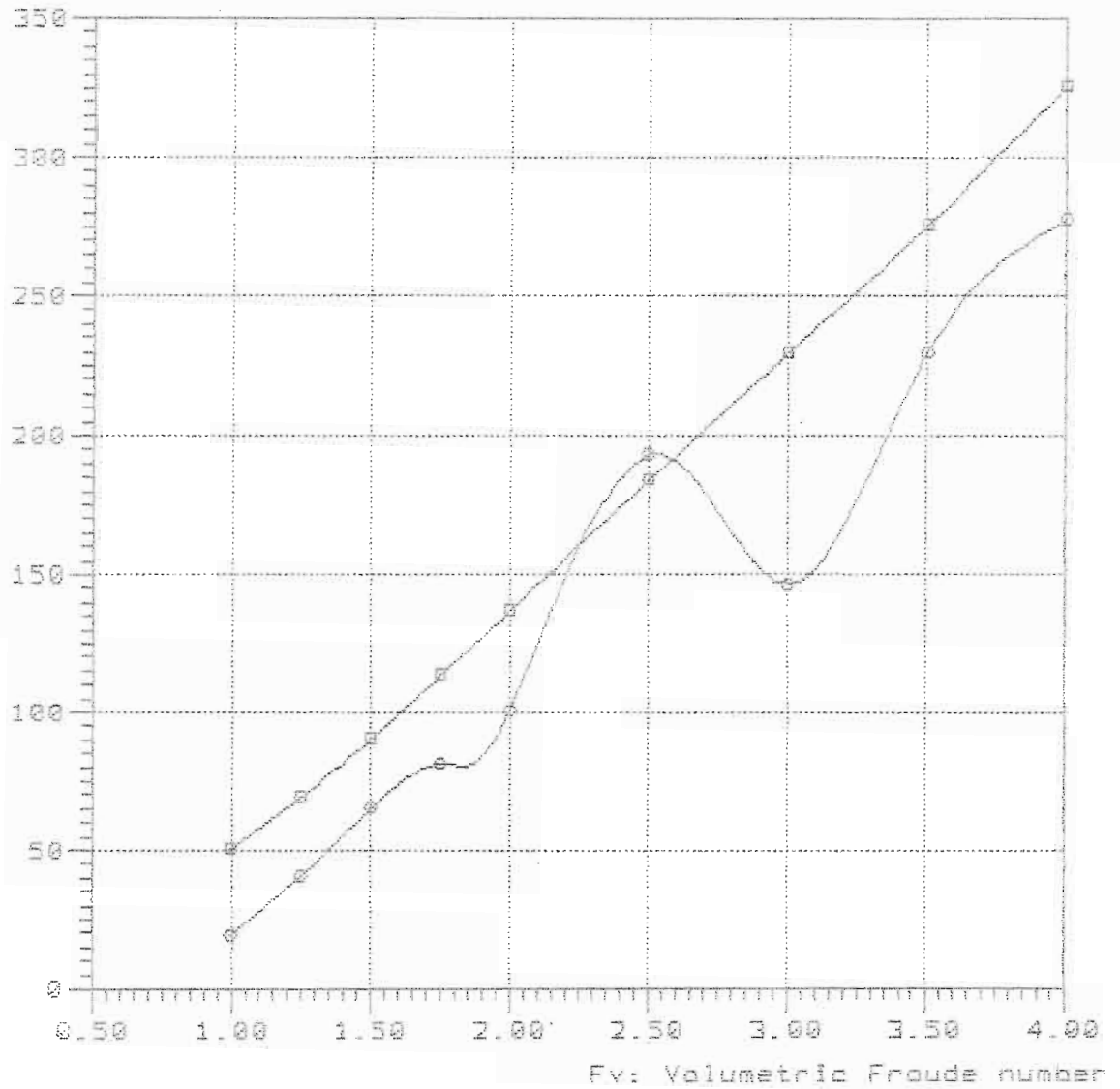


Curve legend

—○—

—■— TMB-65A Lpx/Bpx=4.666 Ap/Vol=13.933 Lpx/As=6.446 Lcg/Lpx=0.360

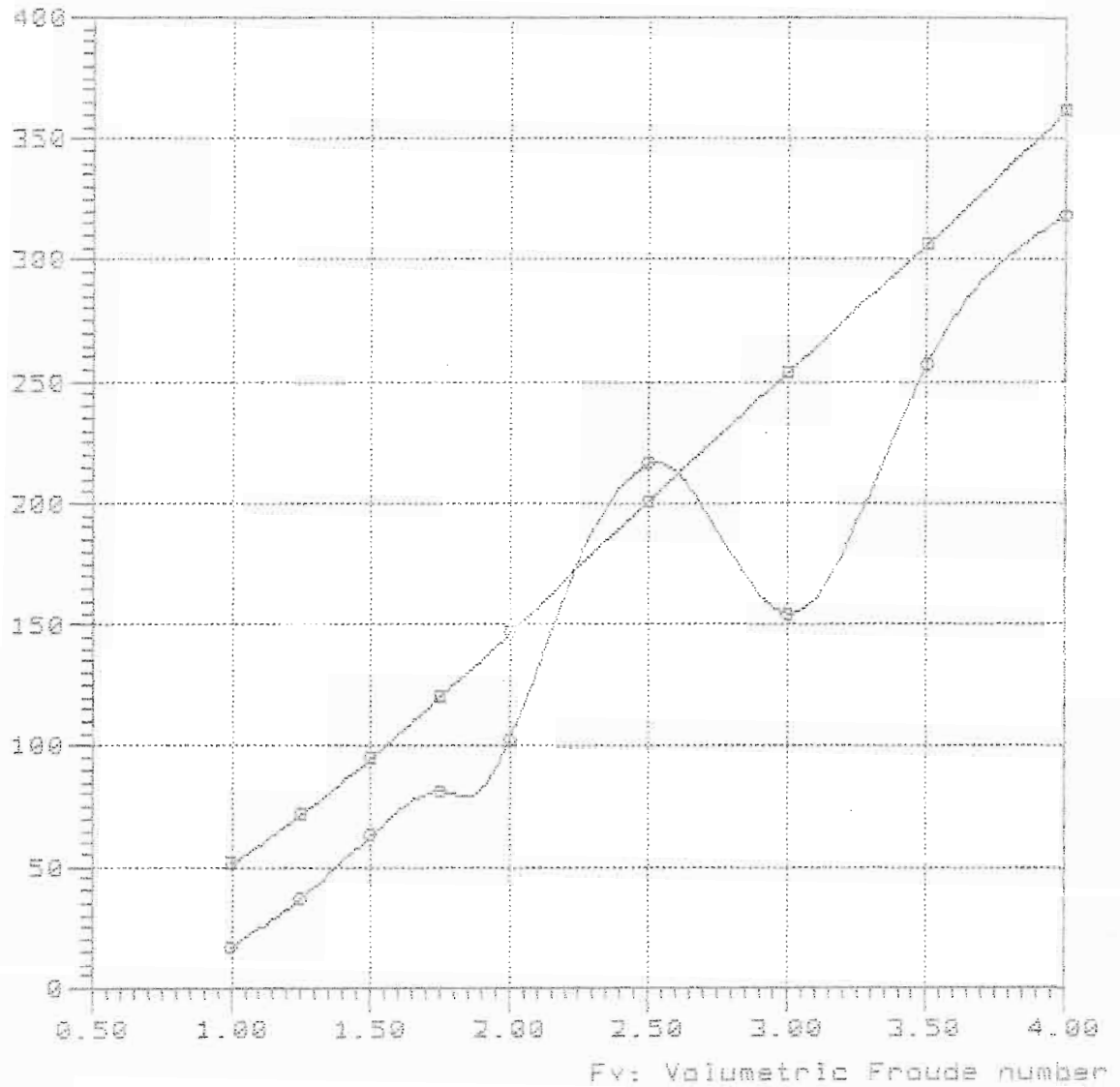
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65A Lpx/Bpx=4.660 Ap/Vol=13.955 Lpx/Ap=6.440 Lcg/Lpx=0.400

Rbare: Bare-hull resistance (lbs)

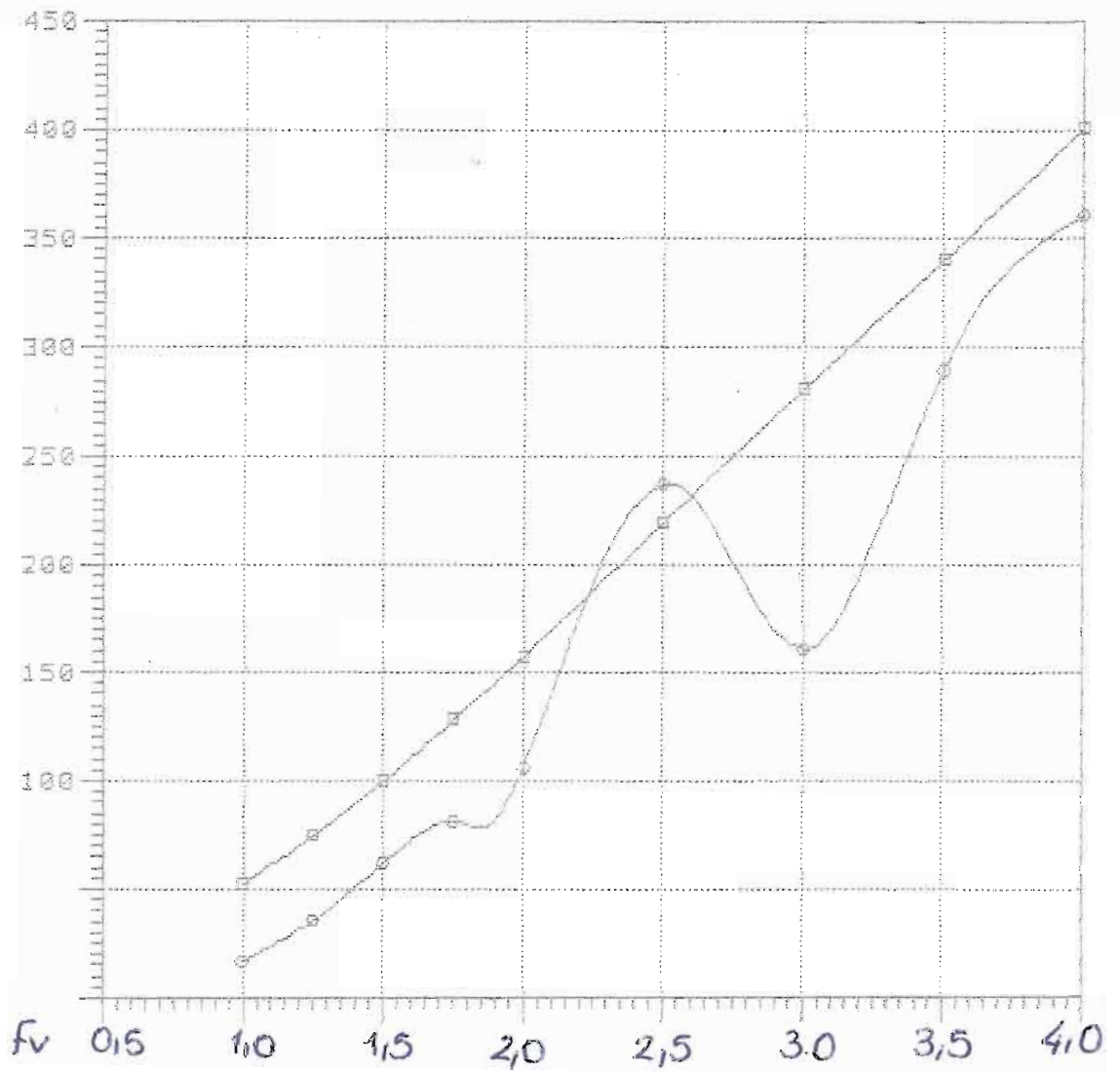


—□—

—○—

TMB-65A Lpx/Bpx=4.669 Ap/Vol=13.955 Lpx/Ap=6.440 Lcg/Lpx=0.440

Rbare: Bare-hull resistance (lbs)



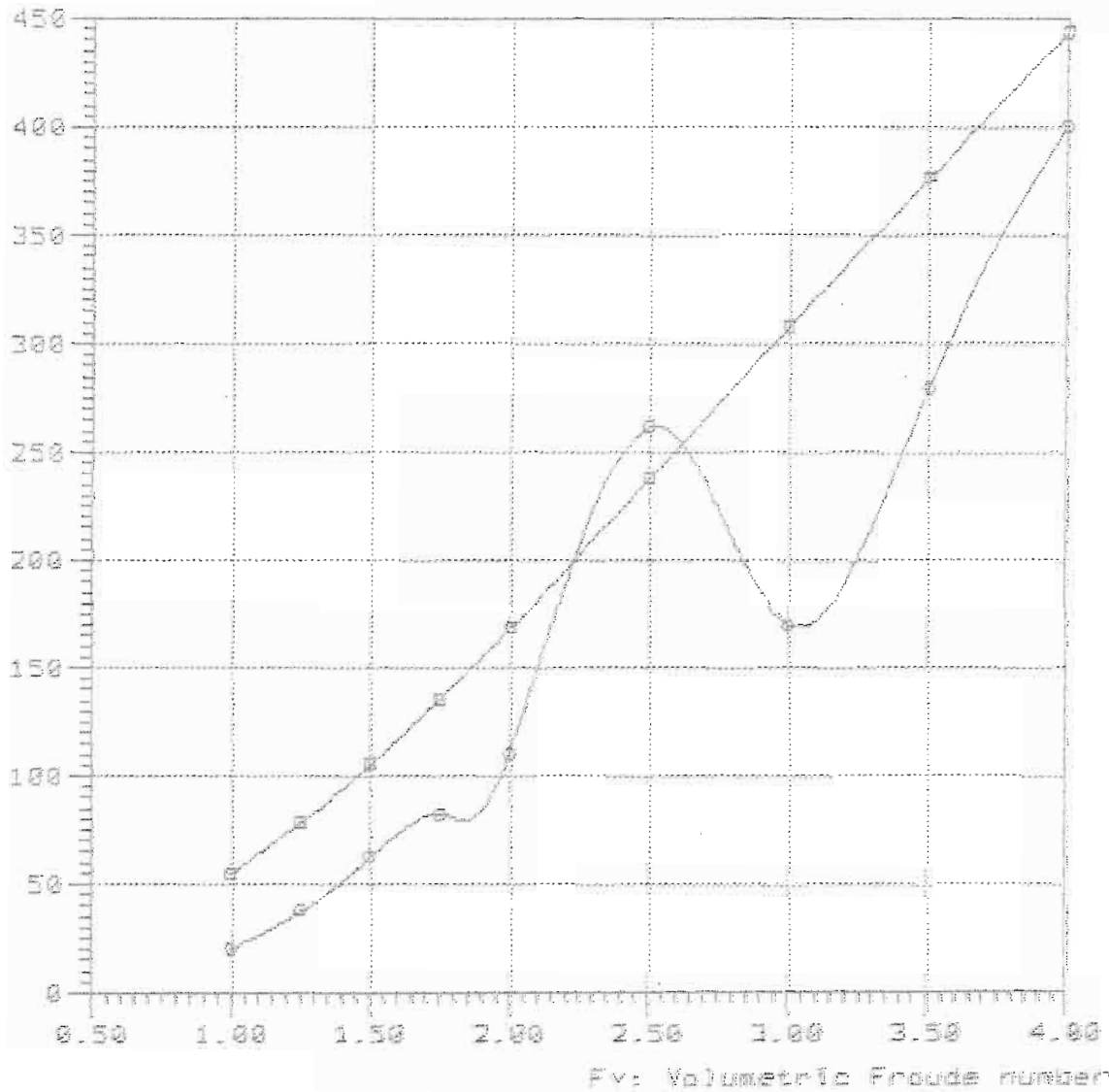


### Bare-hull resistance

vs

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



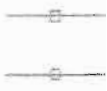
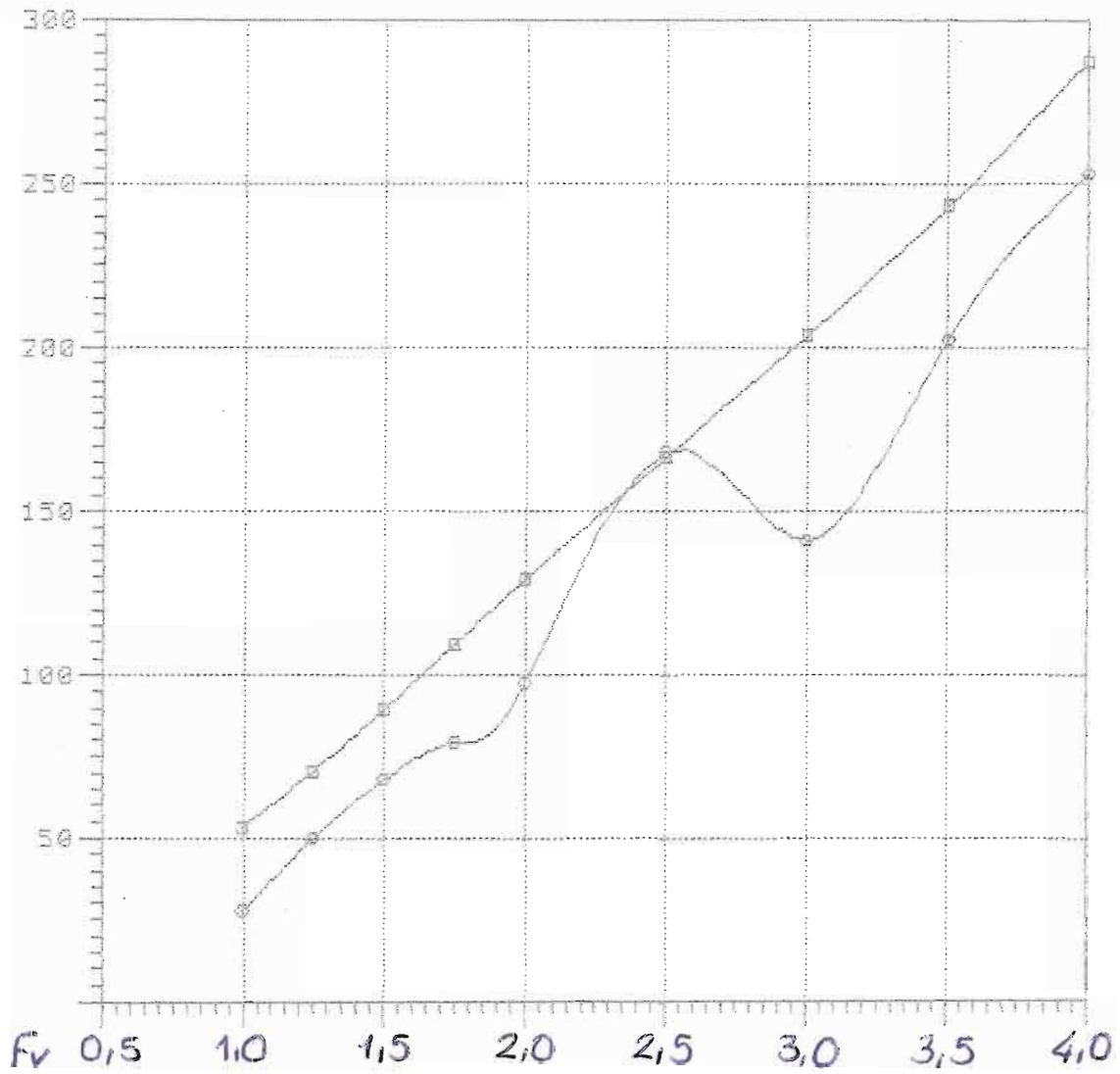
#### Curve legend

—■—

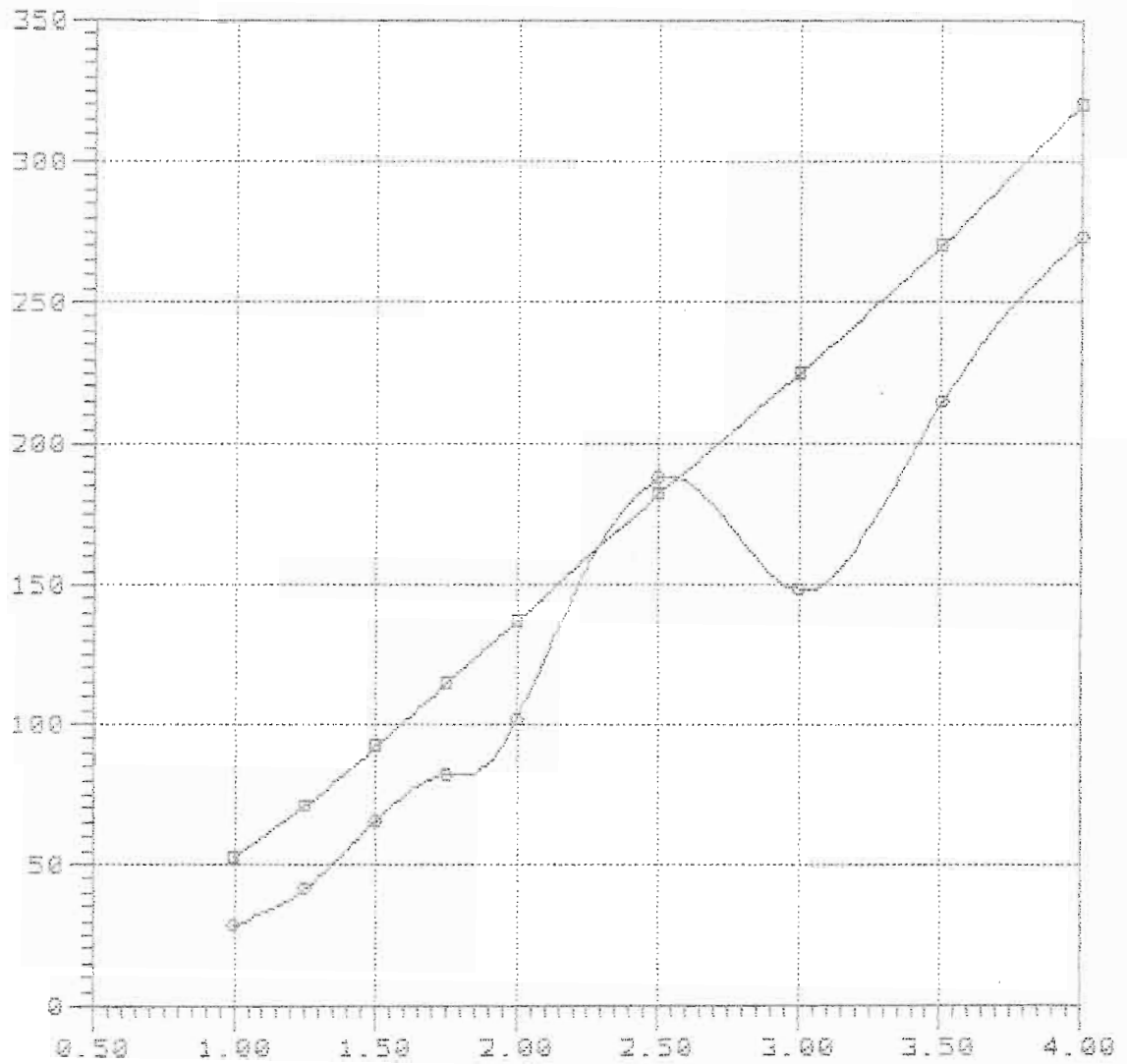
—○— TMB-65A Lpx/Bpx=4.658 Ap/Vol=13.555 Lpx/Sp=6.440 Log/Lpx=8.526

Model	=	5198
Ref	=	NSRDC
Friction	=	<del>A</del> TTC Ca=4e-4
Lpx	=	25.000 ft
Lwl	=	24.849 ft
Bpx	=	5.365 ft
Ap	=	97.050 sqft
Vcg	=	1.649 ft
Disp.	=	1000.00 Lb
Deadrise	=	22.50 degree
Twist Angle	=	2.00 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.660
Lpx/Ap	=	6.440
Ap /Vol	=	15.526
Lpx/Vol	=	10.003
Cvload	=	0.101
Lbload	=	0.008
Disp-Lpx	=	28.571

Rbare: Bare-hull resistance (lbs)



Rbare: Bare-hull resistance (lbs)



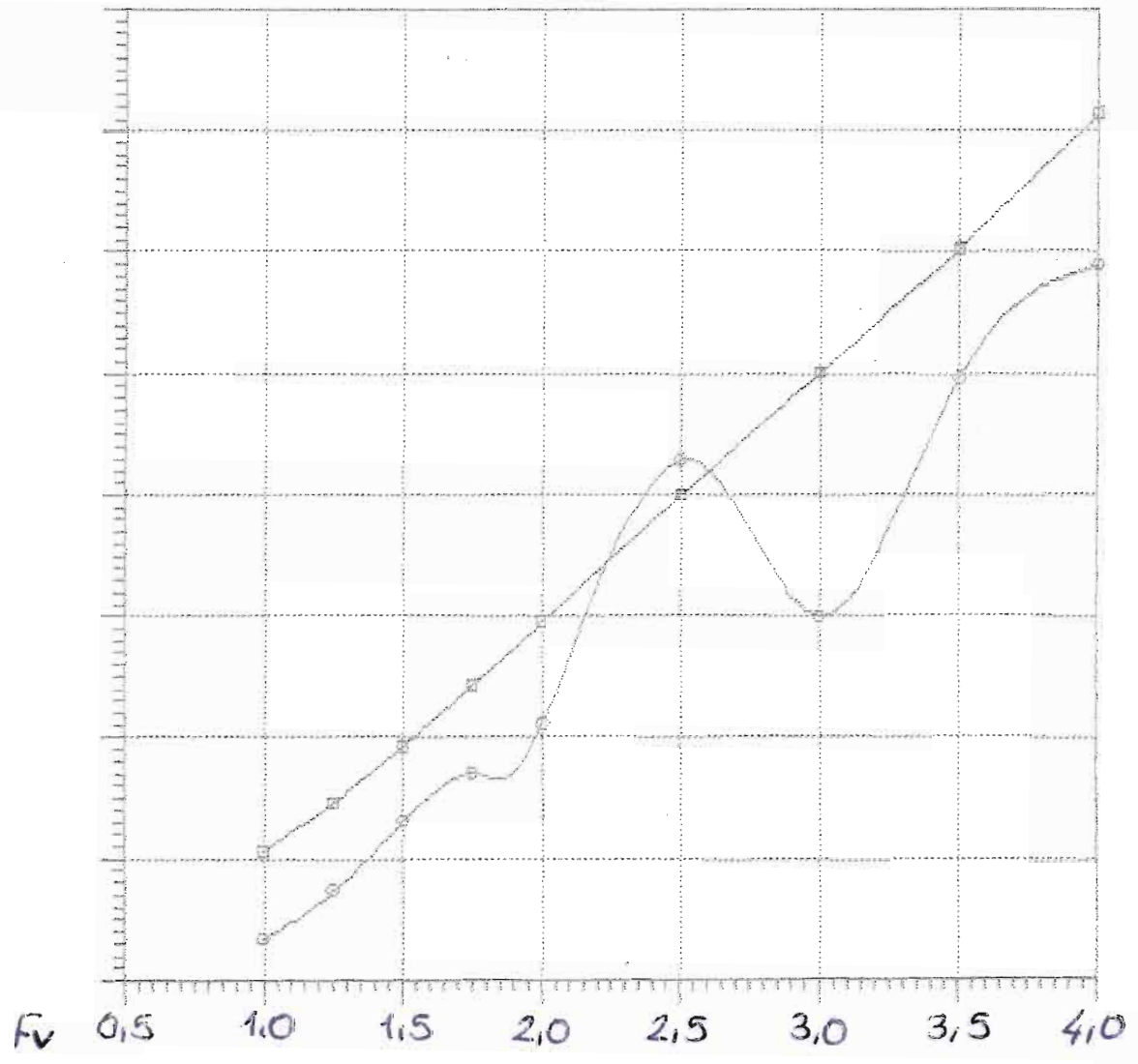
Fv: Volumetric Froude number

—□—

—○—

TMB-65A Lpx/Bpx=4.660 Ap/Vol=15.528 Lpx/As=6.440 Lcg/Lpx=0.360

16-10-40  
mdl



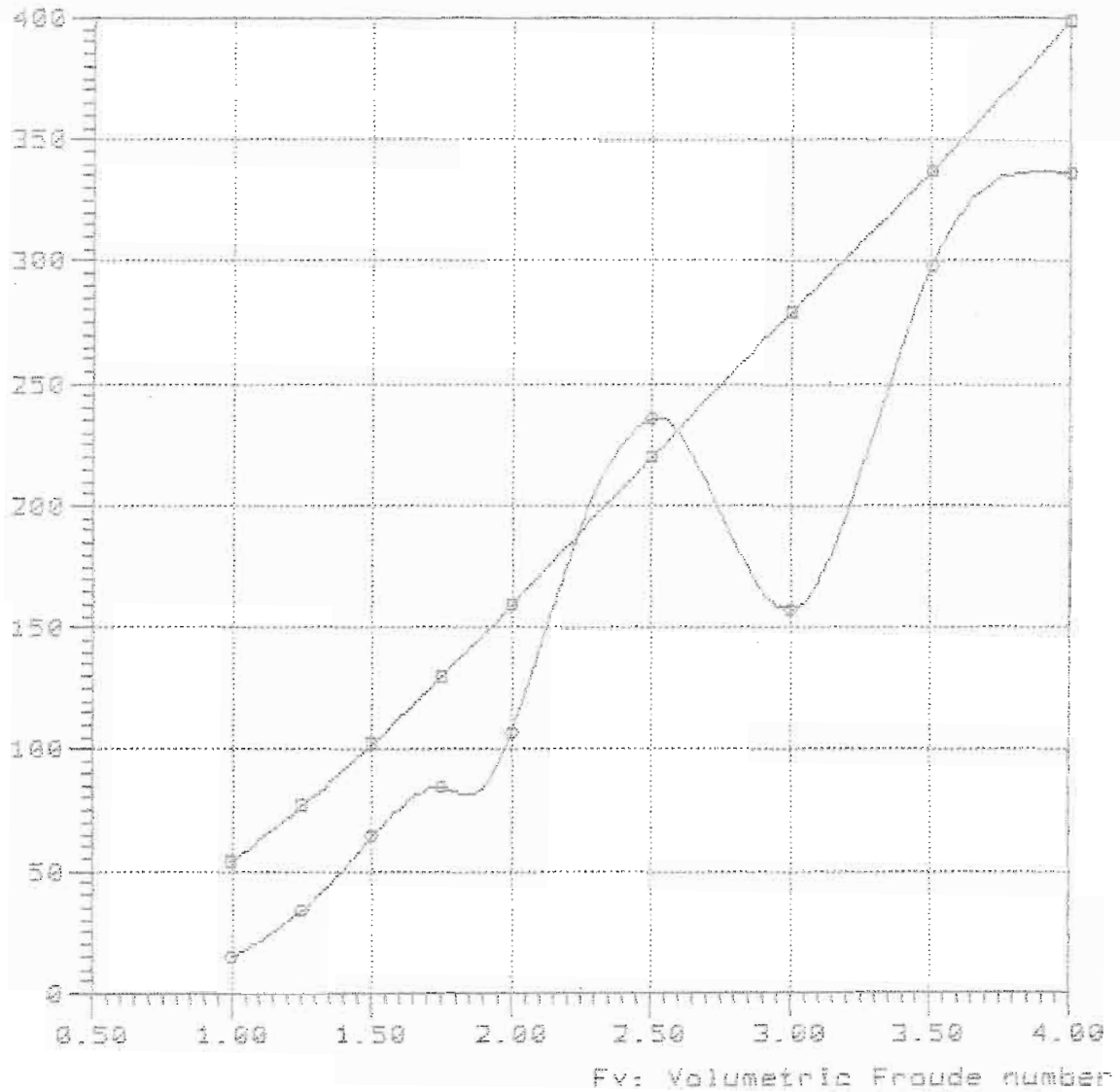
—□—  
—○—

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)

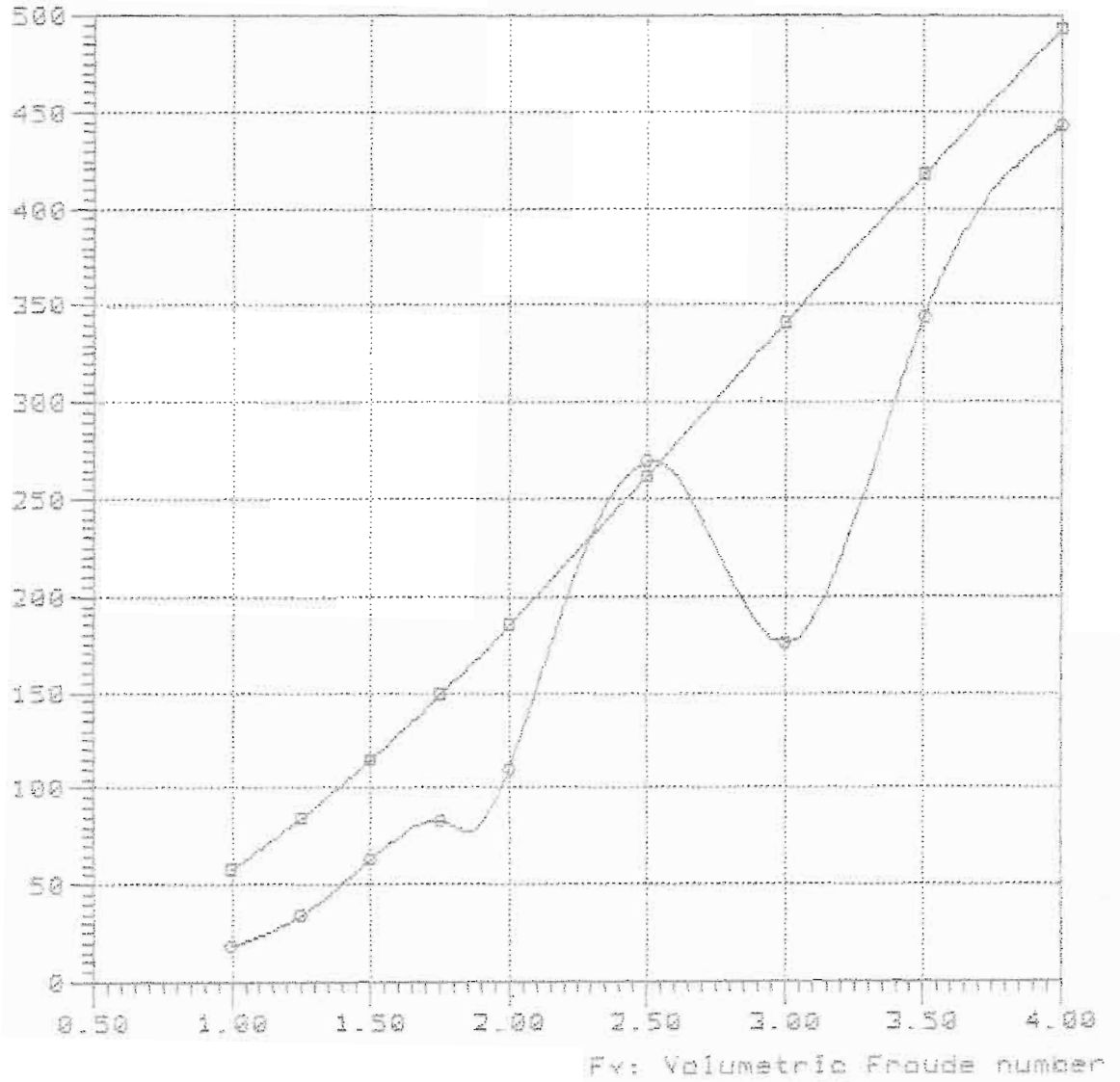


#### Curve legend

—□—

—○— TMB-65R Lpx/Bpx=4.660 Ap/Vol=15.528 Lpx/As=5.440 Lcg/Lpx=0.440

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-654 Lpx/Bpx=4.660 Ap/Vol=15.528 Lpx/Ap=6.446 Log/Lpx=0.520

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Bare-hull resistance

vs.

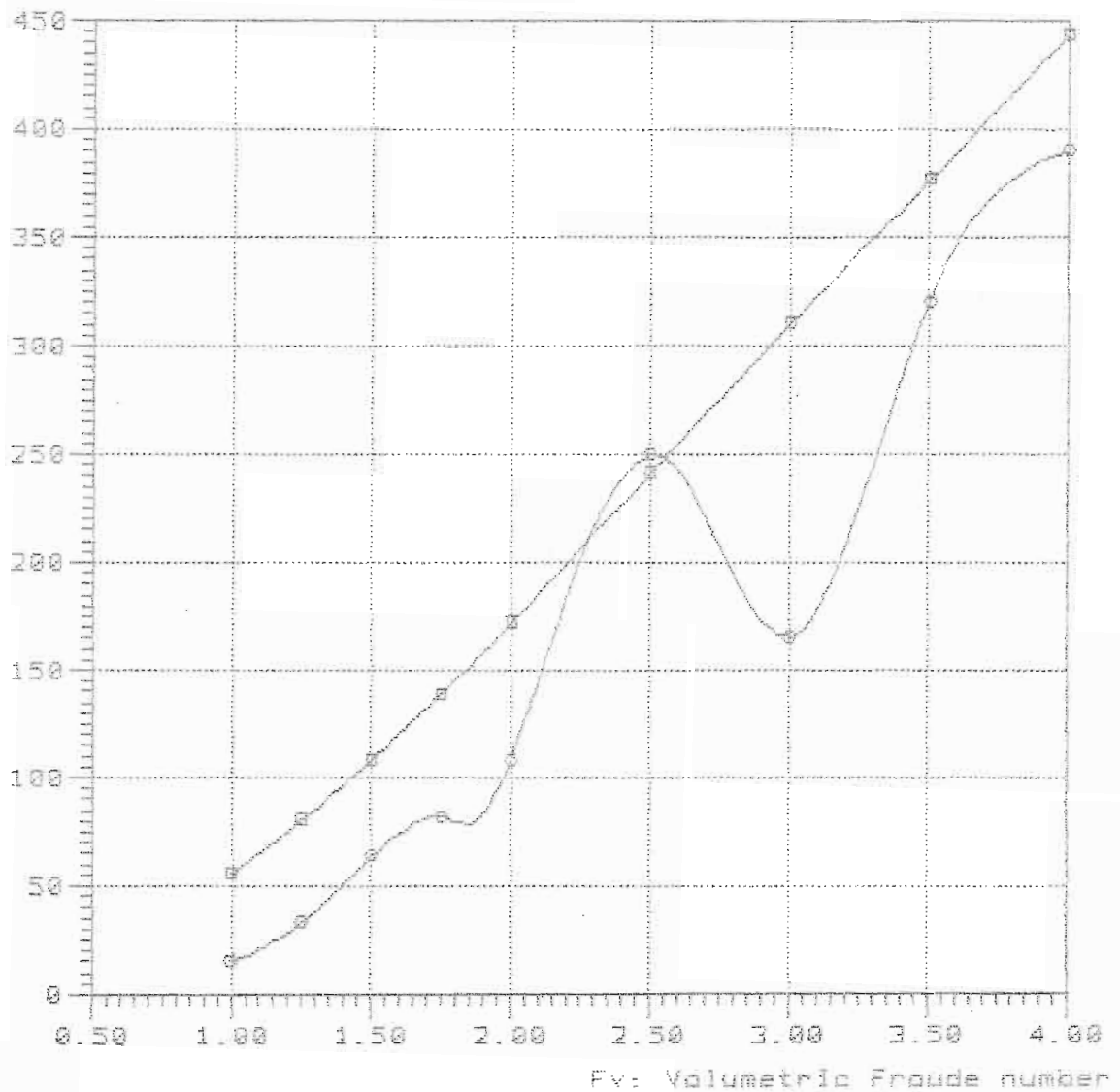
Volumetric Froude number

File: 16-10-48.mdl

Date: 1 Mar 88

Time: 13:53

Rbare: Bare-hull resistance (lbs)



Curve legend

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TMB-65A Lpx/Bpx=4.660 Ap/Vol=15.528 Lox/Ap=6.440 Log/Lox=0.480



5204

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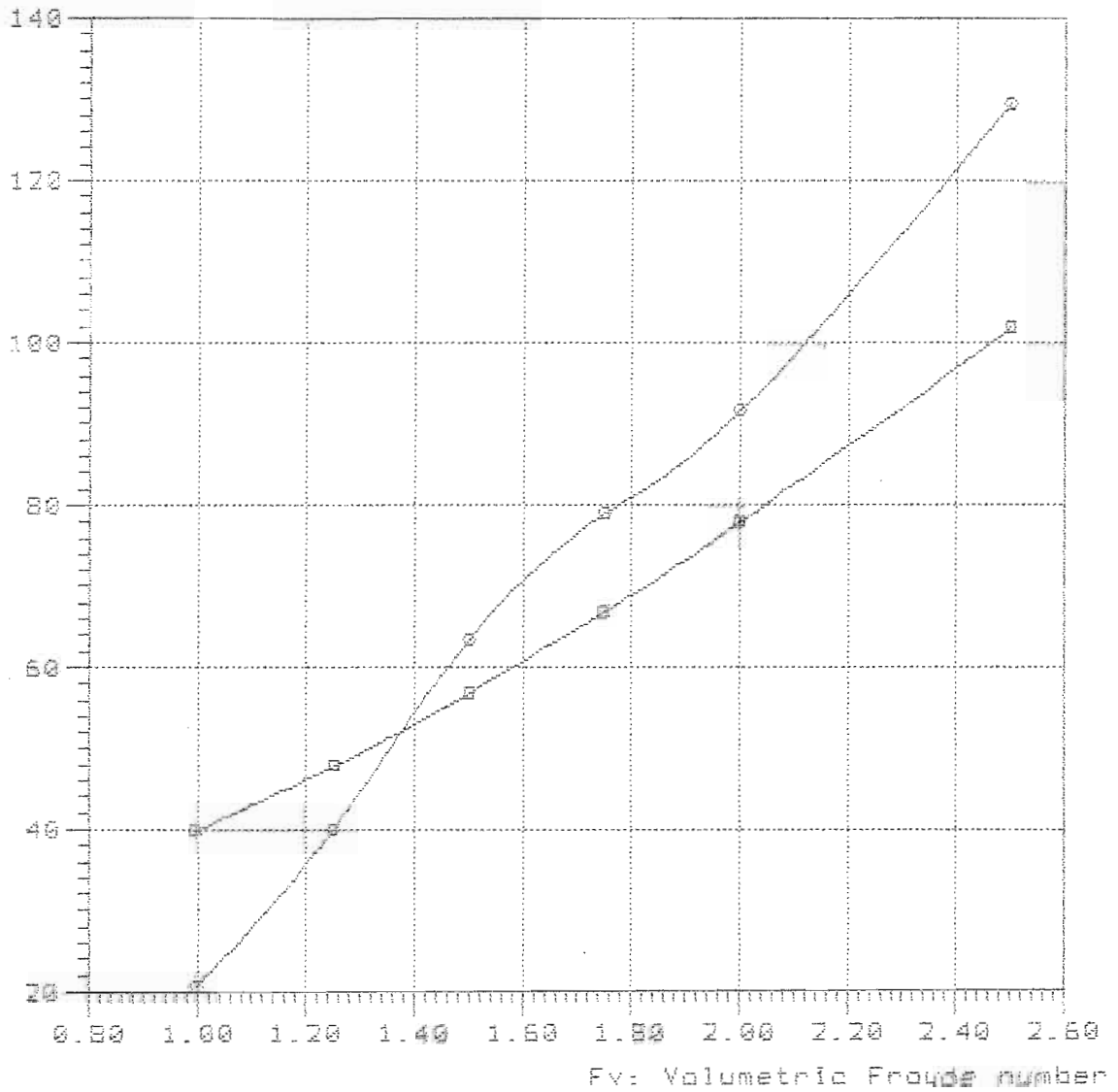
HydroComp, Inc.

File: 5-88-400.mdl

Date: 25 Feb 00

Time: 17:58

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65R Lpx/Bpx=9.34 Ap/Vol=4.97 Lpx/Ap=12.878 Lcg/Lpx=0.480

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

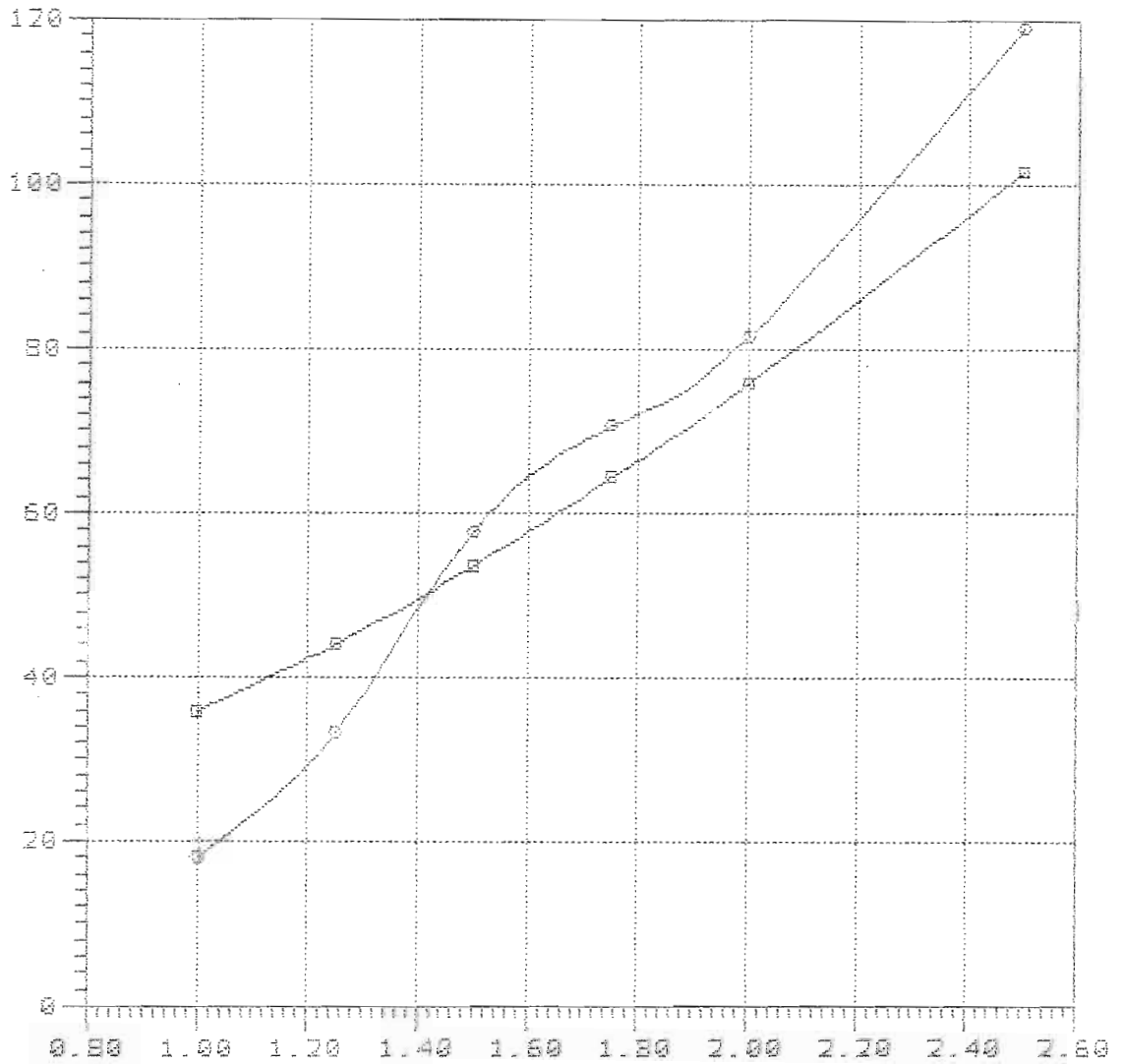
### Volumetric Froude number

File: 5-80-440.mdl

Date: 25 Feb 00

Time: 17:59

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

#### Curve legend

—■—

—○— TMB-65A Lpx/Bpx=9.34 Ap/Vol=4.97 Lpx/Ap=12.878 Lcg/Lpx=0.440

NavCad(tm) 3.1d

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Bare-hull resistance

vs.

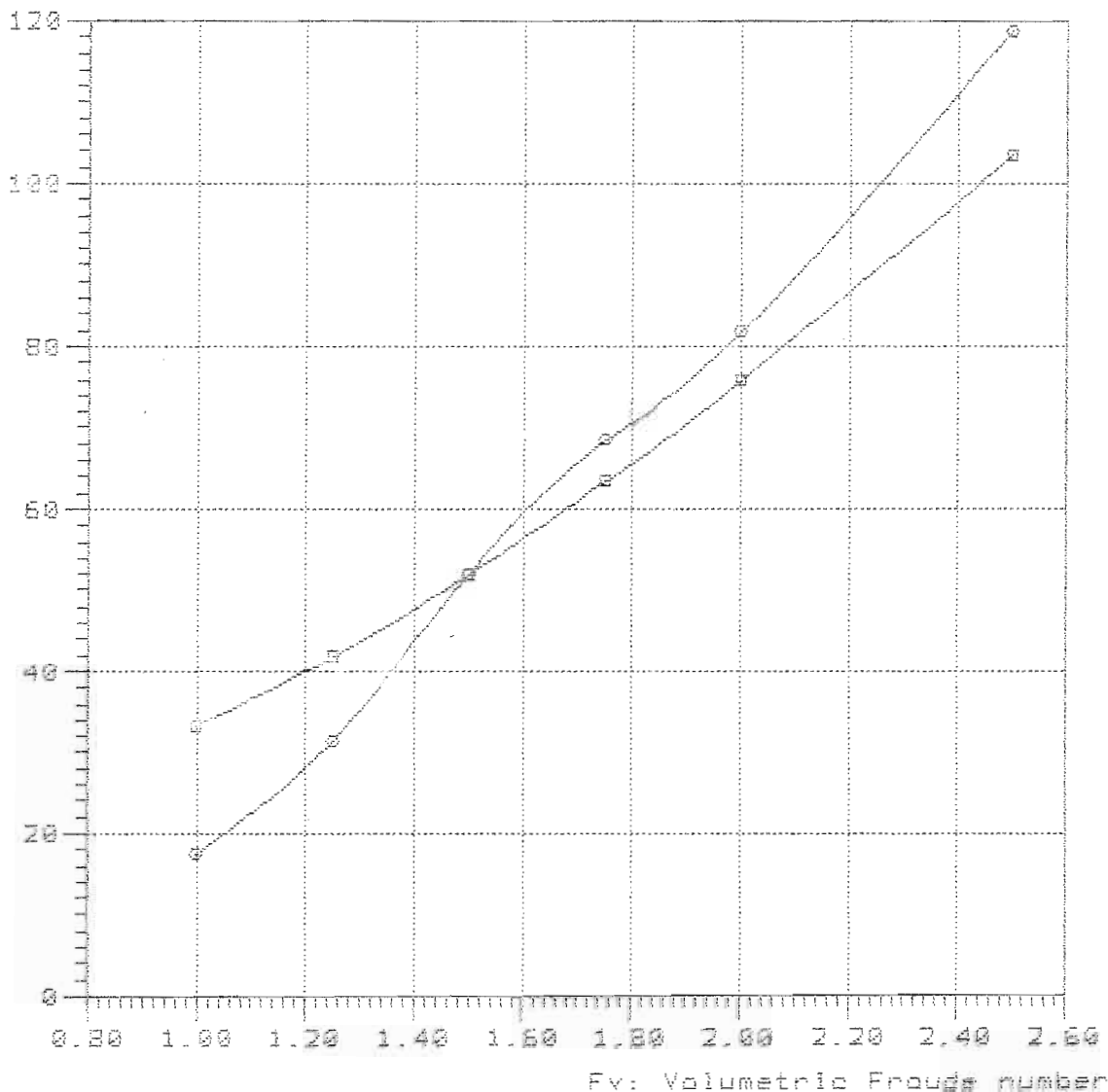
Volumetric Froude number

File: 5-80-480.mdl

Date: 25 Feb 00

Time: 18:27

Rbare: Bare-hull resistance (lbs)

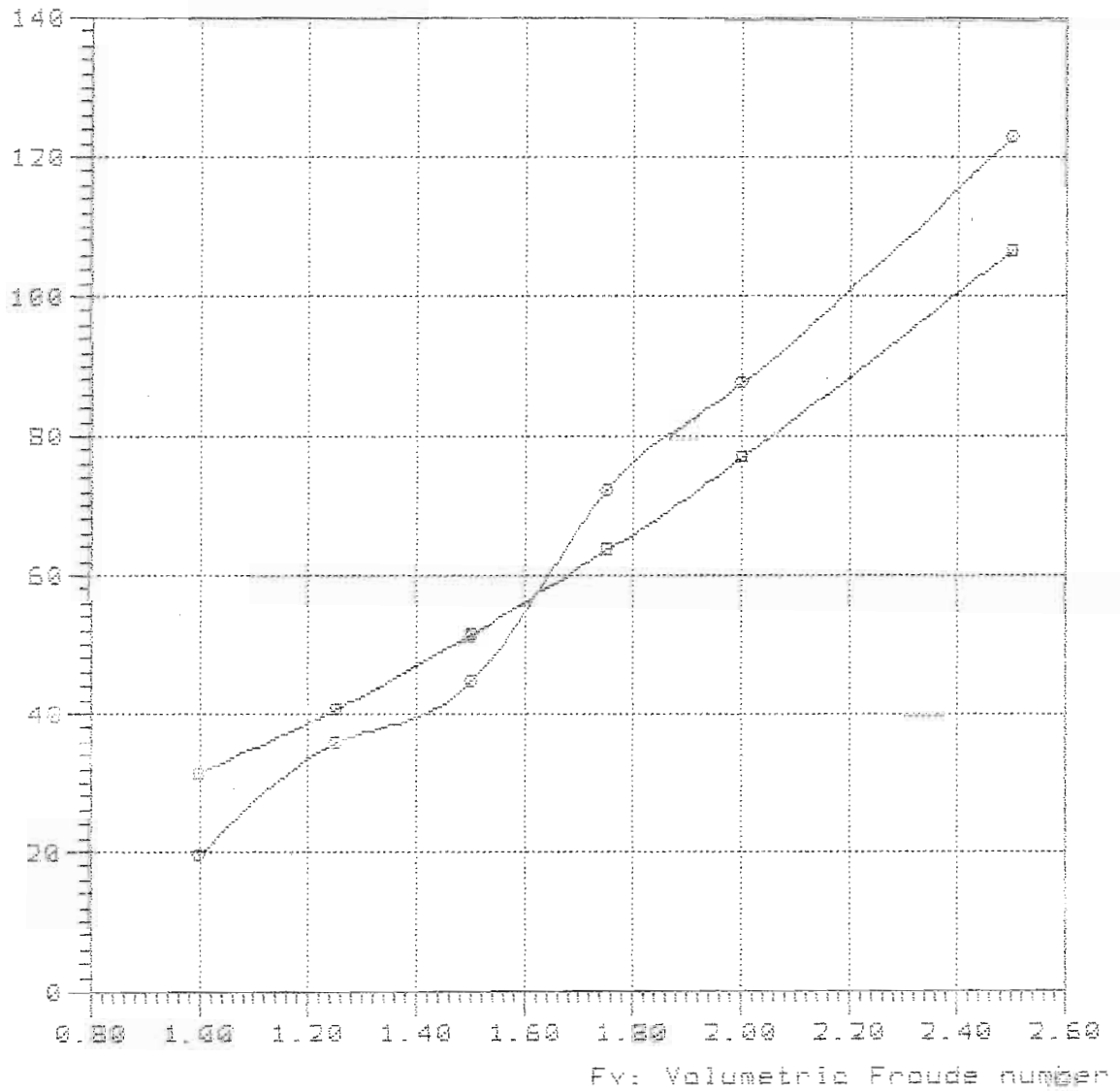


Curve Legend

—□—

—○— TMB-65A Lpx/Bpx=9.34 Ap/Vol=4.97 Lpx/Rp=12.878 Lcg/Lpx=0.480

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A Lpx/Bpx=9.34 Ap/Vol=4.97 Lpx/Ap=12.87B Log/Lpx=0.530

Model = 5204  
Ref = NSRDC  
Friction ~~A~~TTC Ca=4e-4

Lpx = 20.000 ft  
Lwl = 19.880 ft  
Bpx = 2.141 ft  
Ap = 31.061 sqft  
Vcg = 0.658 ft  
Disp. = 1000.00 Lb  
Deadrise = 22.50 degree  
Twist Angle= 2.00 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 9.341  
Lpx/Ap = 12.878  
Ap /Vol = 4.969  
Lpx/Vol = 8.024  
Cvload = 1.592  
Lbload = 0.046  
Disp-Lpx = 55.804

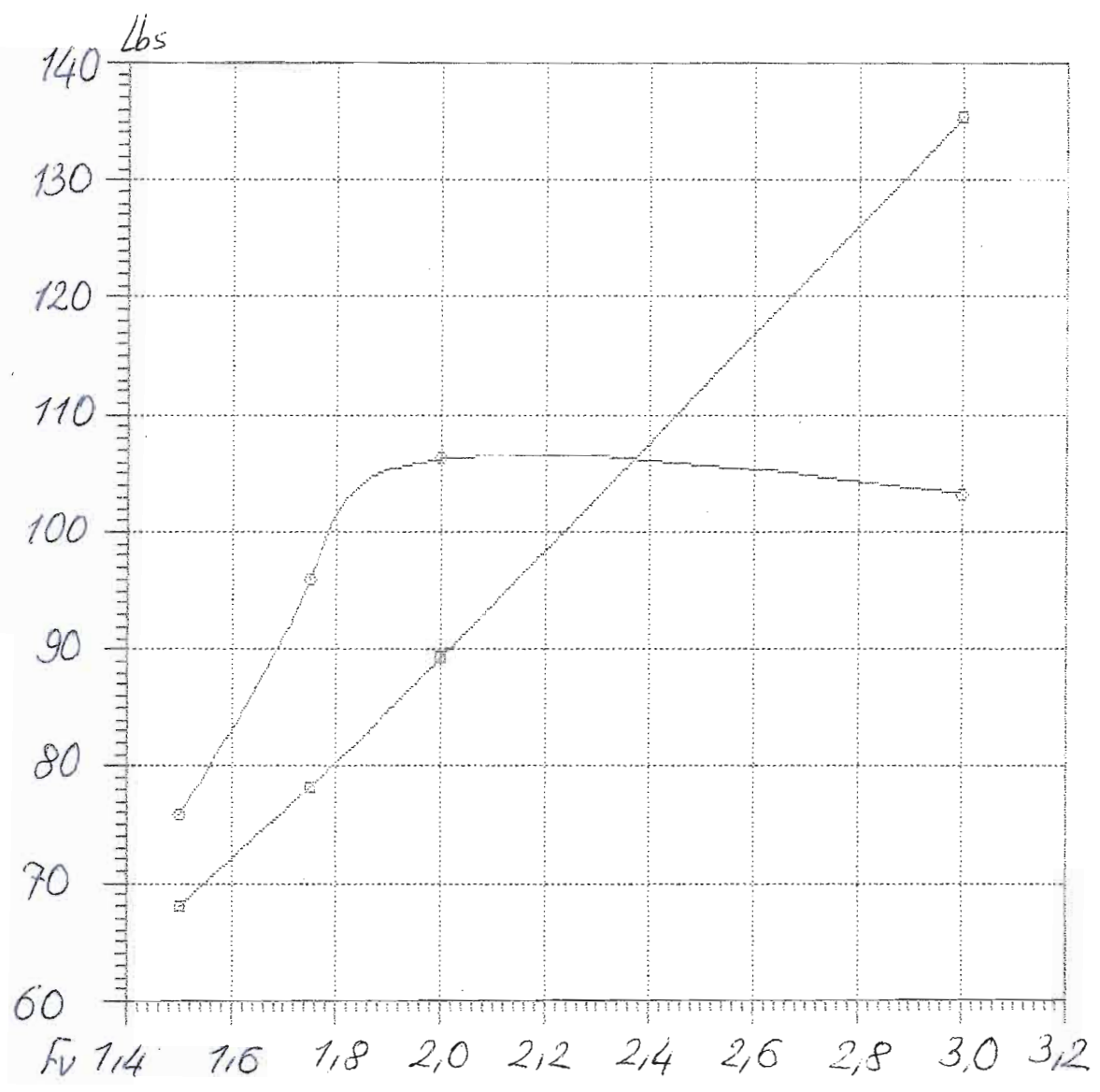
Bu ölçüler dizayn ve bununa ilgili  
Resimlerin telif hakları  
ÇEMBERCİ DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez. Kopya  
veya kopya edilemez ve her ne mak-  
sadı olursa olsun maksadı dışında  
izinsiz kullanılamaz.

Model = 5204  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 21.200 ft  
Lwl = 21.072 ft  
Bpx = 2.270 ft  
Ap = 34.900 sqft  
Vcg = 0.698 ft  
Disp. = 1000.00 Lb  
Deadrise = 22.50 degree  
Twist Angle= 2.00 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 9.339  
Lpx/Ap = 12.878  
Ap /Vol = 5.583  
Lpx/Vol = 8.505  
Cvload = 1.336  
Lbload = 0.039  
Disp-Lpx = 46.854

6-85-320



—○—  
—□—



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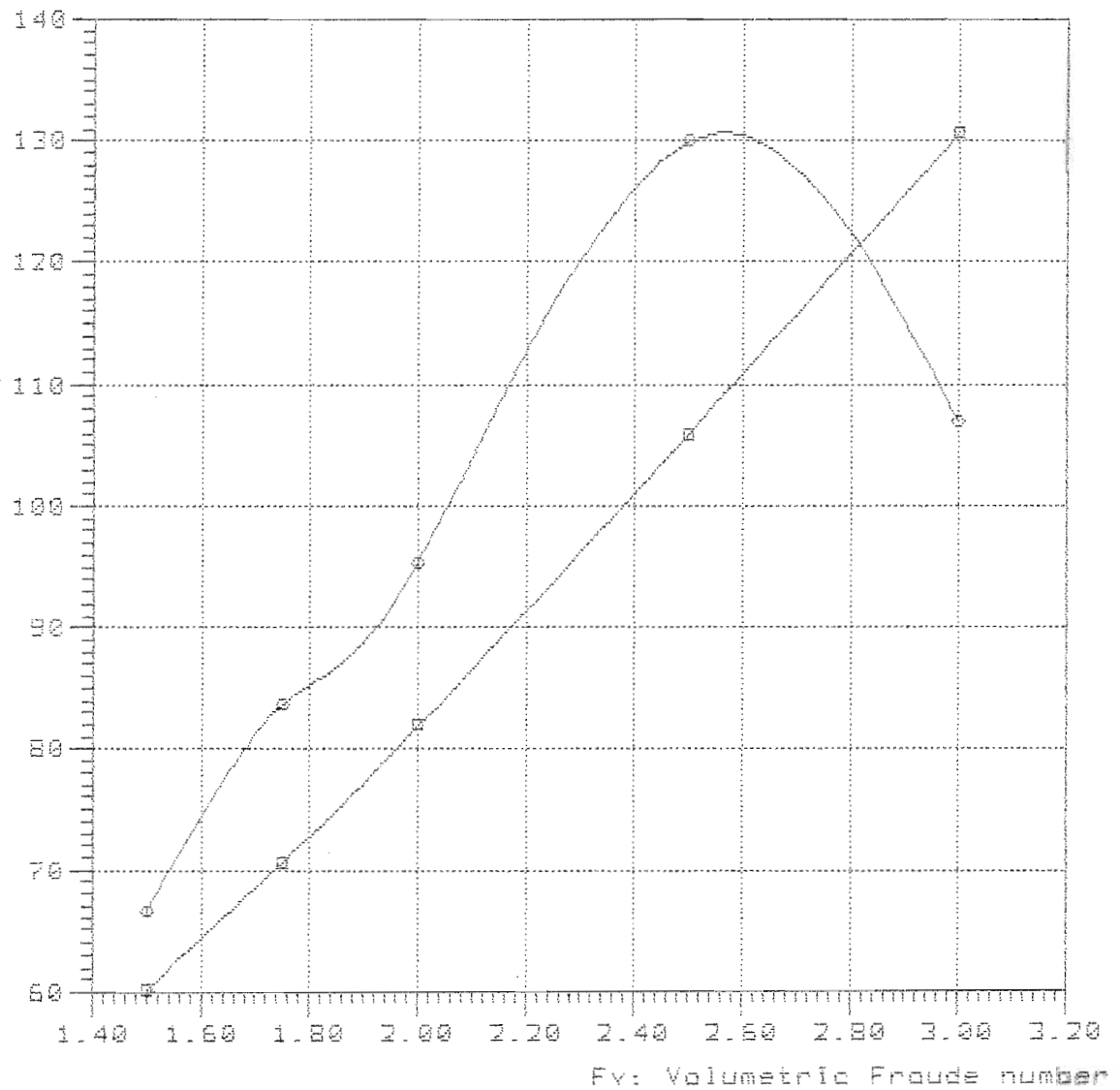
HydroComp, Inc.

File: 6-85-260.mdl

Date: 25 Feb 00

Time: 18:30

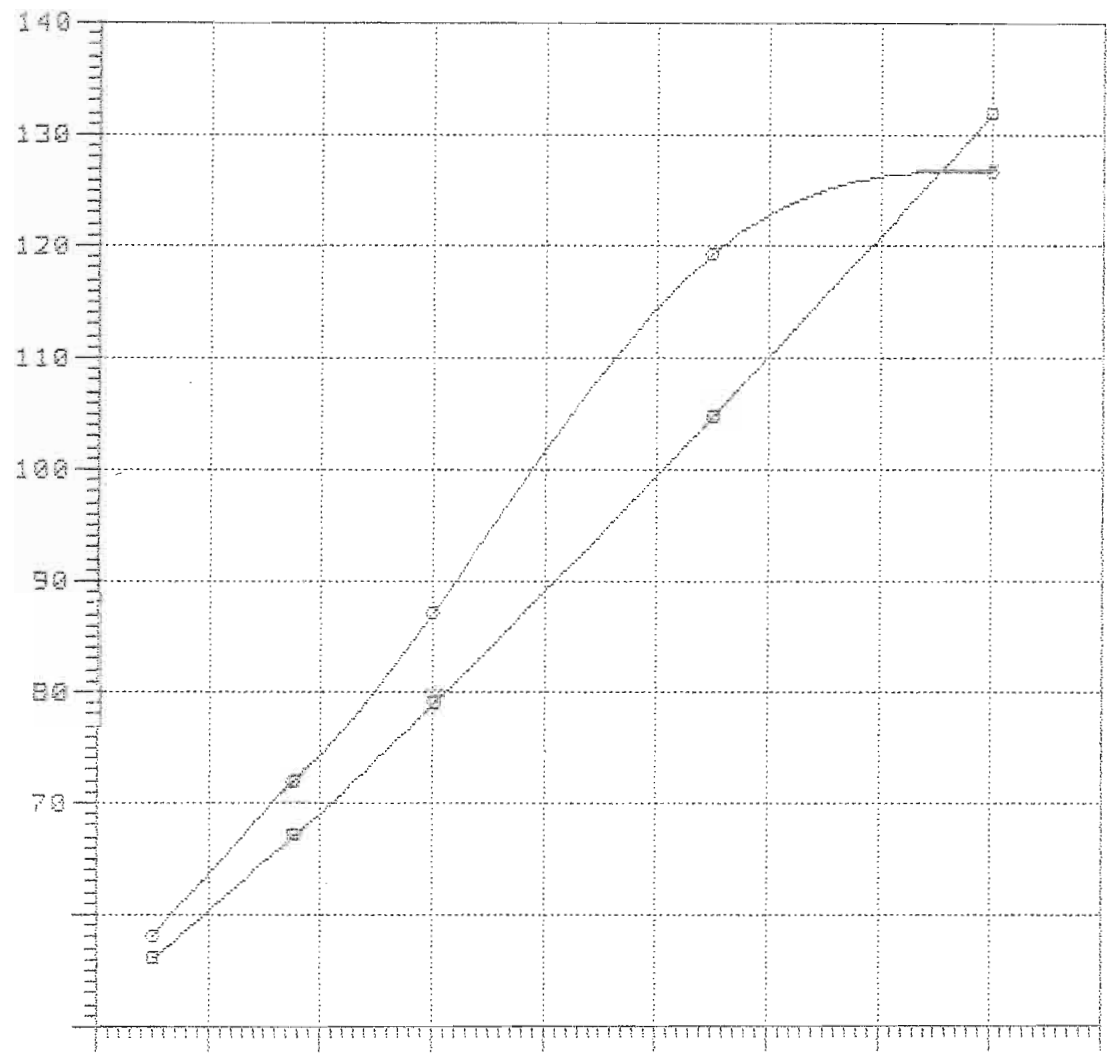
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A Lpx/Bpx=9.34 Ap/Vol=5.584 Lpx/Ap=12.878 Log/Lpx=0.360

Rbare: Bare-hull resistance (lbs)



—■—  
—○—

NavCad(tm) 3.1d

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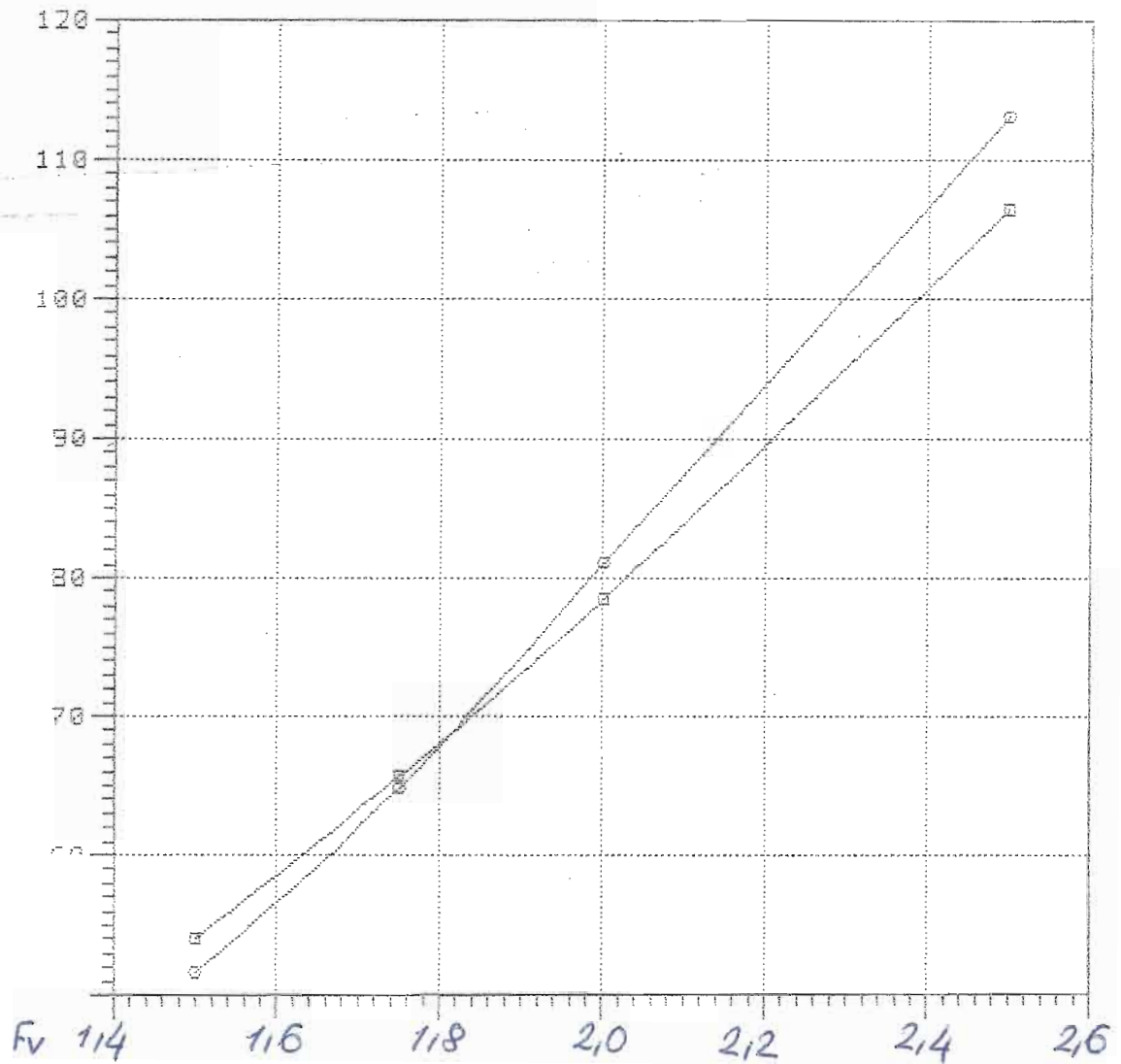
HydroComp, Inc.

File: 6-85-440.mdl

Date: 25 Feb 00

Time: 18:45

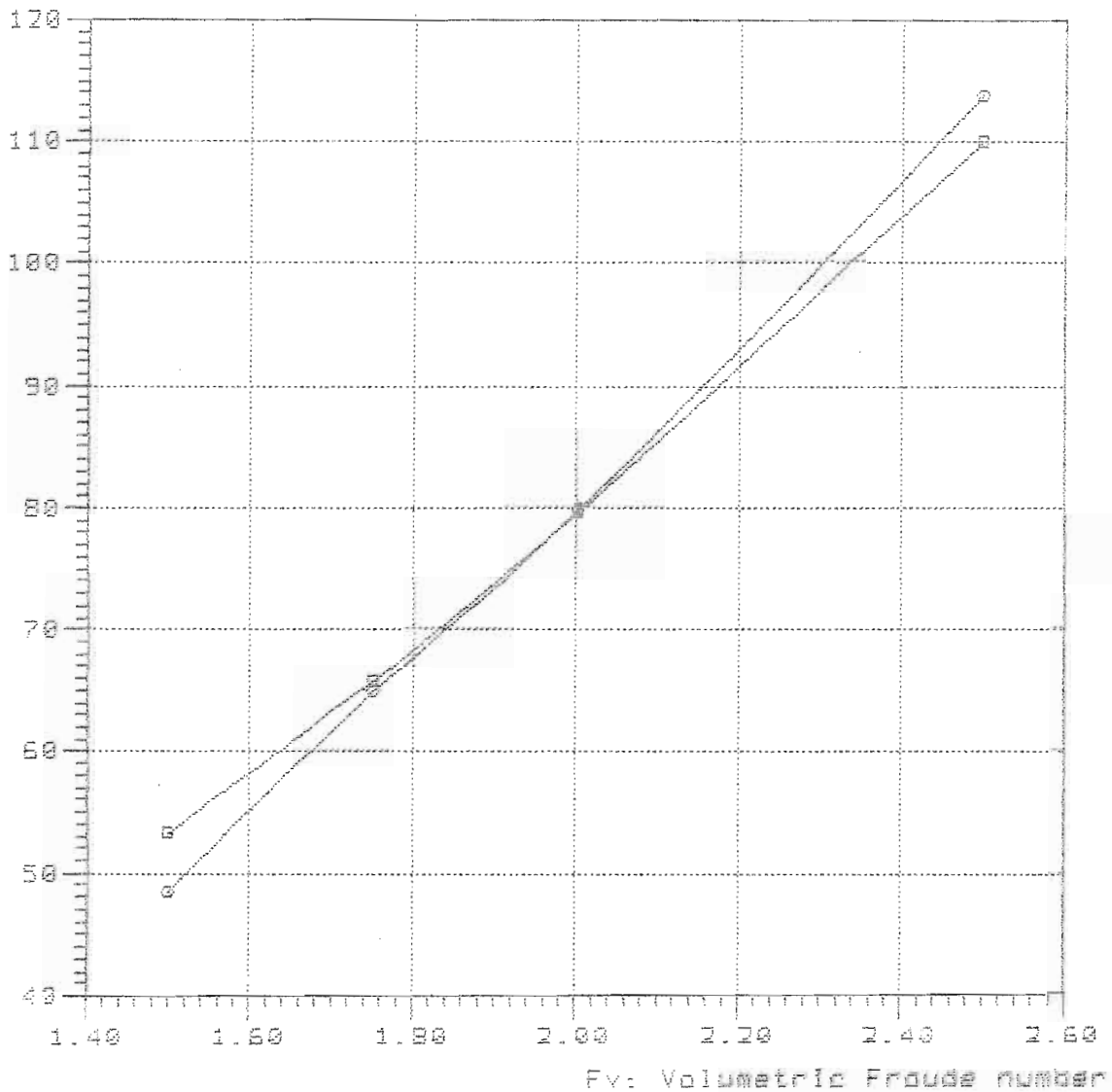
Rbare: Bare-hull resistance (lbs)



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—○—

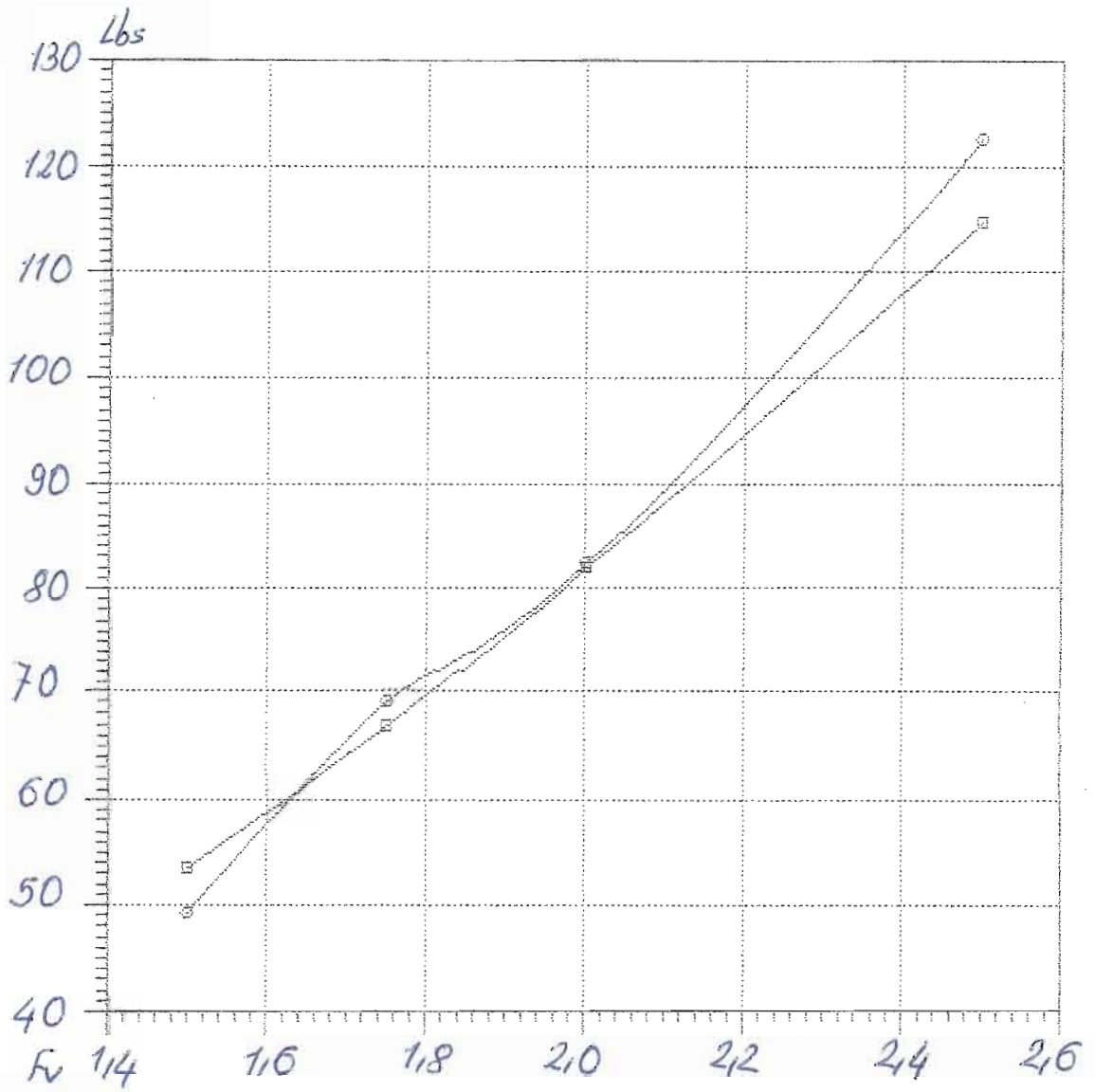
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A Lpx/Bpx=9.34 Ap/Vol=5.584 Lpx/Ap=12.878 Log/Lpx=0.480

6-85-520



—□—

—○—

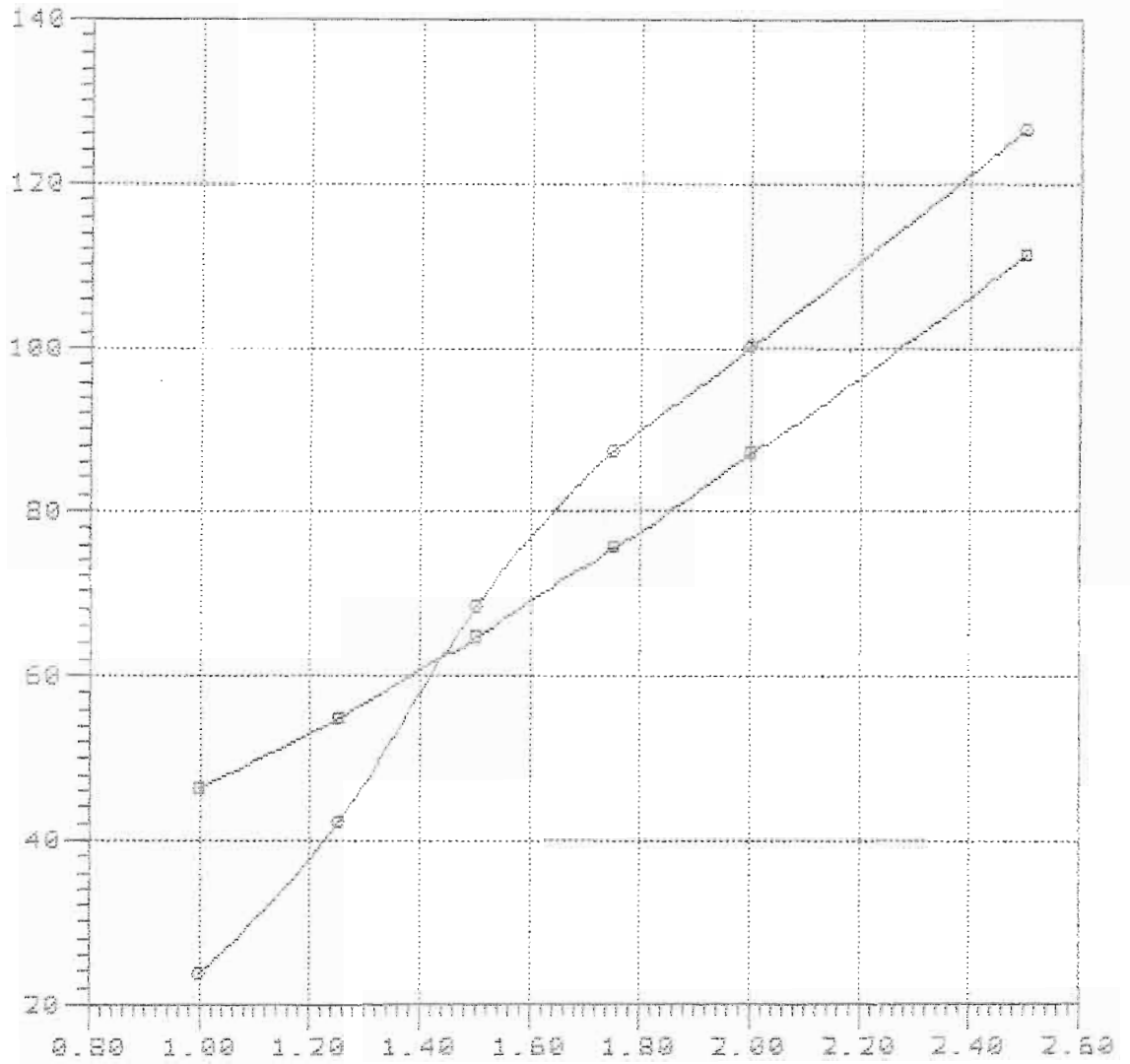
Model = 5204  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 22.500 ft  
Lwl = 22.365 ft  
Bpx = 2.409 ft  
Ap = 39.311 sqft  
Vcg = 0.740 ft  
Disp. = 1000.00 Lb

Deadrise = 22.50 degree  
Twist Angle= 2.00 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 9.340  
Lpx/Ap = 12.878  
Ap /Vol = 6.289  
Lpx/Vol = 9.027  
Cvload = 1.118  
Lbload = 0.032  
Disp-Lpx = 39.193

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—

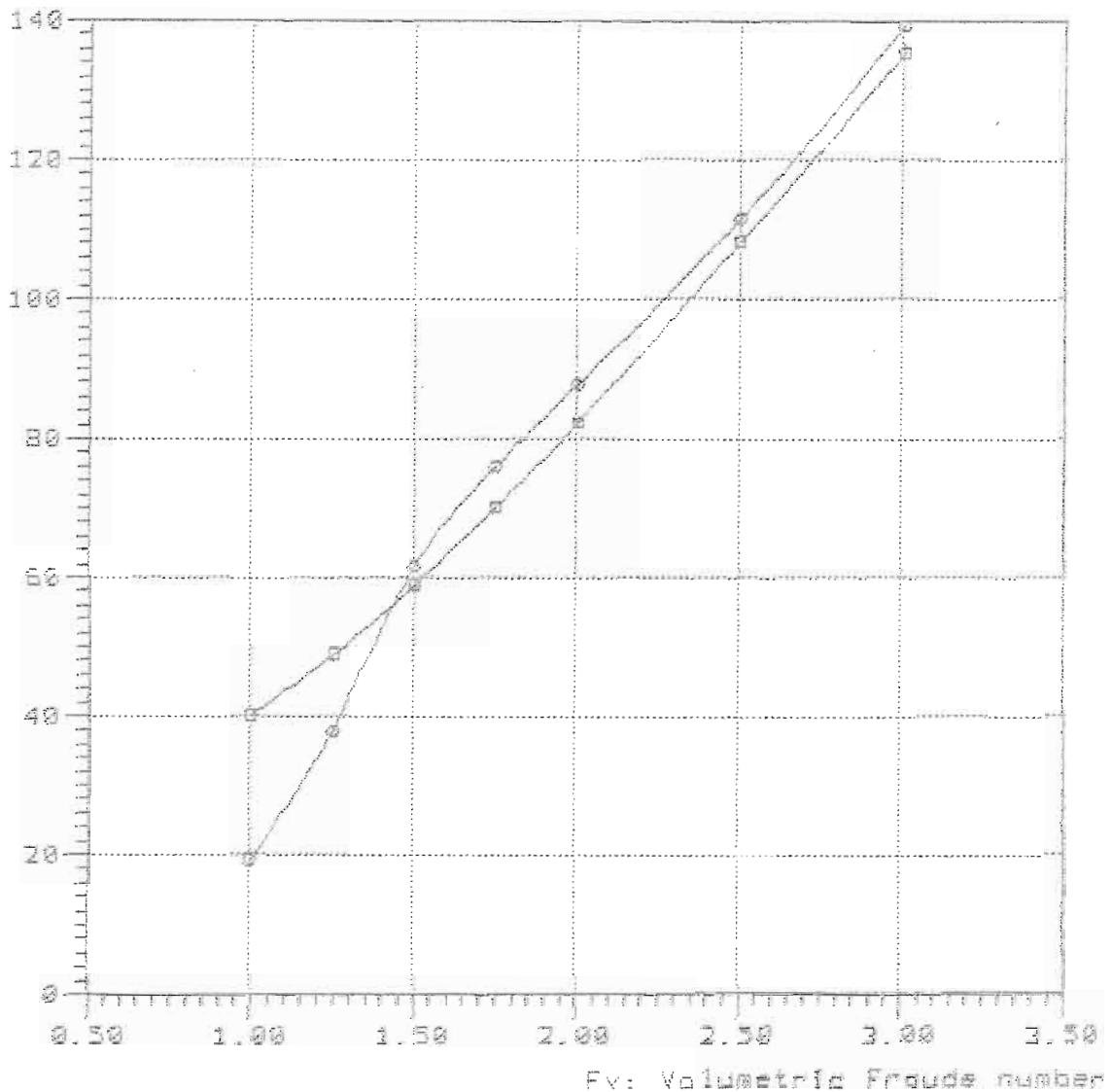
—○— TMB-65A Lpx/Bpx=9.34 Ap/Vol=6.299 Lpx/As=12.279 Log/Lpx=0.229

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Bare-hull resistance  
vs.  
Volumetric Froude number

File: 6-90-360.mdl  
Date: 26 Feb 00  
Time: 9:04

Rbare: Bare-hull resistance (lbs)

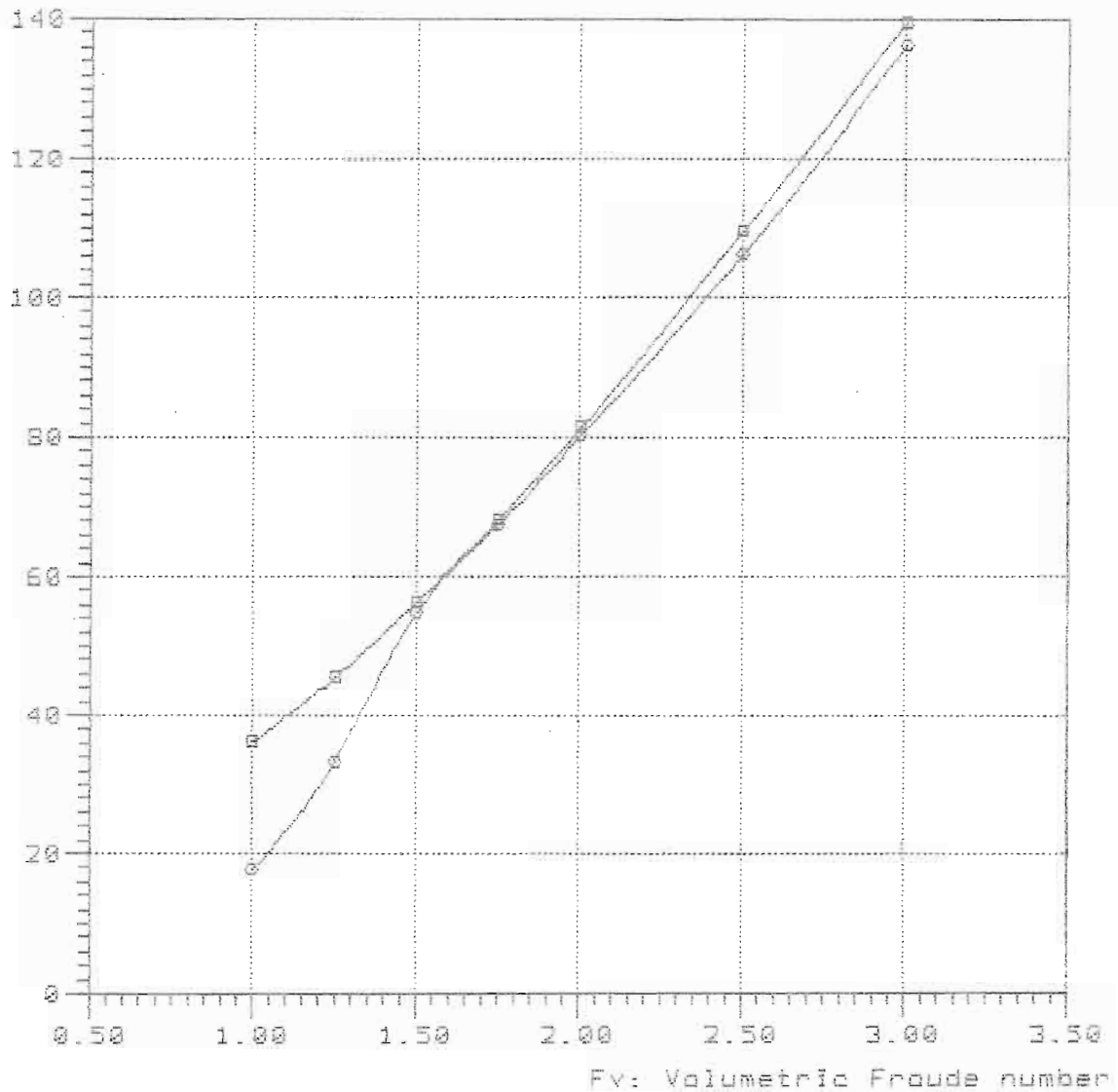


Curve legend

- 
- TMB-65A Lpx/Bpx=5.34 Ap/Vol=6.296 Lpx/Ap=12.878 Log/Lpx=0.360



Rbare: Bare-hull resistance (lbs)

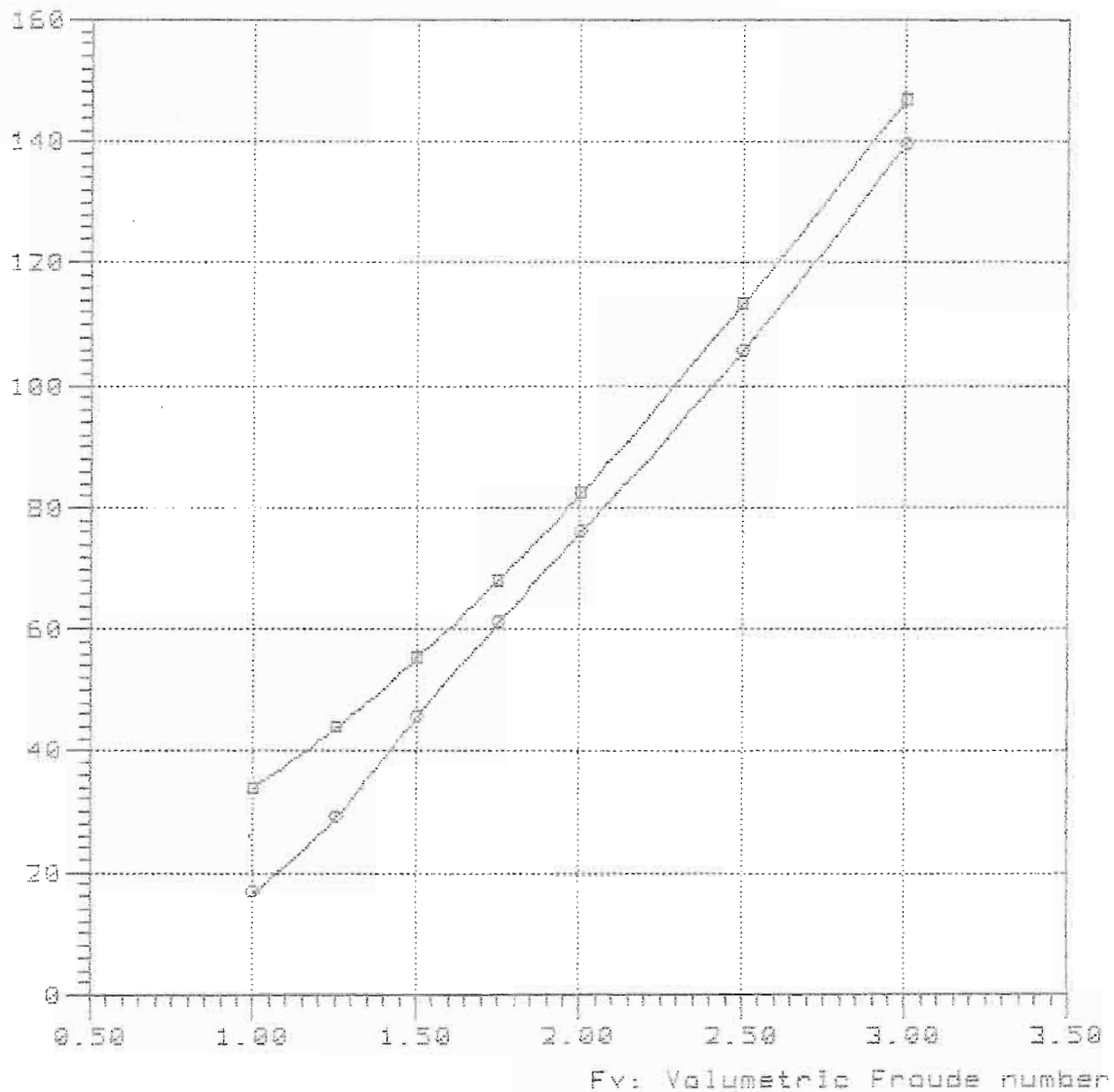


Curve legend

—■—

—●— TMB-65A Lpx/Bpx=9.34 Ap/Vol=6.290 Lpx/Ap=12.878 Log/Lpx=0.400

Rbare: Bare-hull resistance (lbs)

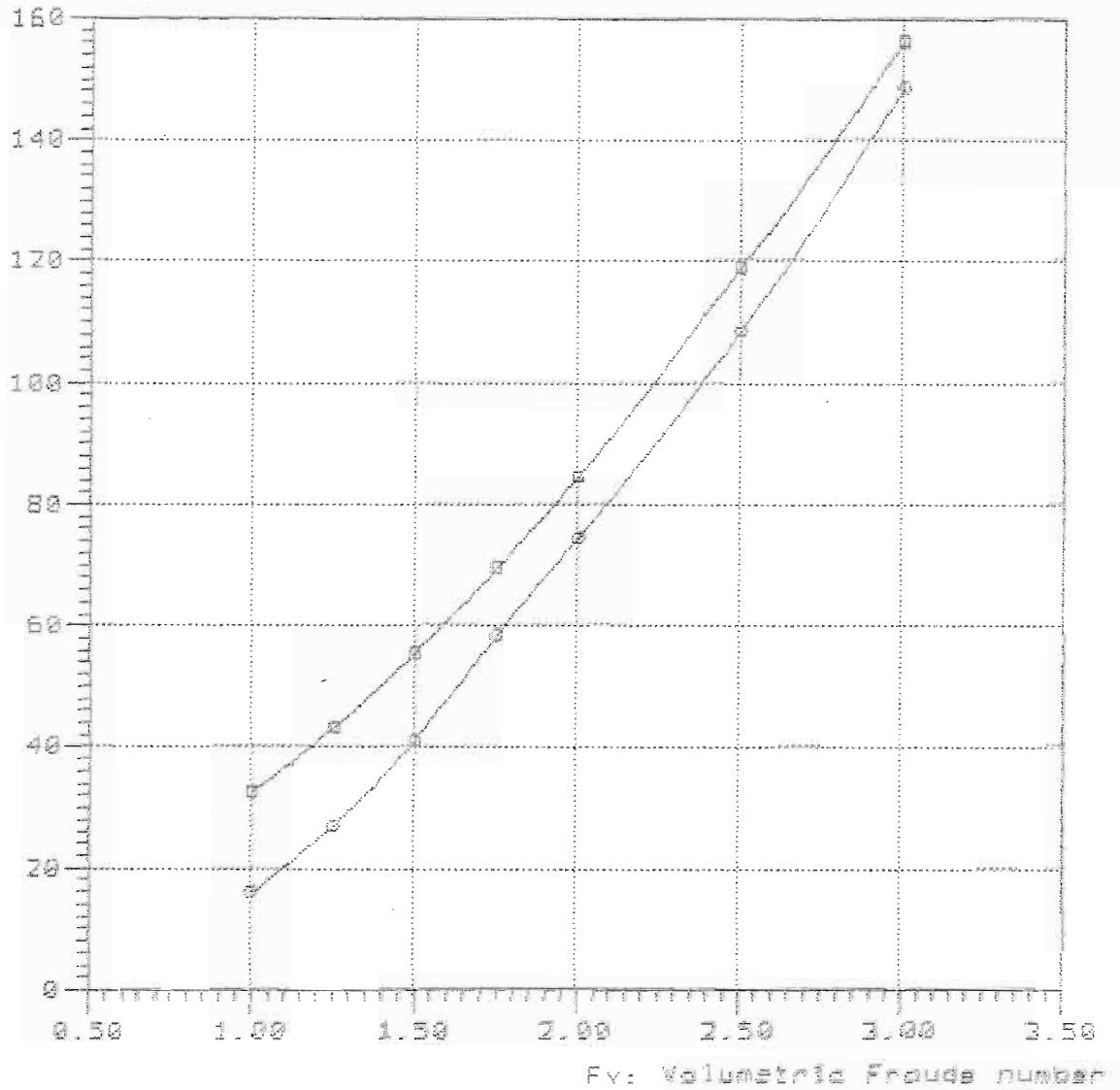


Curve legend

—□—

—○— TMB-65A Lpx/Bpx=9.34 Ap/Vol=6.250 Lpx/Ap=12.878 Lcg/Lpx=0.448

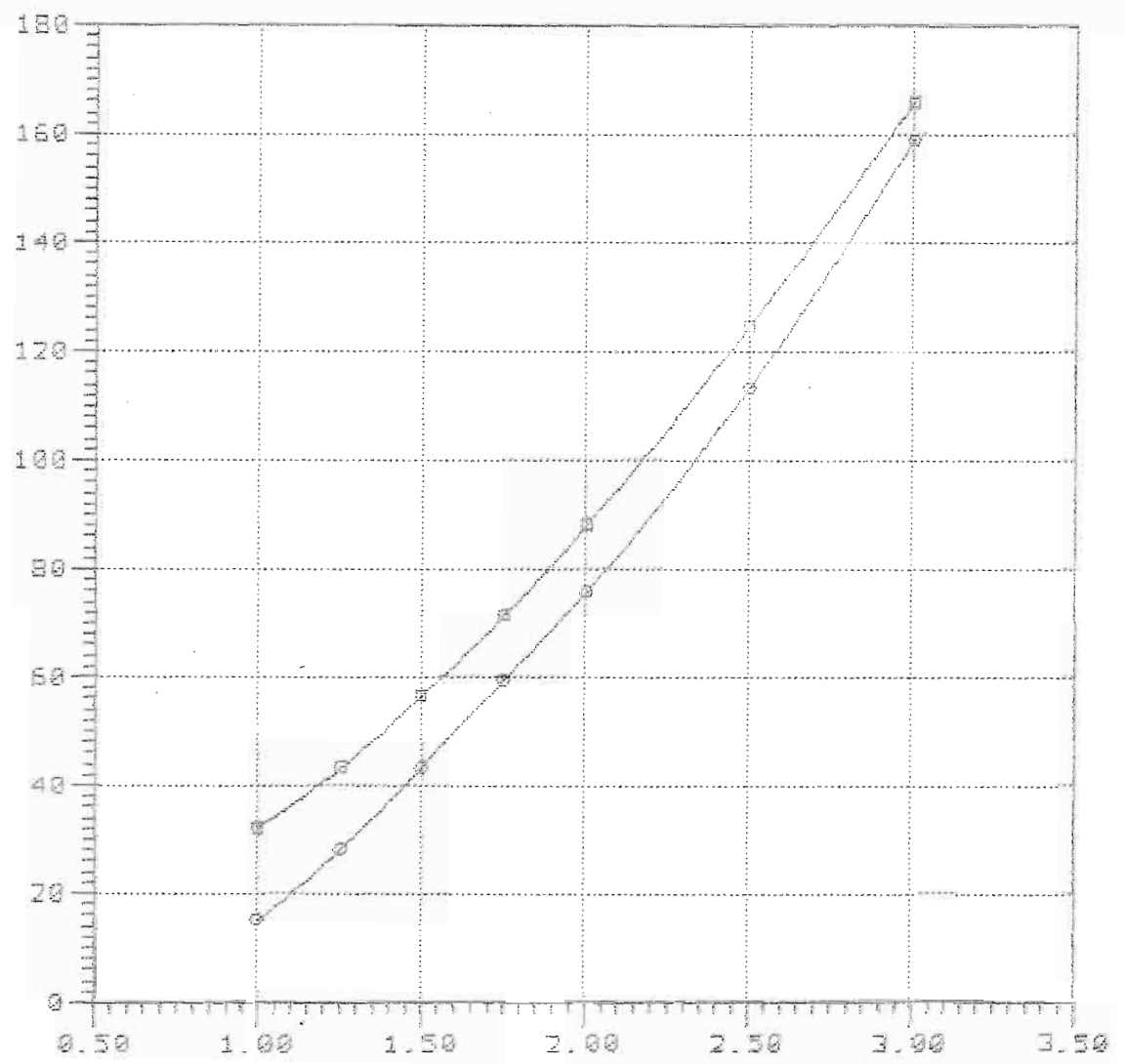
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65R Lpx/Bpx=9.34 Ap/Vol=5.290 Lpx/Sp=12.878 Log/Lpx=0.450

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—□—

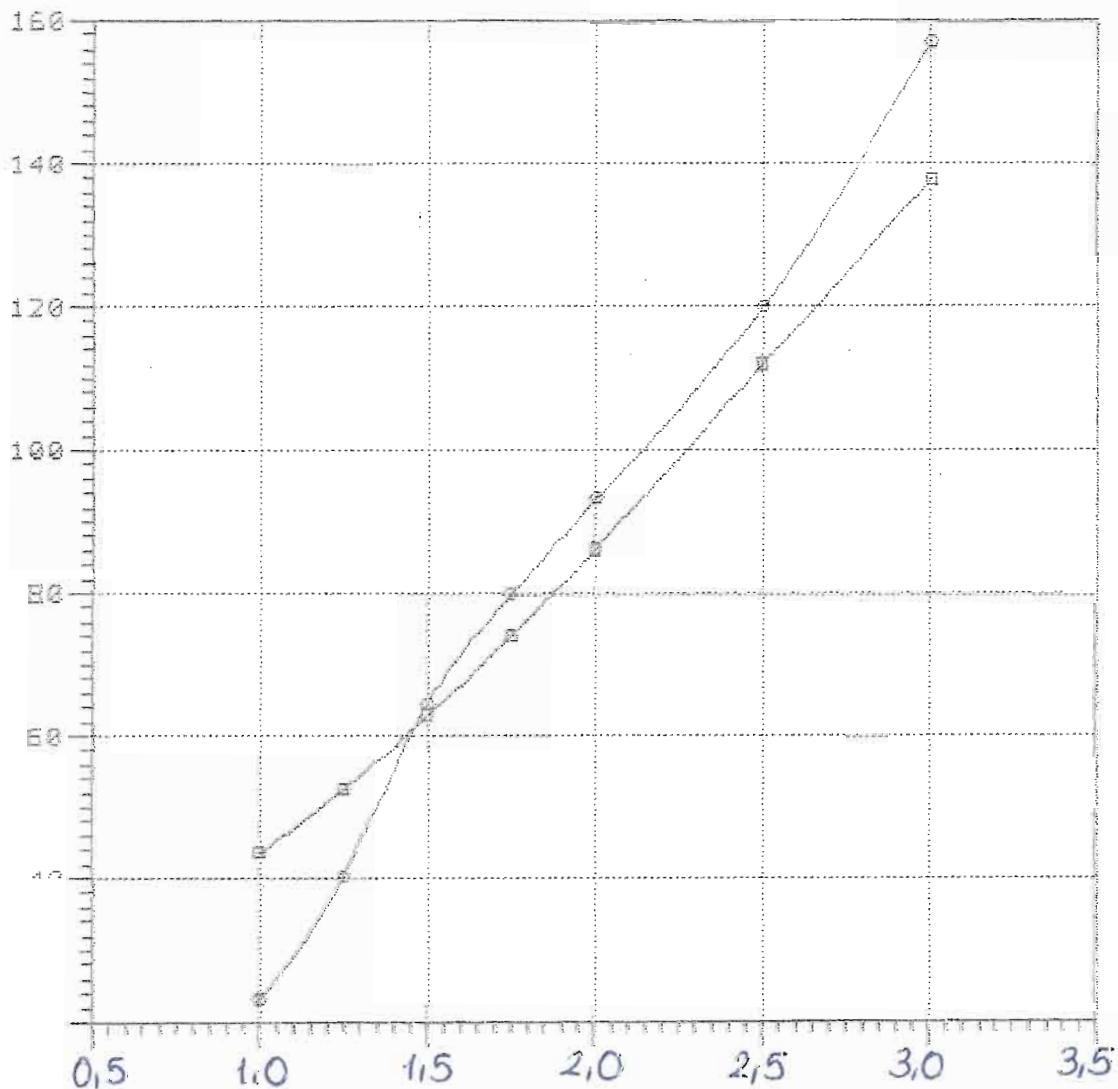
—○— TMR-65A Lpx/Bpx=9.34 Ap/Vol=6.298 Lpx/Ap=12.878 Log/Lpx=0.528

Model = 5204  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 23.700 ft  
Lwl = 23.557 ft  
Bpx = 2.537 ft  
Ap = 43.616 sqft  
Vcg = 0.780 ft  
Disp. = 1000.00 Lb  
Deadrise = 22.50 degree  
Twist Angle= 2.00 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

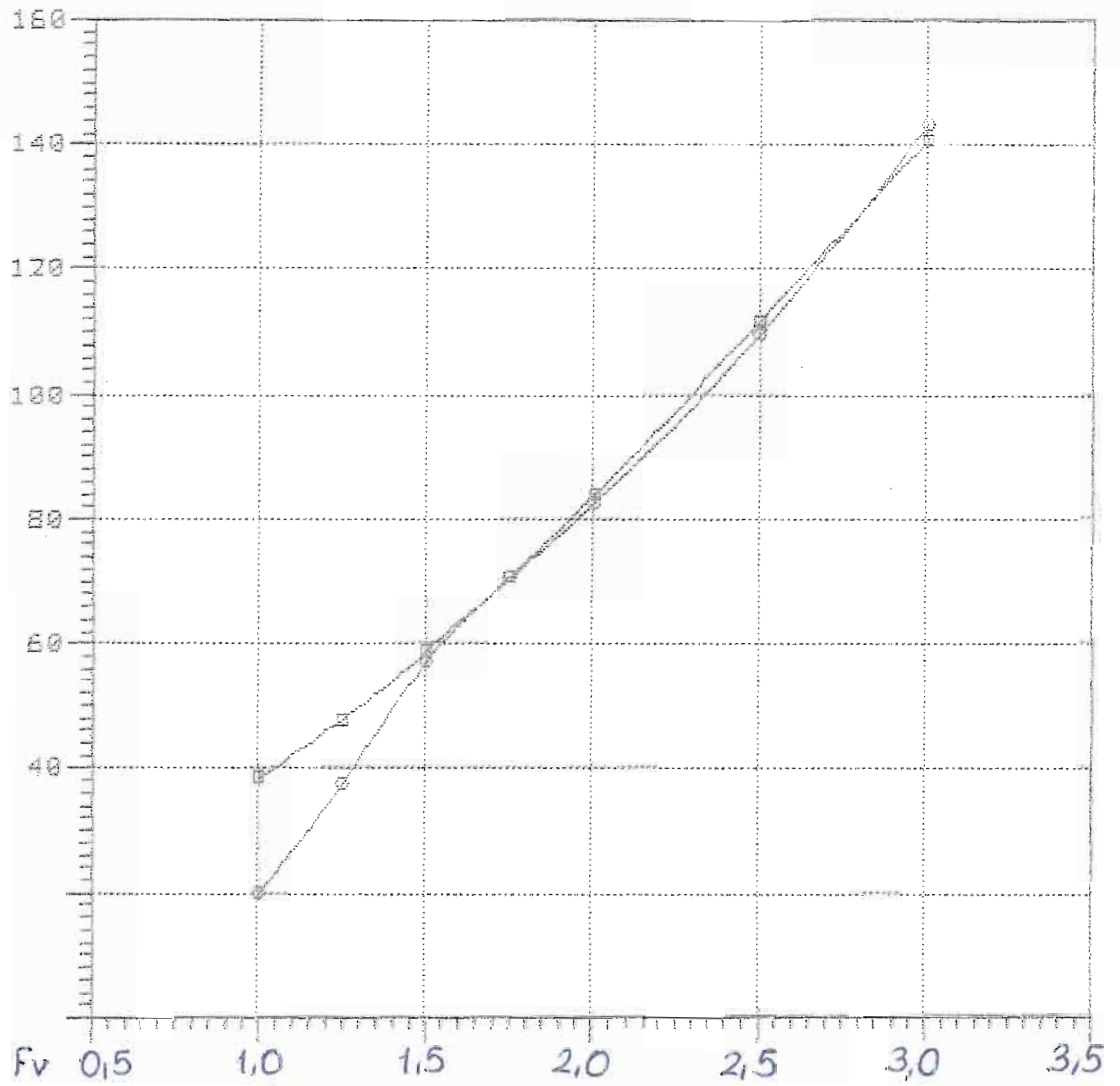
Lpx/Bpx = 9.342  
Lpx/Ap = 12.878  
Ap /Vol = 6.978  
Lpx/Vol = 9.508  
Cvload = 0.957  
Lbload = 0.028  
Disp-Lpx = 33.536

Rbare: Bare-hull resistance (lbs)

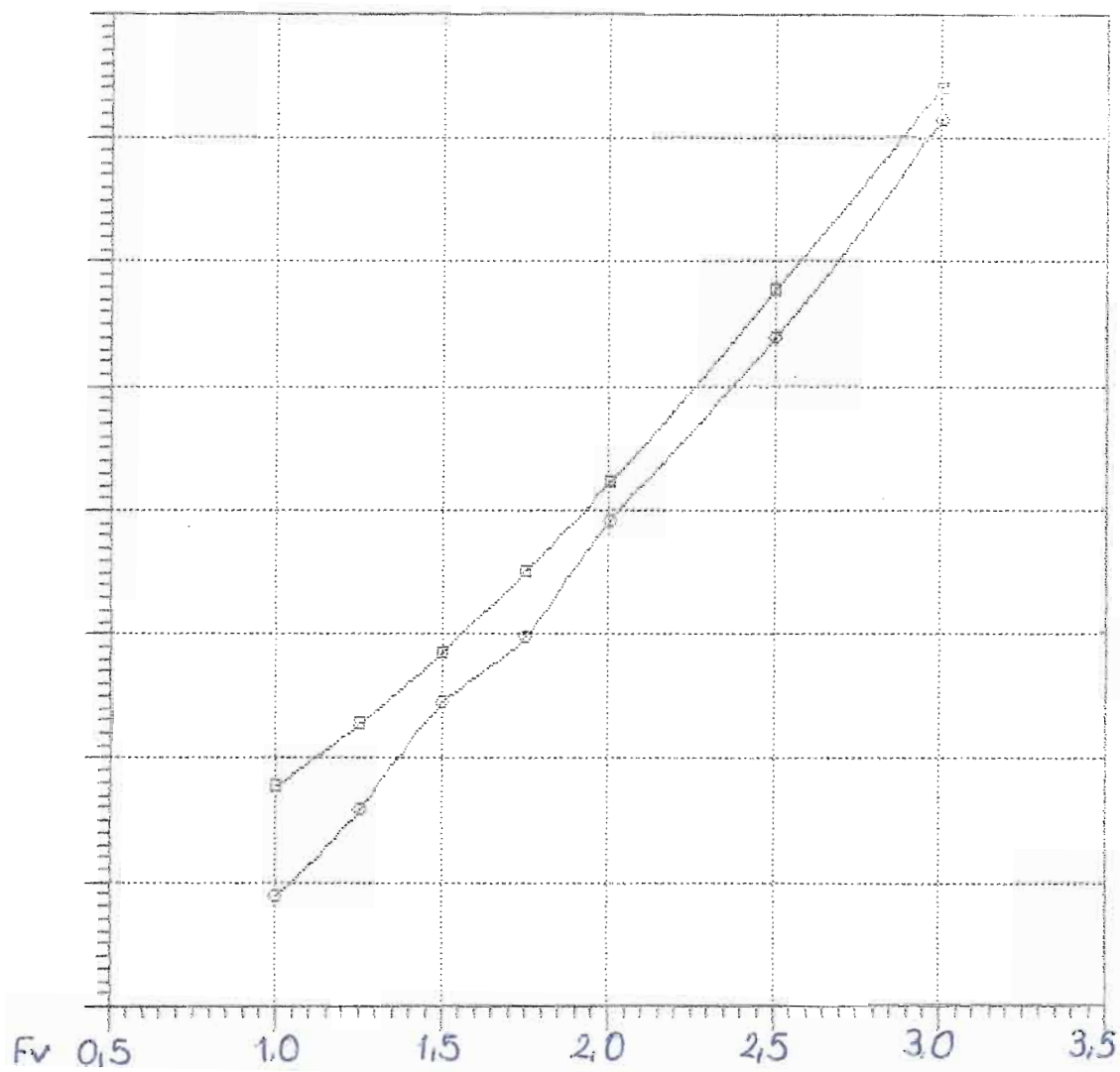


—■—  
—●—

Rbare: Bare-hull resistance (lbs)

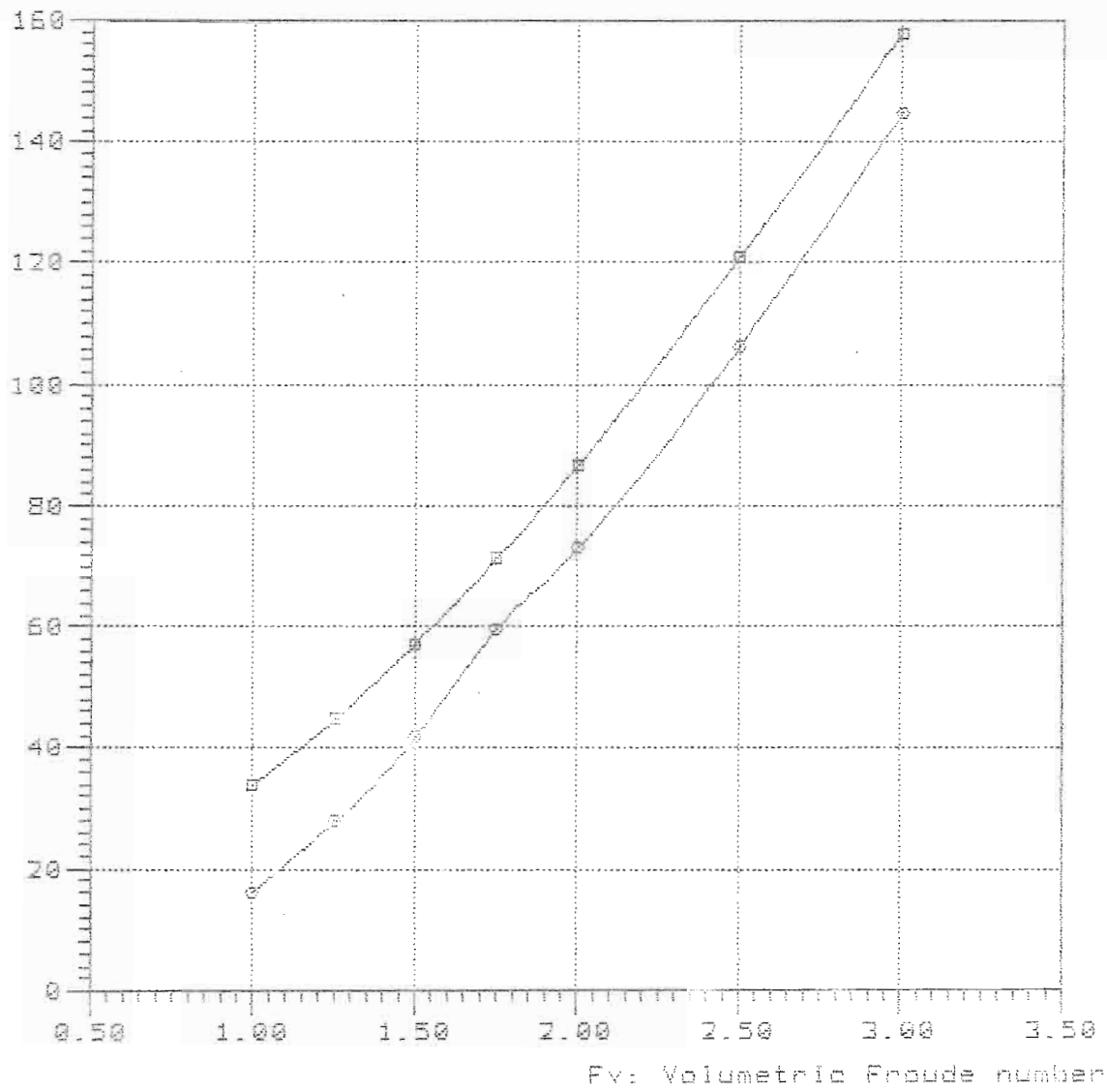


7-95-400



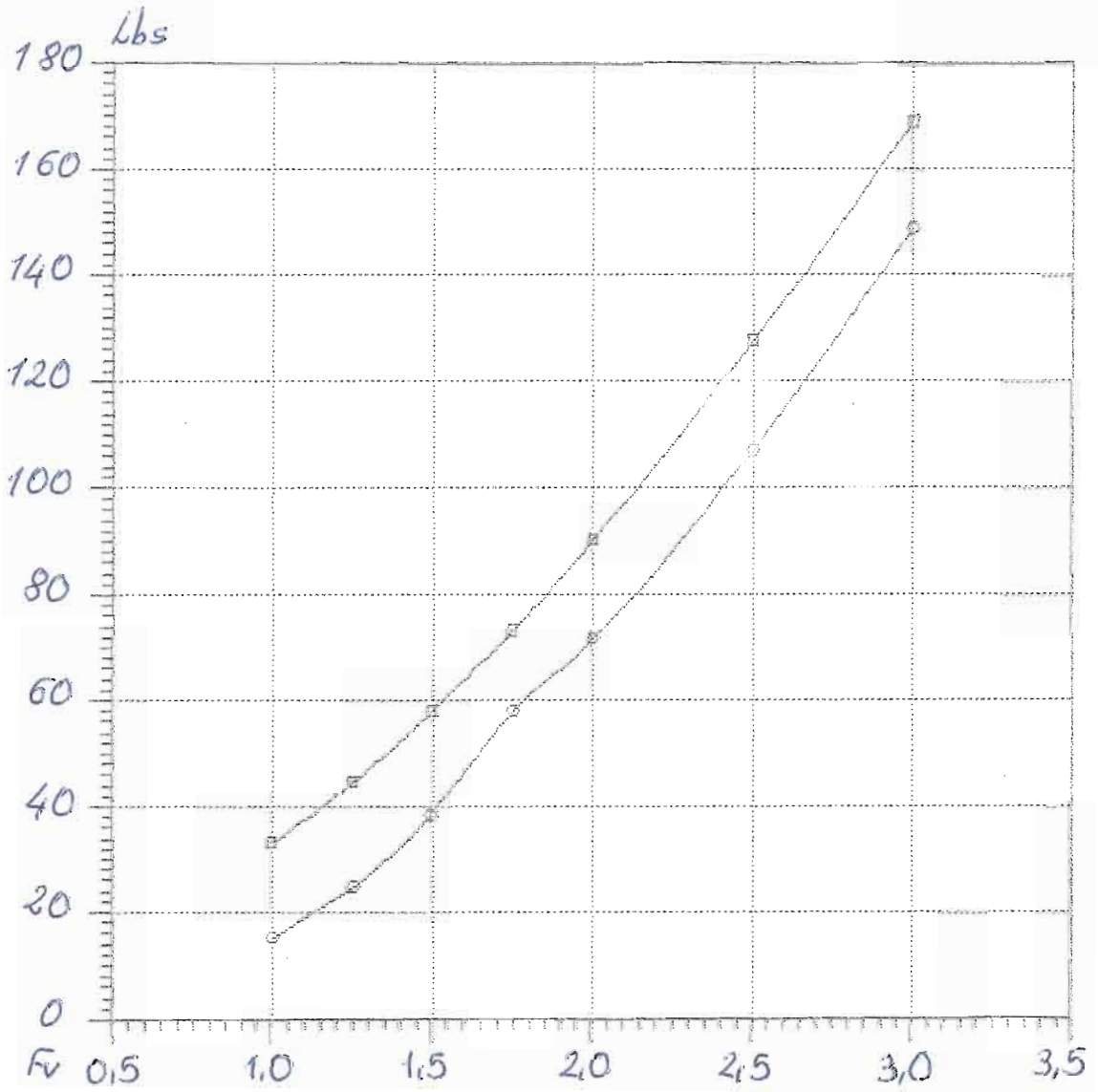


Rbare: Bare-hull resistance (lbs)



—□—  
—○— TMB-65A Lpx/Bpx=9.34 Ap/Vol=6.978 Lpx/Ap=12.878 Log/Lpx=0.440

7-95-480



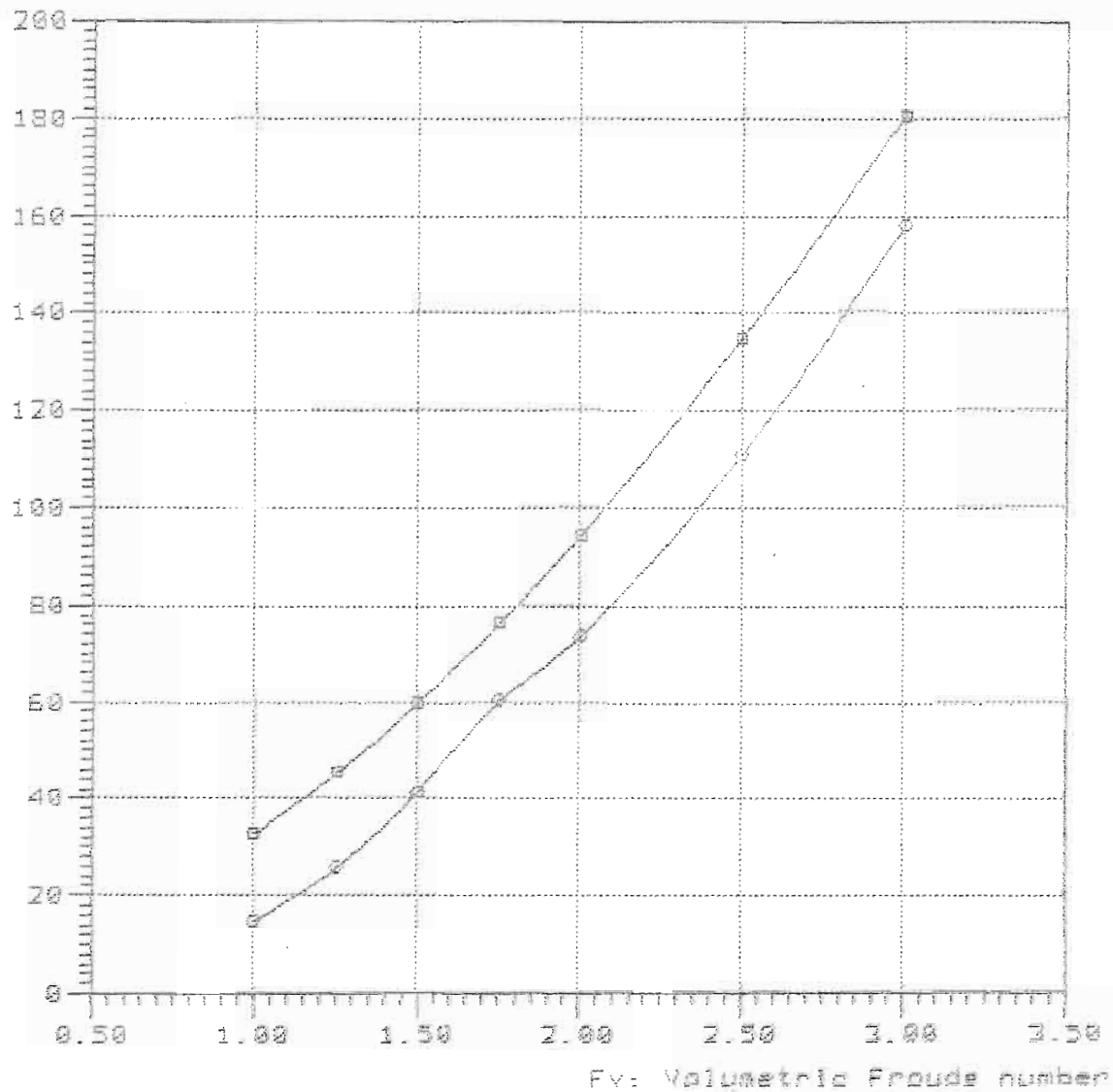
—□—  
—○—

Bare-hull resistance

vs.

Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

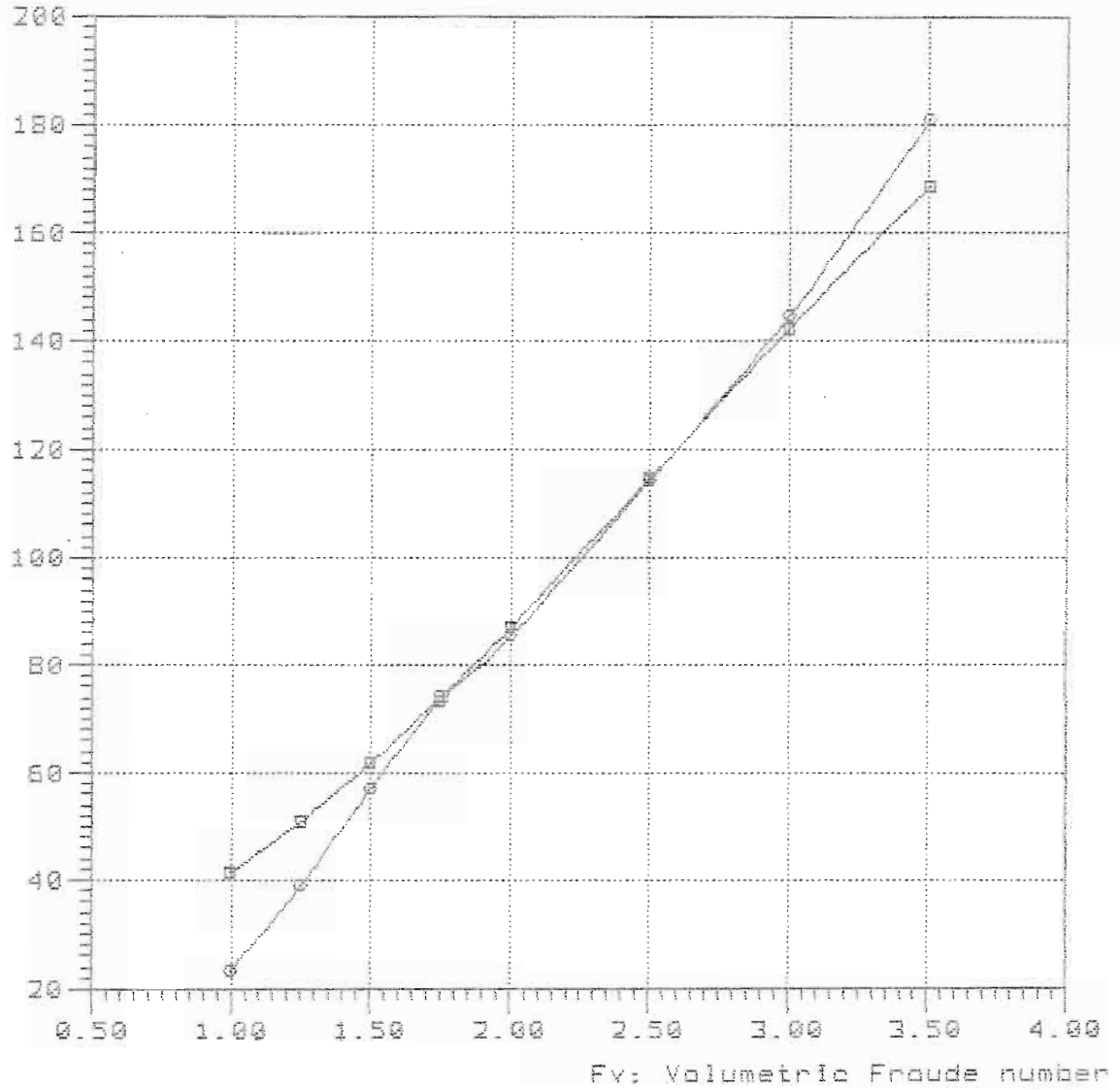
—○— TMB-65A Lpx/Bpx=3.34 Ap/Vol=6.978 Lpx/As=12.878 Log/Lpx=0.520

Model = 5204  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 25.000 ft  
Lwl = 24.989 ft  
Bpx = 2.677 ft  
Ap = 48.532 sqft  
Vcg = 0.827 ft  
Disp. = 1000.00 Lb  
Deadrise = 22.50 degree  
Twist Angle= 2.00 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 9.339  
Lpx/Ap = 12.878  
Ap /Vol = 7.764  
Lpx/Vol = 10.030  
Cvload = 0.815  
Lbload = 0.024  
Disp-Lpx = 28.571

Rbare: Bare-hull resistance (lbs)

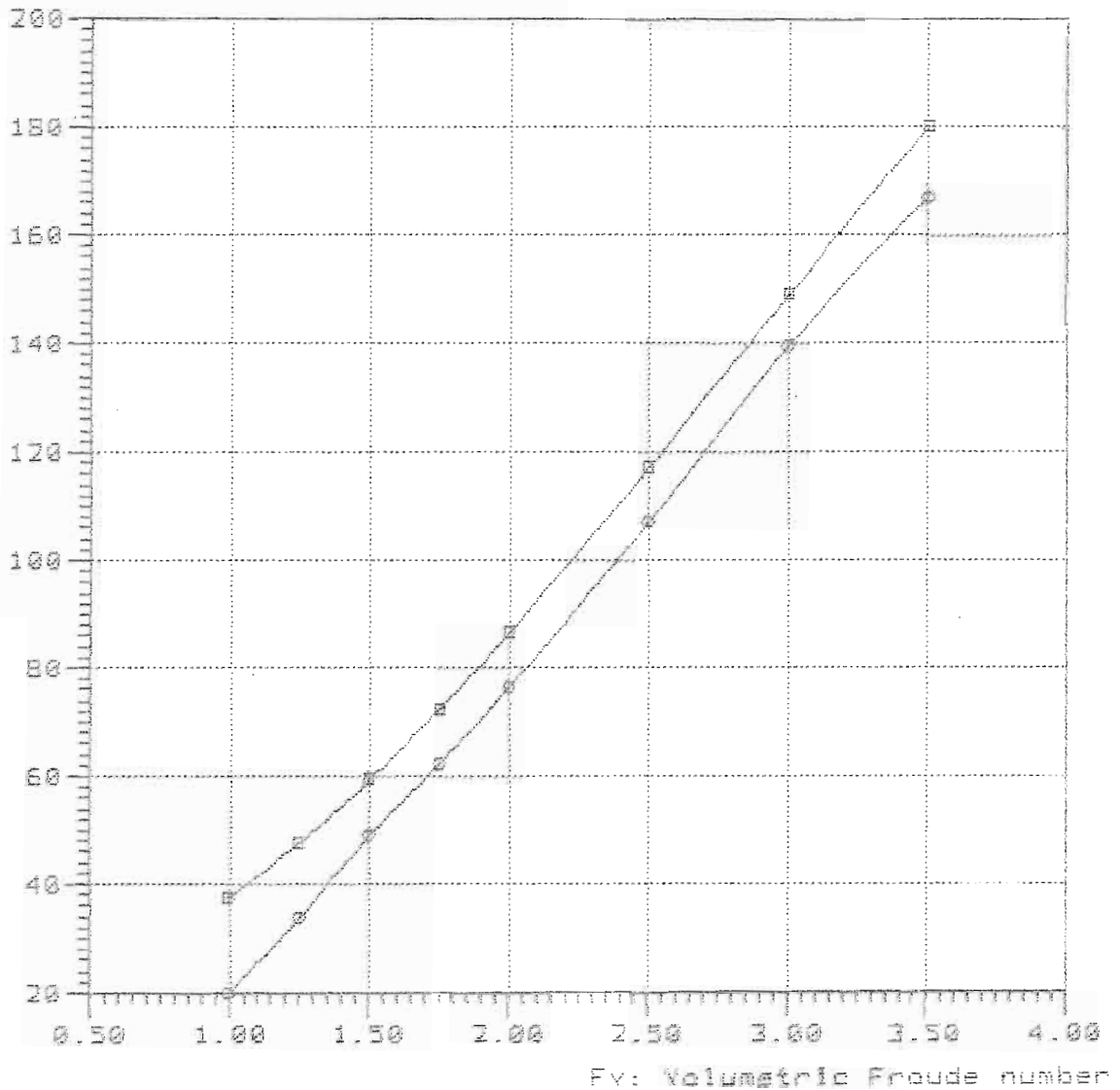


Curve legend

—■—

—●— TMB-65A Lpx/Bpx=9.34 Ap/Vol=7.765 Lox/Op=12.678 Lcg/Lpx=0.328

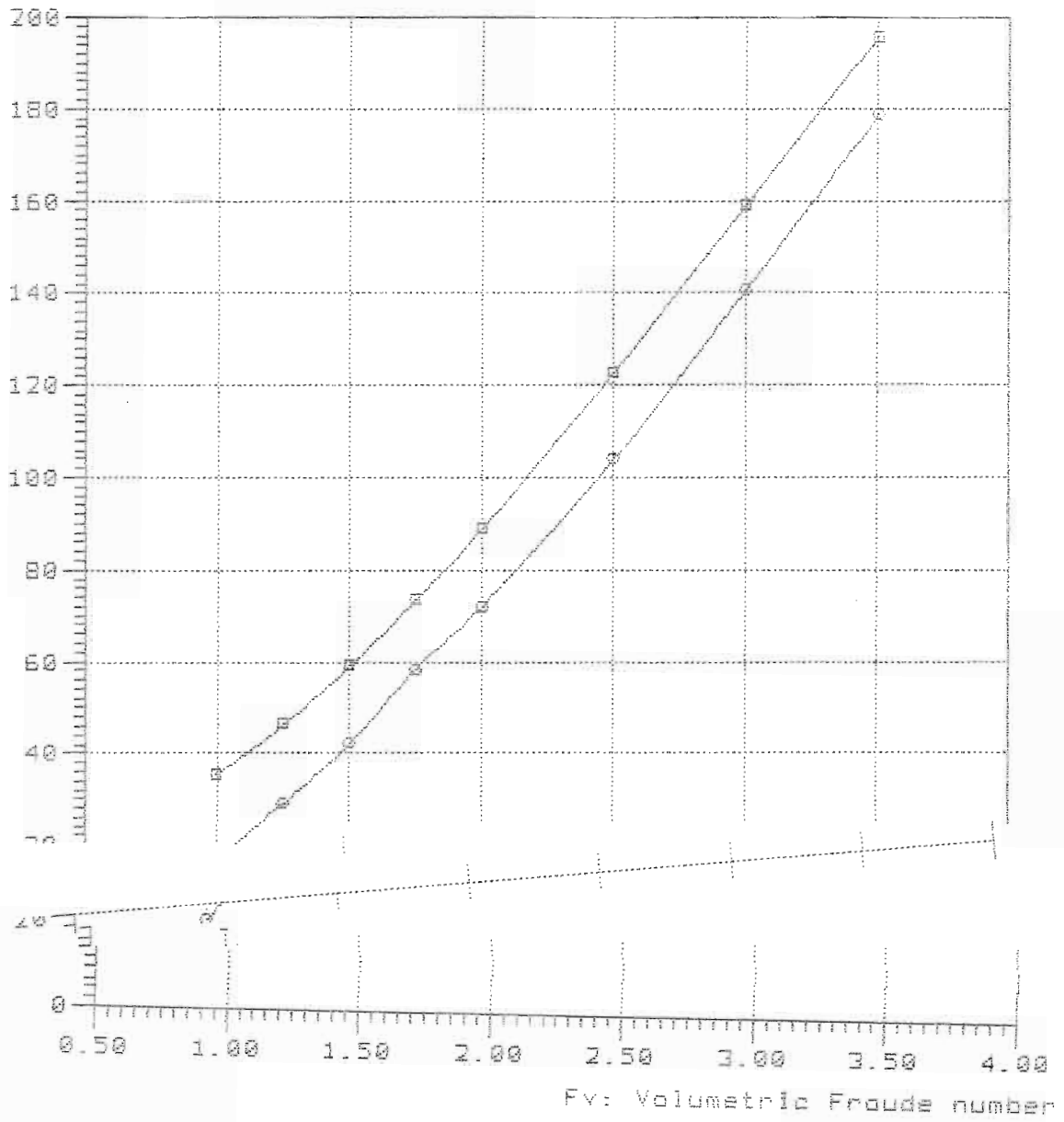
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65A Lpx/Epx=9.34 Ap/Vol=7.765 Lpw/Ap=12.878 Lcg/Lpx=0.360

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A Lpx/Epx=9.34 Ap/Vol=7.765 Lpx/Ap=12.878 Lcg/Lpx=0.400

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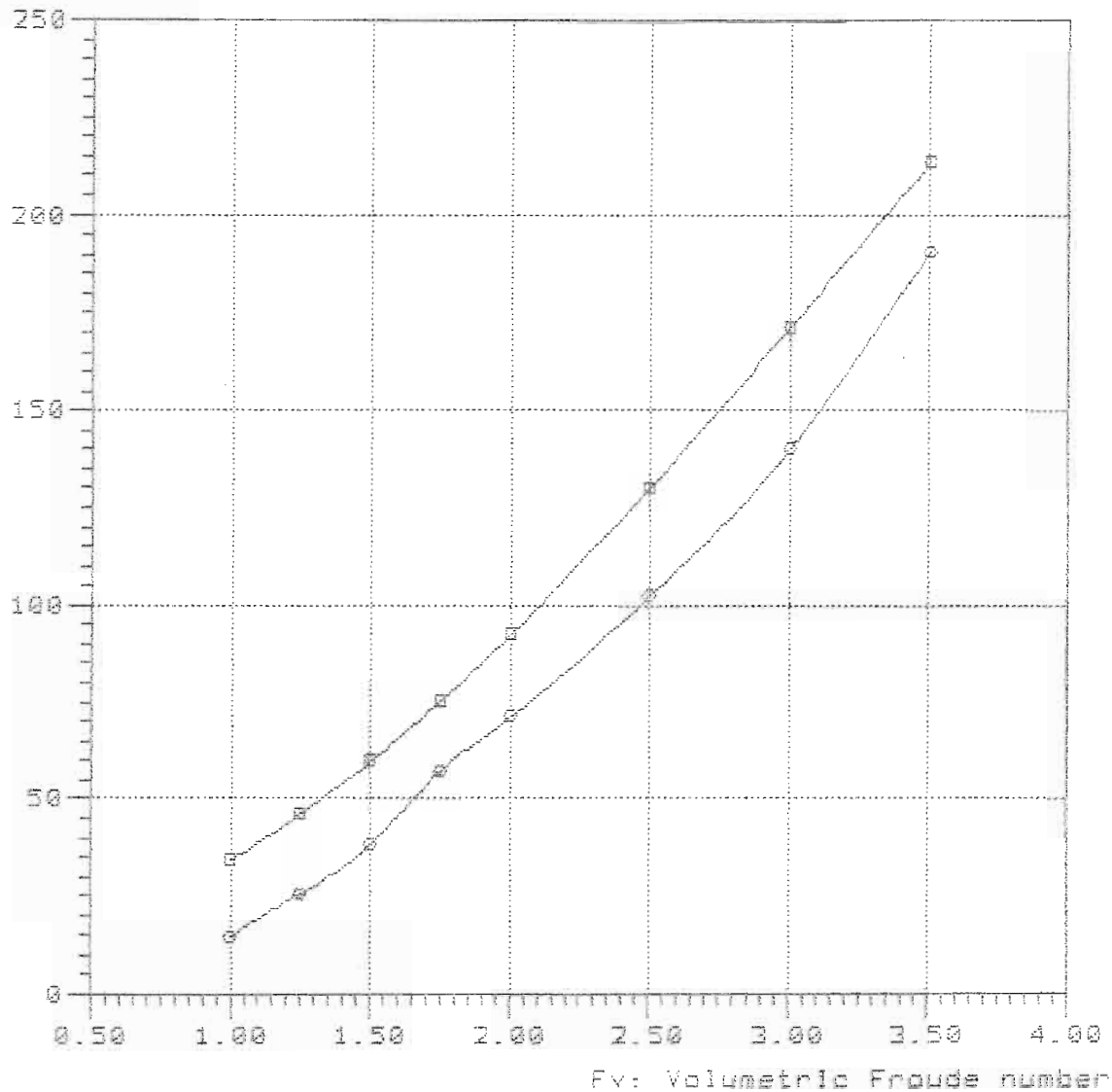
HydroComp, Inc.

File: B-10-440.mdl

Date: 26 Feb 00

Time: 9:45

Rbare: Bare-hull resistance (lbs)

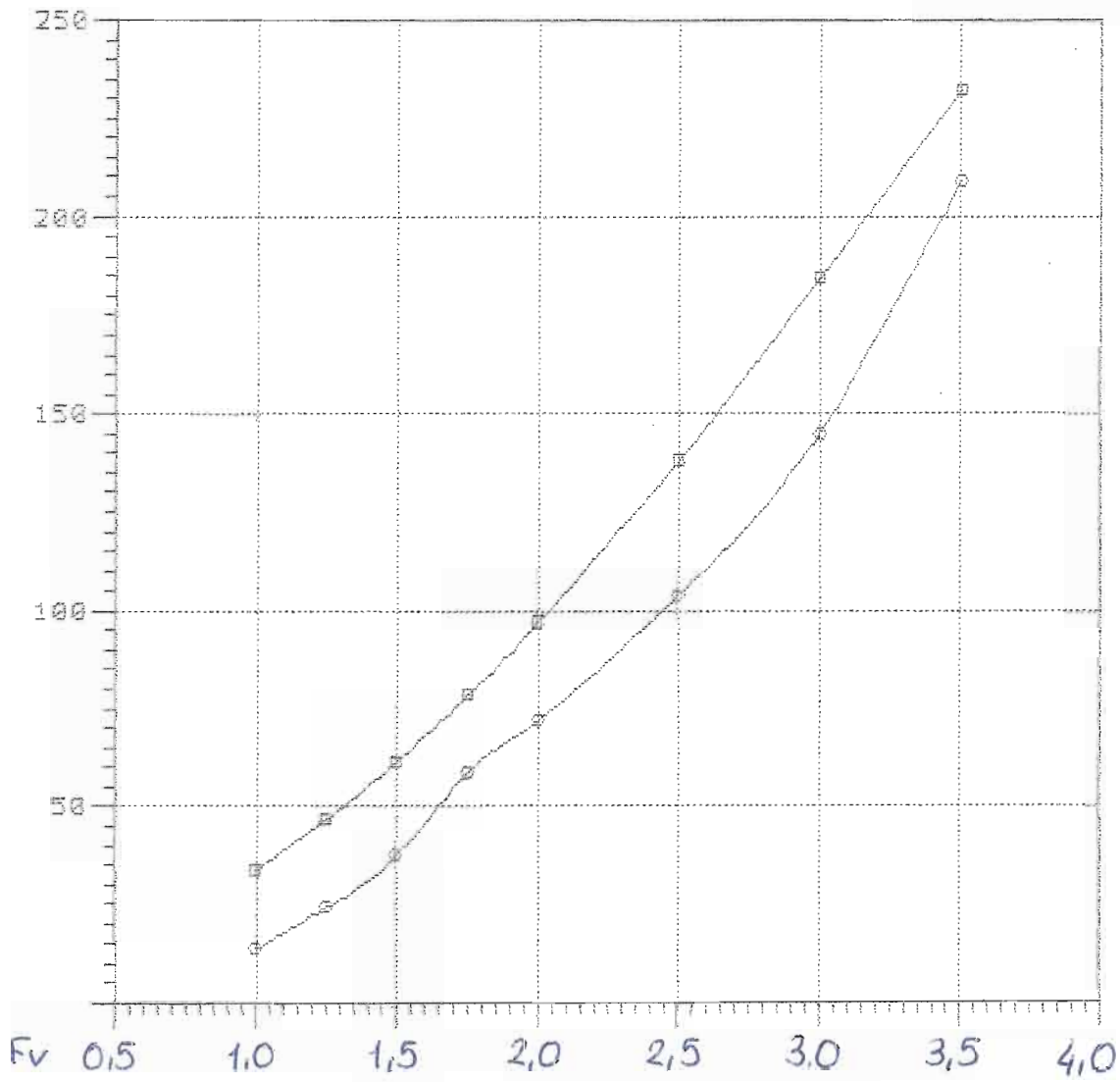


—■—

—●— TMB-65A Lpx/Bpx=9.34 Ap/Vol=7.765 Lpx/Ap=12.878 Log/Lpx=0.400

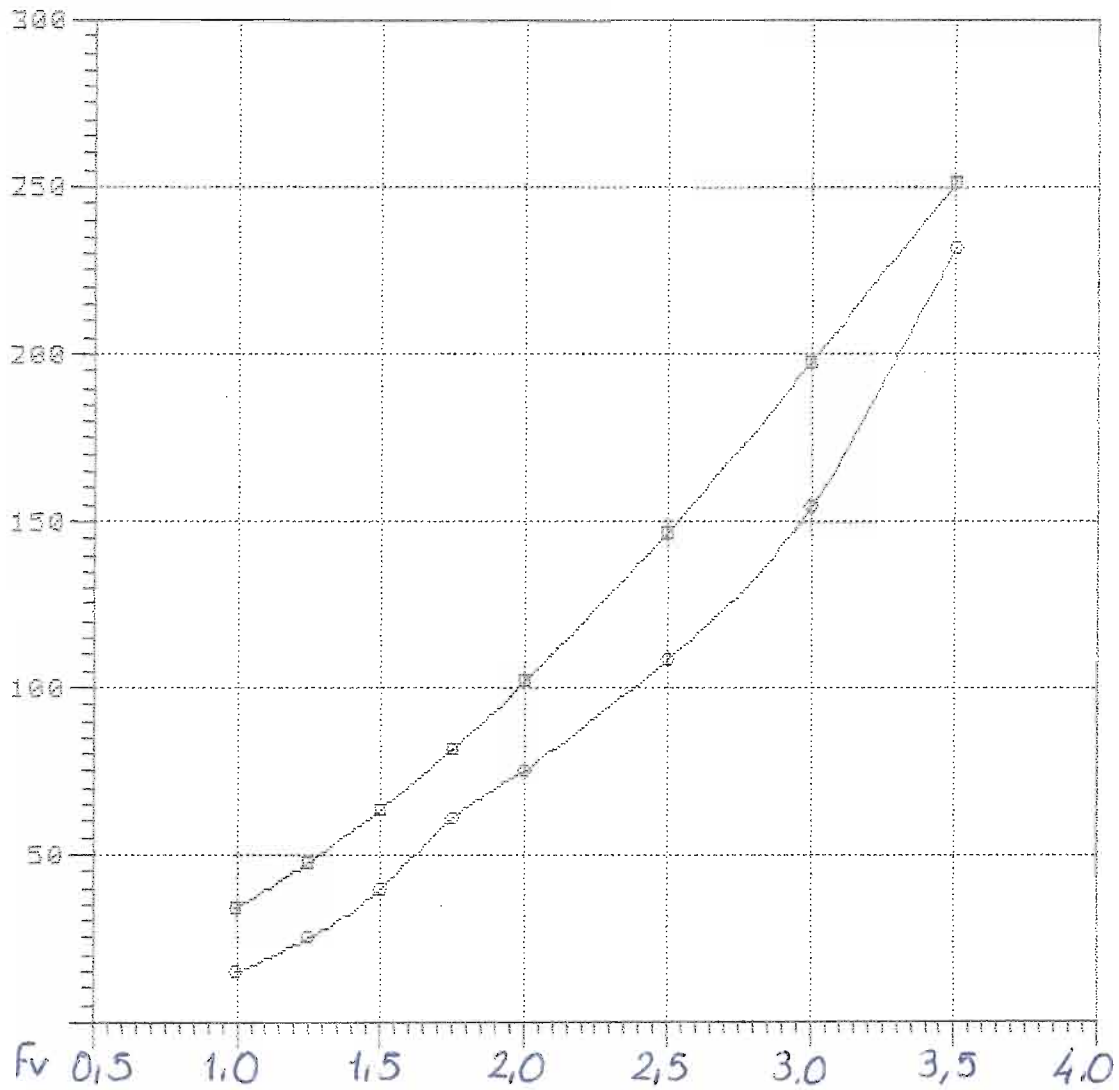


Rbare: Bare-hull resistance (lbs)



—■—  
—●—

Rbare: Bare-hull resistance (lbs)



5208

Model = 5208  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

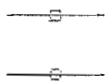
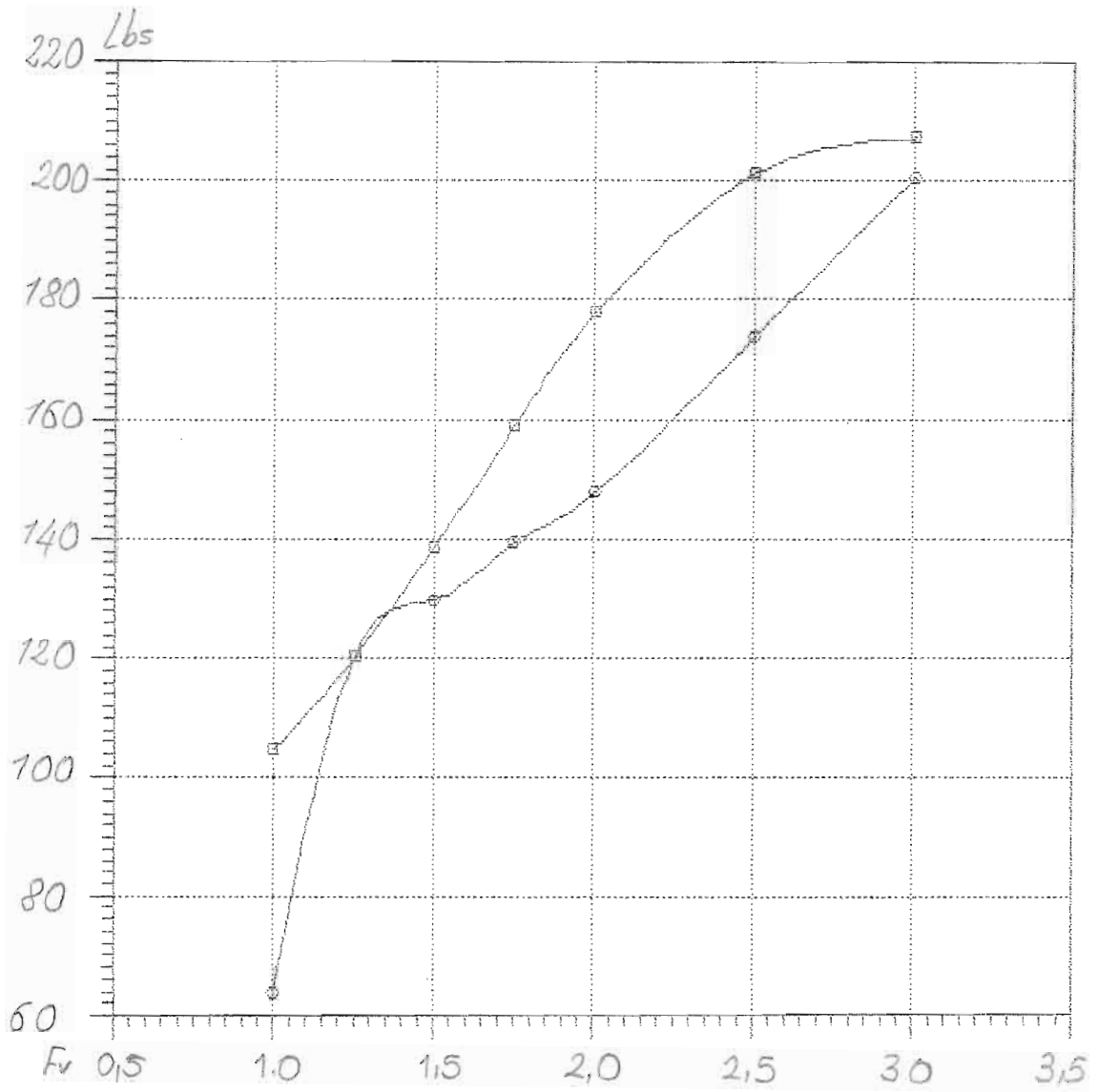
Lpx = 16.200 ft  
Lwl = 16.006 ft  
Bpx = 2.440 ft  
Ap = 29.144 sqft  
Vcg = 1.062 ft  
Disp = 1000.00 Lb

Deadrise = 37.40 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

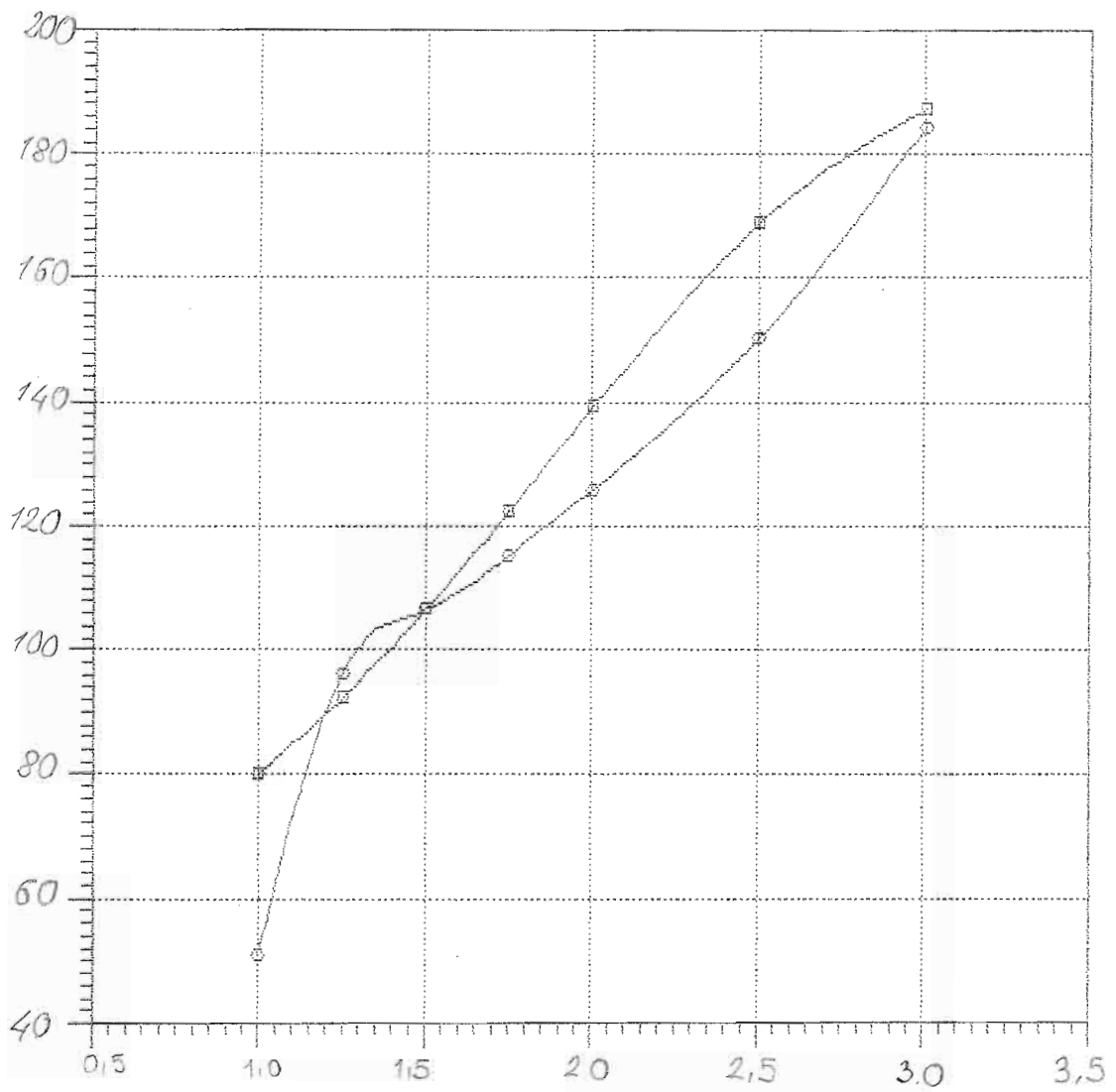
Lpx/Bpx = 6.639  
Lpx/Ap = 9.005  
Ap /Vol = 4.662  
Lpx/Vol = 6.499  
Cvload = 1.076  
Lbload = 0.052  
Disp-Lpx = 105.00  
Twist Ang= 7.00 degree

**Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCİ DENİZCİLİĞE Aittir  
Bu doküman veya bunun bir kısmı  
üçüncü şahıslara verilemez. Faksir  
veya kopye edilemez ve her ne maksadla  
olursa olsun maksadı dışında  
işsiz kullanılamaz.**

5-65-300



5-65-340



—□—

—○—

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Bare-hull resistance

vs.

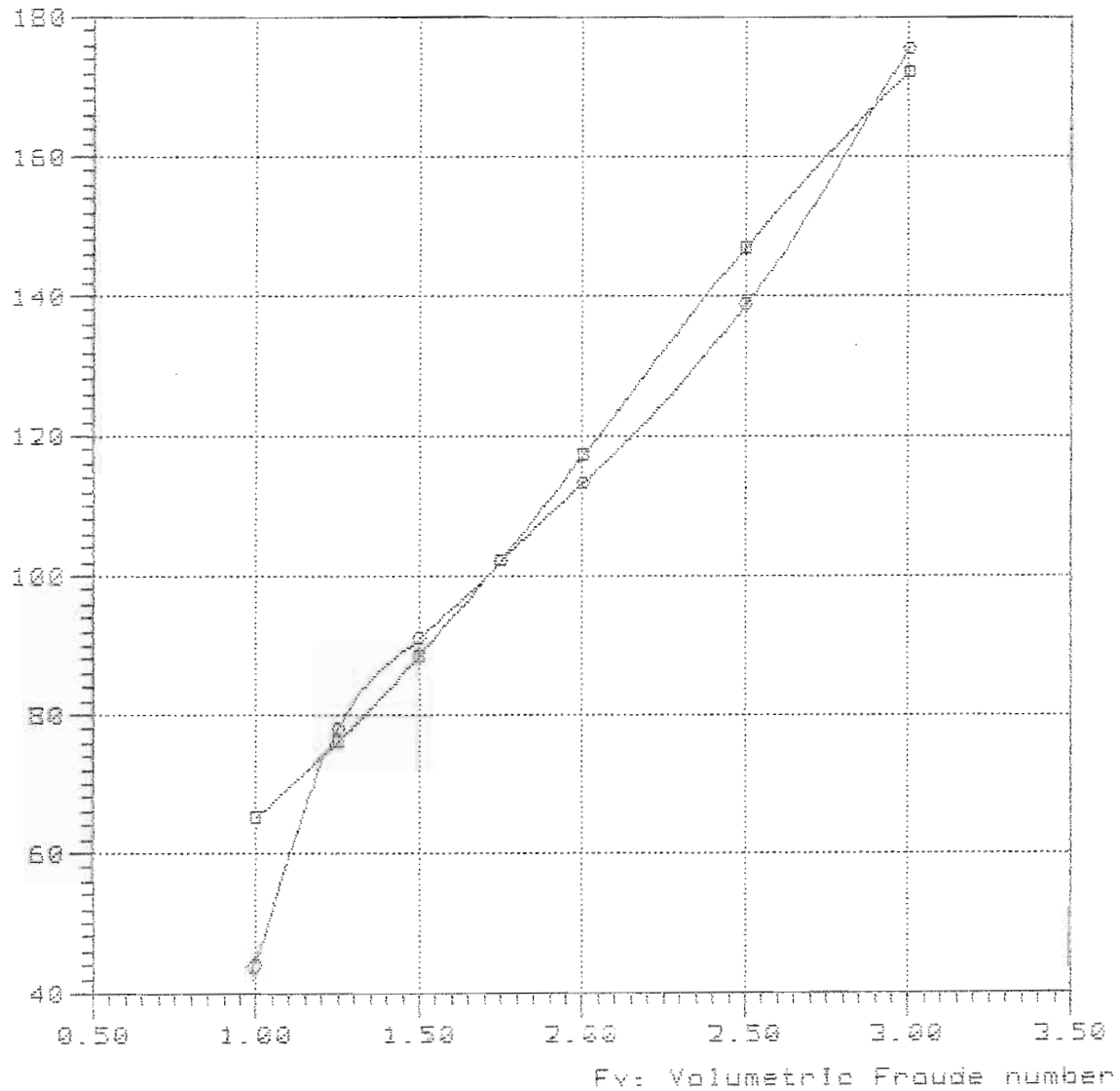
Volumetric Froude number

File: 5-65-380.mdl

Date: 25 Feb 00

Time: 9:37

Rbare: Bare-hull resistance (lbs)



**Curve legend**

—□—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=4.663 Lpx/As=9.005 Lcg/Lpx=0.380

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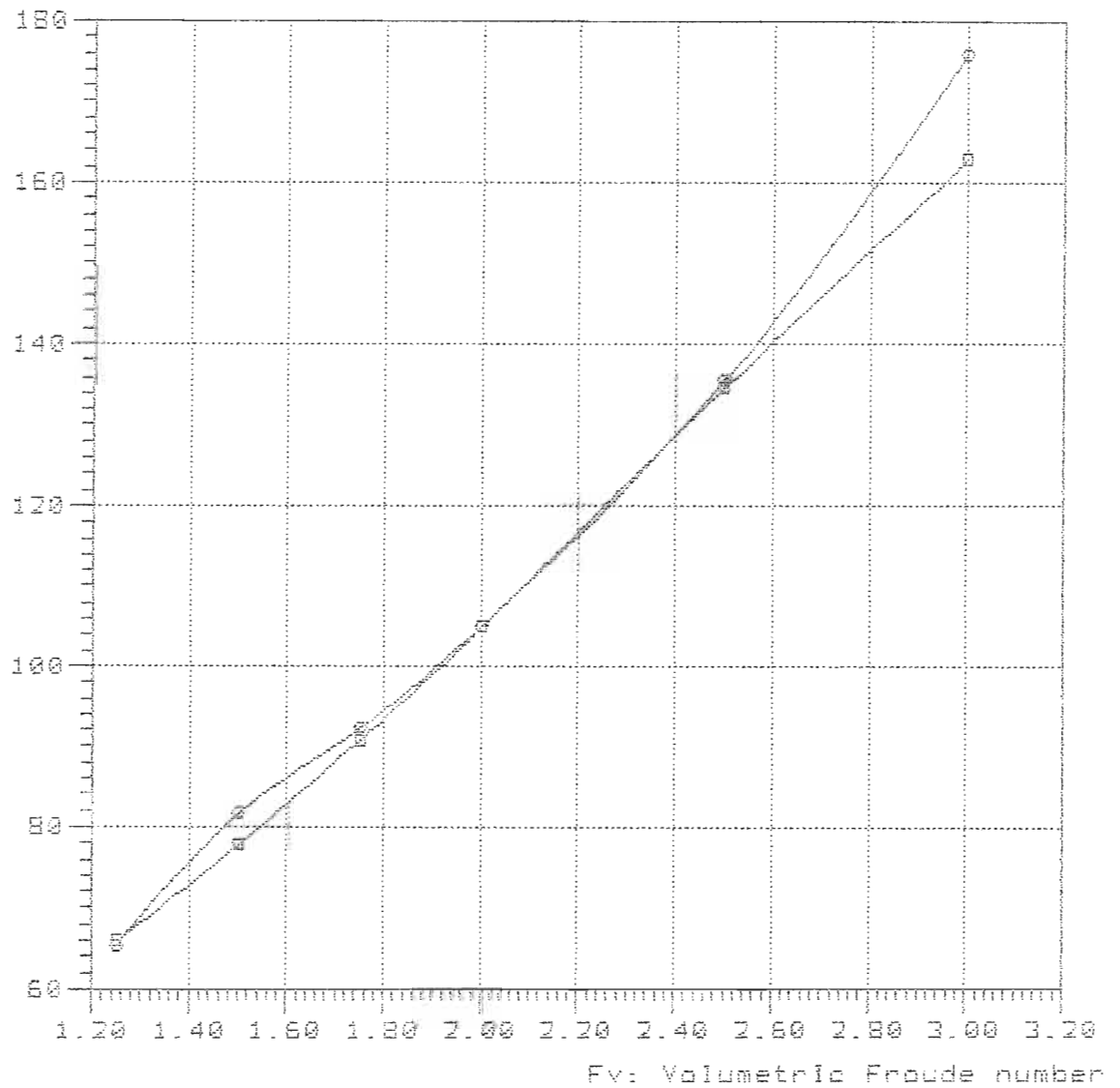
HydroComp, Inc.

File: 5-65-420.mdl

Date: 25 Feb 00

Time: 9:42

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=4.663 Lpx/Ap=9.005 Log/Lpx=0.420



Model = 5208  
Ref = NSRDC  
Friction = ~~A~~ATTC Ca=4e-4

Lpx = 17.500 ft  
Lwl = 17.291 ft  
Bpx = 2.636 ft  
Ap = 34.009 sqft  
Vcg = 1.155 ft  
Disp = 1000.00 Lb  
Deadrise = 37.40 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 6.639  
Lpx/Ap = 9.005  
Ap /Vol = 5.441  
Lpx/Vol = 7.021  
Cvload = 0.853  
Lbload = 0.041  
Disp-Lpx = 83.30  
Twist Ang= 7.00 degree

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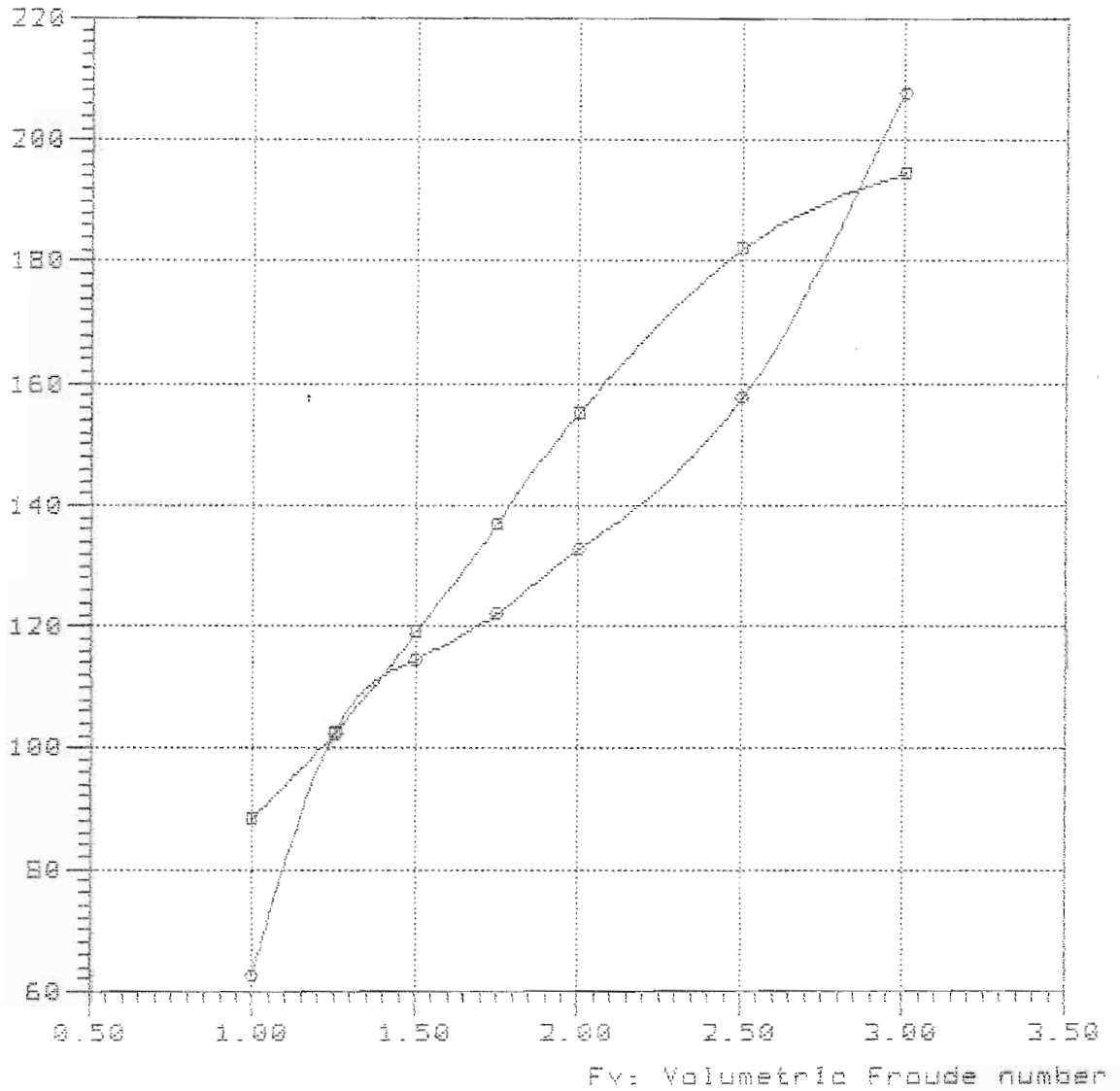
HydroComp, Inc.

File: 5-70-300.mdl

Date: 25 Feb 00

Time: 9:45

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=5.441 Lpx/Ap=9.005 Log/Lpx=0.300

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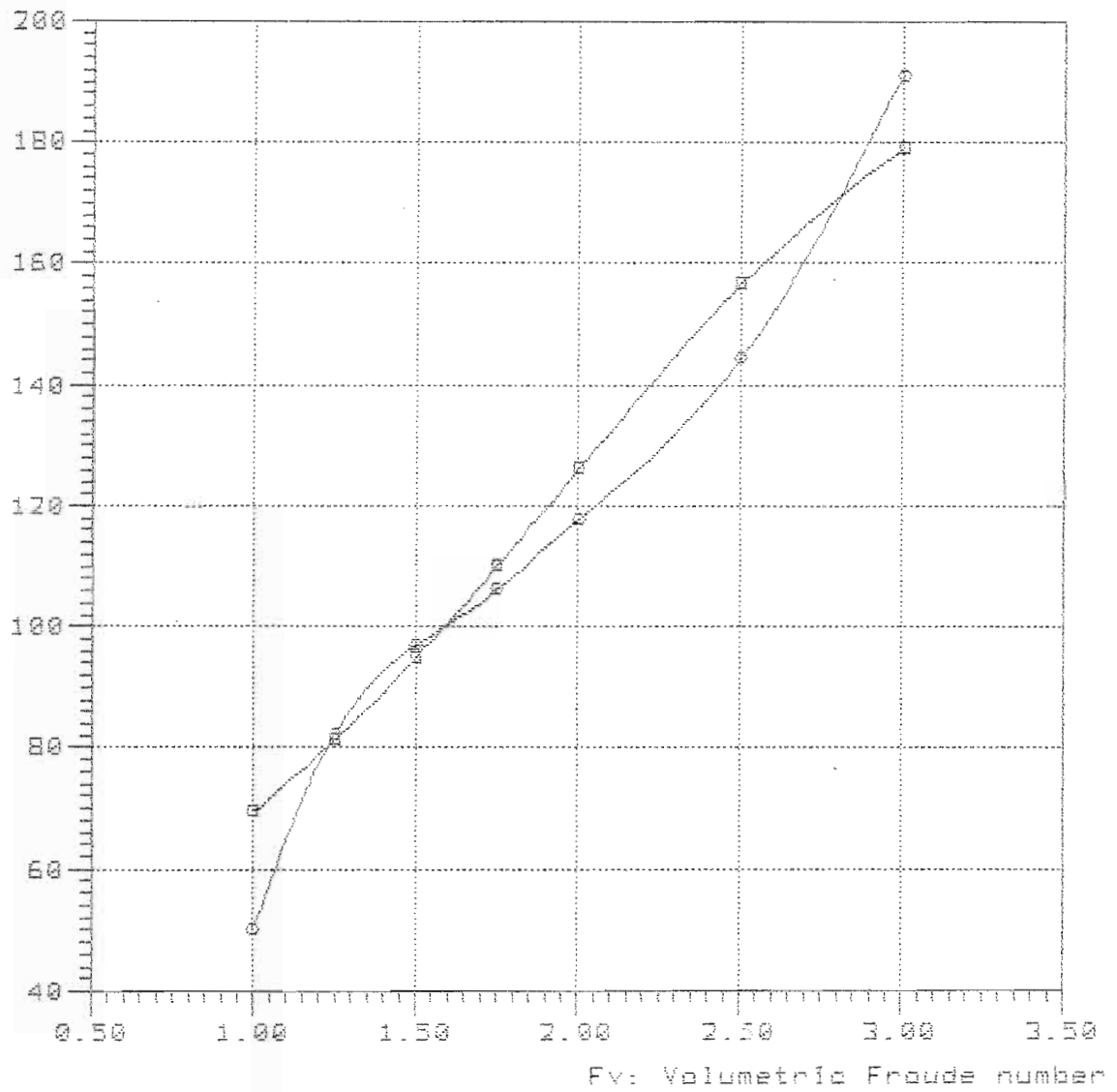
HydroComp, Inc.

File: 5-70-340.mdl

Date: 25 Feb 00

Time: 9:51

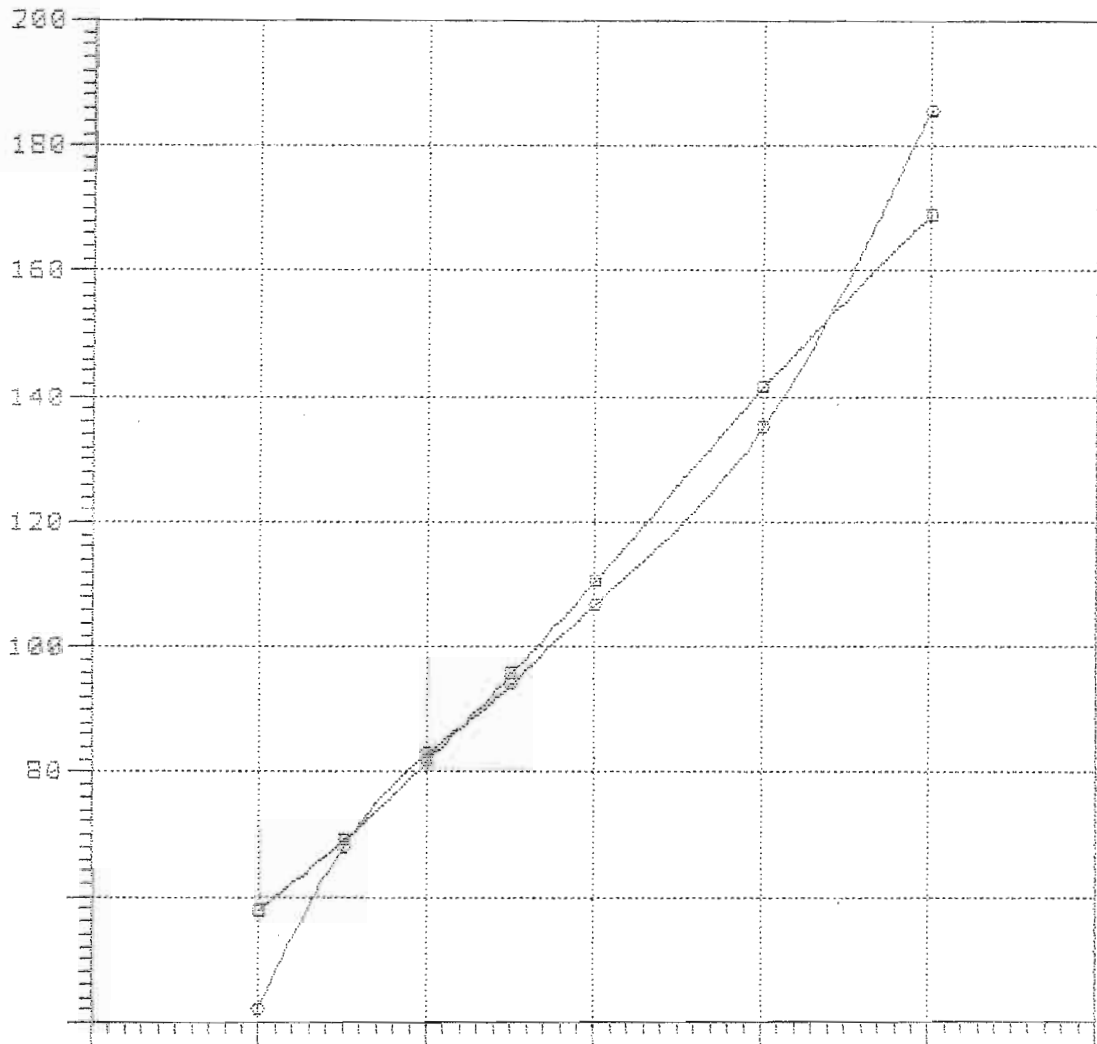
Rbare: Bare-hull resistance (lbs)



—■—

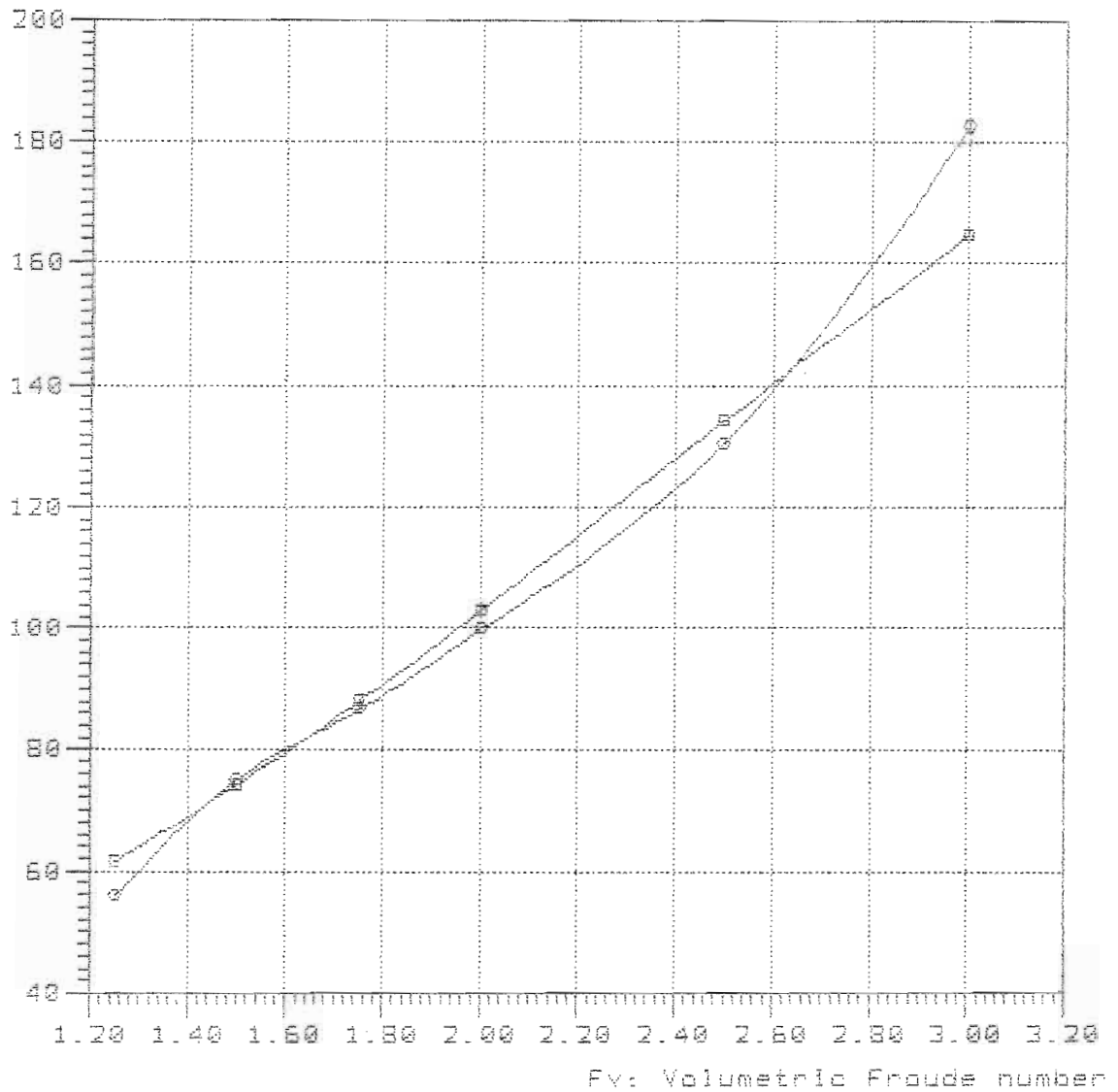
—○— TMB-65B Lpx/Bpx=6.640 Rp/Vol=5.441 Lpx/Rp=9.005 Lcg/Lpx=0.340

Rbare: Base-hull resistance (lbs)



— □ —  
— ○ —

Rbare: Bare-hull resistance (lba)



—■—

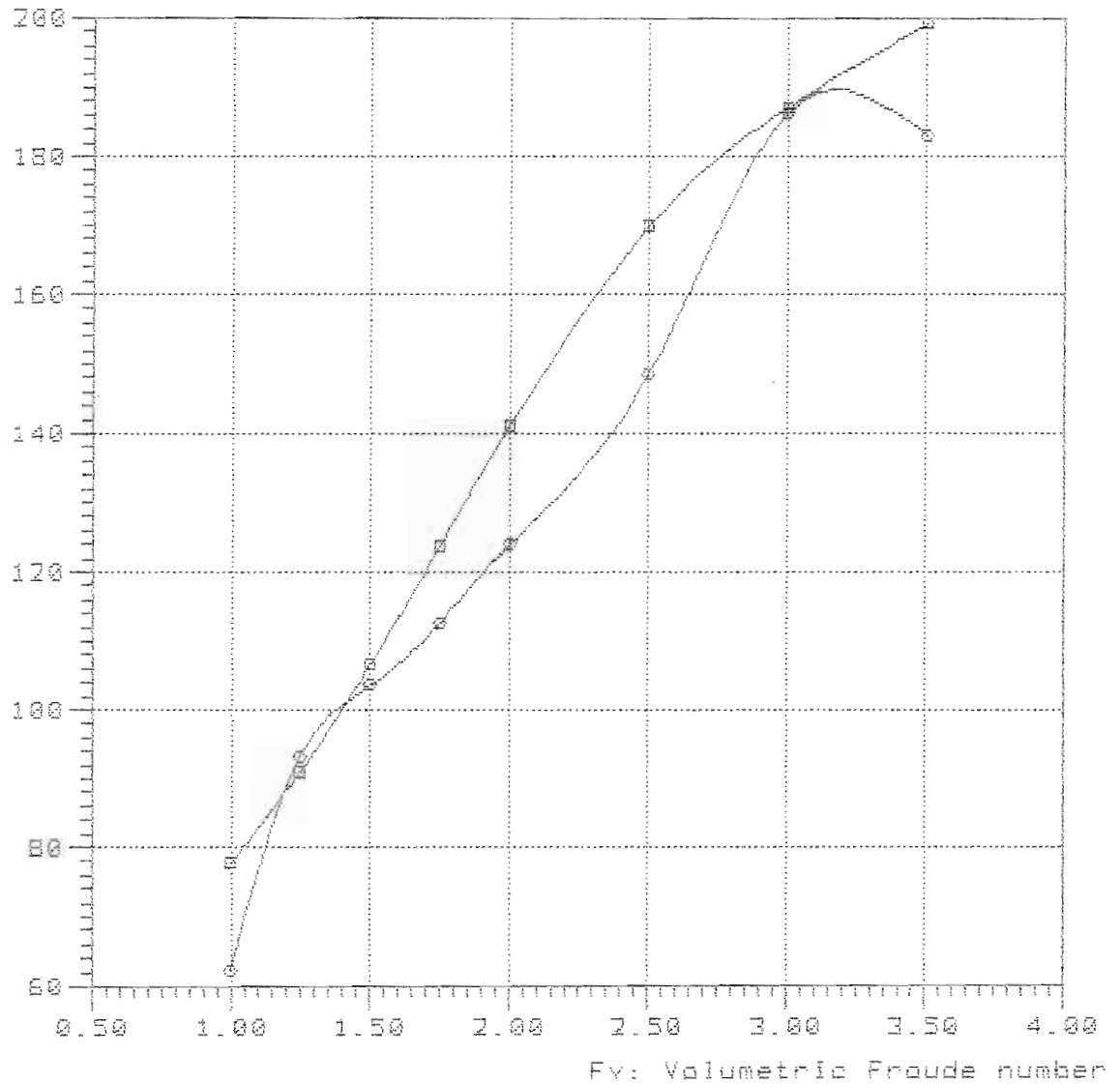
—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=5.441 Lpx/Ap=9.005 Lcg/Lpx=0.420

Model = 5208  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 18.700 ft  
Lwl = 18.476 ft  
Bpx = 2.816 ft  
Ap = 38.833 sqft  
Vcg = 1.226 ft  
Disp. = 1000.00 Lb  
Deadrise = 37.40 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 6.641  
Lpx/Ap = 9.005  
Ap /Vol = 6.213  
Lpx/Vol = 7.502  
Cvload = 0.700  
Lbload = 0.034  
Disp-Lpx = 68.27  
Twist Angle = 7.00 degree

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65B Lpx/Bpx=6.640 Ap/Vol=6.213 Lpx/Ap=9.005 Lcg/Lpx=0.300

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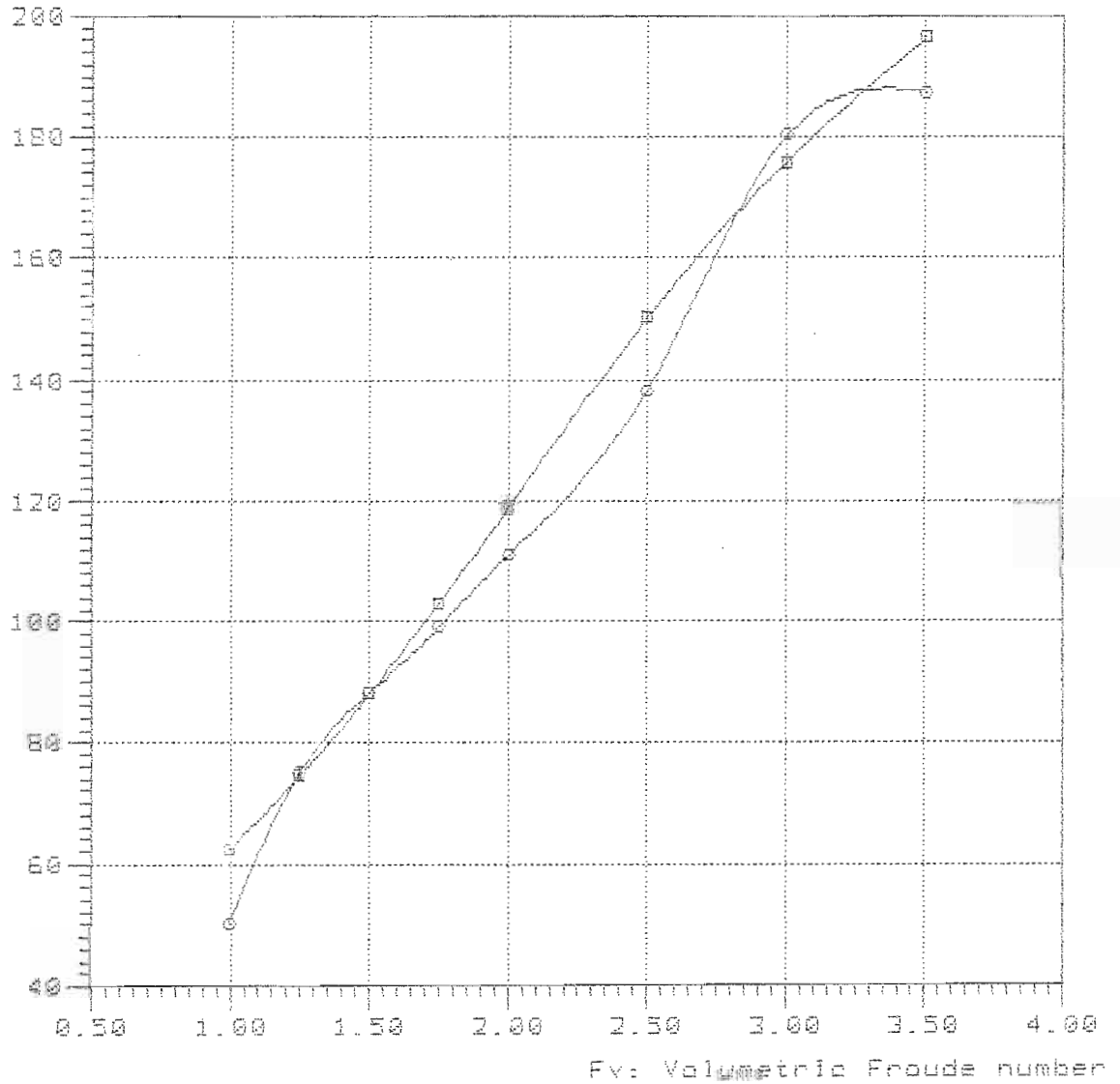
HydroComp, Inc.

File: 6-75-340.mdl

Date: 25 Feb 00

Time: 10:06

Rbare: Bare-hull resistance (lbs)

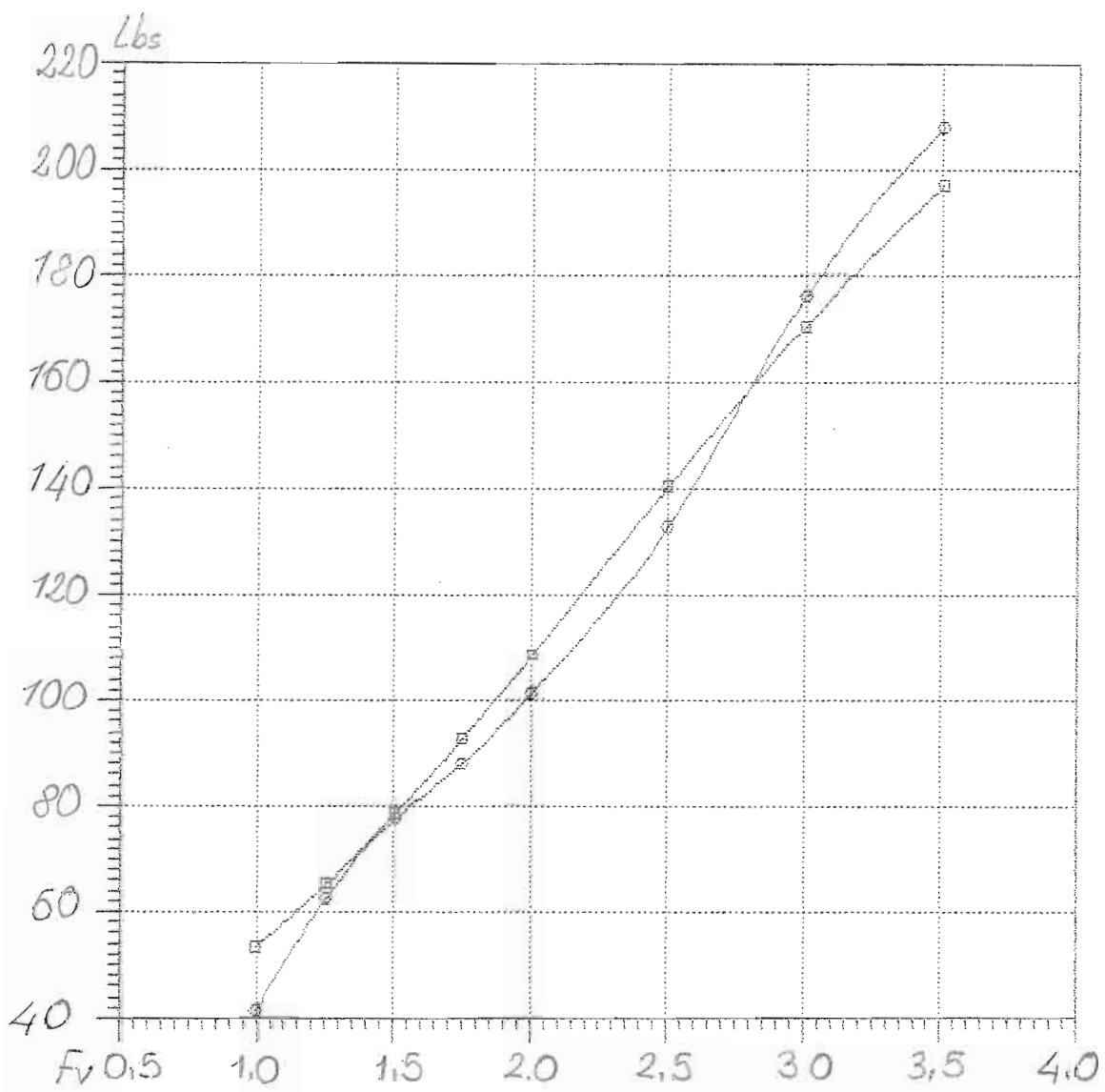


—■—

—○— TMB-65E Lpx/Bpx=6.640 Ap/Vol=6.213 Lpx/Ap=9.005 Log/Lpx=0.340



6-75-380



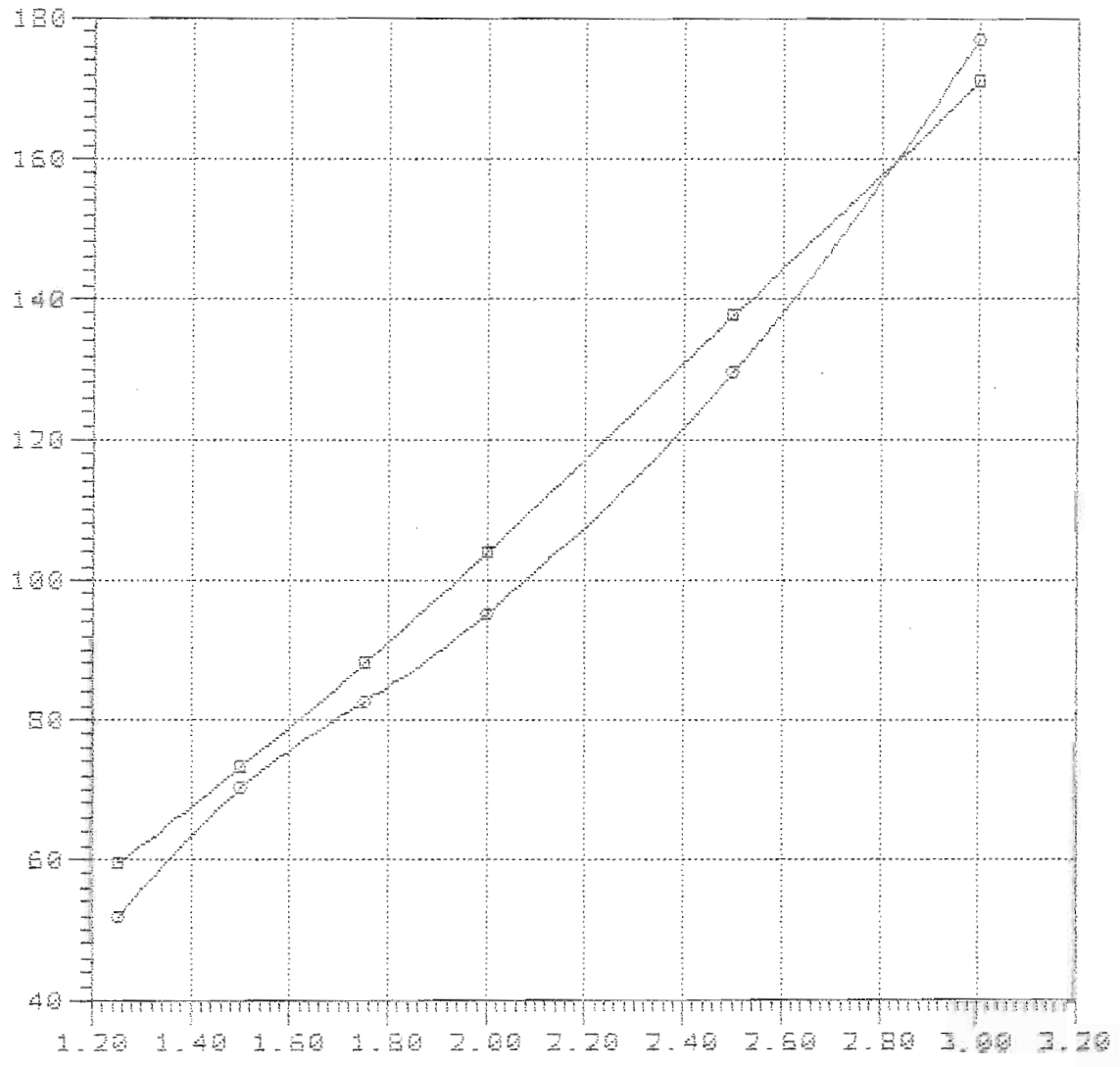
—□—  
—○—

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**Bare-hull resistance**  
 vs.  
**Volumetric Froude number**

File: 6-75-420.mdl  
 Date: 25 Feb 00  
 Time: 10:13

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

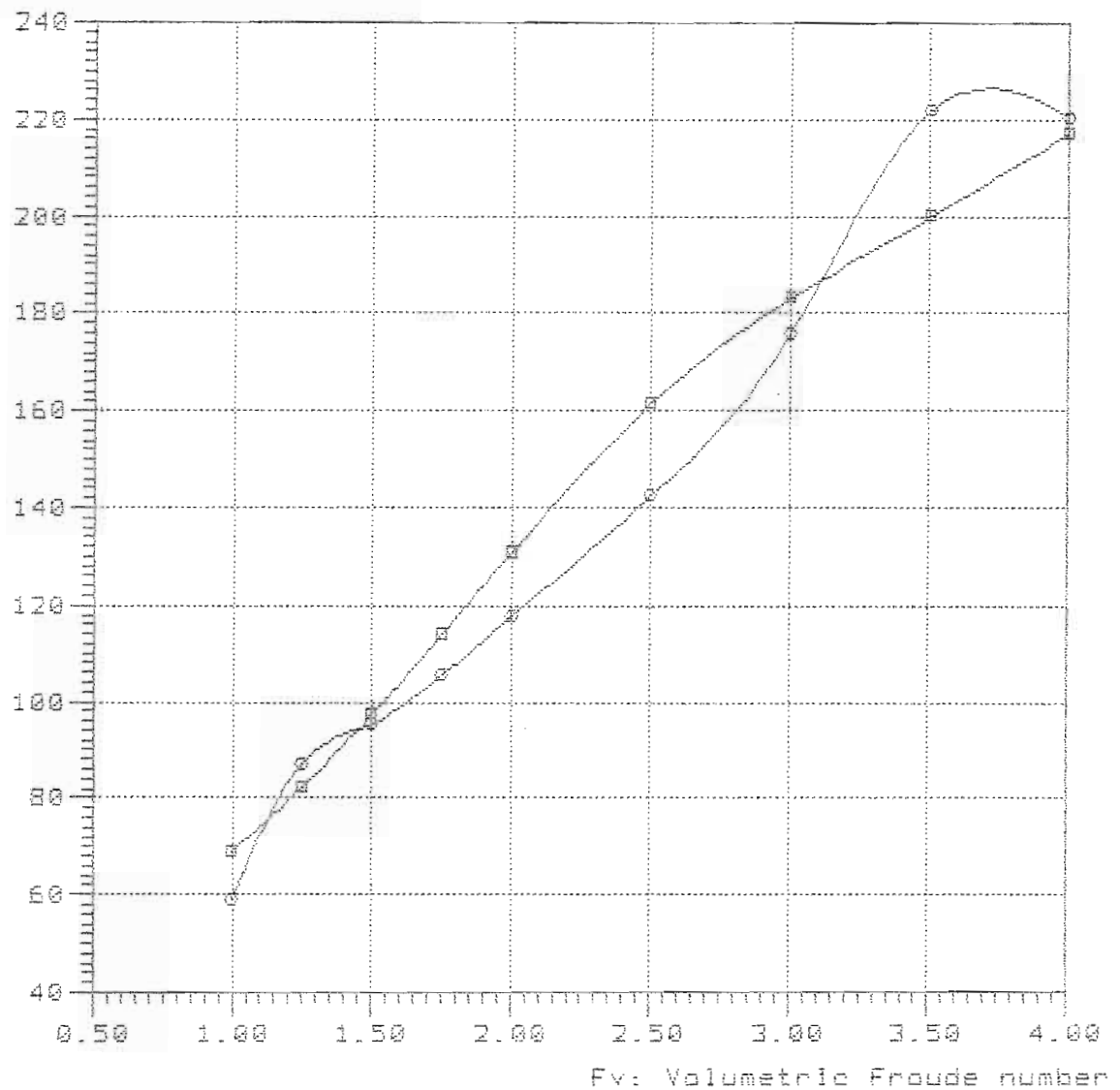
**Curve legend**

- 
- TMB-65B Lpx/Bpx=6.640 Ap/Vol=6.213 Lpx/Ap=3.005 Log/Lpx=0.420

Model = 5208  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 20.000 ft  
Lwl = 19.761 ft  
Bpx = 3.012 ft  
Ap = 44.420 sqft  
Vcg = 1.311 ft  
Disp. = 1000.00 Lb  
Deadrise = 37.40 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç  
  
Lpx/Bpx = 6.640  
Lpx/Ap = 9.005  
Ap /Vol = 7.106  
Lpx/Vol = 8.024  
Cvload = 0.572  
Lbload = 0.028  
Disp-Lpx = 55.80  
Twist Angle= 7.00 degree

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—○— TMB-65E Lpx/Bpx=6.640 Ap/Vol=7.107 Lpx/Ap=9.005 Lcg/Lpx=0.300

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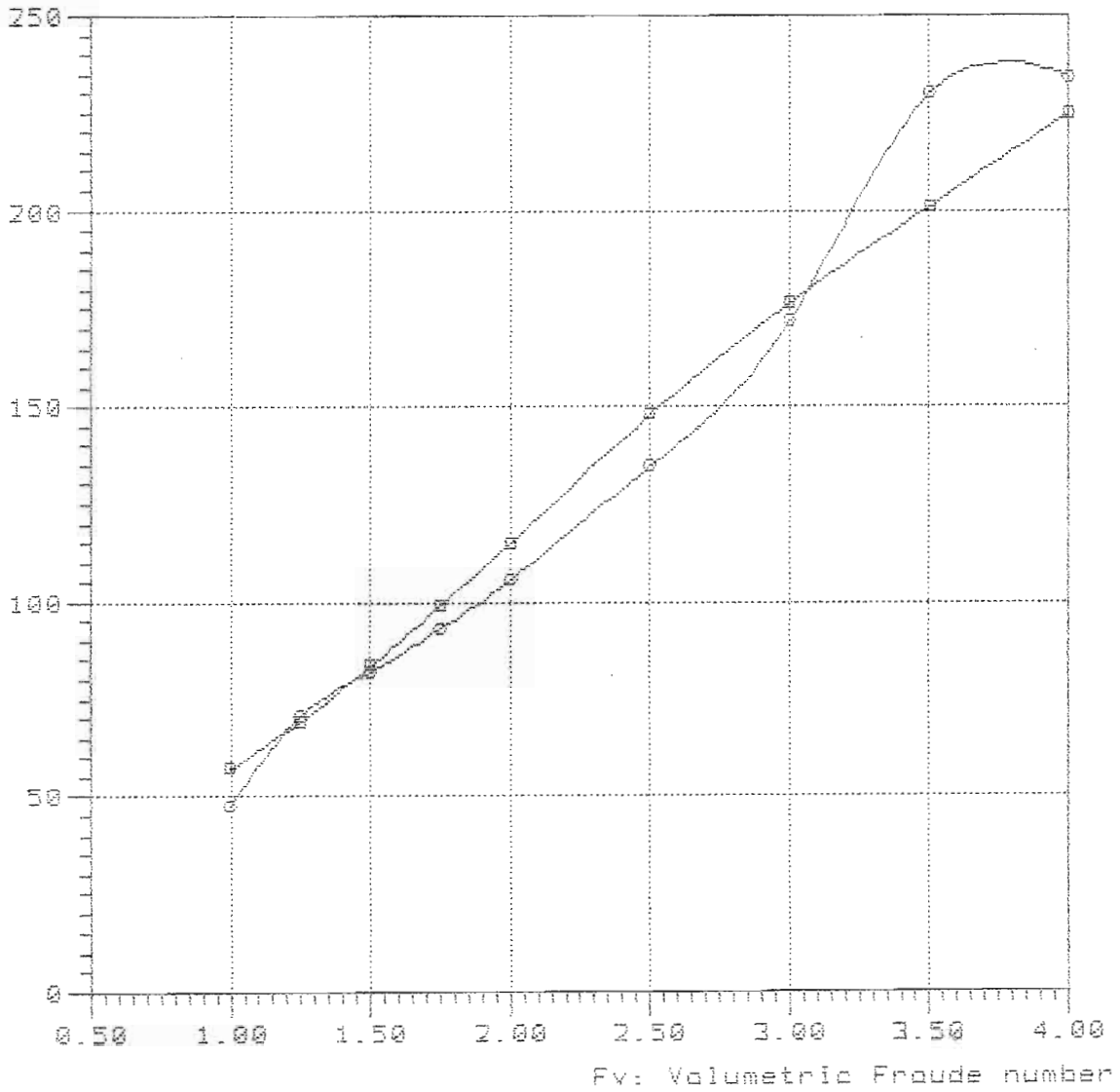
HydroComp, Inc.

File: 7-80-340.mdl

Date: 25 Feb 00

Time: 10:20

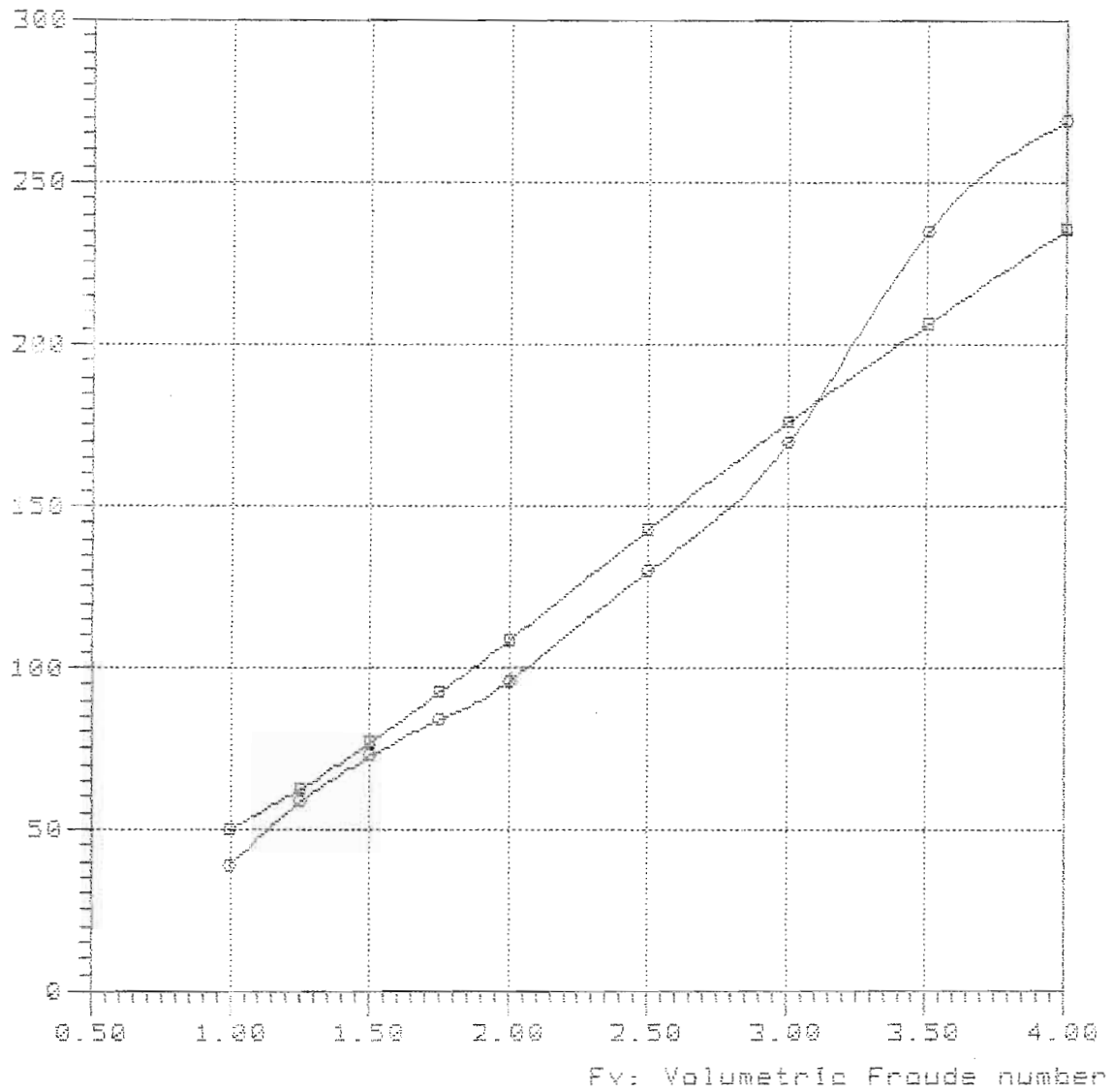
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=7.107 Lpx/Ap=9.005 Log/Lpx=0.340

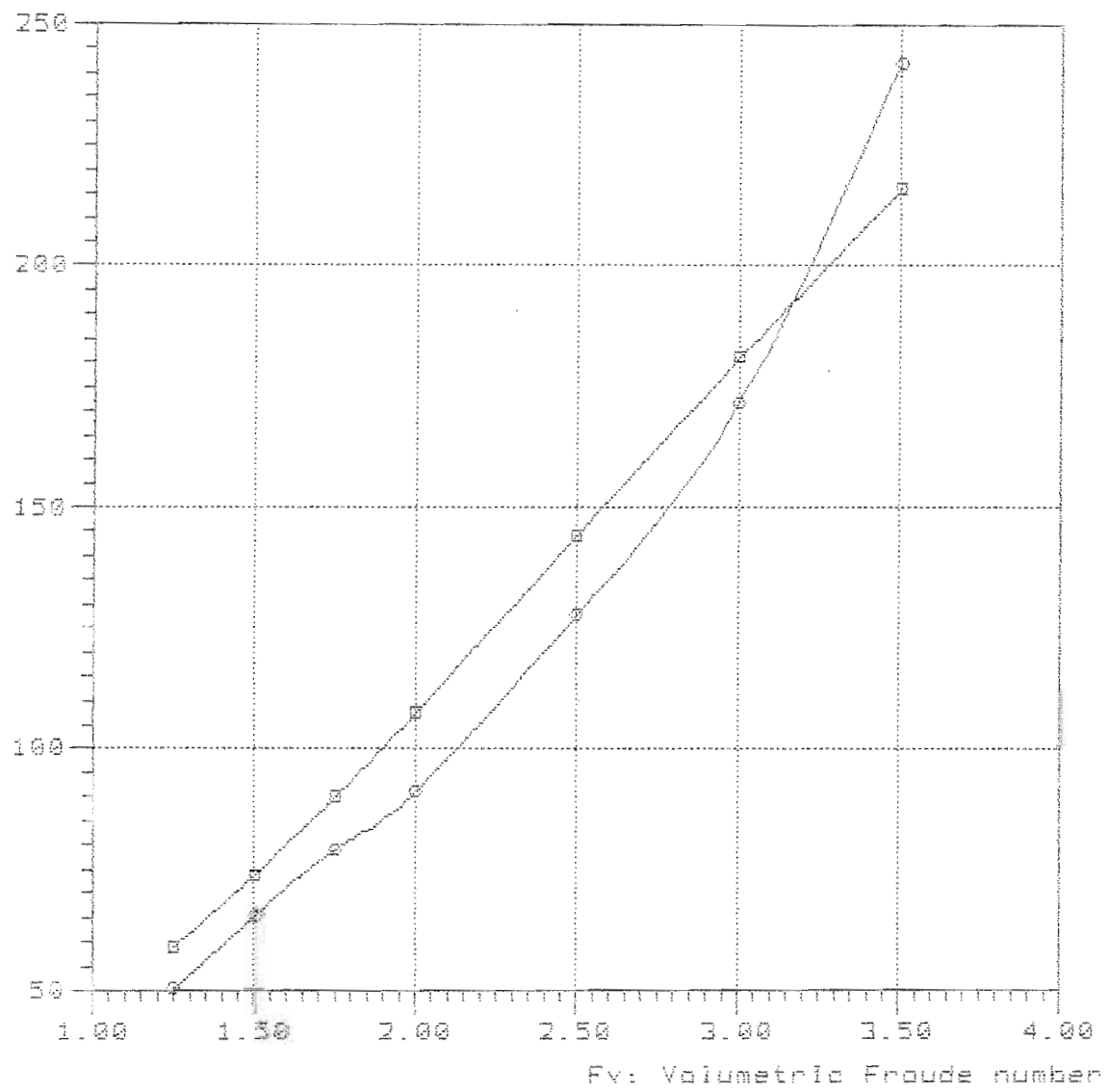
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-658 Lpx/Bpx=6.640 Ap/Vol=7.107 Lpx/Ap=9.095 Log/Lpx=0.380

Rbare: Bare-hull resistance (lbs)



—■—  
—○— TMB-658 Lpx/Bpx=6.640 Ap/Vol=7.107 Lpx/Ap=9.005 Log/Lpx=0.420

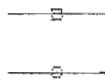
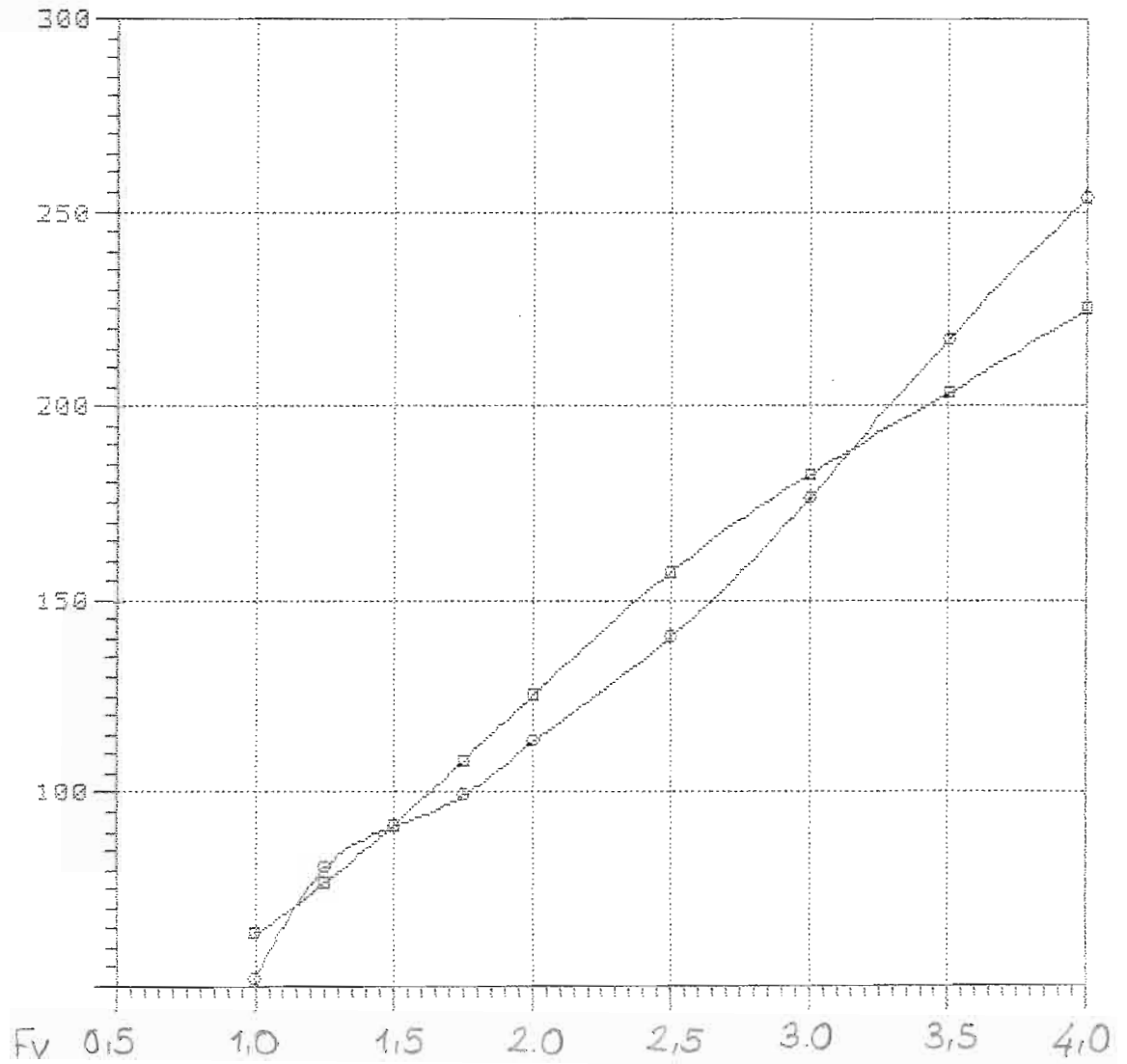
Model = 5208  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 21.200 ft  
Lwl = 20.946 ft  
Bpx = 3.193 ft  
Ap = 49.910 sqft  
Vcg = 1.390 ft  
Disp. = 1000.00 Lb  
Deadrise = 37.40 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inç

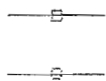
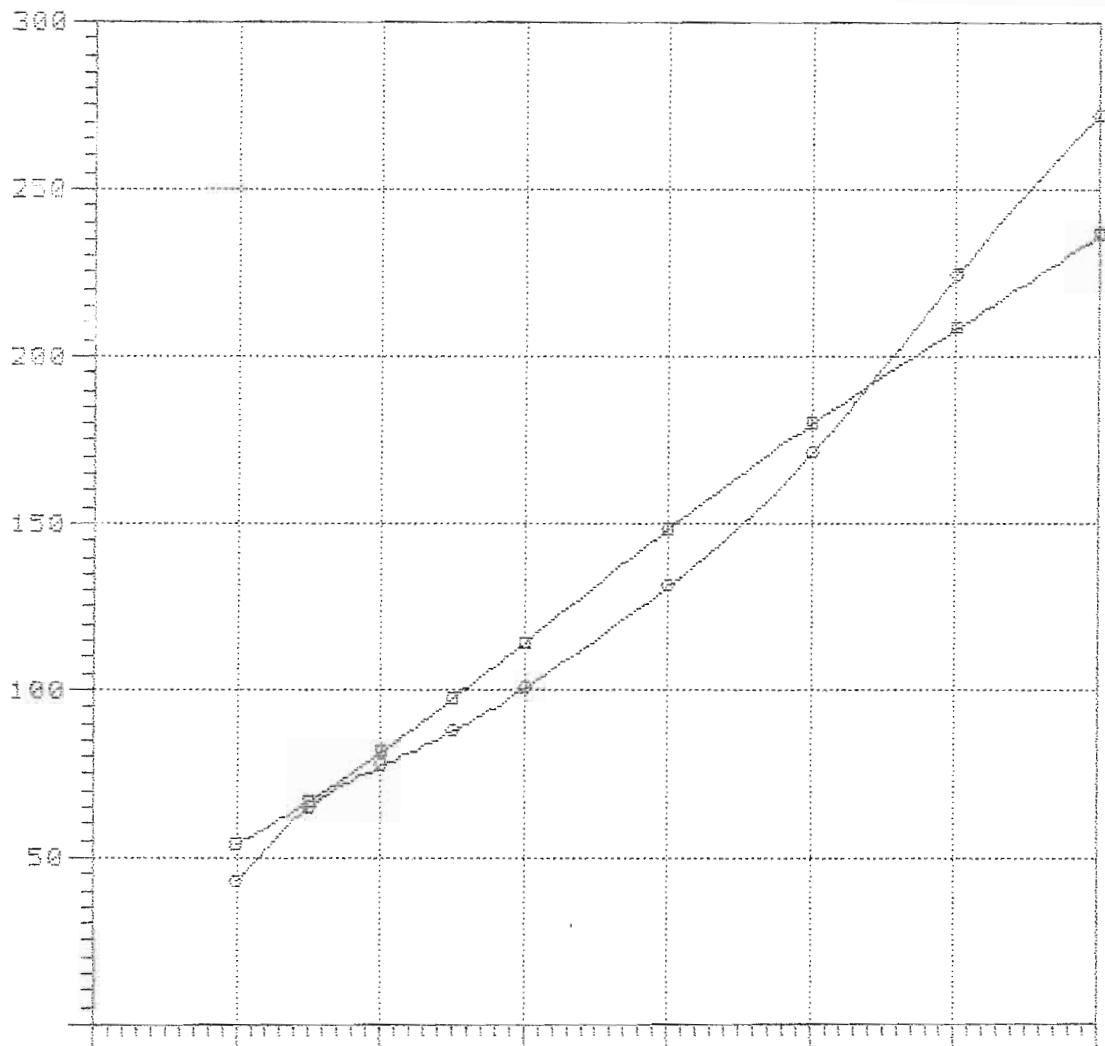
Lpx/Bpx = 6.640  
Lpx/Ap = 9.005  
Ap /Vol = 7.985  
Lpx/Vol = 8.505  
Cvload = 0.480  
Lbload = 0.023  
Disp-Lpx = 46.85  
Twist Angle = 7.00 degree



Rbare: Bare-hull resistance (lbs)



Rbare: Bare-hull resistance (lbs)



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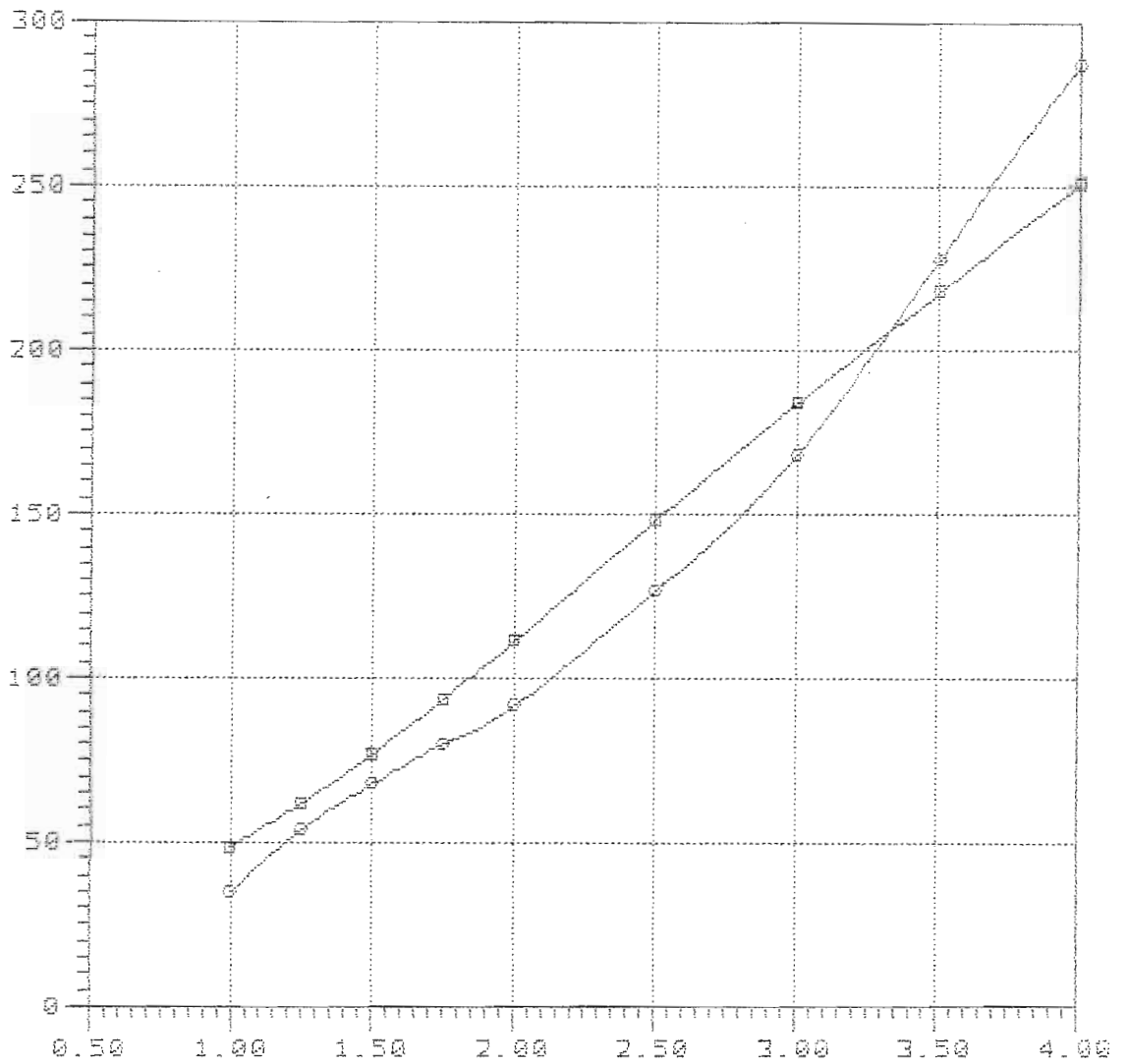
HydroComp, Inc.

File: 8-85-380.mdl

Date: 25 Feb 00

Time: 10:39

Rbare: Bare-hull resistance (lbf)



Fv: Volumetric Froude number

—□—

—○— TMB-63B Lpx/Bpx=6.640 Ap/Vol=7.985 Lpx/Ap=9.005 Log/Lpx=0.380

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### Bare-hull resistance

vs.

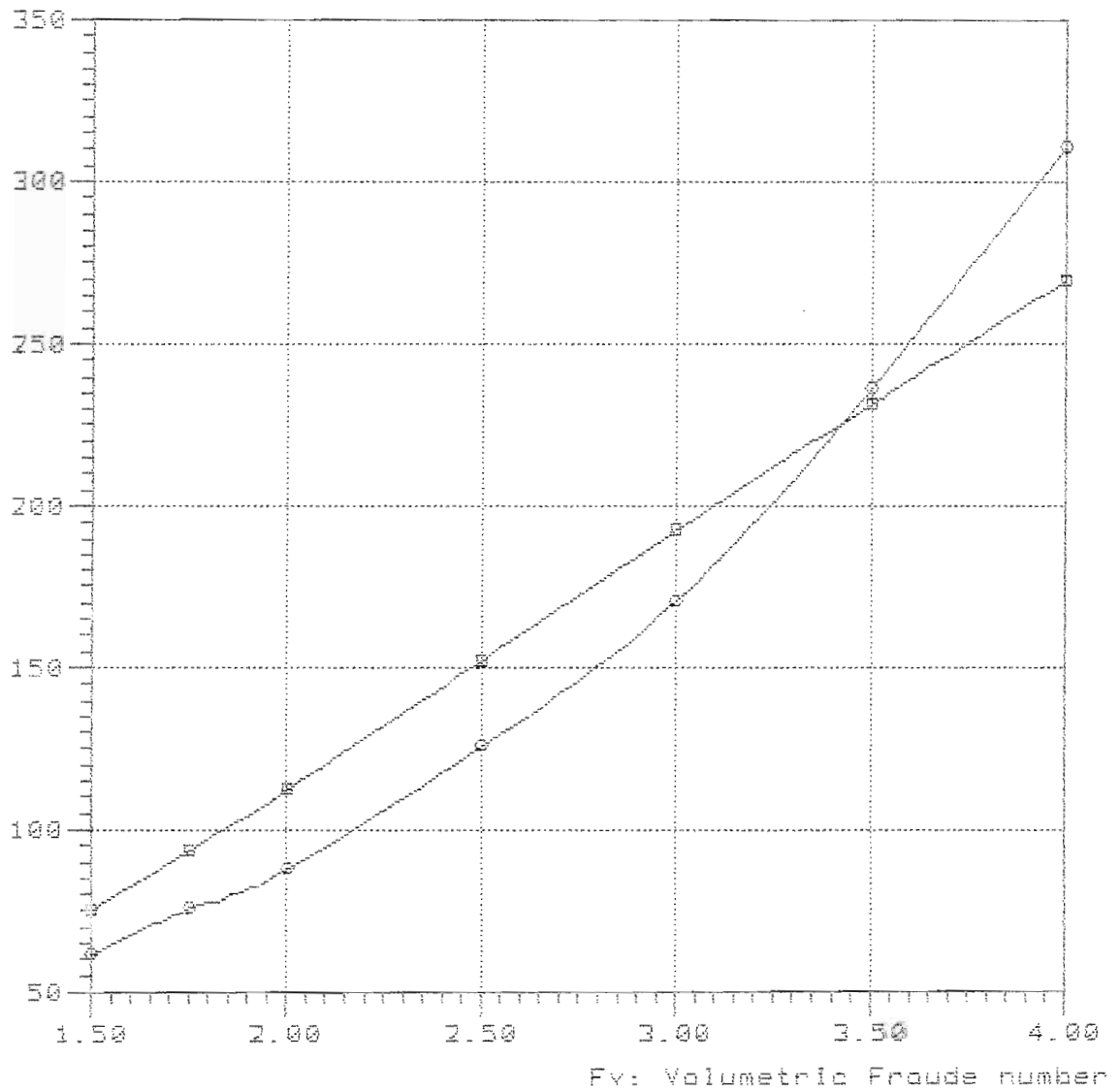
### Volumetric Froude number

File: 8-85-470.mdl

Date: 25 Feb 88

Time: 10:47

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=7.986 Lpx/Ap=9.005 Lcg/Lpx=0.420

Model = 5208  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 22.500 ft  
Lwl = 22.231 ft  
Bpx = 3.389 ft  
Ap = 56.219 sqft  
Vcg = 1.475 ft  
Disp. = 1000.00 Lb  
Deadrise = 37.40 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç  
  
Lpx/Bpx = 6.639  
Lpx/Ap = 9.005  
Ap /Vol = 8.994  
Lpx/Vol = 9.027  
Cvload = 0.401  
Lbload = 0.019  
Disp-Lpx = 39.19  
Twist Angle= 7.00 degree

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Bare-hull resistance

vs.

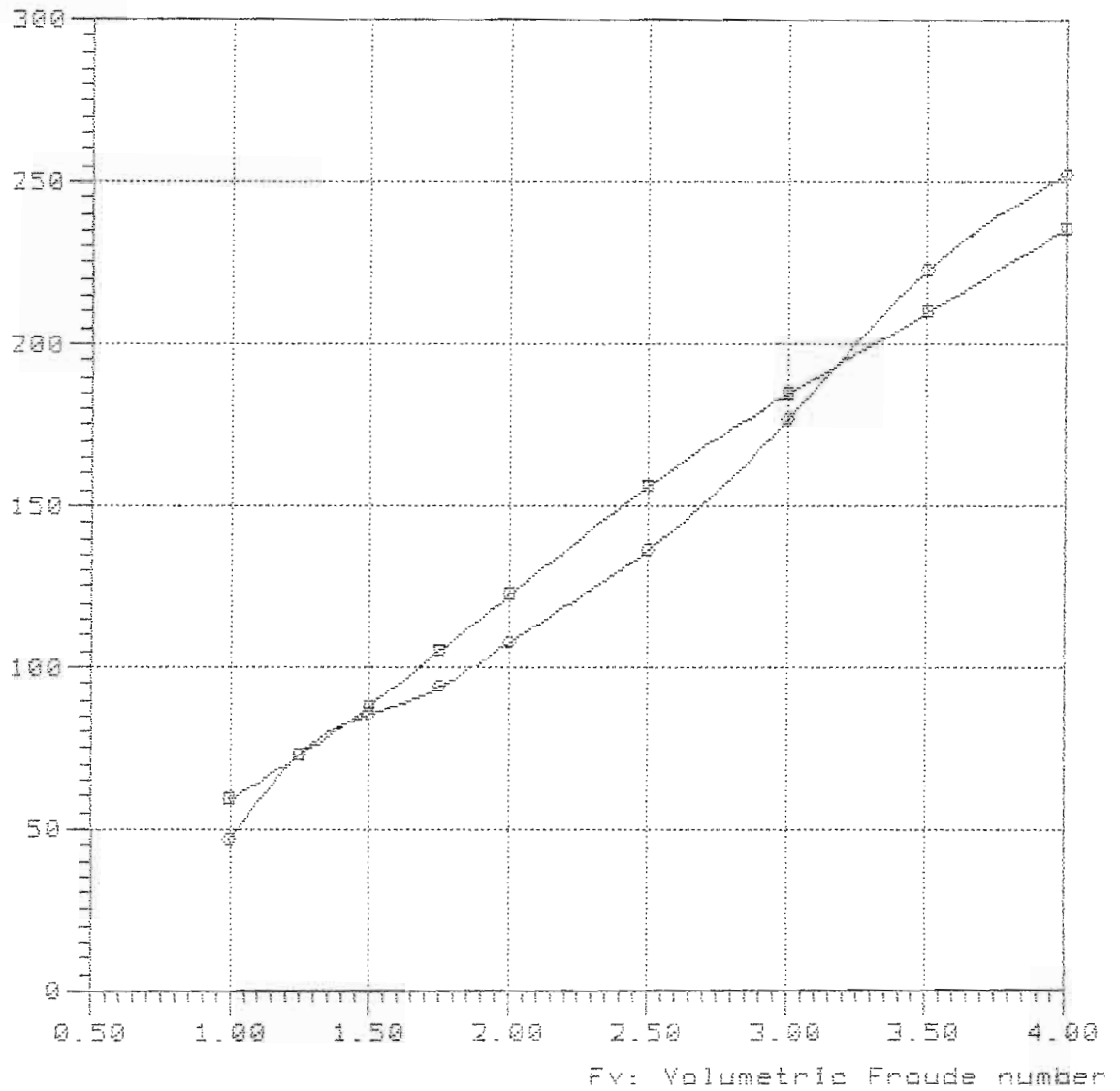
Volumetric Froude number

File: 9-90-300.mdl

Date: 25 Feb 00

Time: 10:50

Rbare: Bare-hull resistance (lbs)

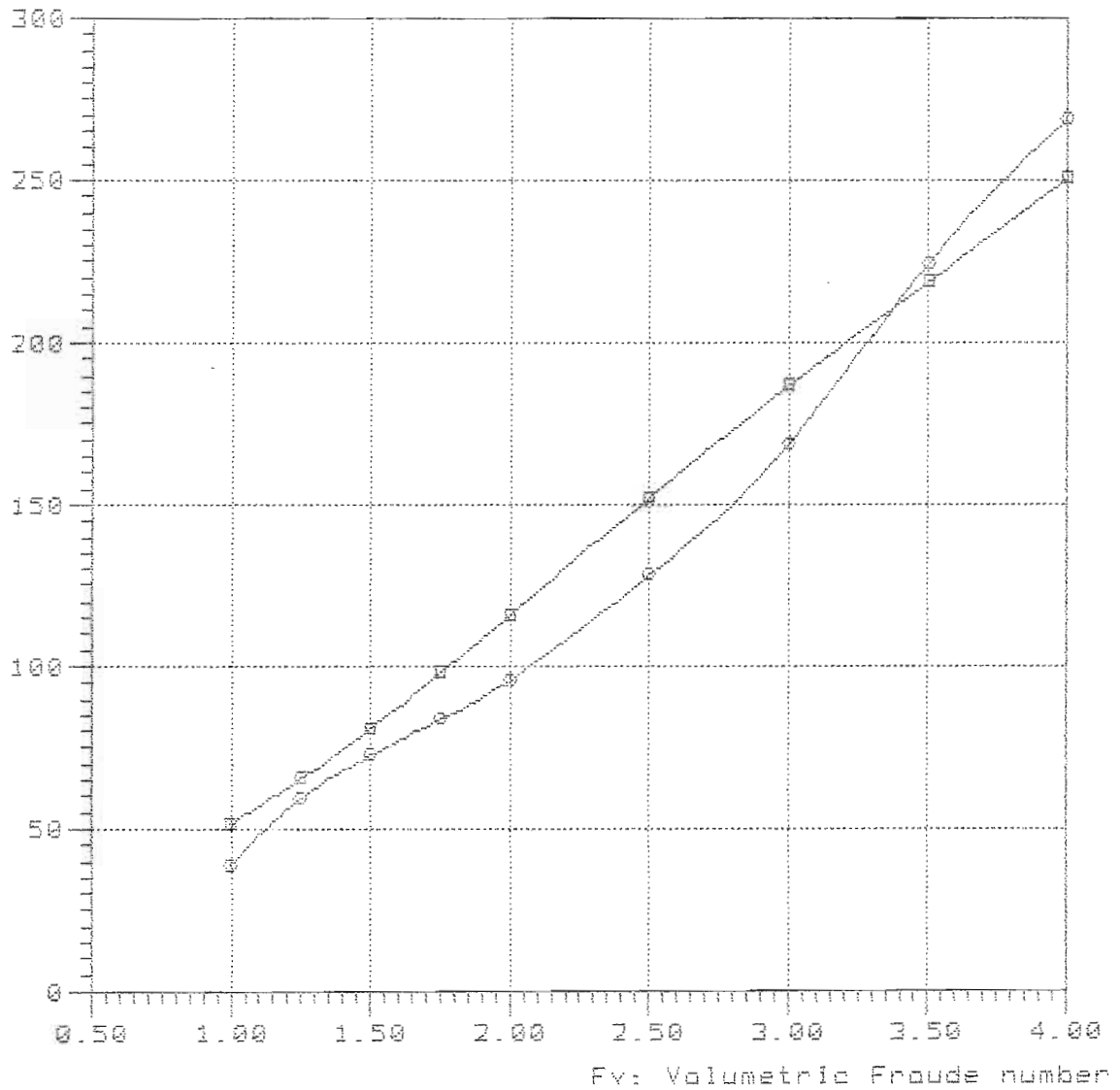


Curve legend

—■—

—○— TMB-65B Lpx/Spx=6.640 Ap/Vol=8.995 Lpx/Ap=9.005 Lcg/Lpx=0.300

Rbare: Bare-hull resistance (lbe)



—■—

—●— TMB-65B Lpx/Bpx=6.640 Ap/Vol=8.955 Lpx/Ap=9.005 Log/Lpx=0.340

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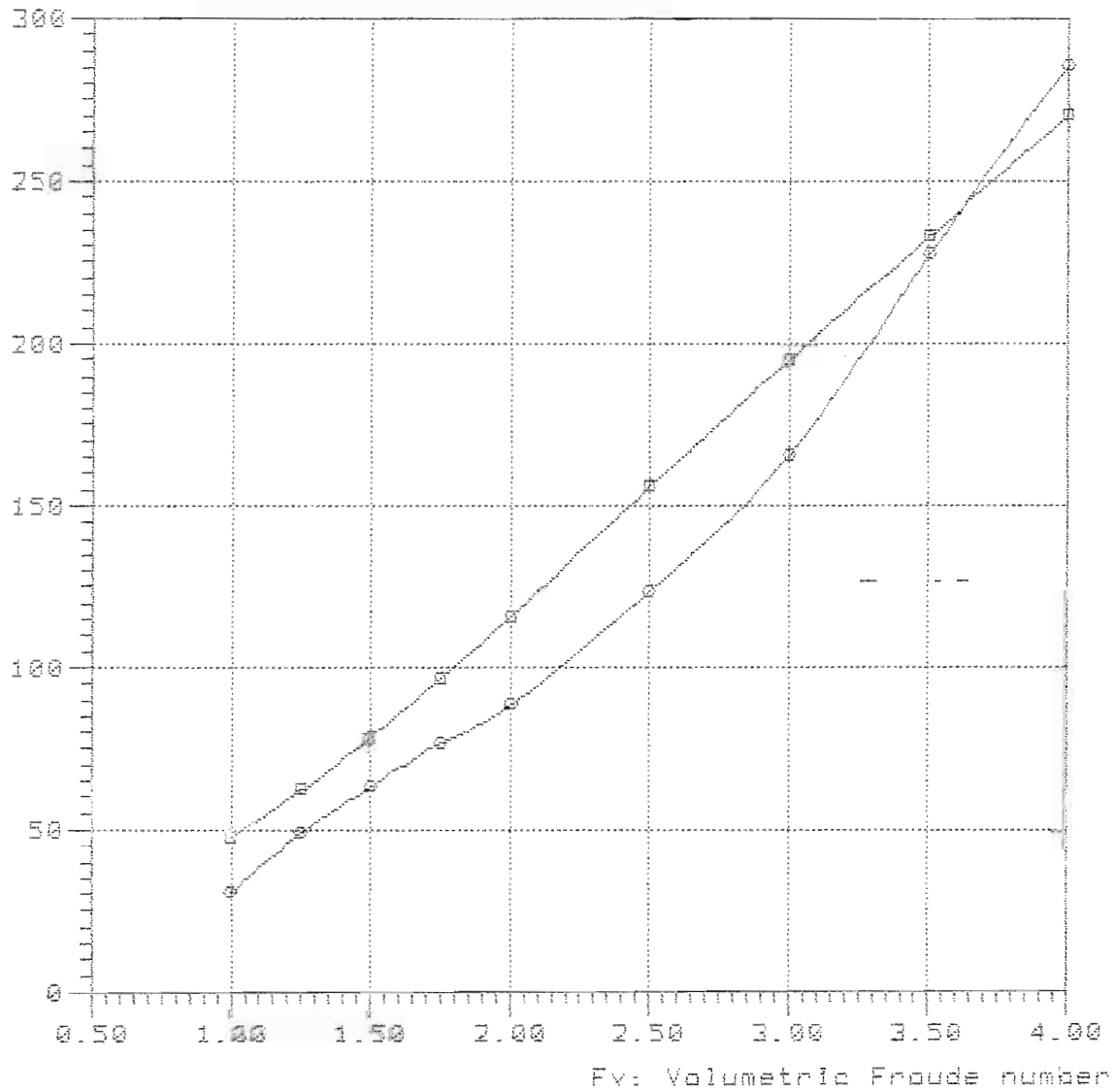
HydroComp, Inc.

File: 9-98-380.mdl

Date: 25 Feb 00

Time: 10:37

Rbare: Bare-hull resistance (lbs)

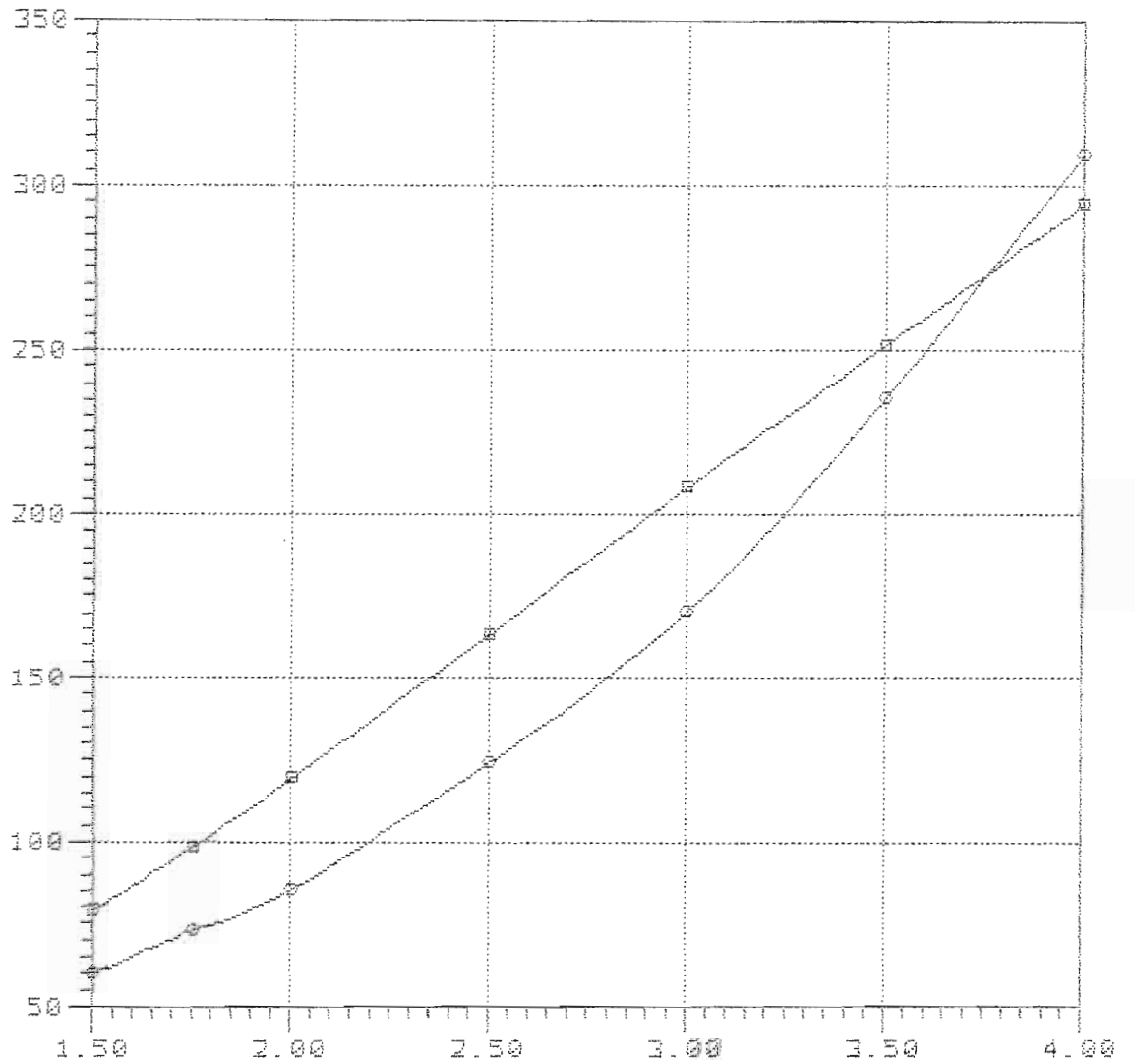


—■—

—○— TMB-65B Lpx/Bpx=6.640 Rp/Vol=8.995 Lpx/Rp=9.005 Log/Lpx=0.380



Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—

—●— TMB-65B Lpx/Spx=6.640 Ap/Vol=8.995 Lpx/Ap=9.005 Log/Lpx=0.420

Model = 5208  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 23.700 ft  
Lwl = 23.416 ft  
Bpx = 3.569 ft  
Ap = 62.375 sqft  
Vcg = 1.554 ft  
Disp. = 1000.00 Lb

Deadrise = 37.40 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

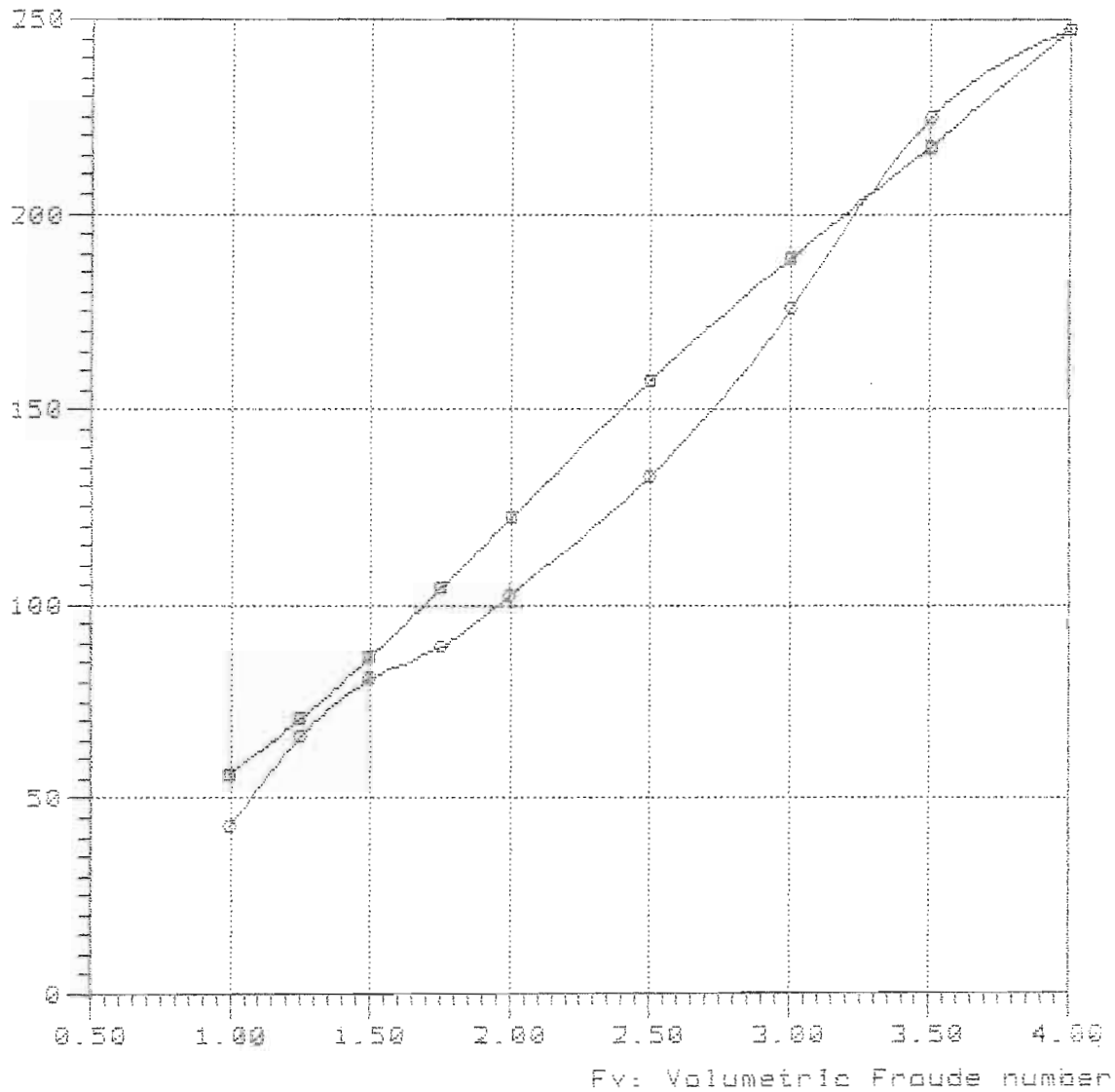
Lpx/Bpx = 6.641  
Lpx/Ap = 9.005  
Ap /Vol = 9.979  
Lpx/Vol = 9.508  
Cvload = 0.344  
Lbload = 0.017  
Disp-Lpx = 33.54  
Twist Angle= 7.00 degree

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=9.550 Lpx/As=9.005 Lcg/Lpx=0.300 5208

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### Bare-hull resistance

vs.

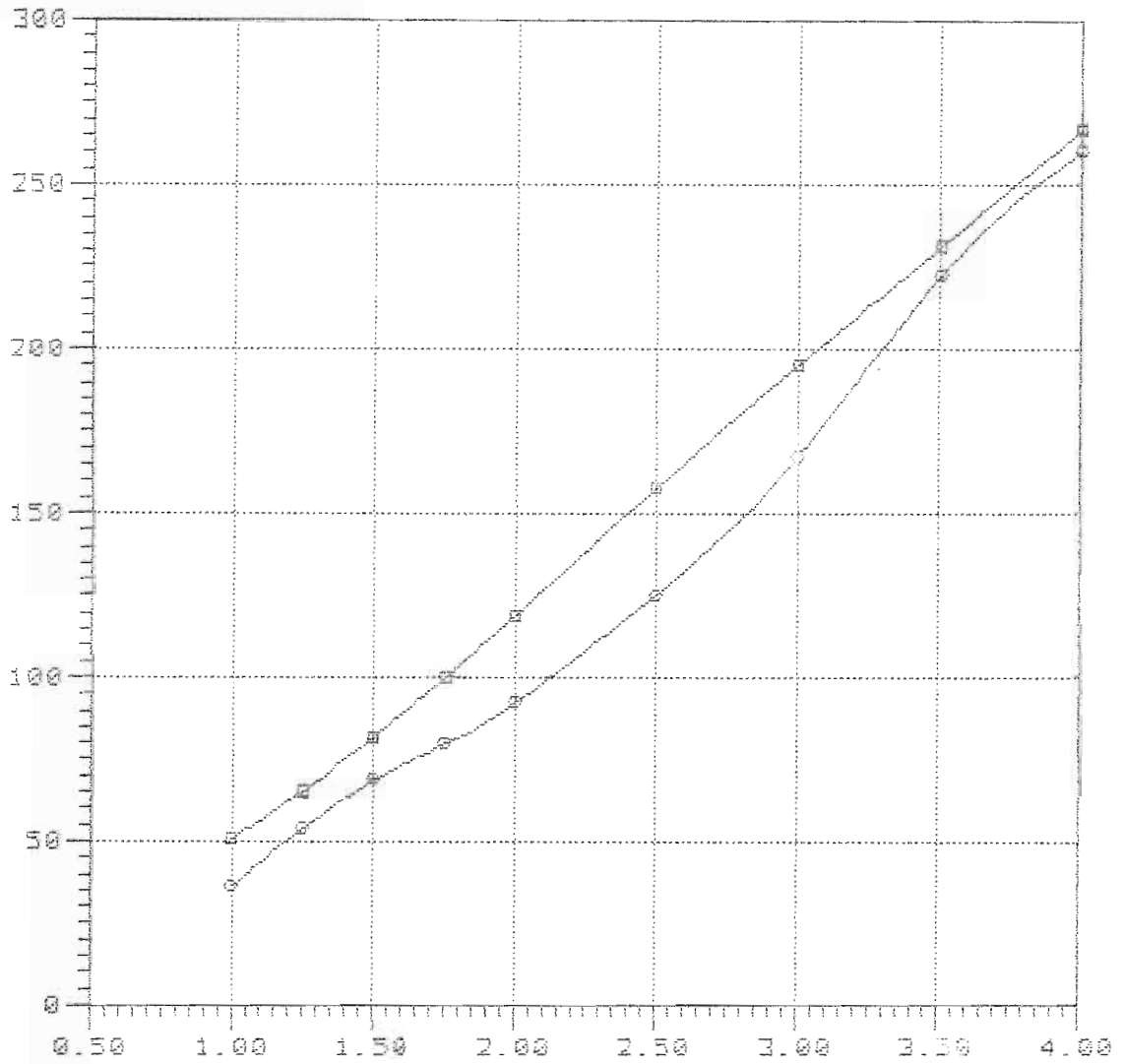
### Volumetric Froude number

File: 10-95-34.mdl

Date: 25 Feb 00

Time: 9:03

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

#### Curve legend

—■—

—○— TNB-65B Lpx/Bpx=6.640 Ap/Vol=9.980 Lpx/Ap=9.005 Lcg/Lpx=0.340

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### Bare-hull resistance

vs.

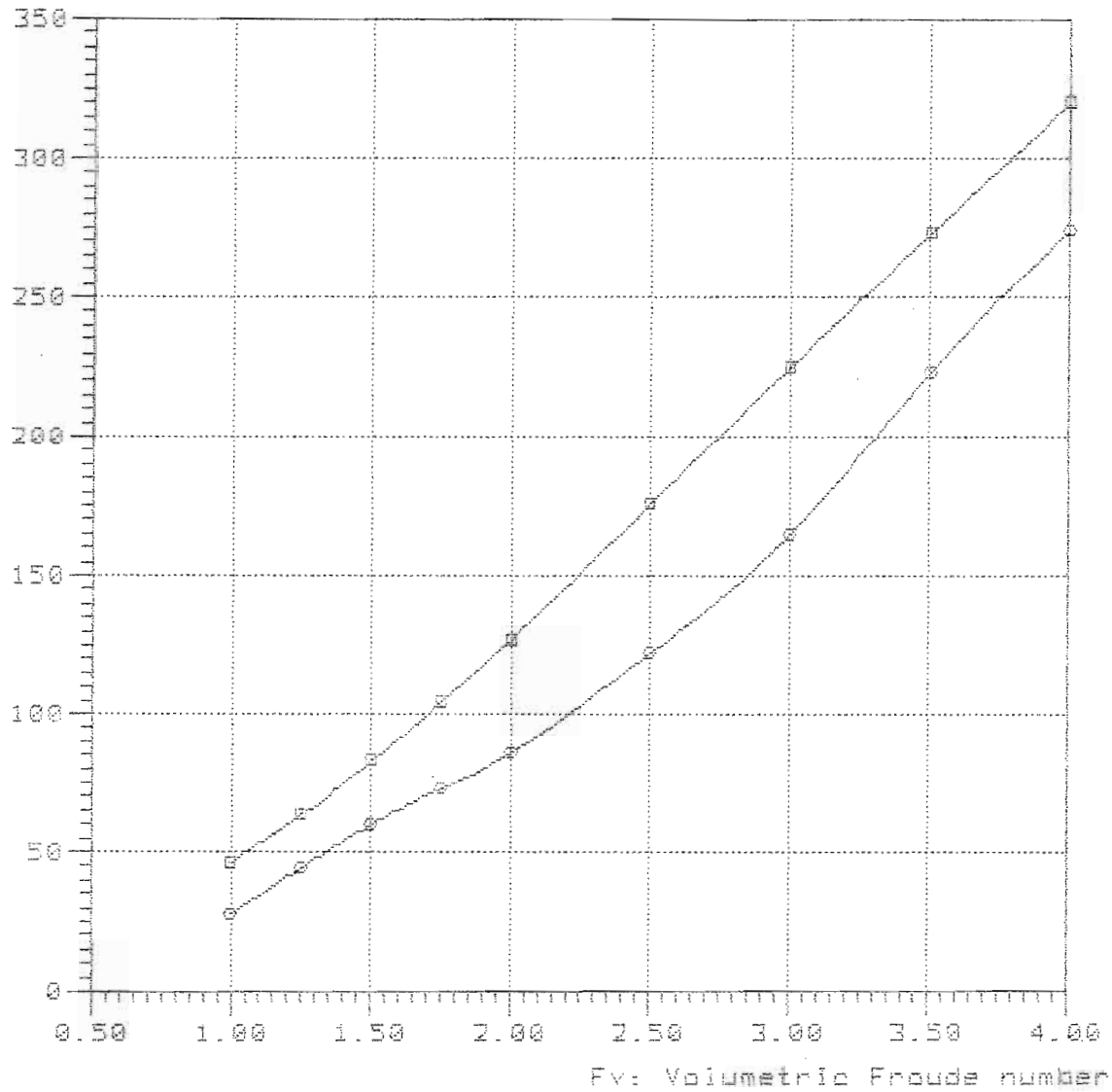
### Volumetric Froude number

File: 10-95-38.mdl

Date: 25 Feb 00

Time: 9:06

Rbare: Bare-hull resistance (lbs)

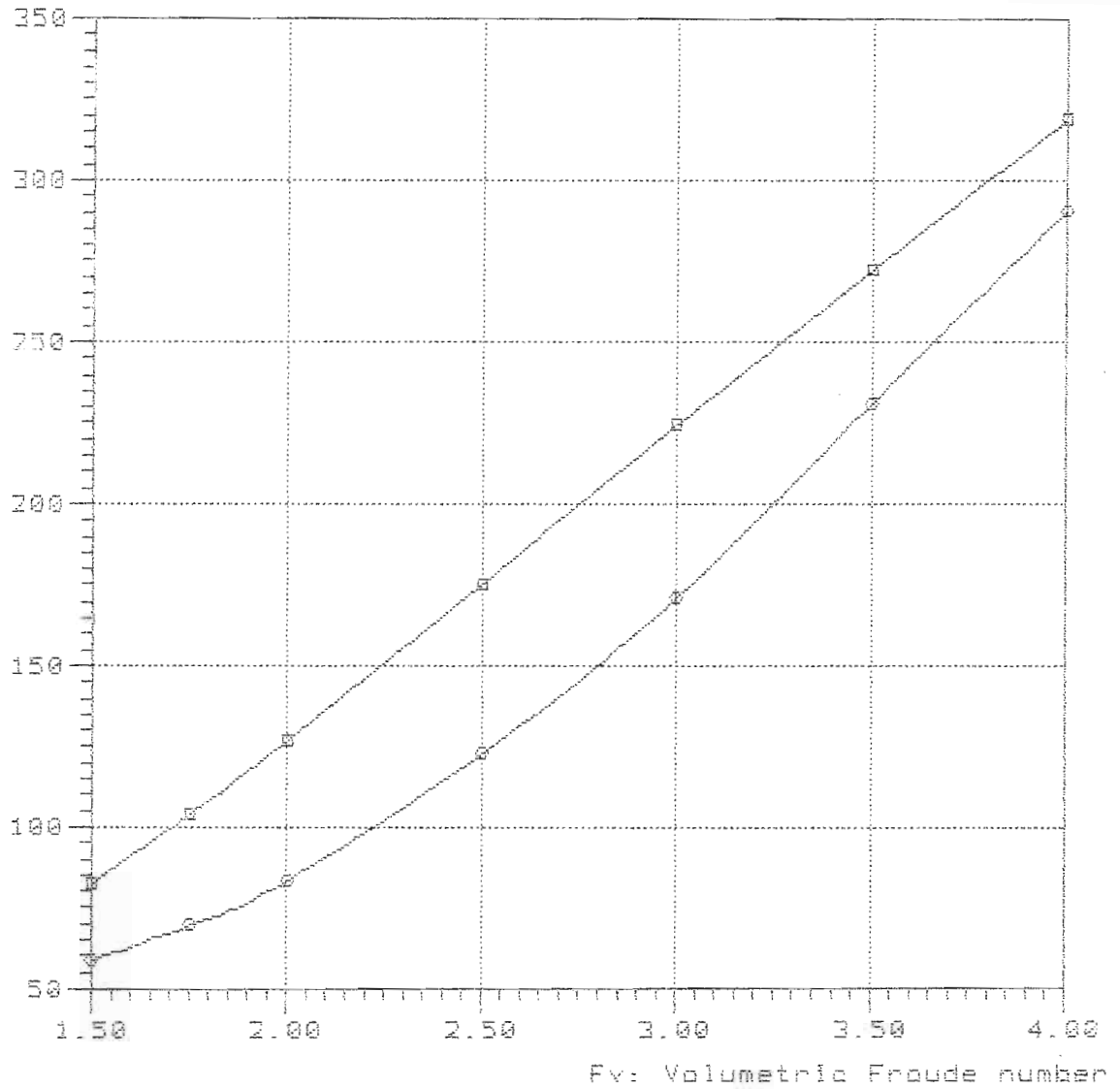


#### Curve legend

—■—

—○— TMB-63B Lpx/Bpx=6.640 Ap/Vol=9.980 Lpx/Ap=9.005 Lcg/Lpx=0.380

Rbare: Bare-hull resistance (lbs)



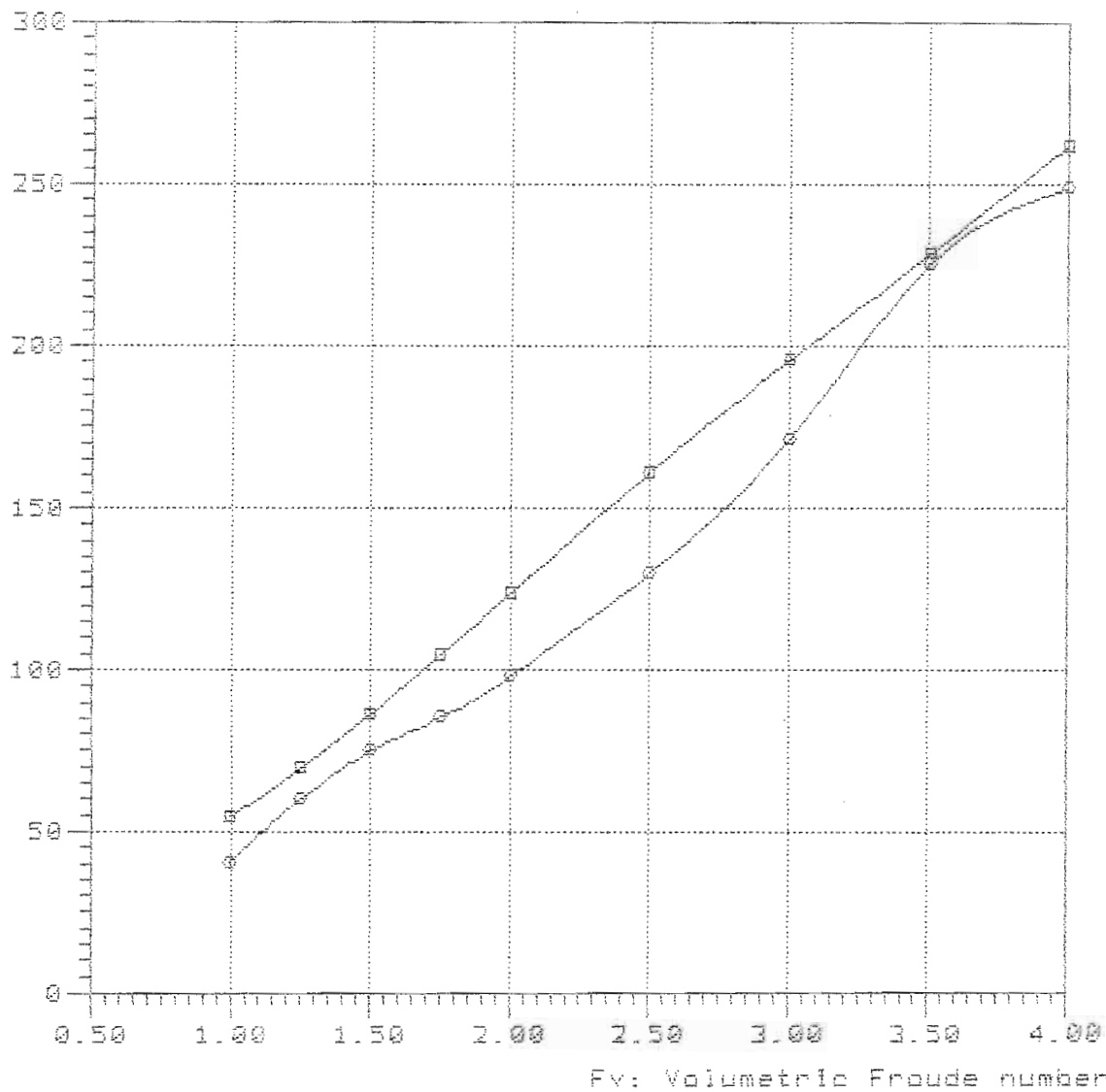
—■—

—●— TMB-65B Lpx/Bpx=6.640 Ap/Vol=9.980 Lpx/Ap=9.005 Lcg/Lpx=0.420

:

Model	=	5208
Ref	=	NSRDC
Friction	=	ATTC Ca=4e-4
Lpx	=	25.000 ft
Lwl	=	24.701 ft
Bpx	=	3.765 ft
Ap	=	69.406 sqft
Vcg	=	1.639 ft
Disp.	=	1000.00 Lb
Deadrise	=	37.40 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inç
Lpx/Bpx	=	6.640
Lpx/Ap	=	9.005
Ap /Vol	=	11.104
Lpx/Vol	=	10.030
Cvload	=	0.293
Lbload	=	0.014
Disp-Lpx	=	28.57
Twist Angle	=	7.00 degree

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=6.640 Ap/Vol=11.105 Lpx/Ap=9.005 Log/Lpx=0.300



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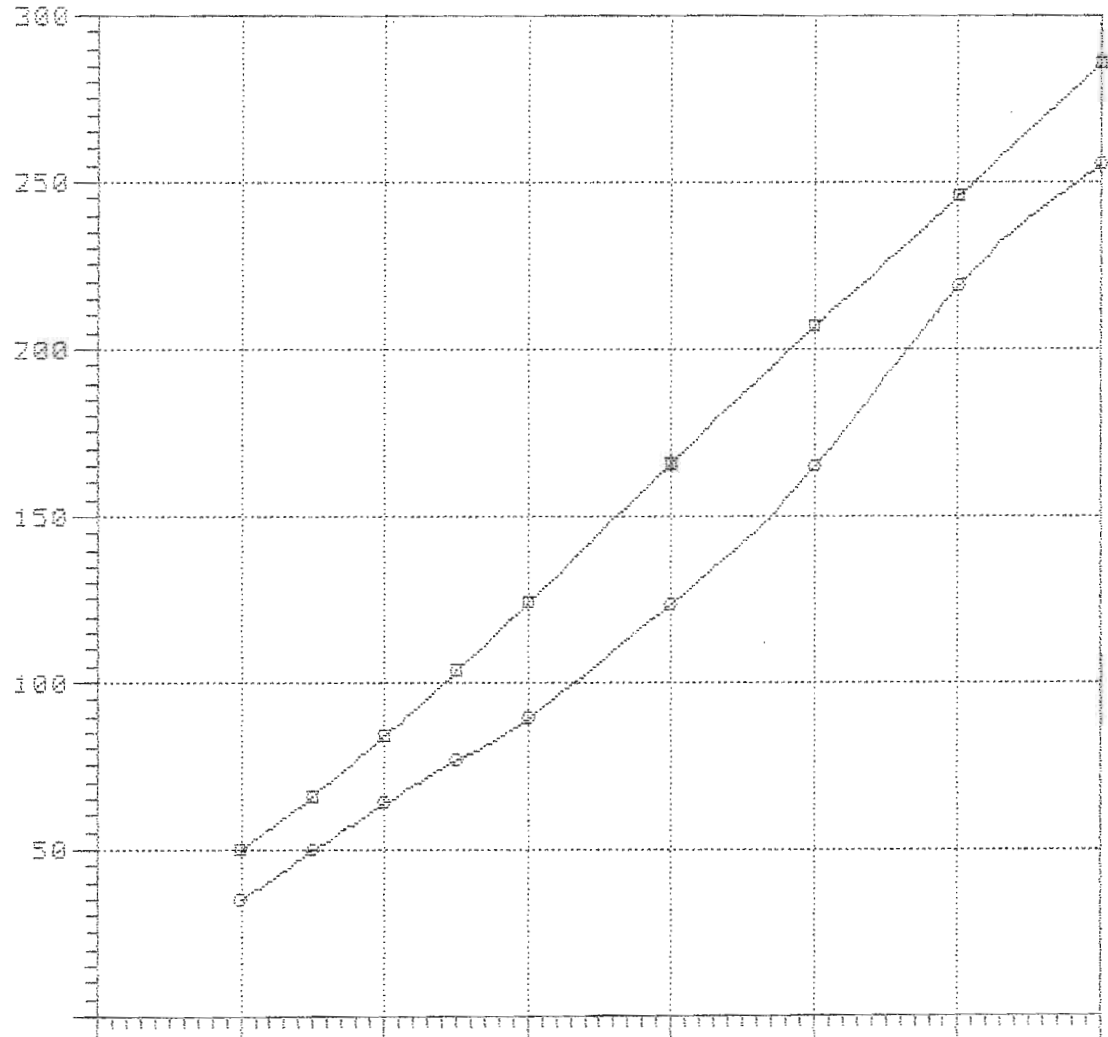
HydroComp, Inc.

File: 11-10-34.mdl

Date: 25 Feb 00

Time: 9:16

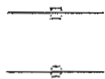
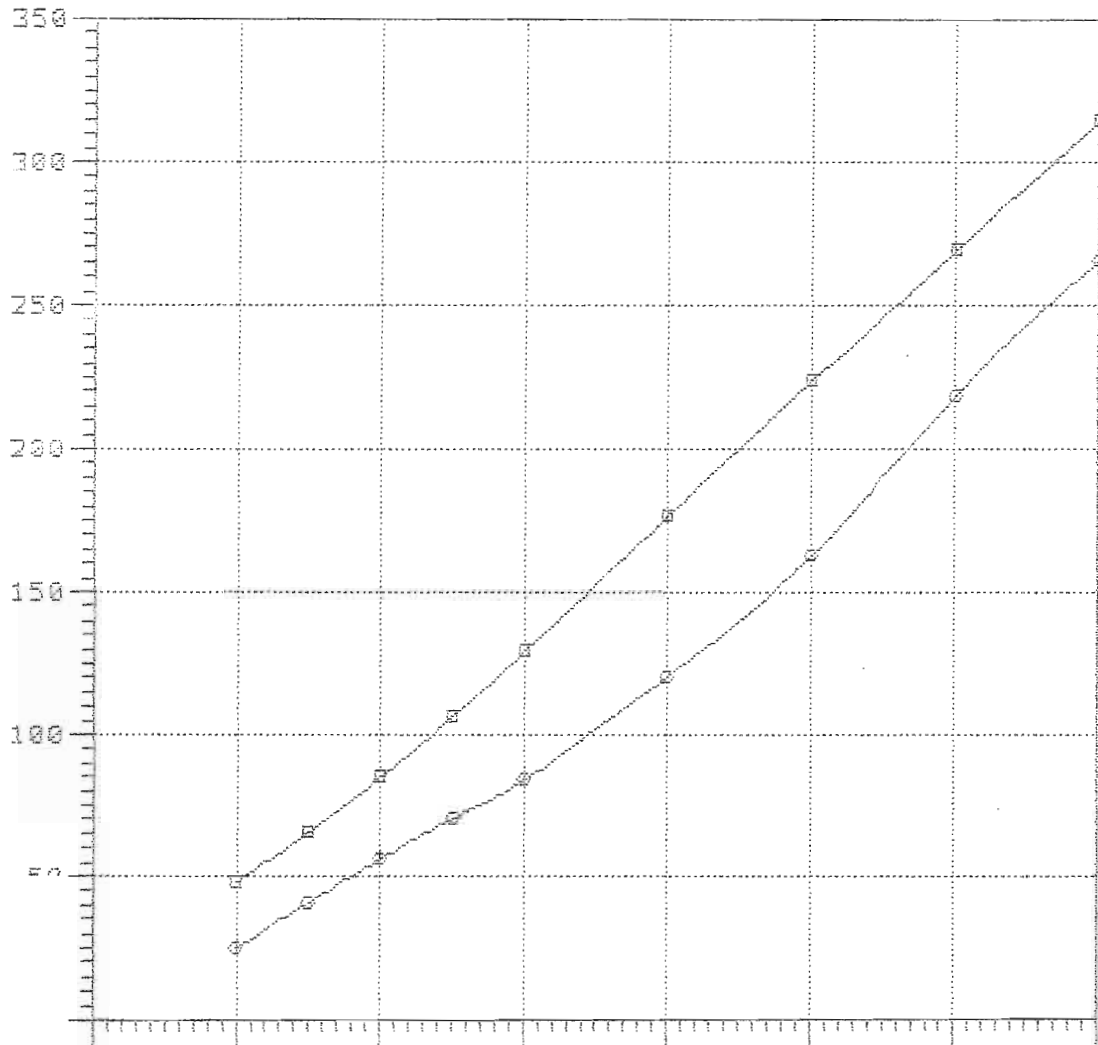
Rbare: Bare-hull resistance (lbe)



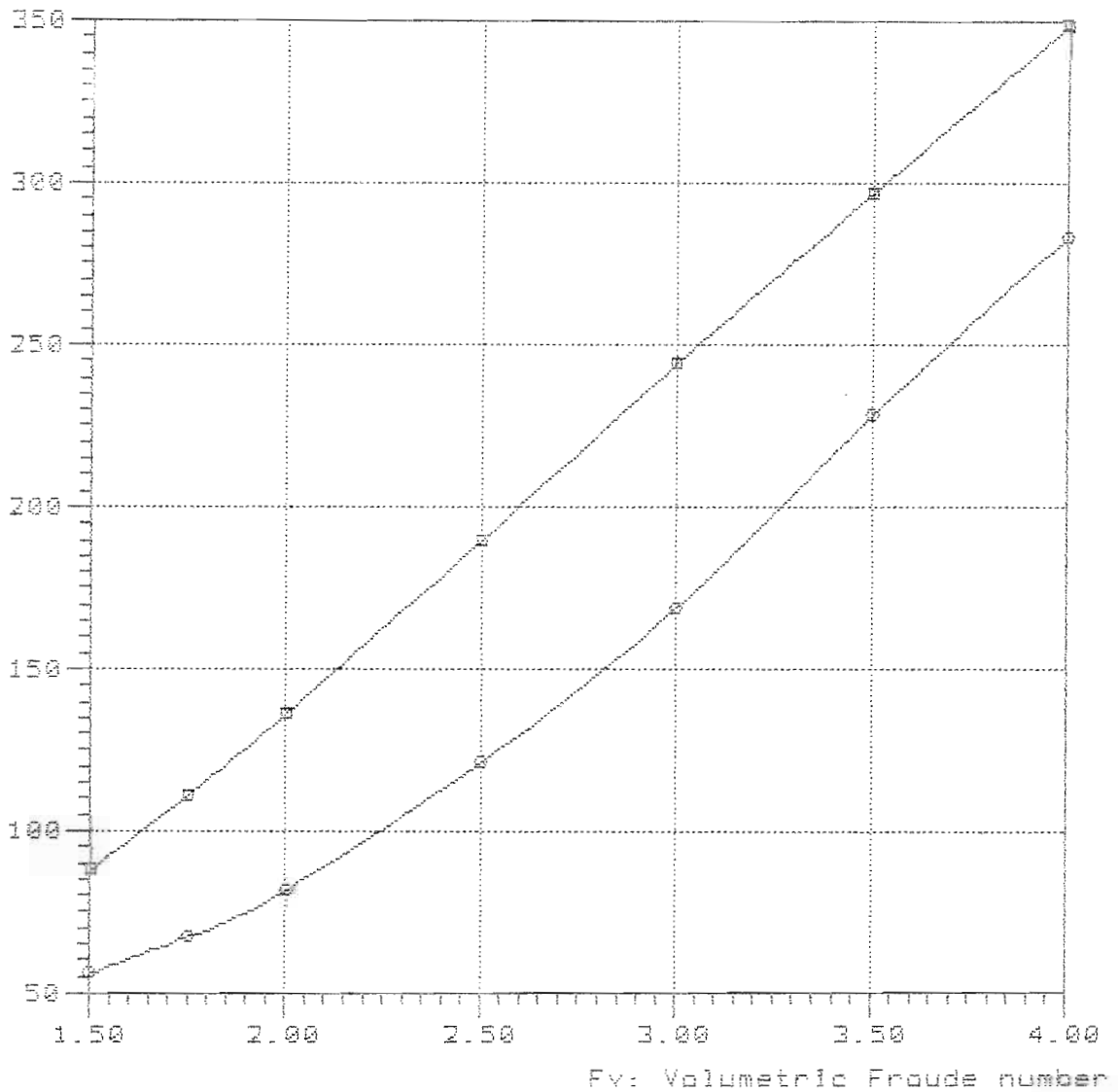
—■—

—○—

Rbare: Bare-hull resistance (lbs)



Rbare: Bare-hull resistance (lbs)



—□—

—○— TM2-65B Lpx/Epx=6.640 Ap/Val=11.165 Lpx/Ap=9.895 Log/Lpx=0.420

5236

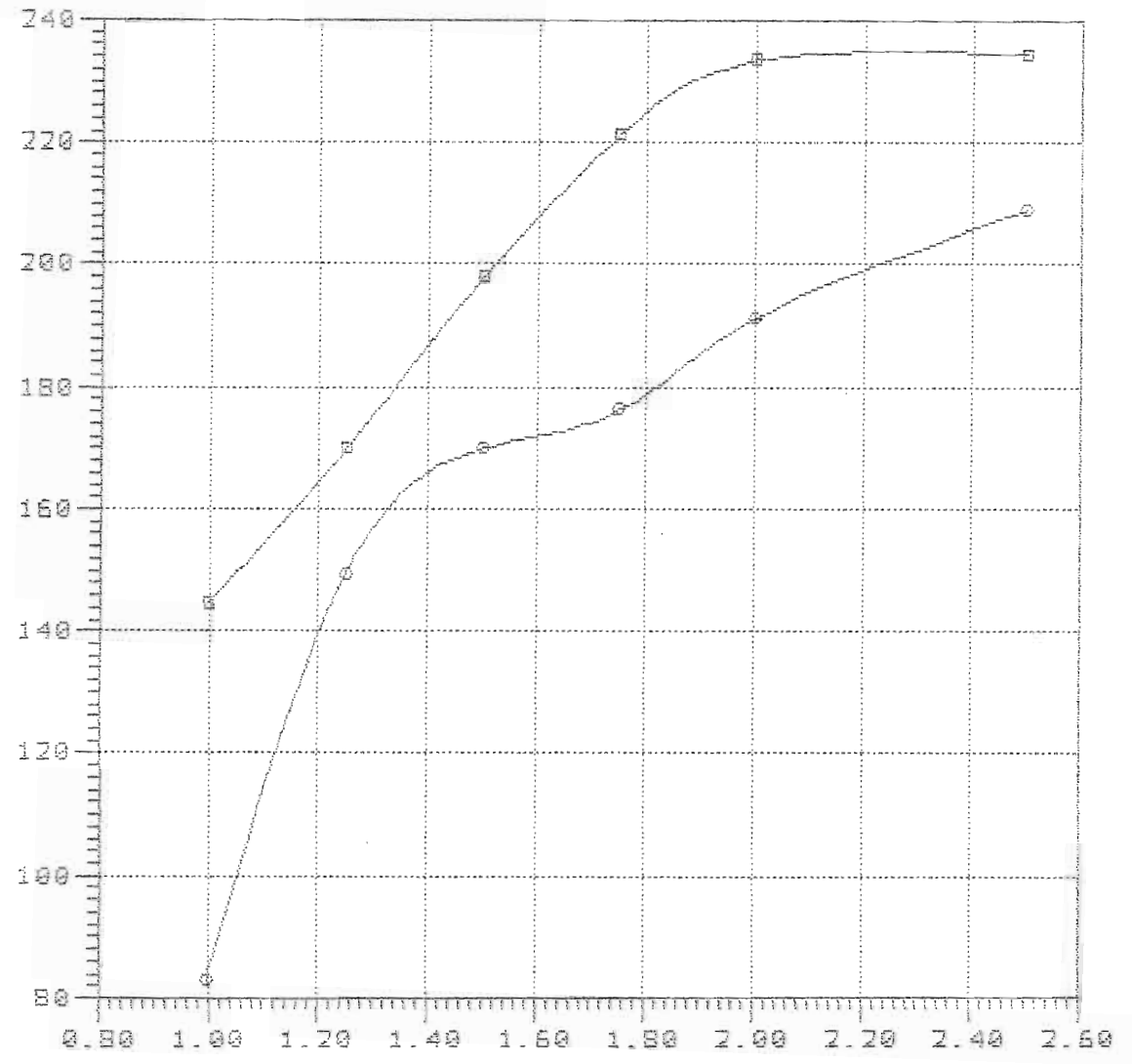
Model = 5236  
Ref = NSRDC  
Friction = ITTC  $Ca=4e-4$

Lpx = 12.500 ft  
Lwl = 12.350 ft  
Bpx = 2.665 ft  
Ap = 24.521 sqft  
Vcg = 1.157 ft  
Disp. = 1000.00 Lb  
Deadrise = 37.40 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 4.690  
Lpx/Ap = 6.372  
Ap /Vol = 3.923  
Lpx/Vol = 5.015  
Cvload = 0.826  
Lbload = 0.067  
Disp-Lpx = 228.57  
Twist Angle = 7.00 degree

**Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCİ DENİZCİLİĞE Aittir  
Bu doküman veya bunun bir kısmı  
üçüncü şahıslara verilemez. Kopya  
veya kopya edilemez ve her ne mak-  
sada olursa olsun maksadı dışında  
izinsiz kullanılamaz.**

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—  
—○— TMB-658 Lpx/Bpx=4.690 Ap/Vol=3.923 Lpx/As=6.372 Log/Lpx=0.340

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### Bare-hull resistance

vs.

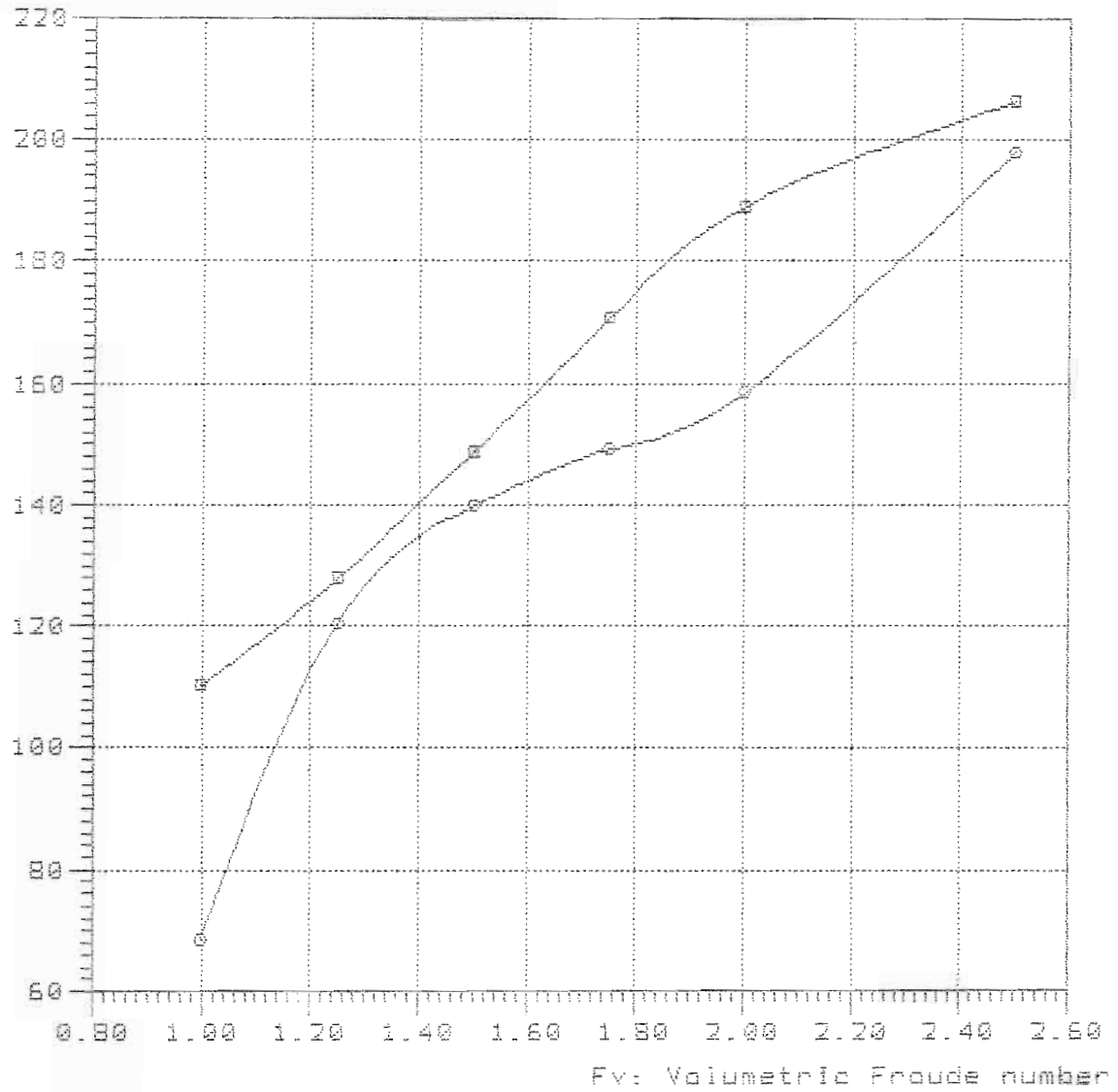
### Volumetric Froude number

File: 4-50-380.mdl

Date: 25 Feb 00

Time: 14:58

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-65B Lpx/Bpx=4.690 Ap/Vol=3.923 Lpx/Ap=6.372 Lcg/Lpx=0.380

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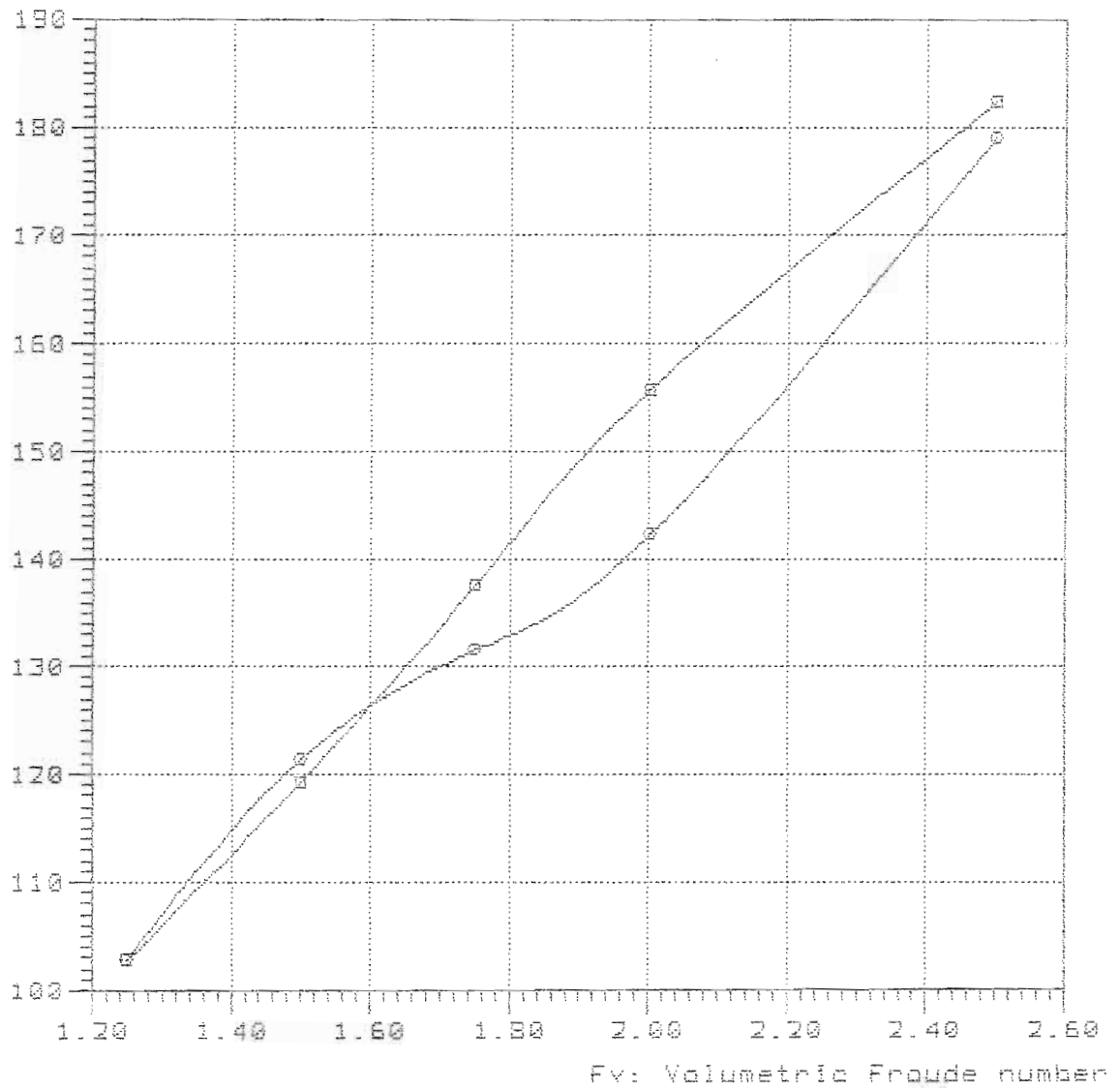
HydroComp, Inc.

File: 4-50-420.mdl

Date: 25 Feb 00

Time: 15:02

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=4.690 Ap/Val=3.923 Lpx/Rp=6.372 Log/Lpx=0.420



NavCad(tm) 3.1d

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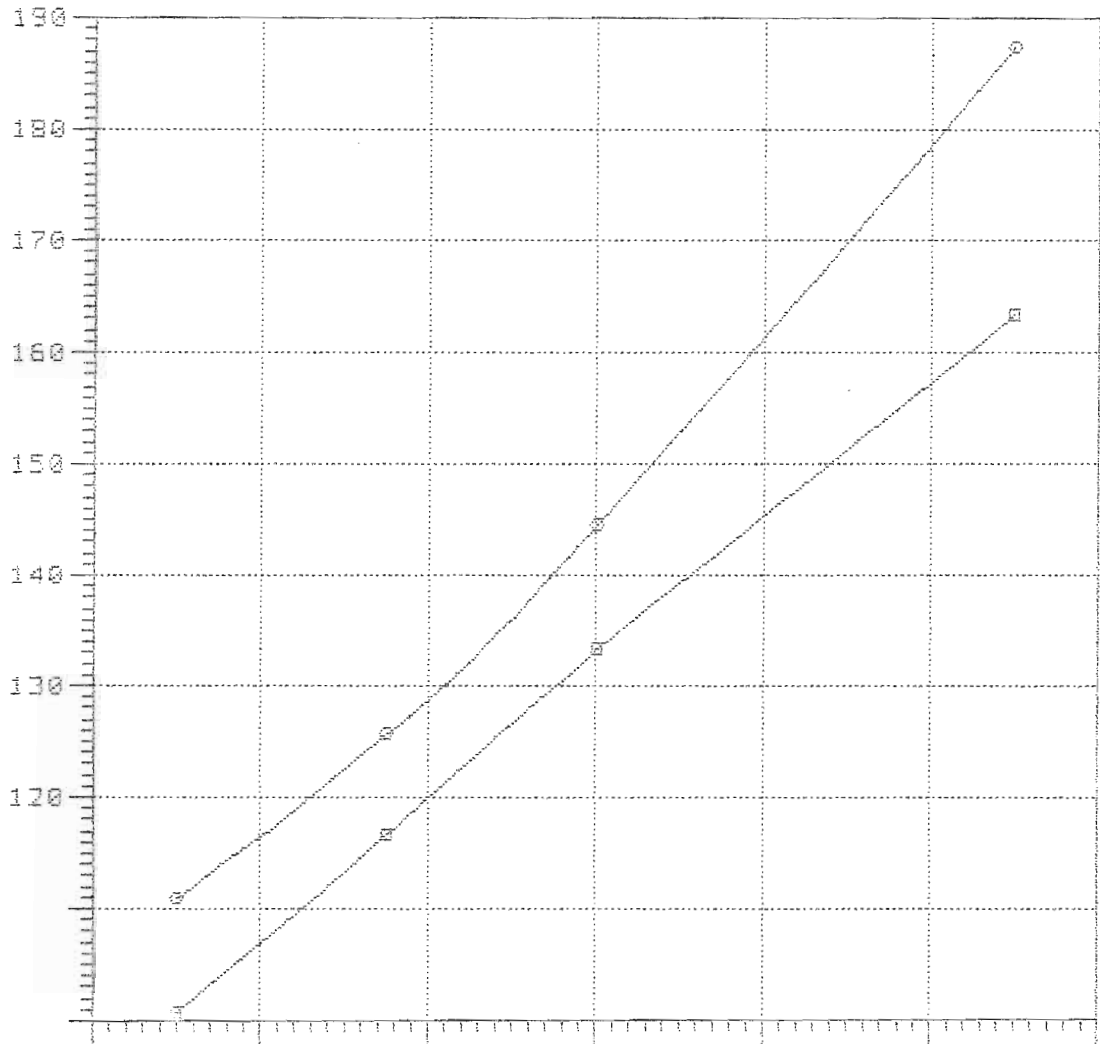
HydroComp, Inc.

File: 4-50-460.mdl

Date: 25 Feb 00

Time: 15:05

Rbare: Bare-hull resistance (lbs)



—□—

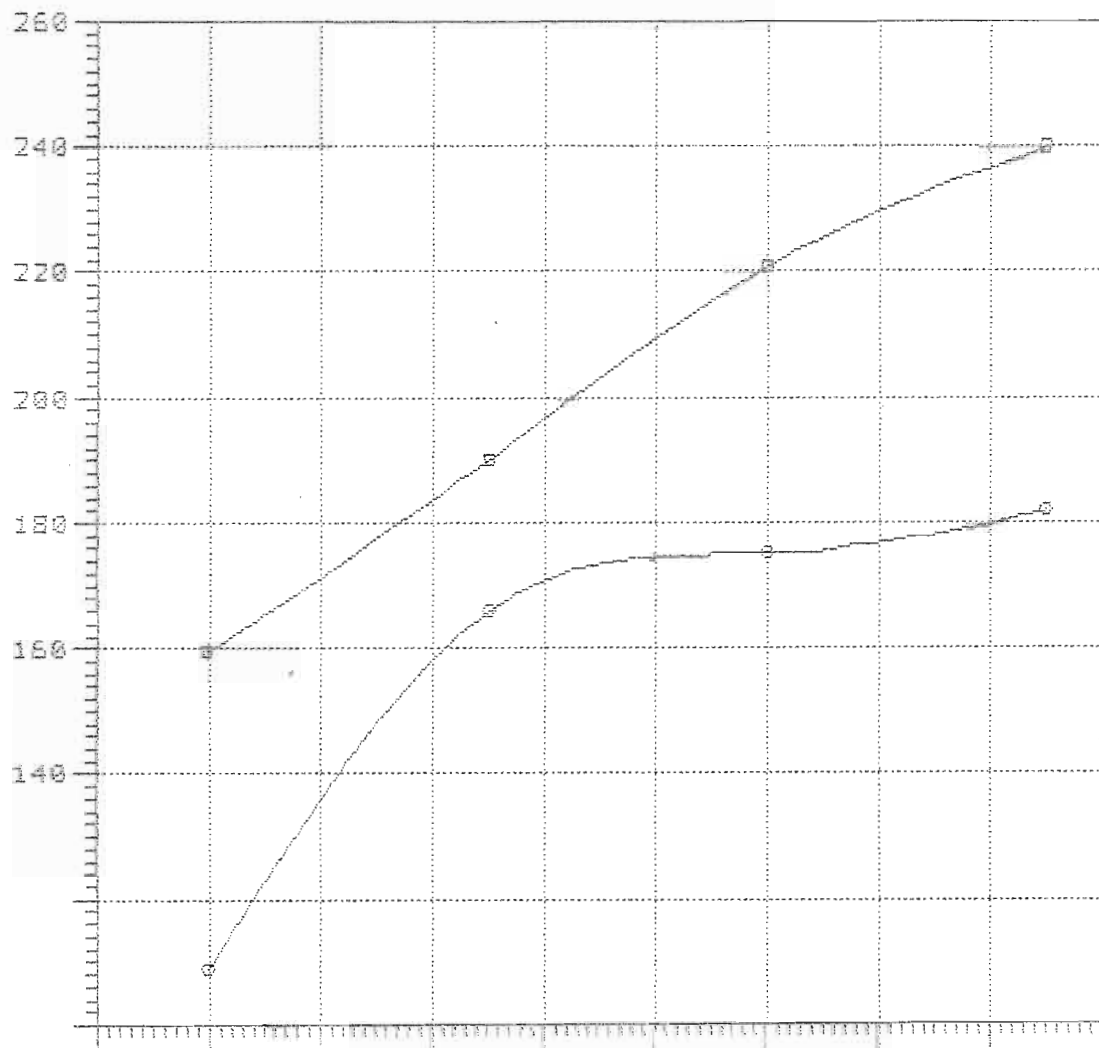
—○—

Model = 5236  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 13.700 ft  
Lwl = 13.536 ft  
Bpx = 2.921 ft  
Ap = 29.455 sqft  
Vcg = 1.268 ft  
Disp. = 1000.00 Lb  
Deadrise = 37.40 degree  
Twist Angle = 7.00 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 4.690  
Lpx/Ap = 6.372  
Ap /Vol = 4.712  
Lpx/Vol = 5.496  
Cvload = 0.627  
Lbload = 0.051  
Disp-Lpx = 173.616

Rbare: Bare-hull resistance (lbs)

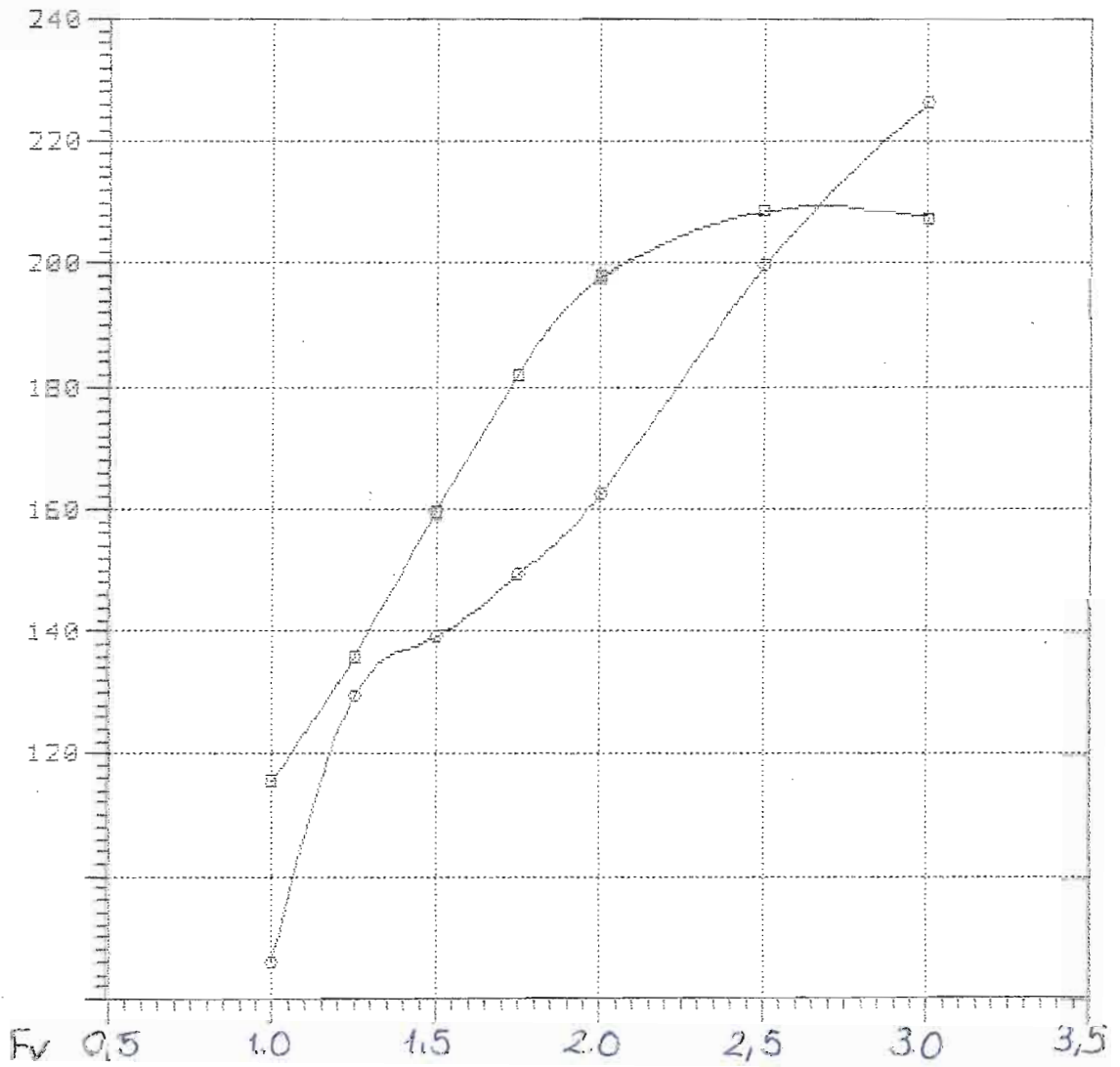


—○—  
—○—

NavCad(tm) 3.1d  
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HydroComp, Inc.

File: 5-55-340.mdl  
Date: 25 Feb 00  
Time: 15:12

Rbare: Bare-hull resistance (lbe)



—□—  
—○—

NavCad(tm) 3.1d

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Bare-hull resistance

vs.

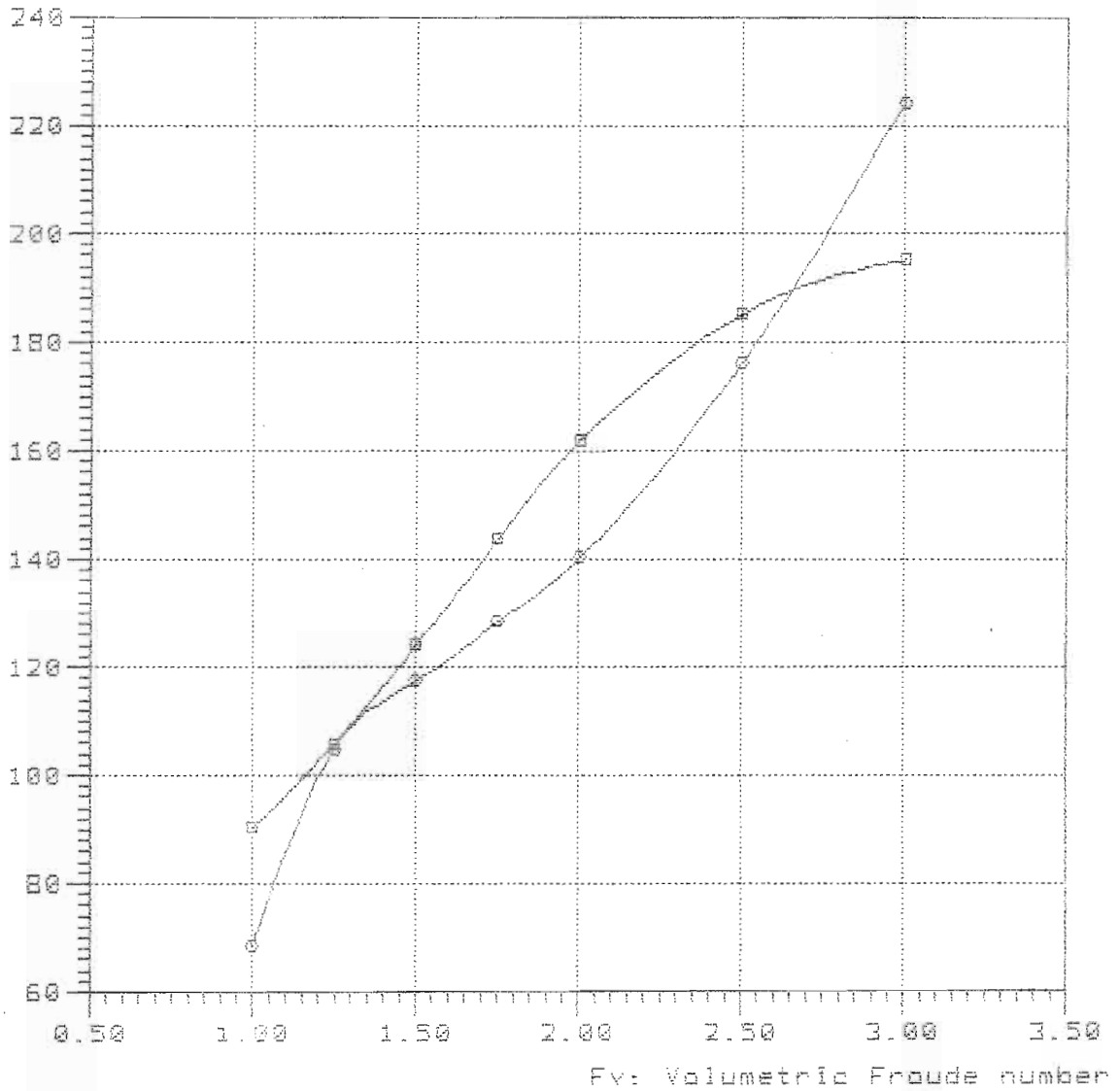
Volumetric Froude number

File: 5-55-380.mdl

Date: 25 Feb 88

Time: 15:38

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—○— TMB-658 Lpx/Bpx=4.690 Ap/Vol=4.713 Lpx/Bp=6.372 Log/Lpx=0.380

NavCad(tm) 3.1d

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HydroComp, Inc.

### Bare-hull resistance

vs.

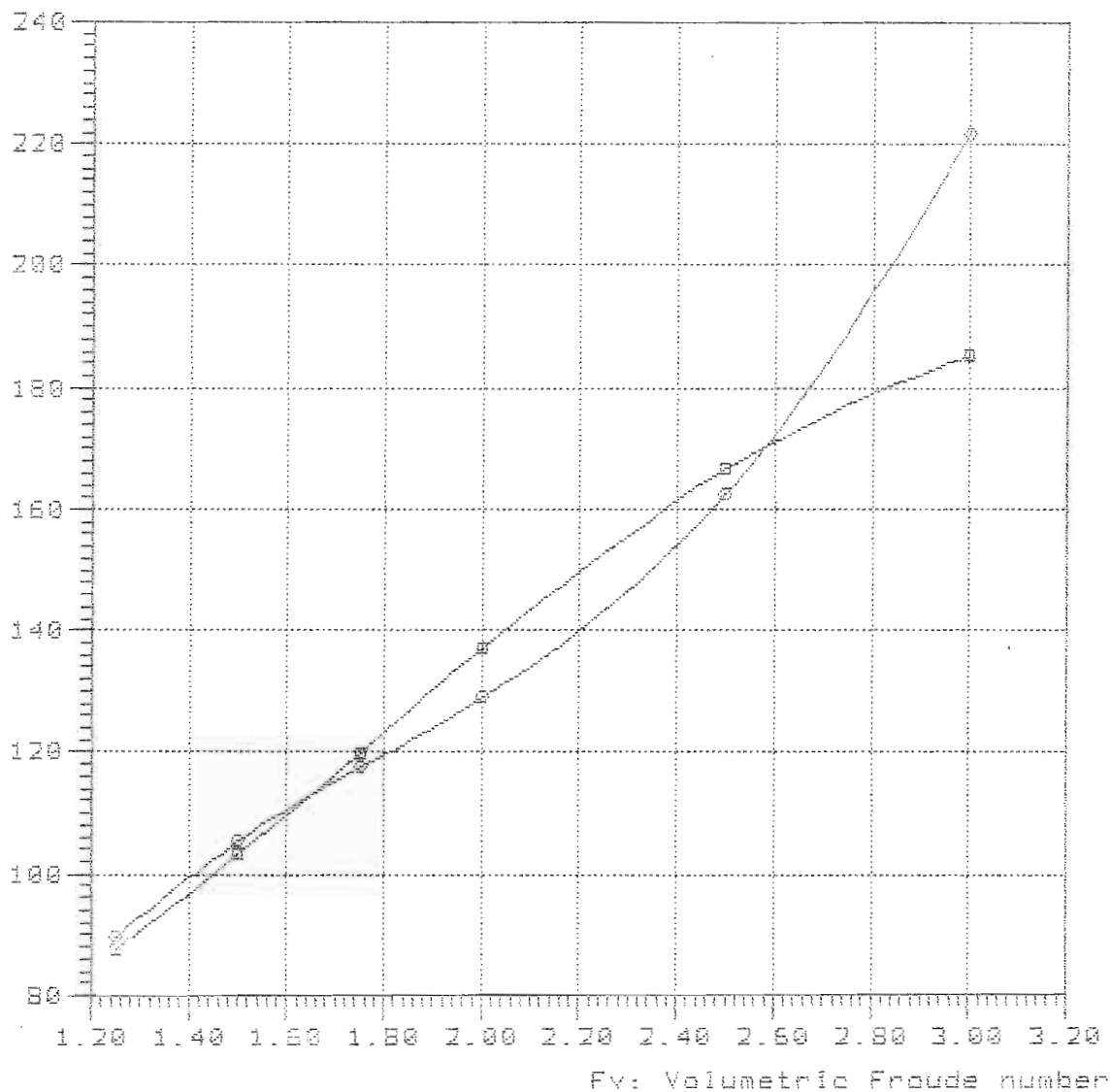
### Volumetric Froude number

File: 5-55-420.mdl

Date: 25 Feb 00

Time: 15:41

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-65B Lpx/Bpx=4.690 Ap/Vol=4.713 Lpx/Rp=6.372 Log/Lpx=0.420

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

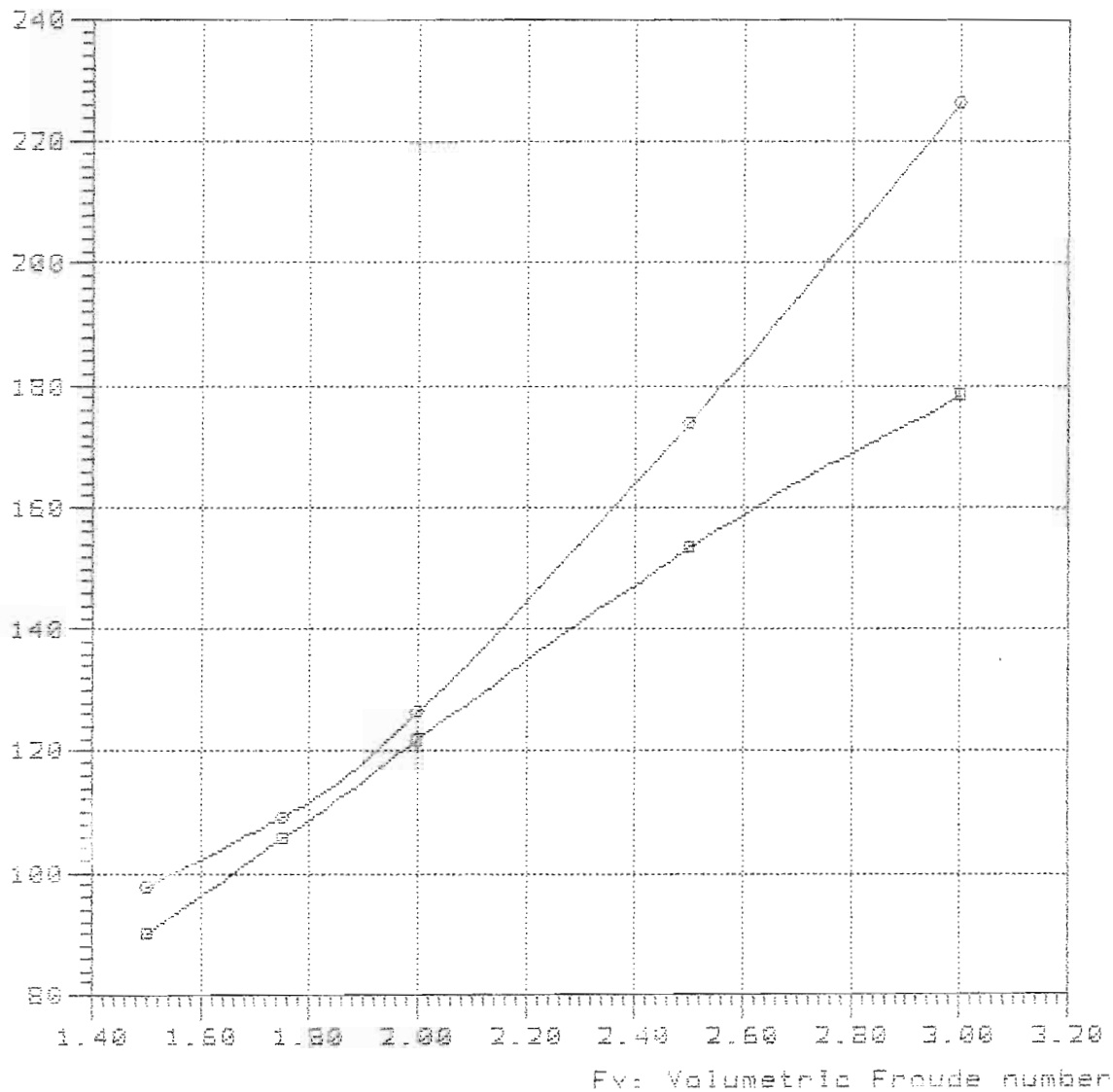
### Volumetric Froude number

File: 5-55-460.mdl

Date: 25 Feb 00

Time: 15:44

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-65B Lpx/Bpx=4.658 Ap/Vol=4.713 Lpx/Rp=6.372 Lcg/Lpx=0.460

Model = 5236  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 15.000 ft  
Lwl = 14.820 ft  
Bpx = 3.198 ft  
Ap = 35.311 sqft  
Vcg = 1.388 ft  
Disp. = 1000.00 Lb

Deadrise = 37.40 degree  
Twist Angle= 7.00 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 4.690  
Lpx/Ap = 6.372  
Ap /Vol = 5.649  
Lpx/Vol = 6.018  
Cvload = 0.478  
Lbload = 0.039  
Disp-Lpx = 132.275



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### Bare-hull resistance

vs.

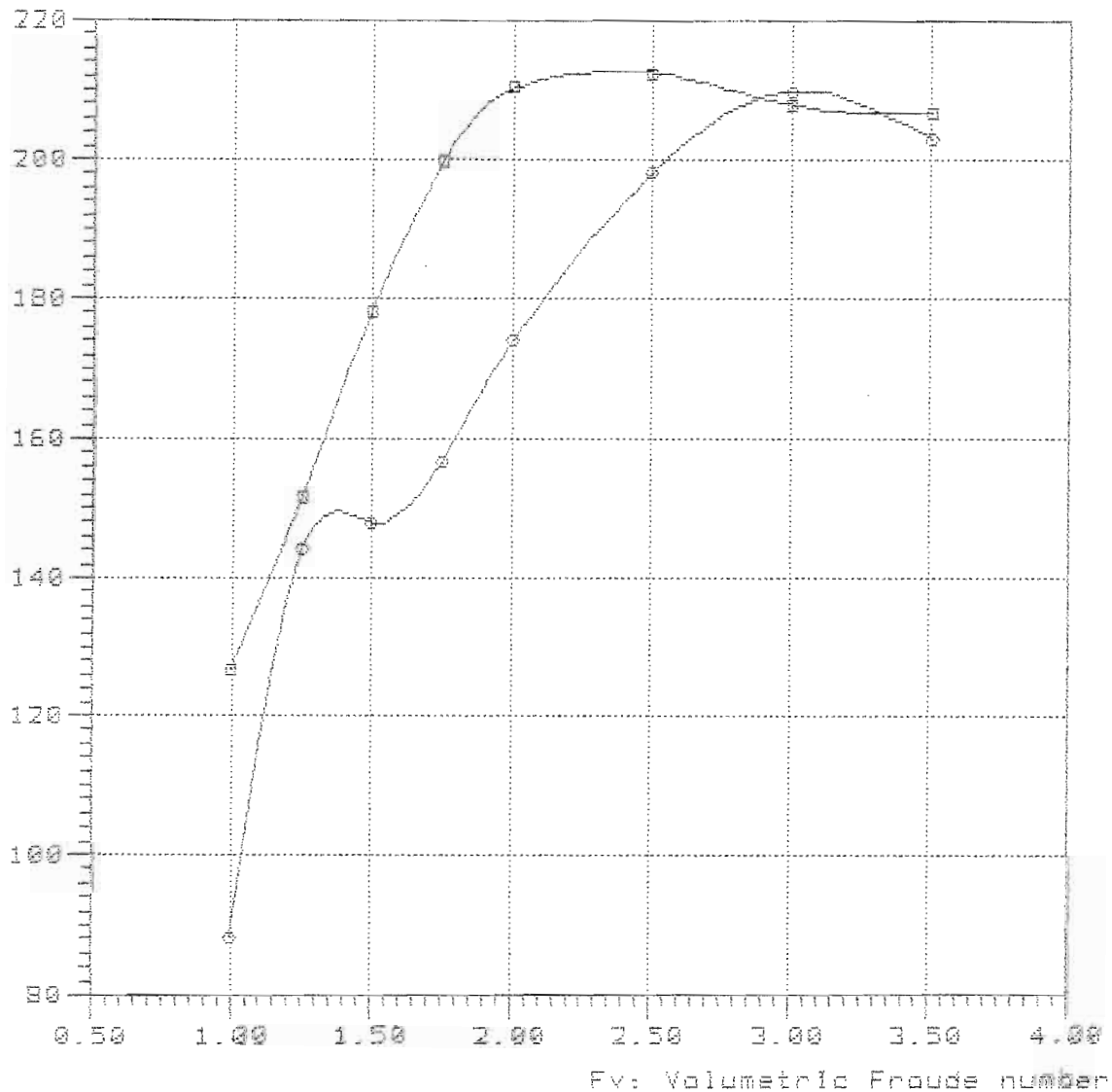
### Volumetric Froude number

File: 6-60-300.mdl

Date: 25 Feb 00

Time: 13:48

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-65B Lpx/Sp=4.690 Ap/Vol=5.650 Lpx/Sp=6.372 Leg/Lpx=0.300

NavCad(tm) 3.1d

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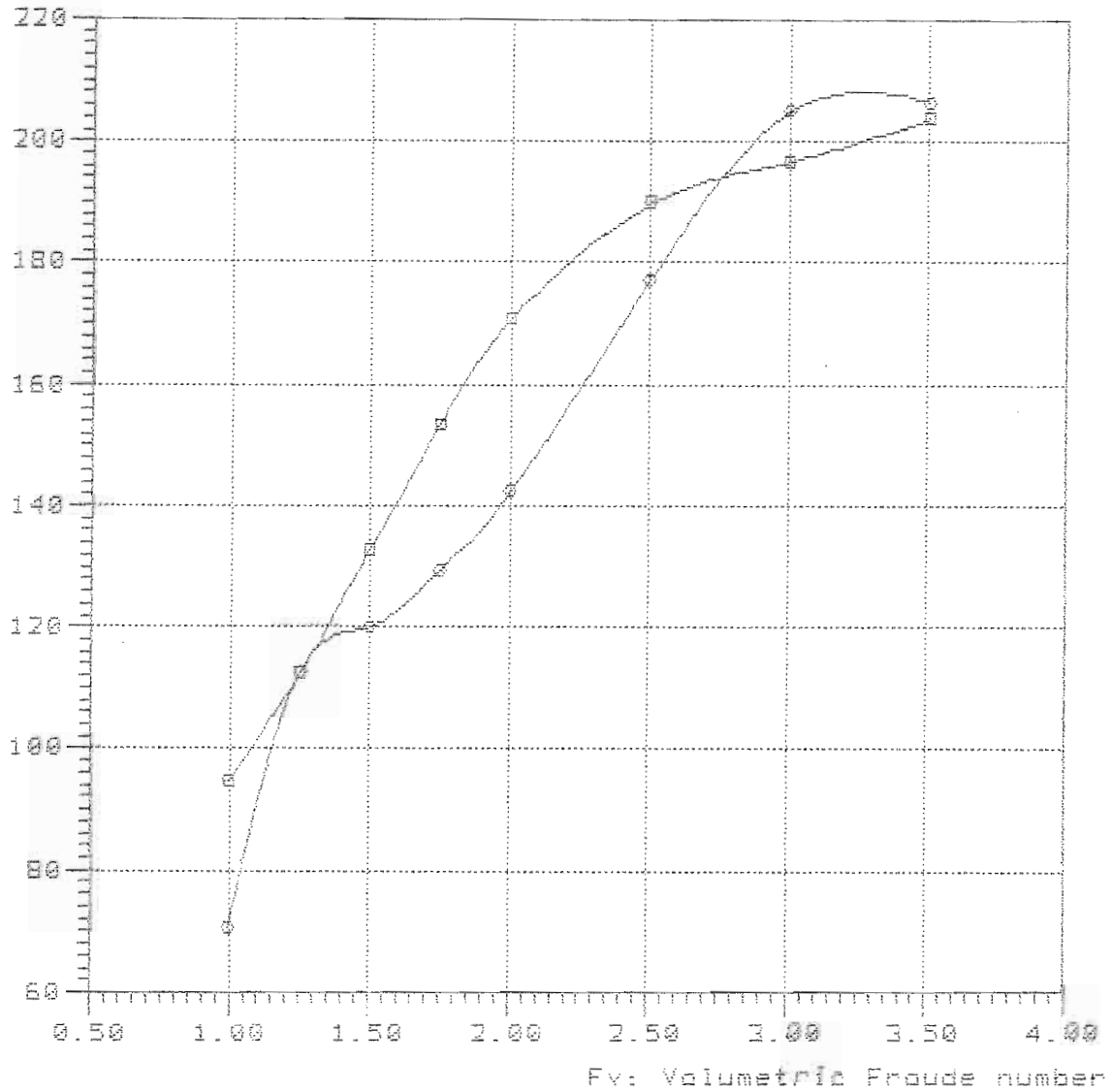
HydroComp, Inc.

File: E-00-340.mdl

Date: 25 Feb 00

Time: 15:51

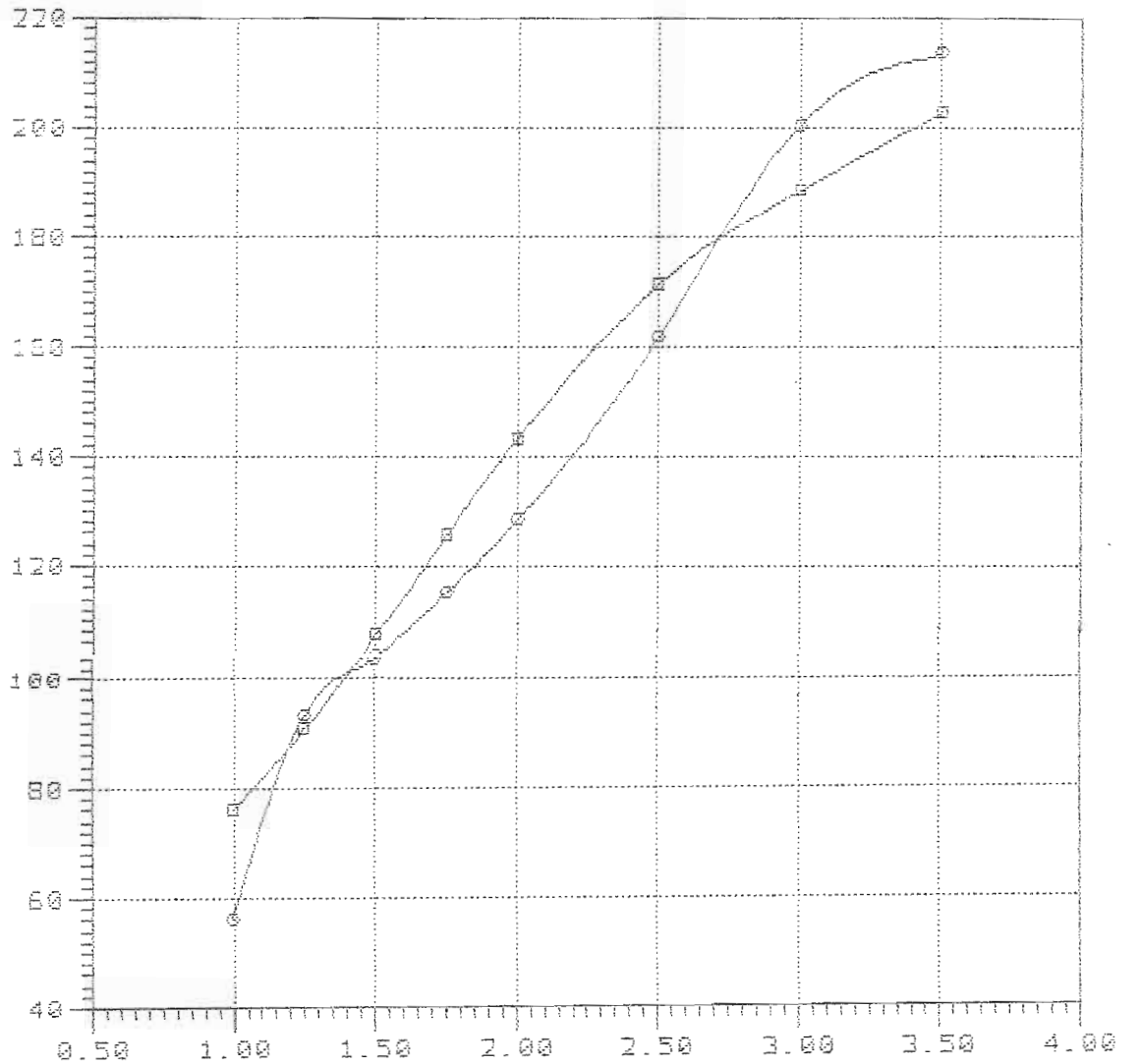
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65B Lpx/Bpx=4.650 Ap/Vol=5.650 Lpx/Ap=6.372 Log/Lpx=0.348

Rbare: Bare-hull resistance (lbs)

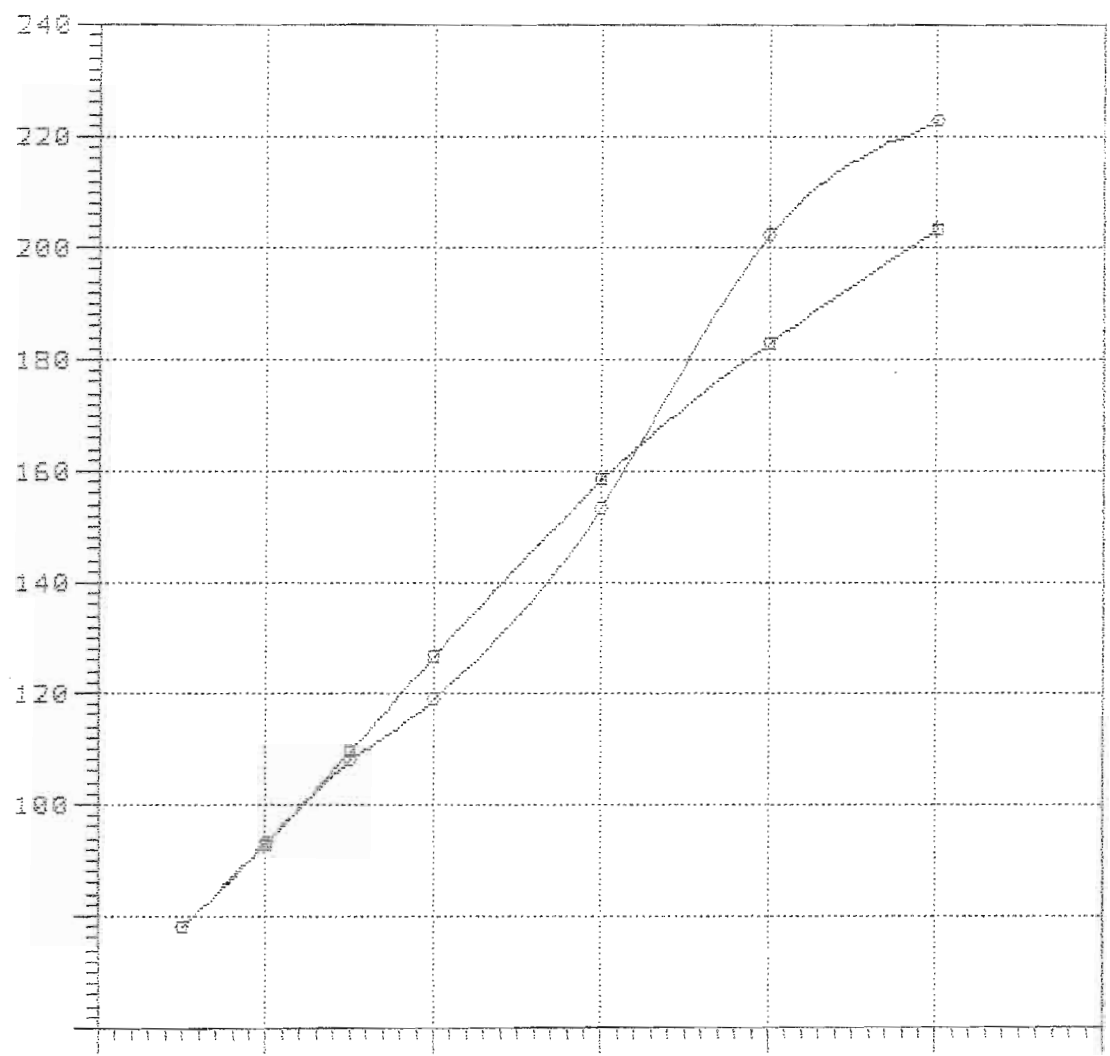


Fv: Volumetric Froude number

—■—

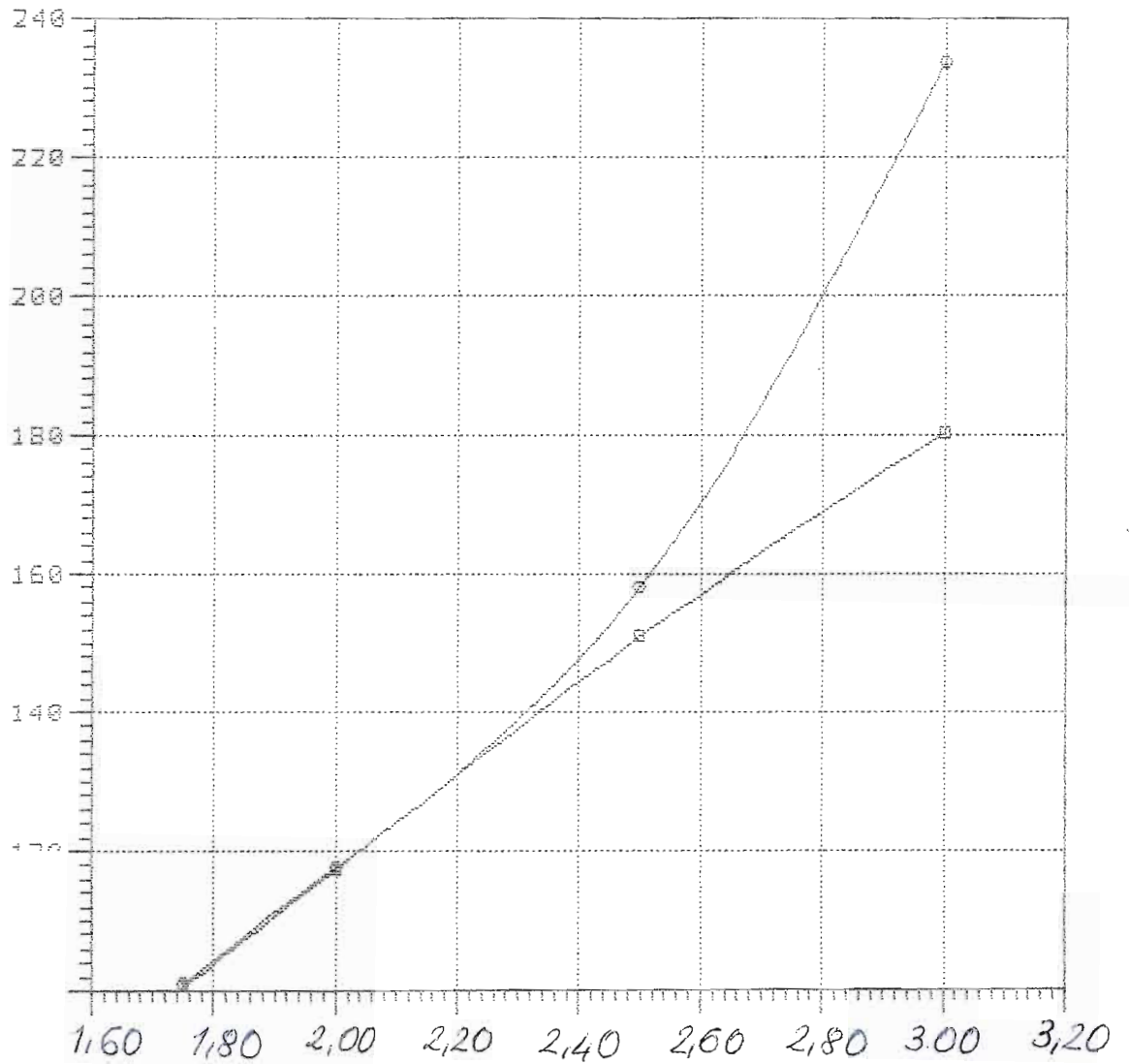
—●— TMB-65B Lpx/Bpx=4.690 Ap/Vol=5.650 Lpx/Ap=6.372 Log/Lpx=0.380

Rbare: Bare-hull resistance (lbs)



—■—  
—○—

Rbare: Bare-hull resistance (lbe)



—□—  
—□—

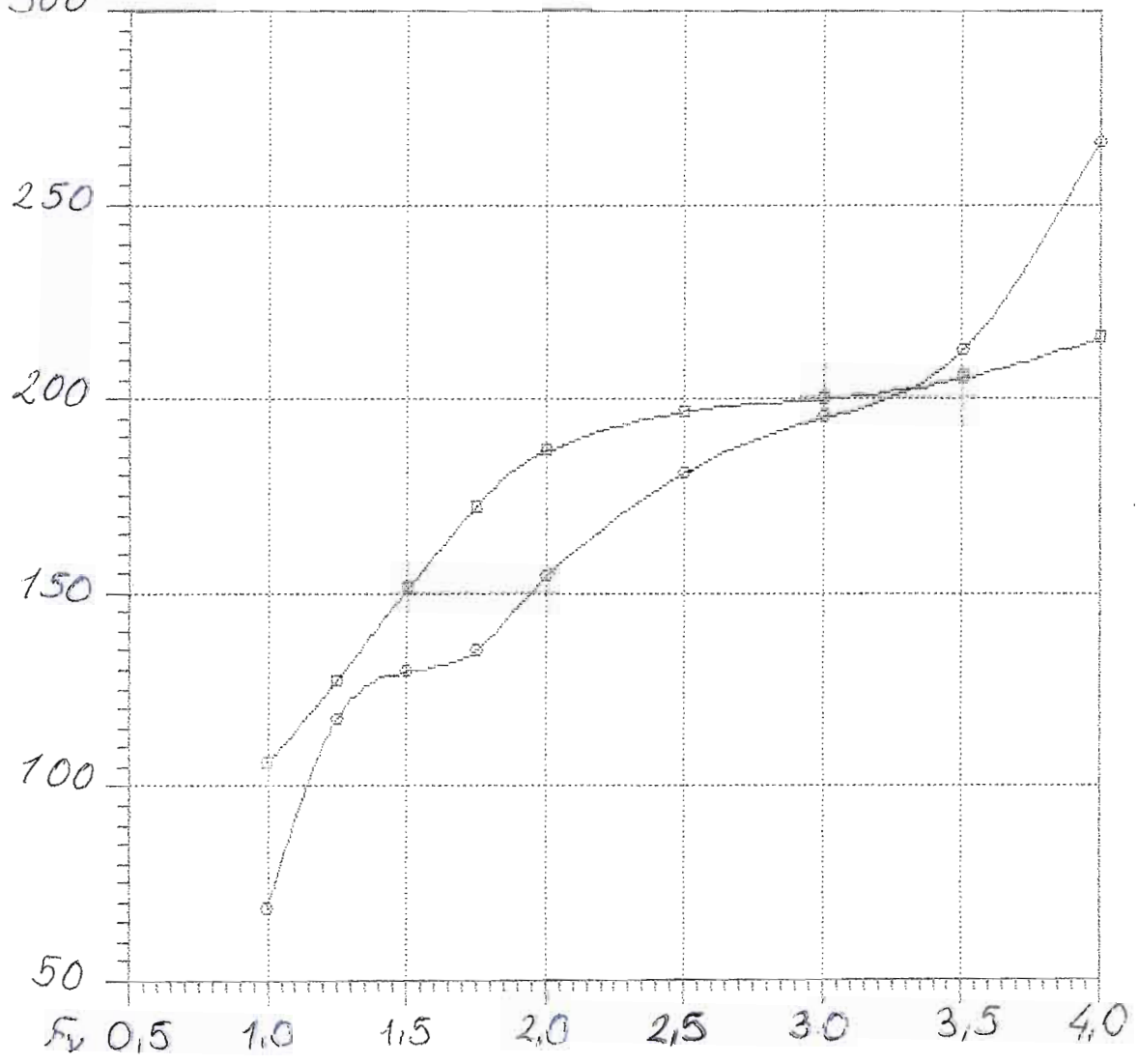
Model = 5236  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 16.200 ft  
Lwl = 16.006 ft  
Bpx = 3.454 ft  
Ap = 41.186 sqft  
Vcg = 1.499 ft  
Disp. = 1000.00 Lb  
Deadrise = 37.40 degree  
Twist Angle= 7.00 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 4.690  
Lpx/Ap = 6.372  
Ap /Vol = 6.589  
Lpx/Vol = 6.499  
Cvload = 0.379  
Lbload = 0.031  
Disp-Lpx = 105.004

7-65-300

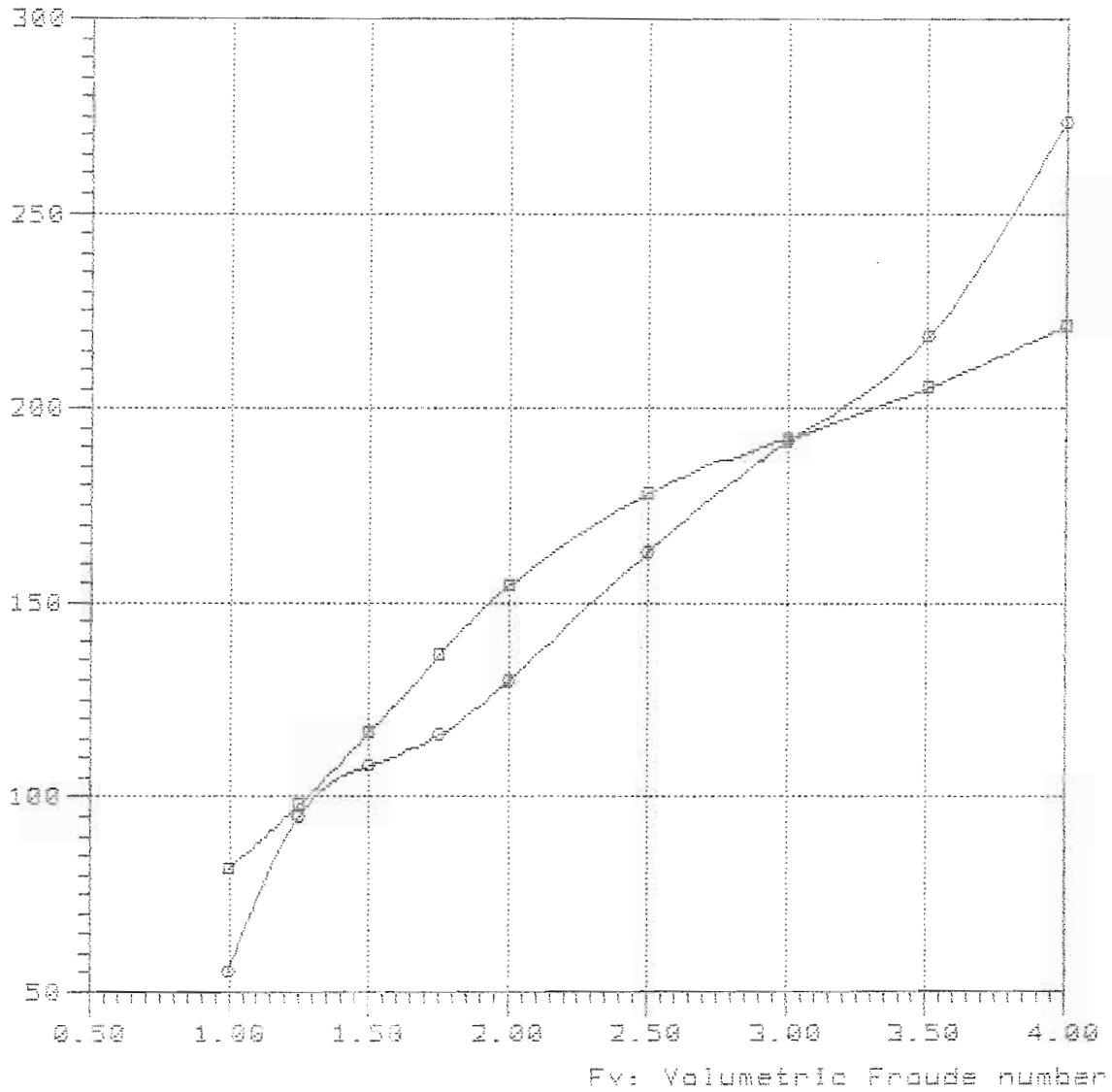
300 Lbs



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File: 7-65-340.mdl  
Date: 25 Feb 00  
Time: 16:34

Rbare: Bare-hull resistance (lbs)

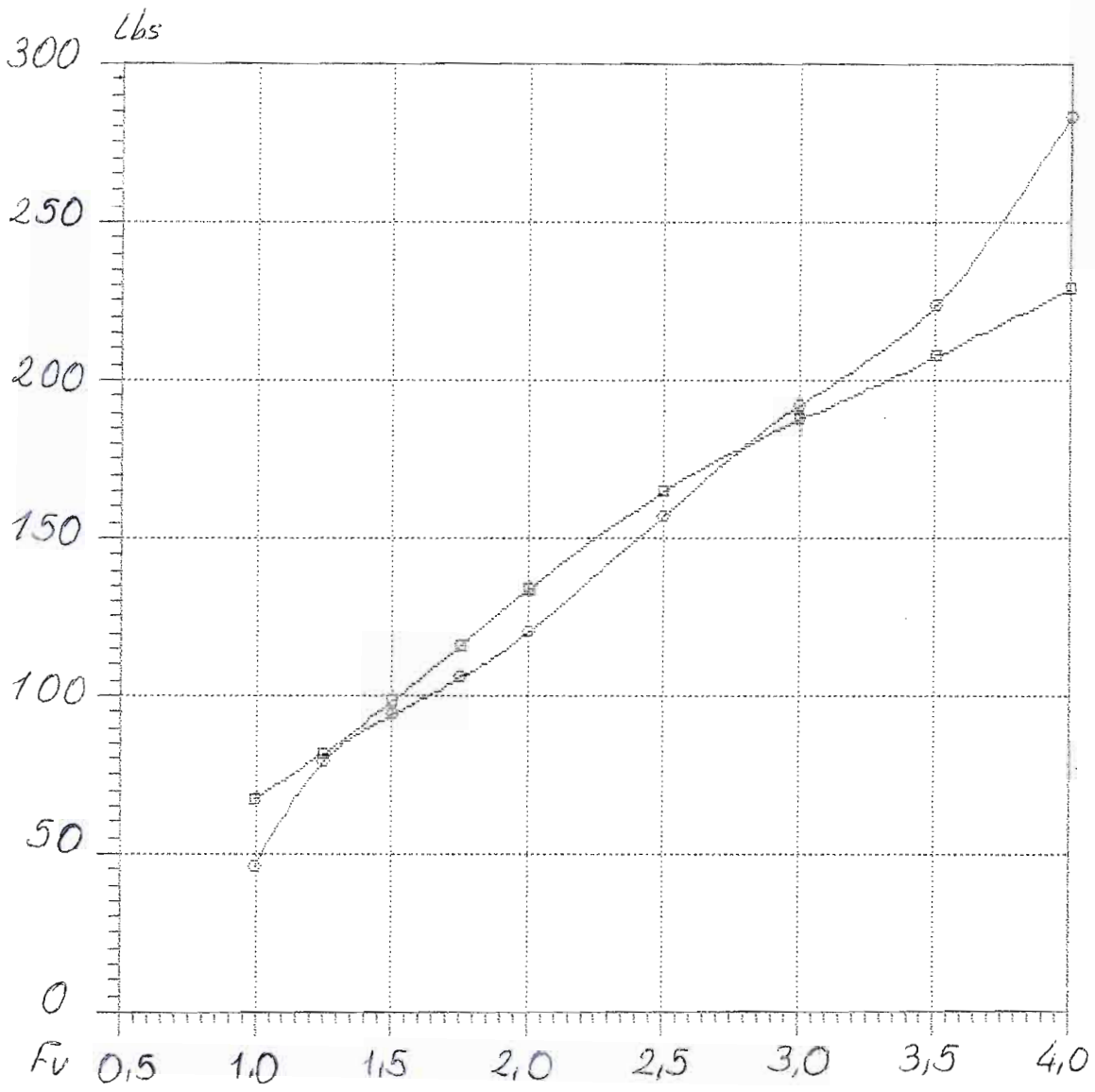


—■—

—●— TMB-65B Lpx/Bpx=4.690 Ap/Vol=6.590 Lpx/Ap=6.372 Log/Lpx=0.340



7-65-380



—□—  
—○—

NavCad(tm) 3.1d

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HydroComp, Inc.

Bare-hull resistance

vs.

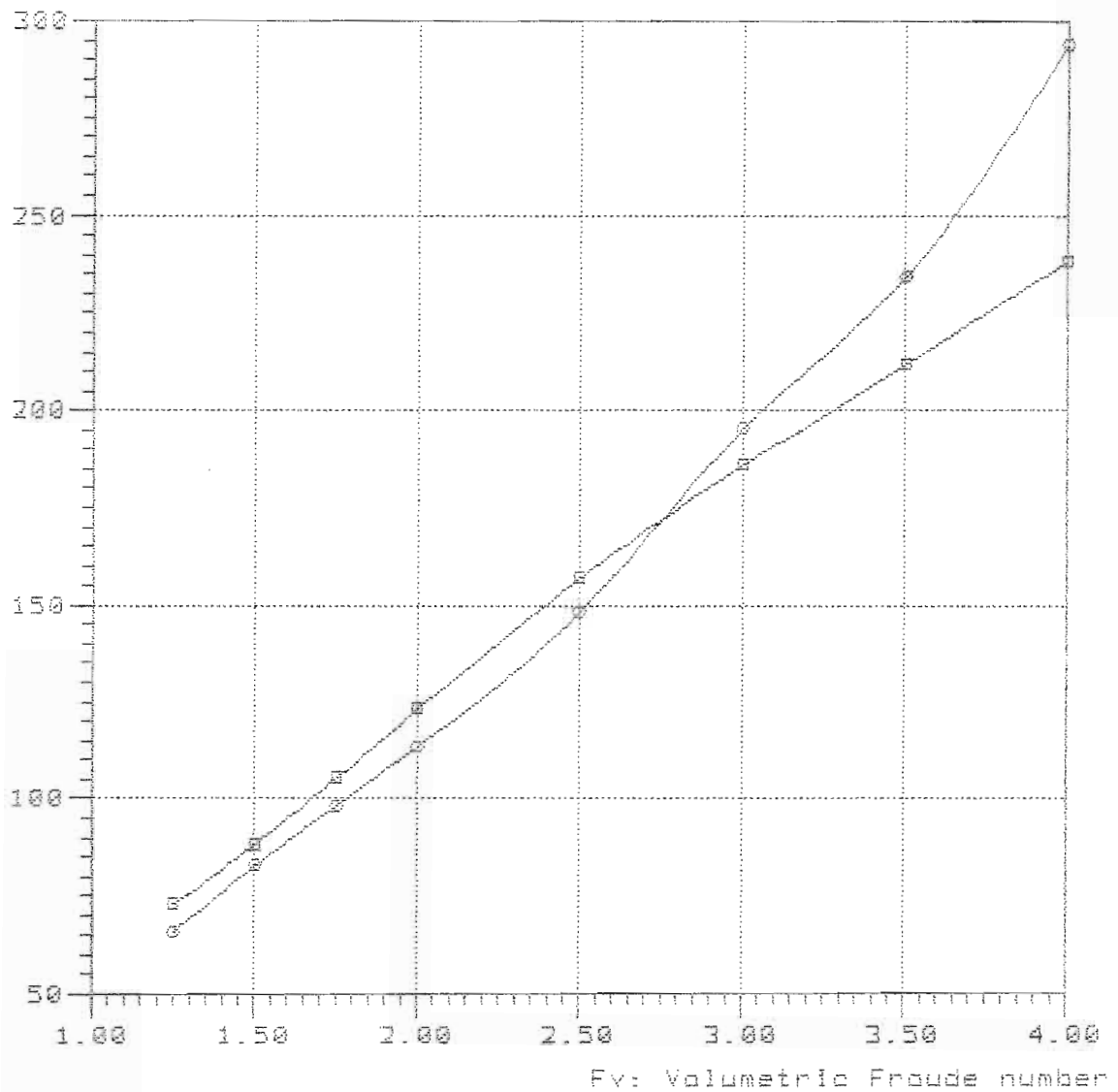
Volumetric Froude number

File: 7-65-420.mdl

Date: 25 Feb 00

Time: 16:40

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—●— TMB-65B Lpx/Bpx=4.690 Ap/Vol=6.590 Lpx/As=6.372 Log/Lpx=0.420

Model = 5236  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 17.500 ft  
Lwl = 17.290 ft  
Bpx = 3.731 ft  
Ap = 48.062 sqft  
Vcg = 1.620 ft  
Disp. = 1000.00 Lb  
Deadrise = 37.40 degree  
Twist Angle= 7.00 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 4.690  
Lpx/Ap = 6.372  
Ap /Vol = 7.689  
Lpx/Vol = 7.021  
Cvload = 0.301  
Lbload = 0.025  
Disp-Lpx = 83.299

NavCad(tm) 3.1d

### Bare-hull resistance

File: 8-70-300.mdl

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vs.

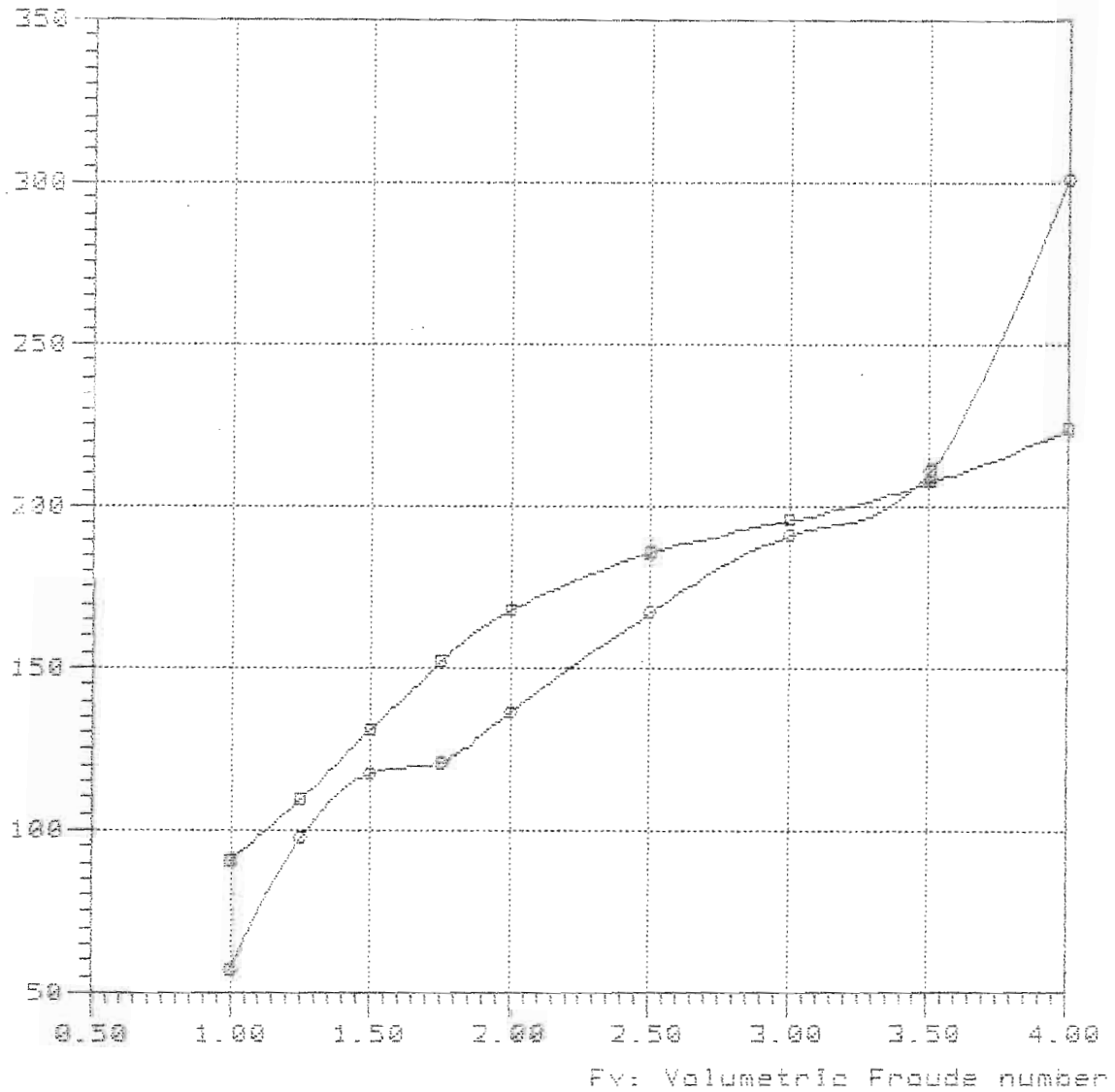
Date: 25 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 16:43

Rbare: Bare-hull resistance (lbs)

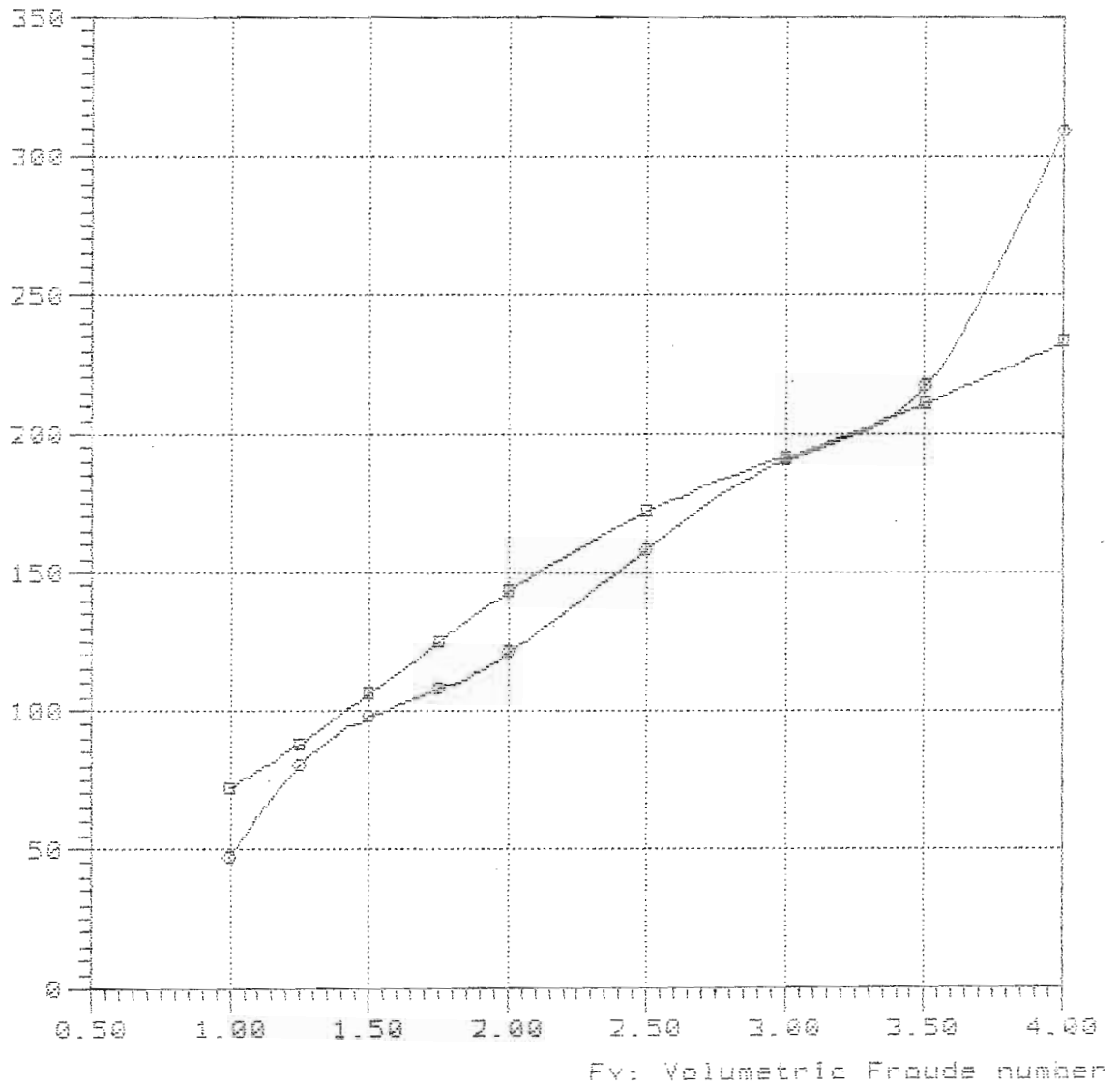


#### Curve legend

—■—

—●— TMB-65B Lpx/Sp=4.690 Rp/Vol=7.650 Lpx/Rp=6.372 Lcg/Lpx=0.300

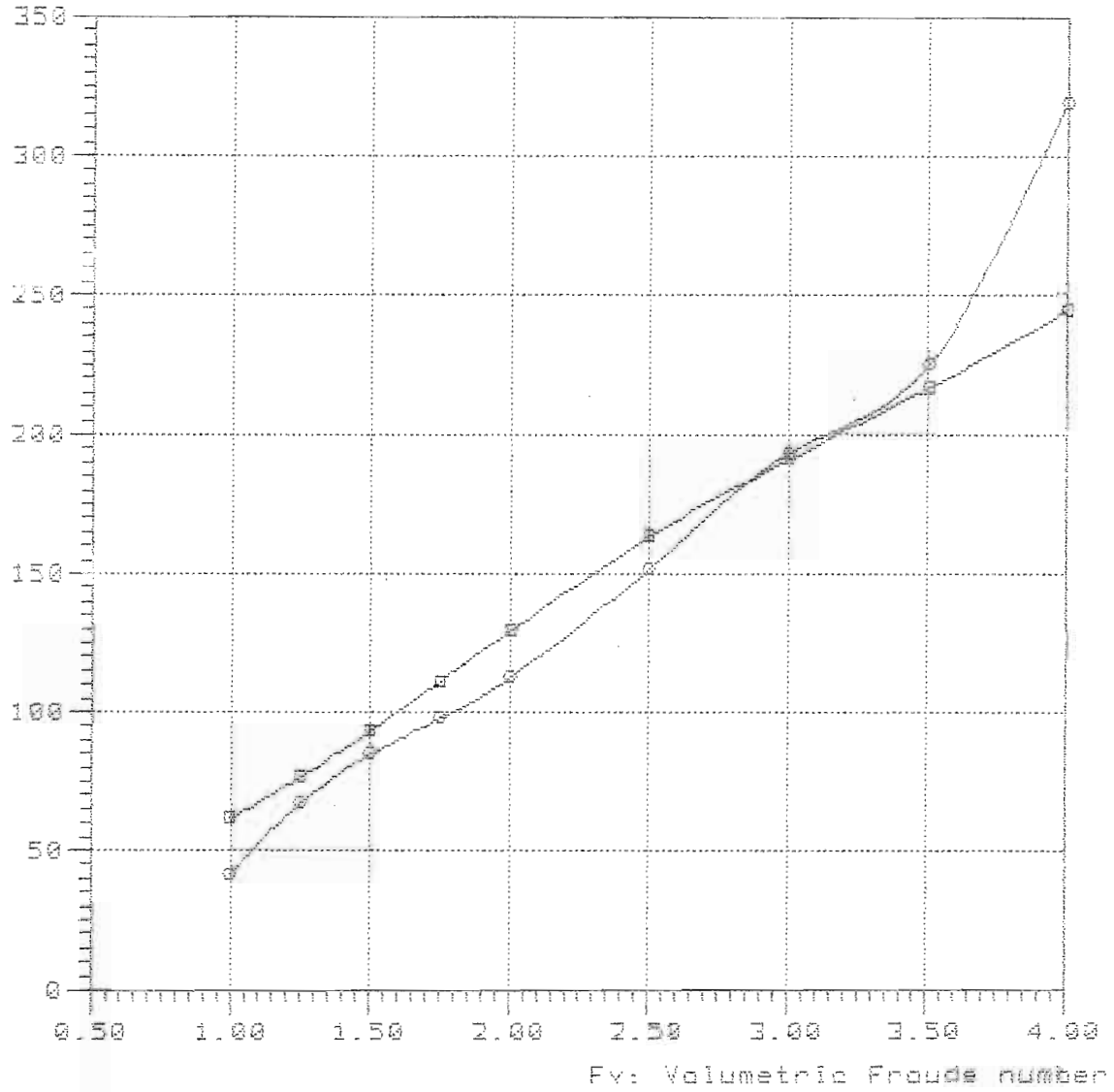
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65B Lpx/Bpx=4.650 Ap/Vol=7.690 Lpx/Ap=6.372 Lcg/Lpx=0.340

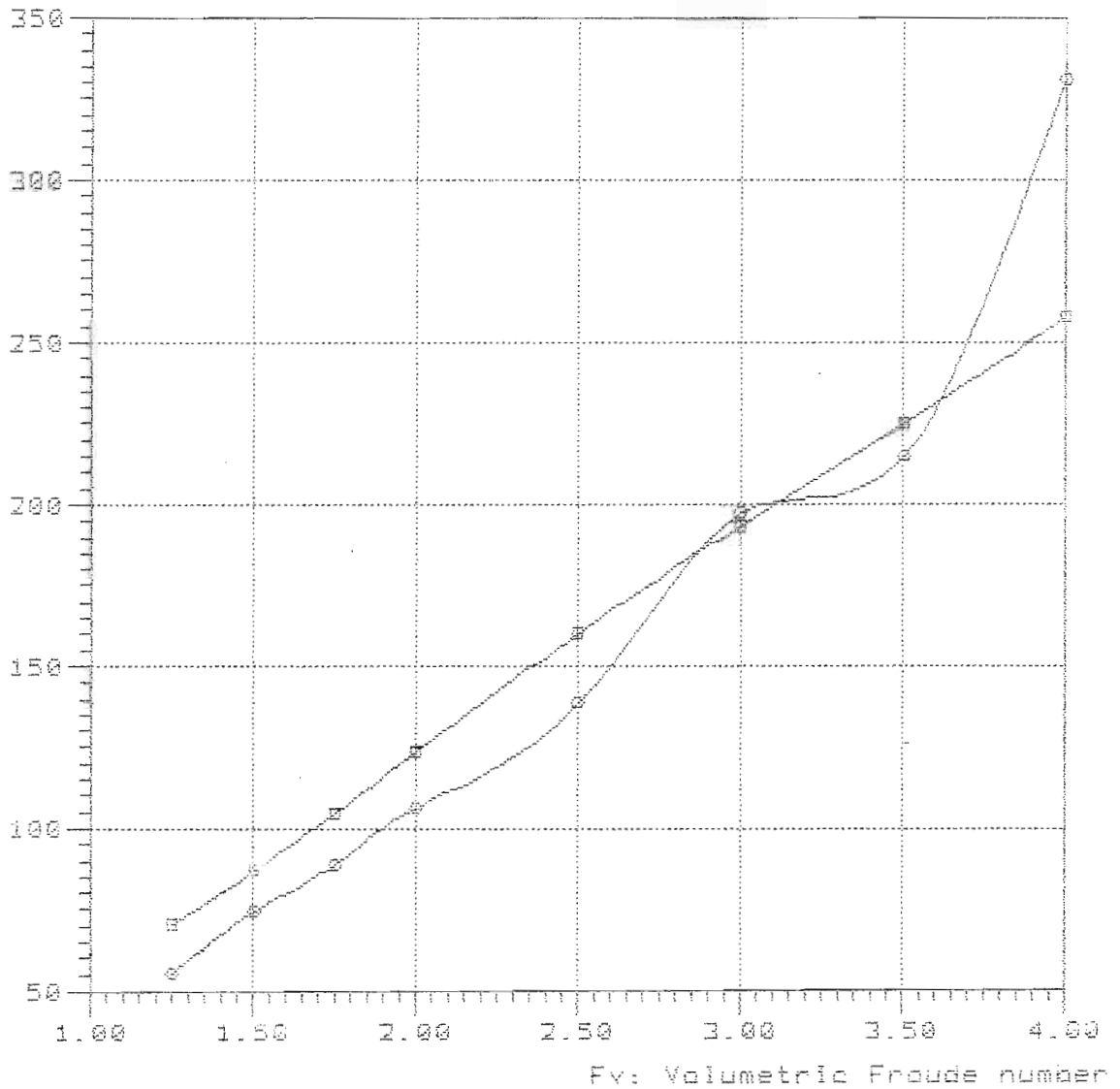
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Δpx=4.650 Ap/Vol=7.650 Lpx/Δpx=6.372 Log/Lpx=0.380

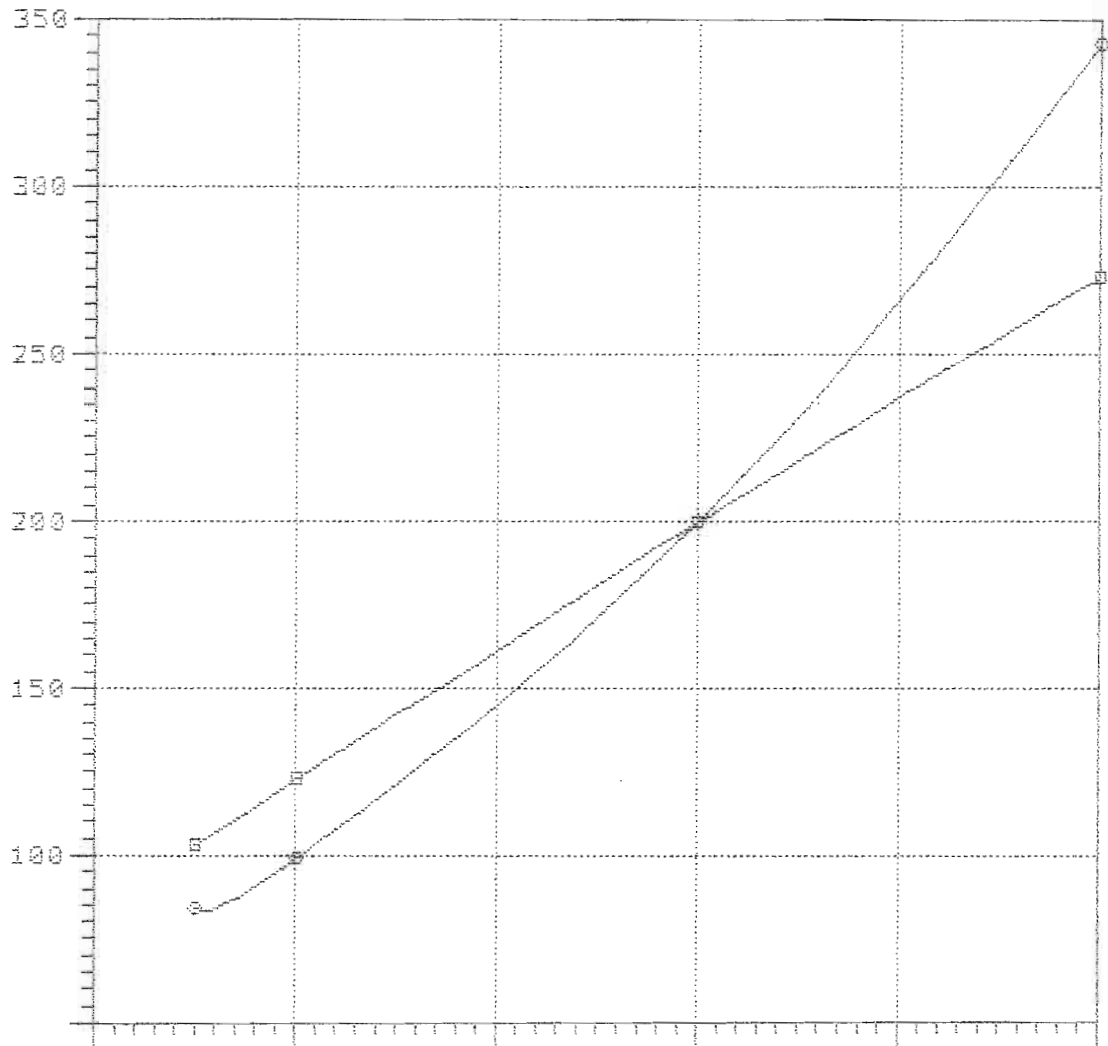
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=4.636 Ap/Wal=7.696 Lpx/Ap=6.372 Log/Lpx=8.428

Rbare: Bare-hull resistance (lbs)



—■—

—○—

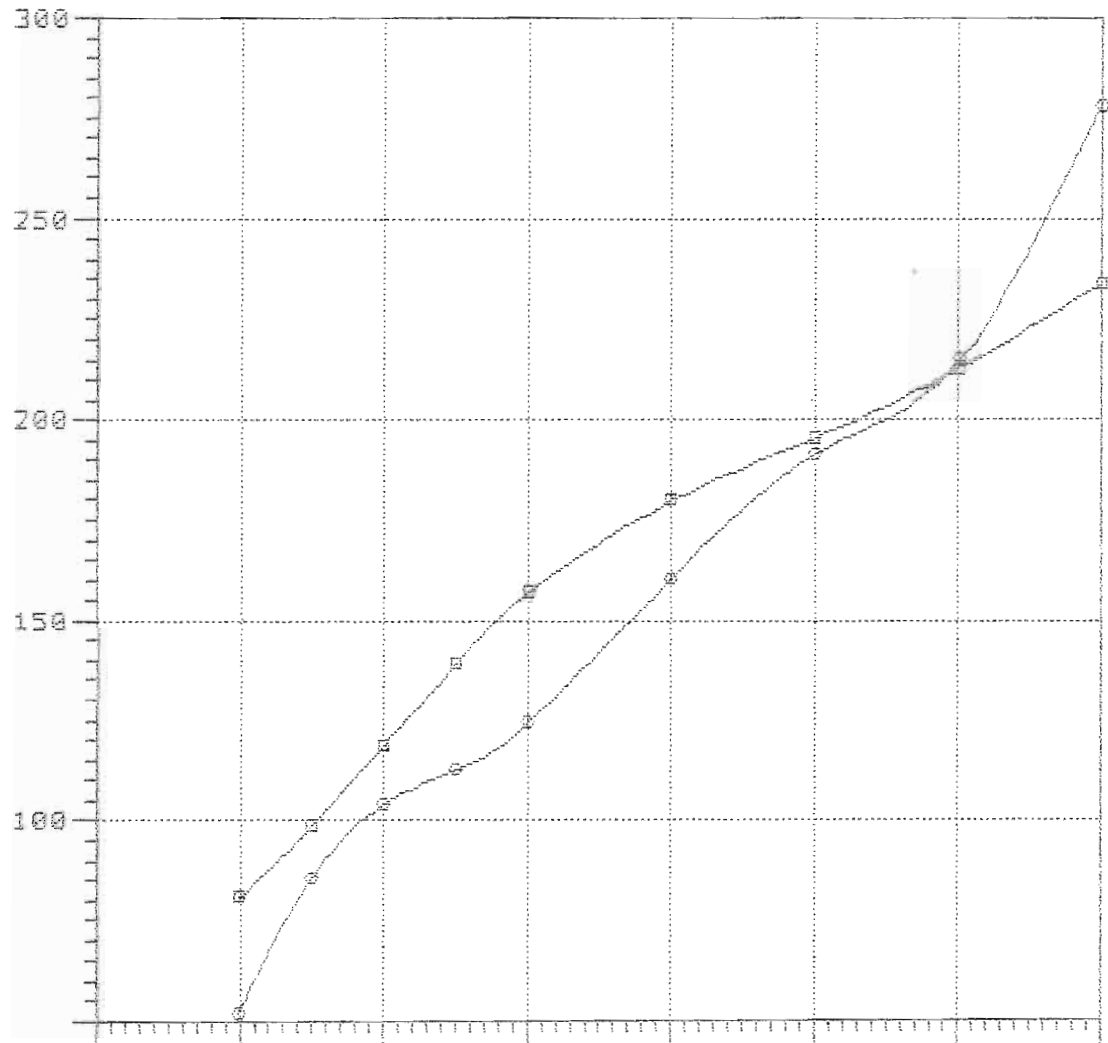


Model = 5236  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 18.700 ft  
Lwl = 18.476 ft  
Bpx = 3.987 ft  
Ap = 54.879 sqft  
Vcg = 1.731 ft  
Disp. = 1000.00 Lb  
Deadrise = 37.40 degree  
Twist Angle= 7.00 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 4.690  
Lpx/Ap = 6.372  
Ap /Vol = 8.780  
Lpx/Vol = 7.502  
Cvload = 0.247  
Lbload = 0.020  
Disp-Lpx = 68.270

Rbare: Bare-hull resistance (lbs)



—■—

—○—

NavCad(tm) 3.1d

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Bare-hull resistance

vs.

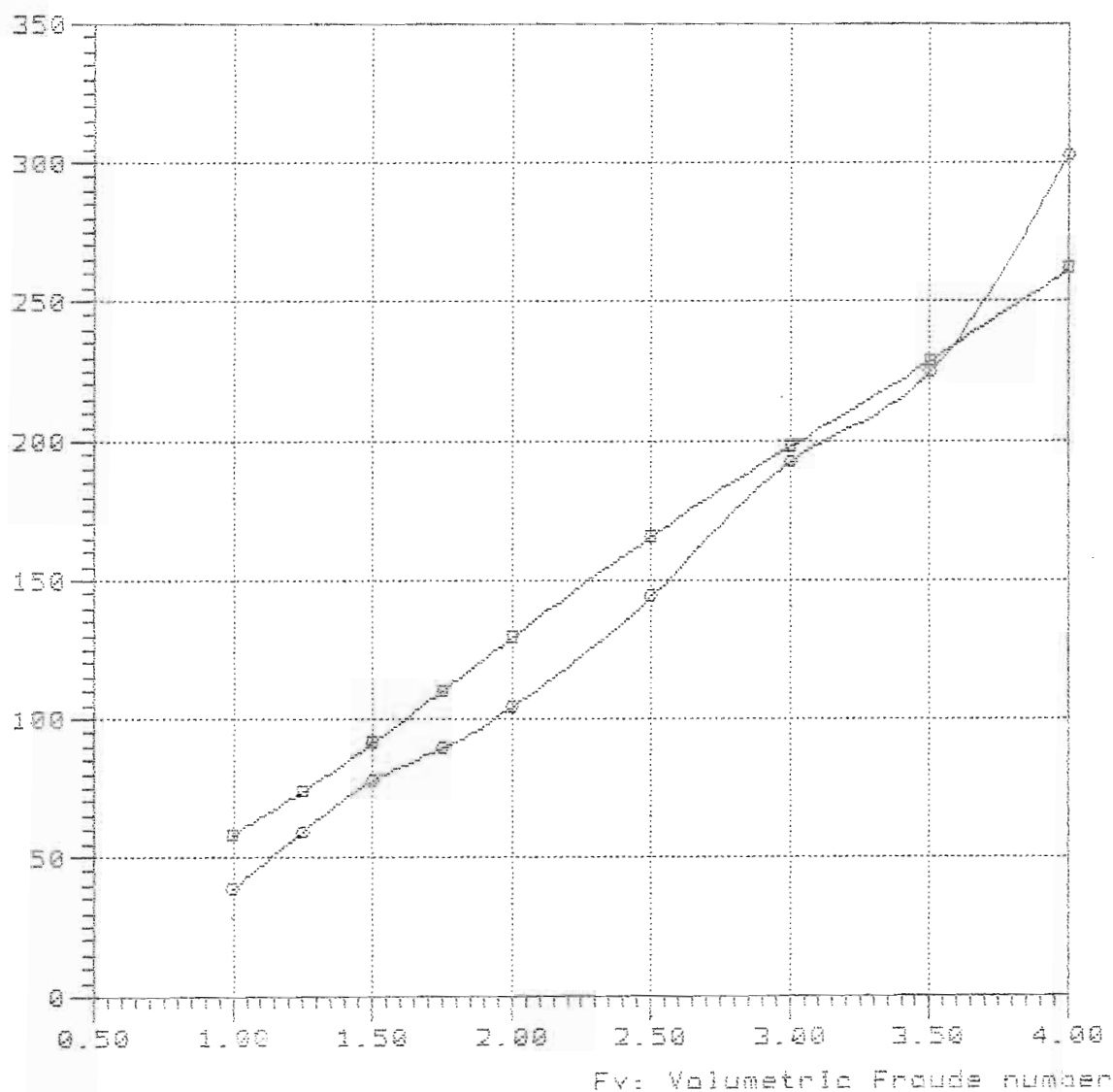
Volumetric Froude number

File: 9-75-380.mdl

Date: 25 Feb 00

Time: 17:10

Rbare: Bare-hull resistance (lbs)

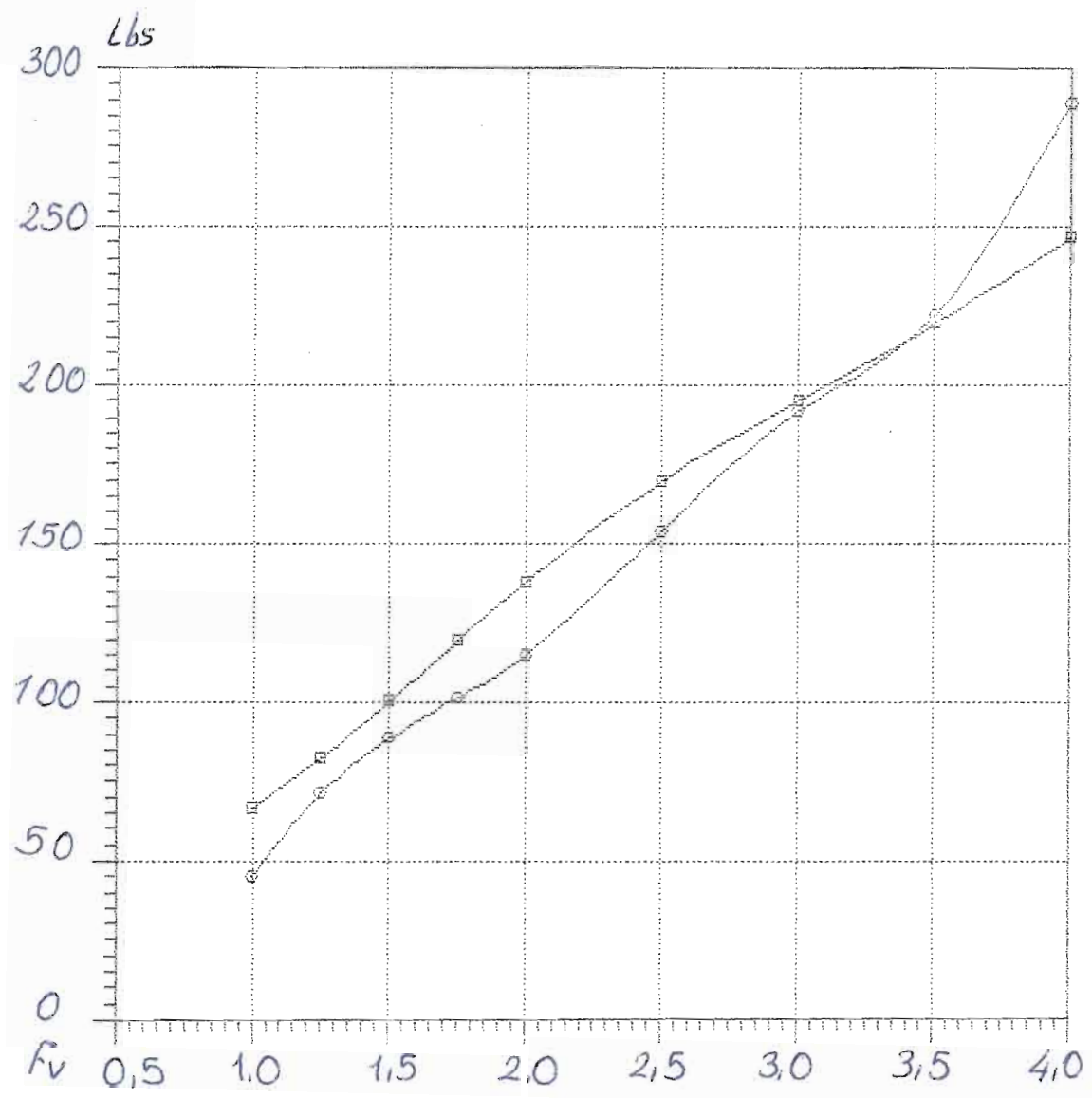


Curve legend

—■—

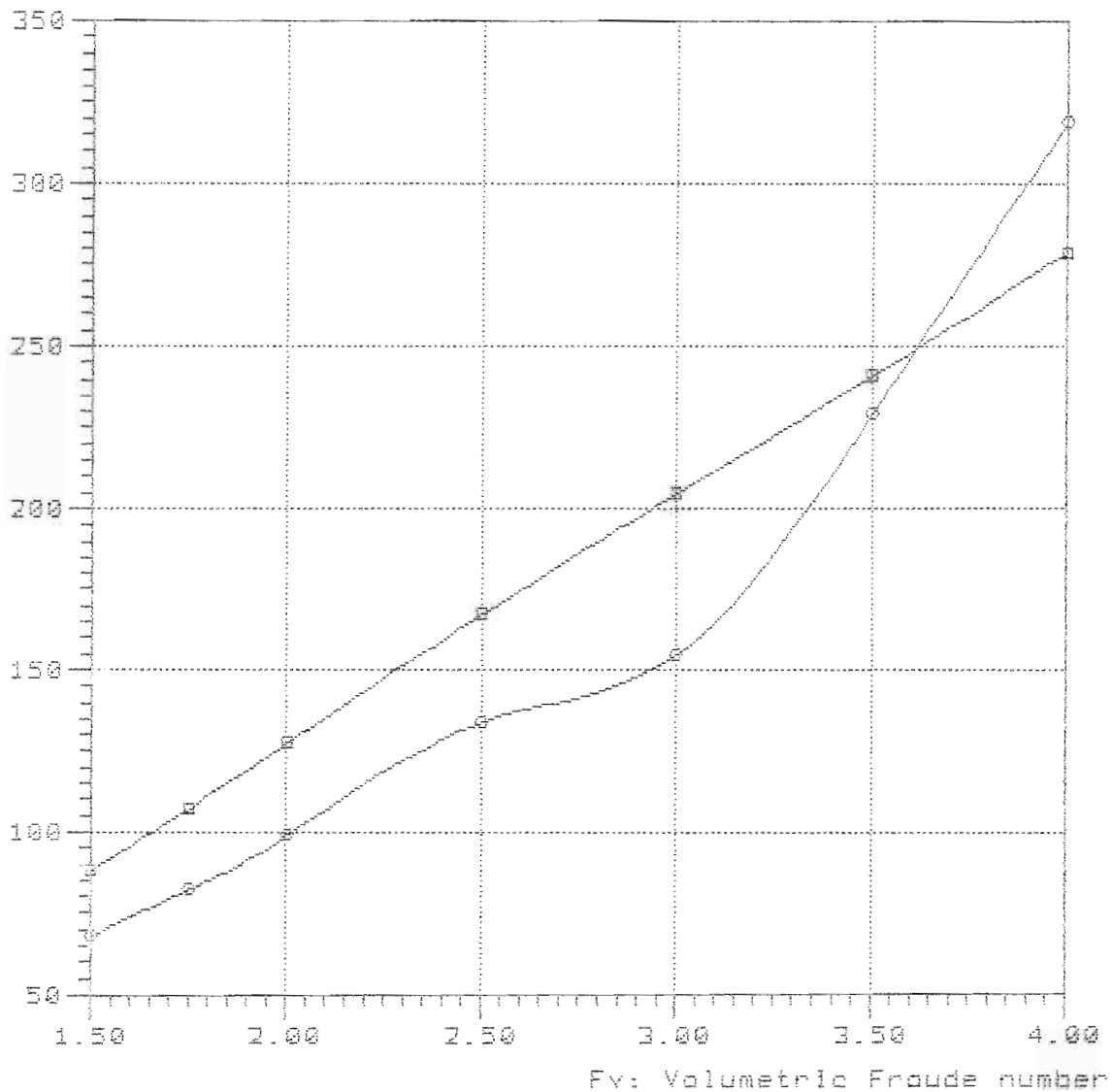
—○— TMB-658 Lpx/Bpx=4.650 Ap/Vol=8.781 Lpx/Ap=6.372 Log/Lpx=0.380

9-75-340



—□—  
—○—

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=4.690 Ap/Vol=8.781 Lpx/Ap=6.372 Log/Lpx=0.420

NavCad(tm) 3.1d

### Bare-hull resistance

File: 9-75-460.mdl

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vs.

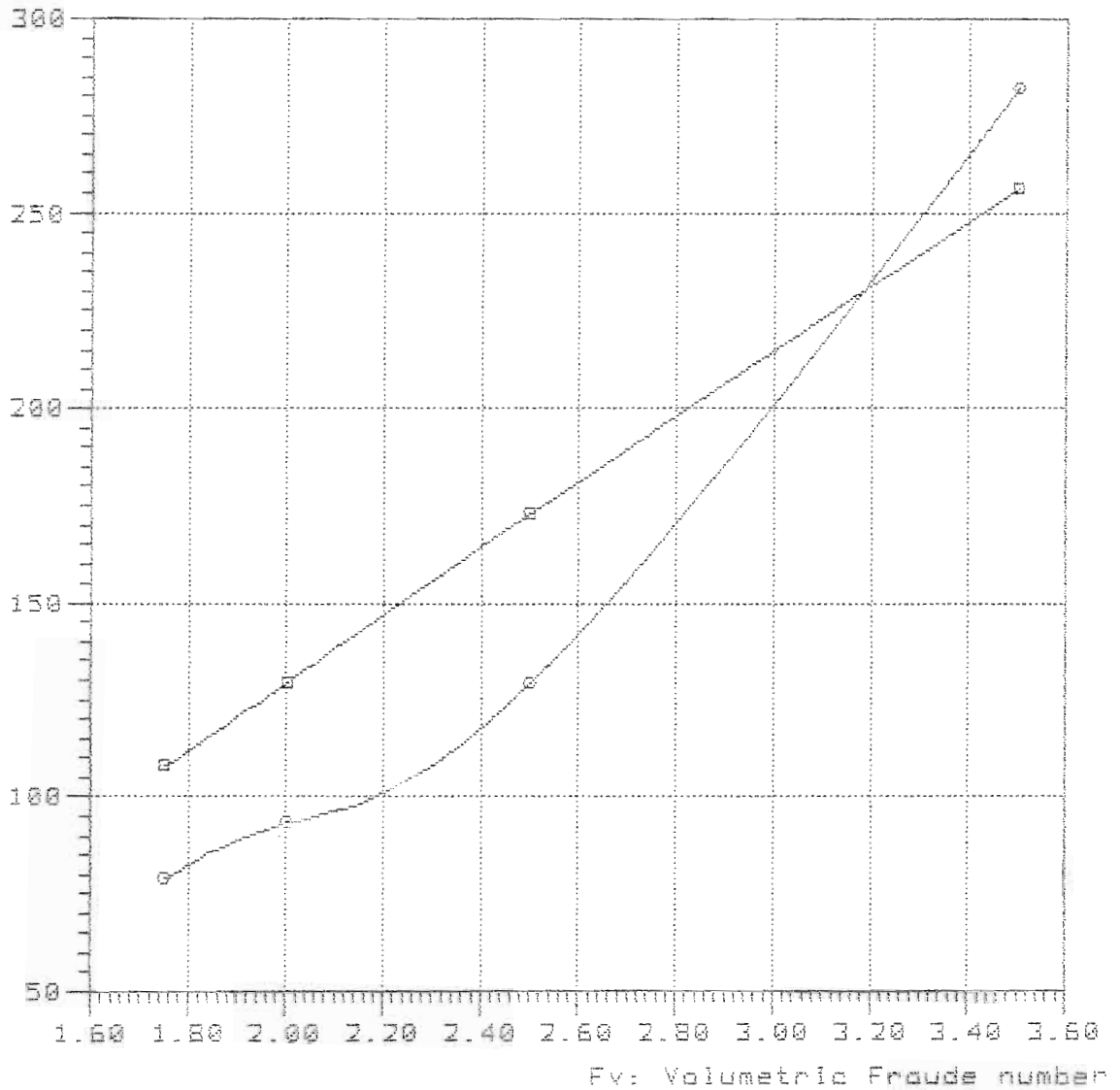
Date: 25 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 17:08

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

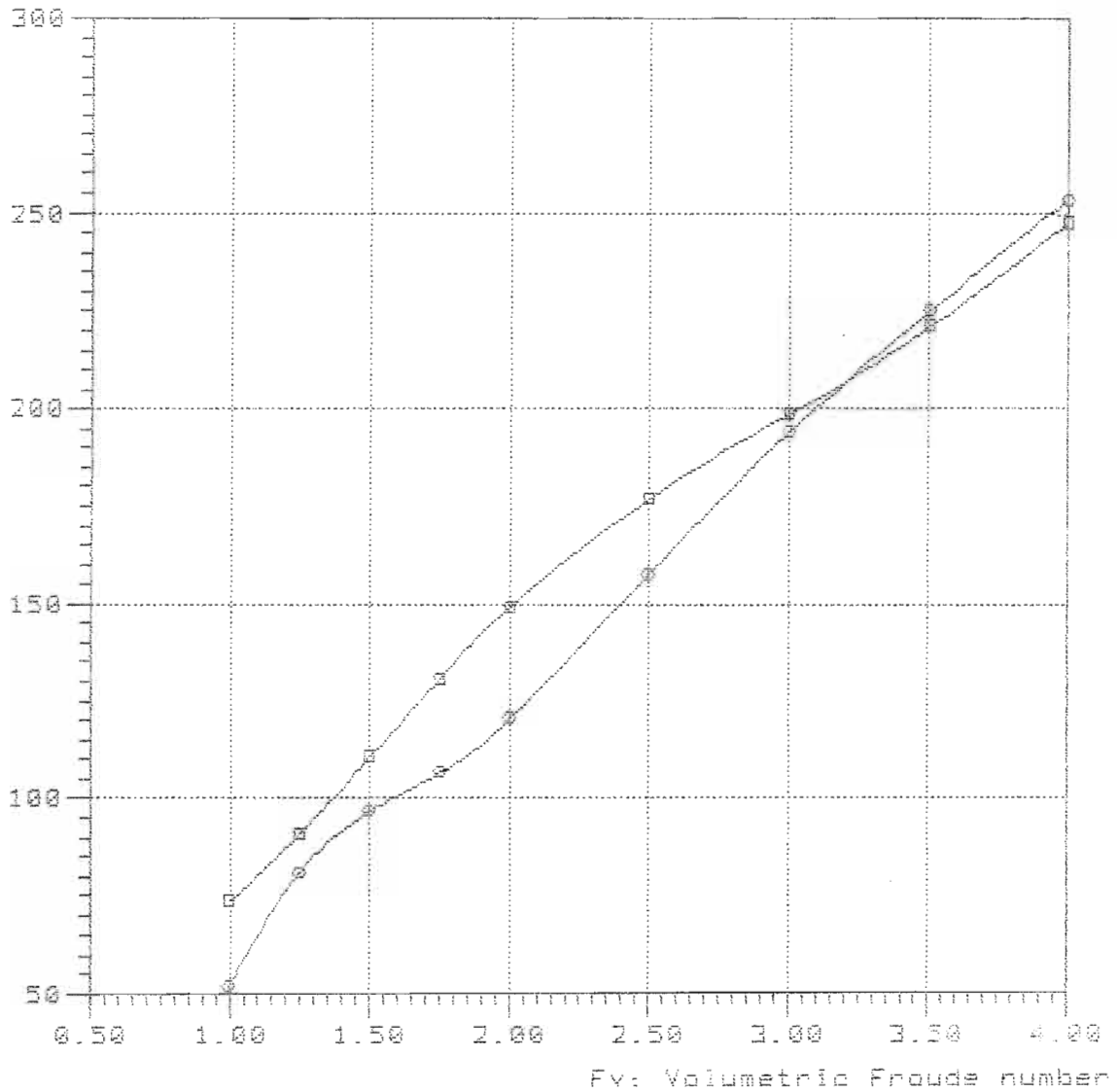
—○— TMB-658 Lpx/Bpx=4.690 Ap/Vol=8.781 Lpx/Ap=6.372 Lcg/Lpx=0.460

Model = 5236  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 20.000 ft  
Lwl = 19.761 ft  
Bpx = 4.264 ft  
Ap = 62.775 sqft  
Vcg = 1.851 ft  
Disp. = 1000.00 Lb  
Deadrise = 37.40 degree  
Twist Angle= 7.00 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 4.690  
Lpx/Ap = 6.372  
Ap /Vol = 10.043  
Lpx/Vol = 8.024  
Cvload = 0.202  
Lbload = 0.016  
Disp-Lpx = 55.804

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-658 Lpx/Bpx=4.690 Ap/Vol=10.044 Lpx/Ap=6.372 Log/Lpx=0.300



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### Bare-hull resistance

File: 10-80-34.mdi

(c) Copyright 1995

vs.

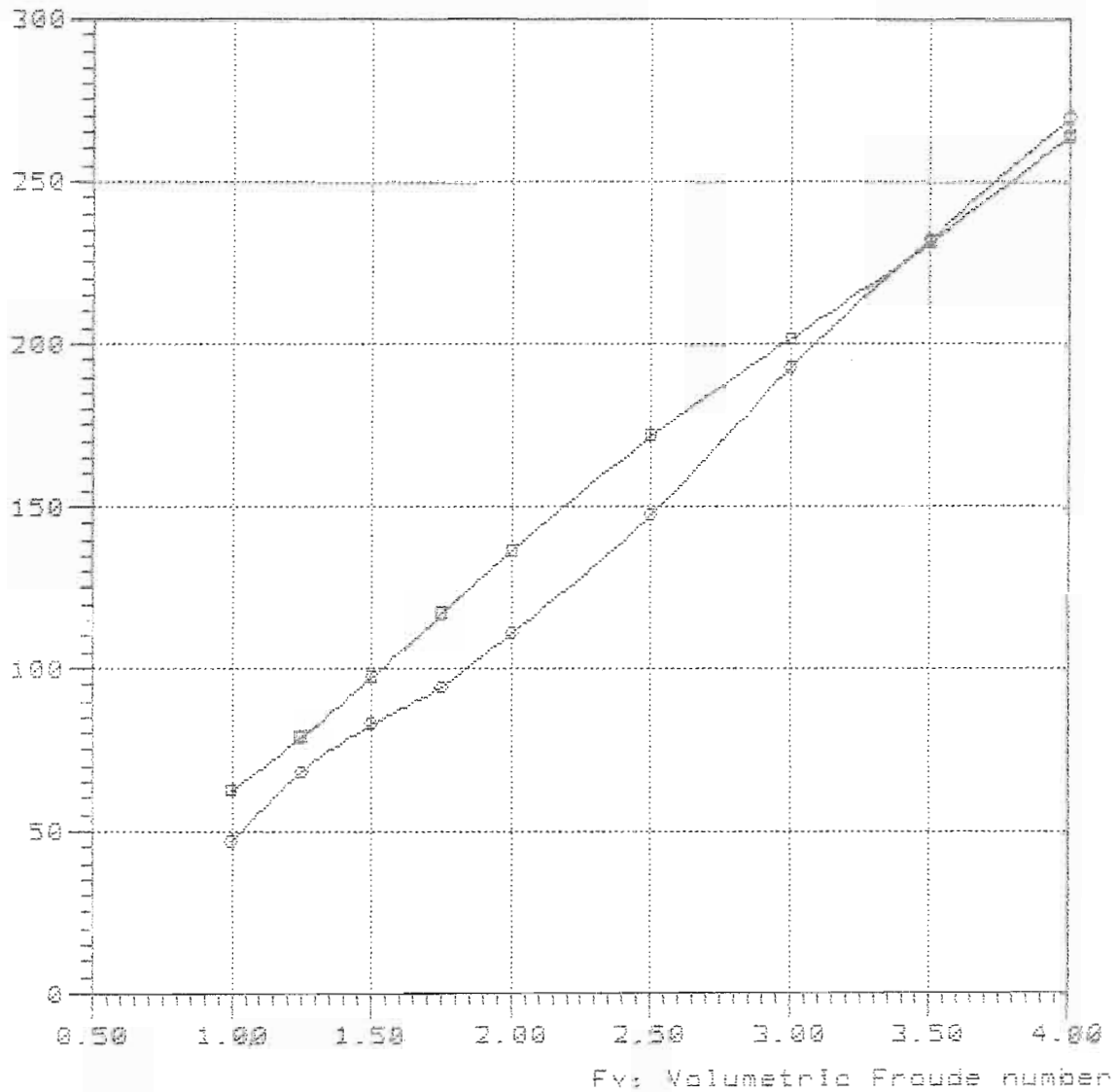
Date: 25 Feb 90

HydroComp, Inc.

### Volumetric Froude number

Time: 14:45

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-658 Lpx/Bpx=4.658 Ap/Vol=10.944 Lpx/Ap=6.372 Log/Lpx=0.340

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

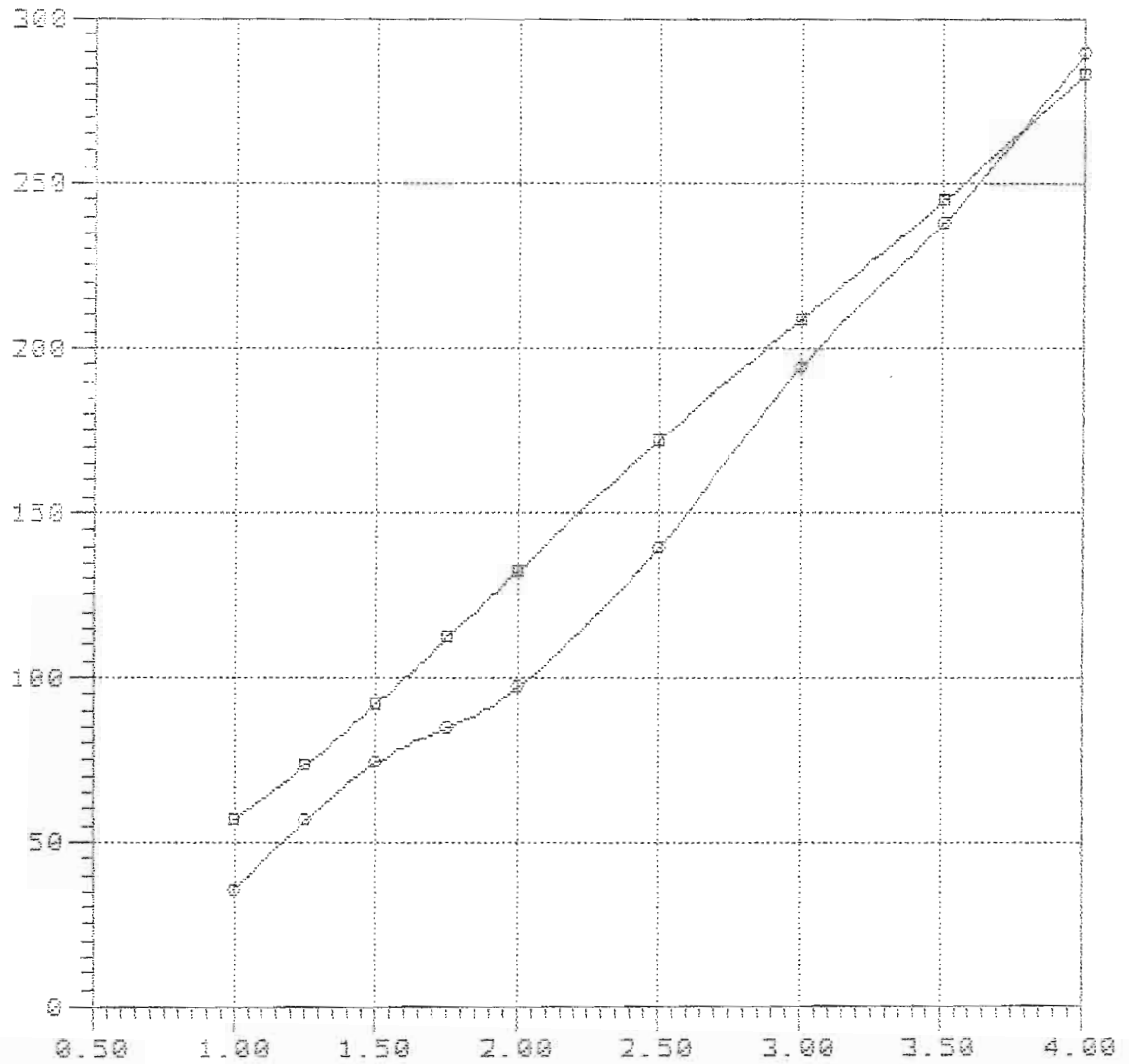
### Volumetric Froude number

File: 10-80-38.mdl

Date: 25 Feb 00

Time: 14:48

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

#### Curve legend

—■—

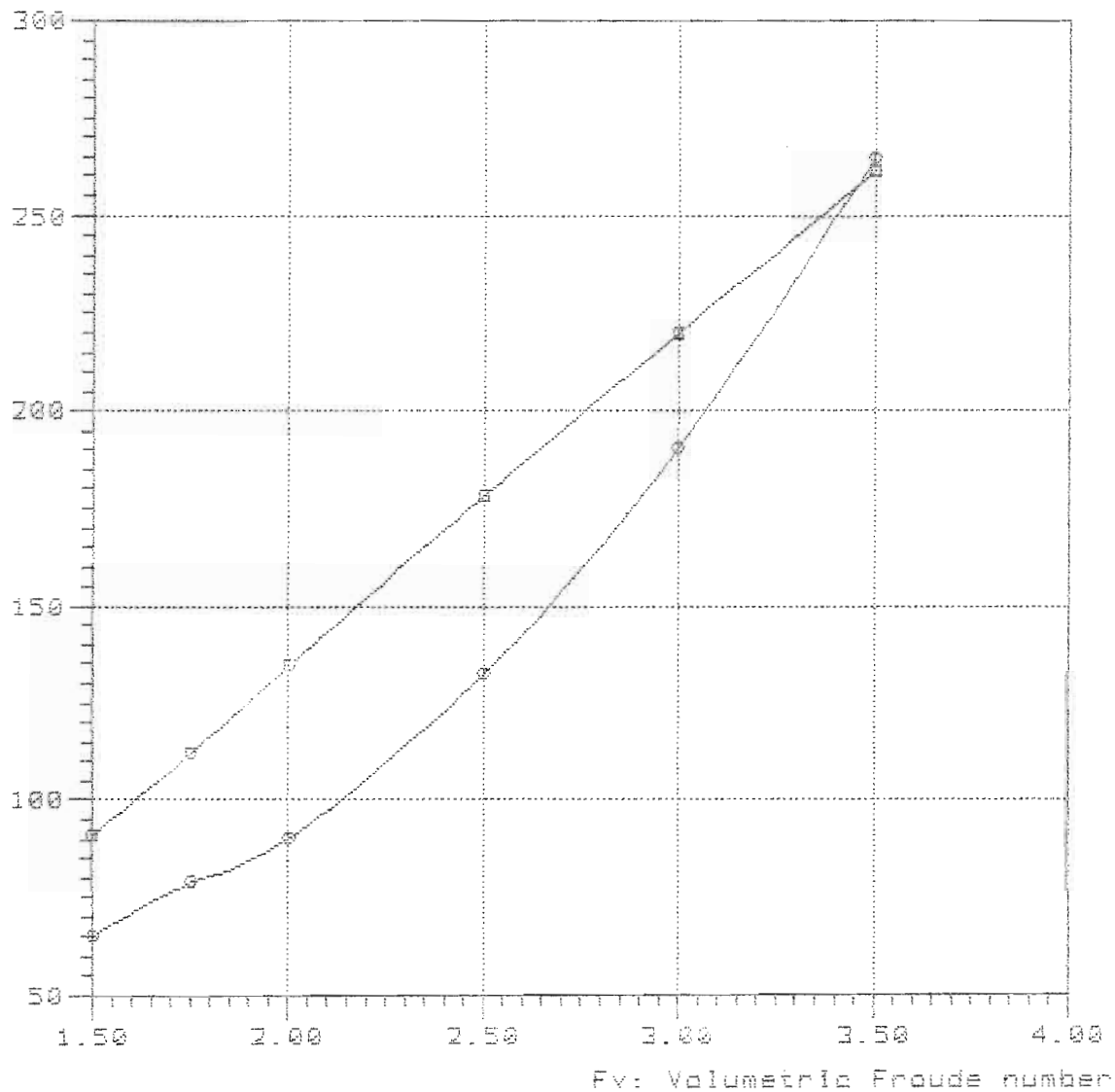
—●— TMB-65B Lpx/Bpx=4.690 Ap/Vol=10.044 Lpx/Ap=6.372 Log/Lpx=0.380

NavCad(tm) 3.1d  
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Bare-hull resistance  
vs.  
Volumetric Froude number

File: 10-80-42.mdl  
Date: 25 Feb 00  
Time: 14:52

Rbare: Bare-hull resistance (lbs)



Curve Legend

—■—

—○— TMB-65B Lpx/Bpx=4.690 Ap/Vol=10.044 Lpx/Ap=6.372 Log/Lpx=0.420

5237

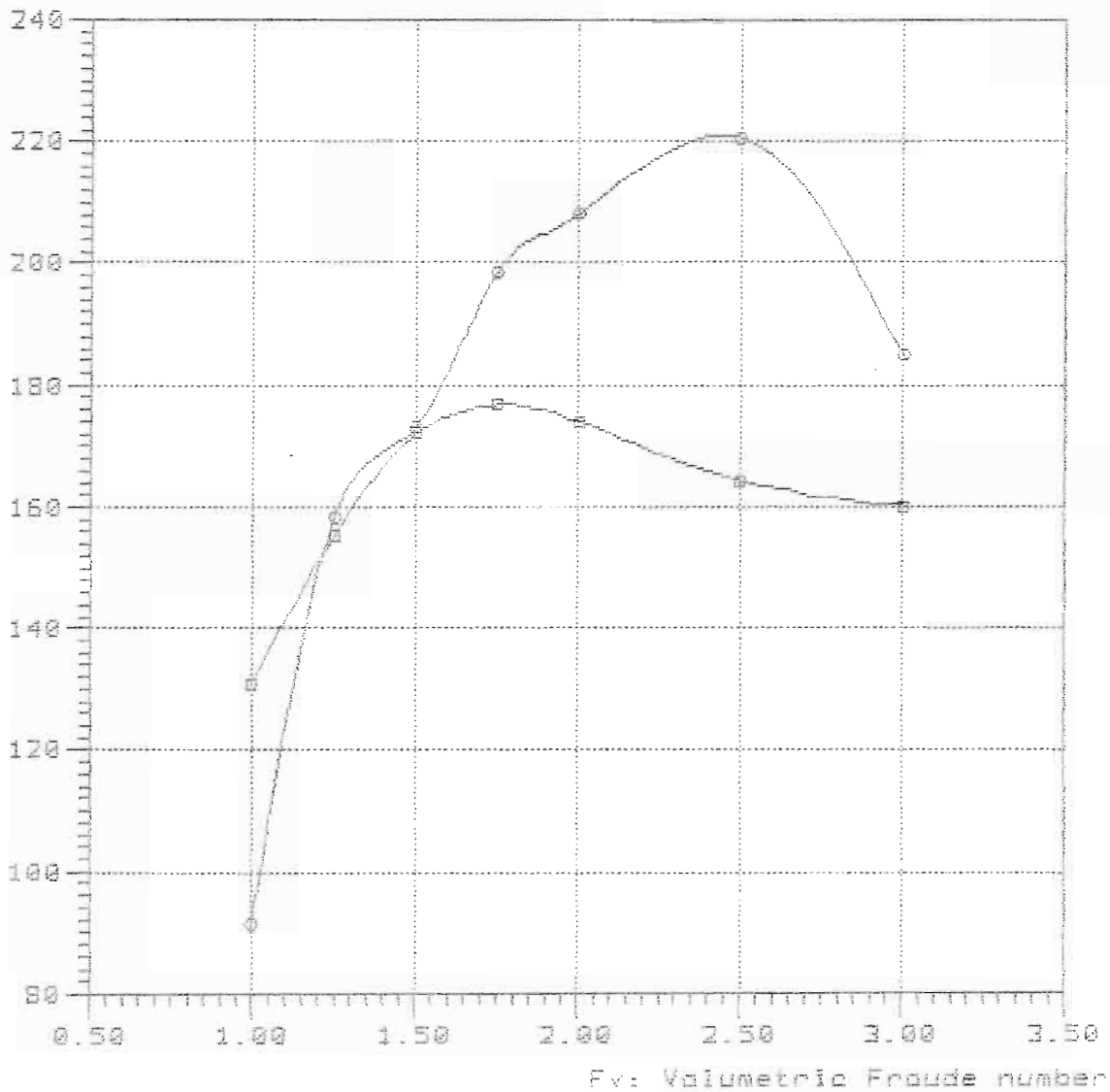
Model = 5237  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 10.000 ft  
Lwl = 9.880 ft  
Bpx = 4.255 ft  
Ap = 31.417 sqft  
Vcg = 0.925 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle = 4.90 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 ini

Lpx/Bpx = 2.350  
Lpx/Ap = 3.183  
Ap /Vol = 5.026  
Lpx/Vol = 4.012  
Cvload = 0.203  
Lbload = 0.047  
Disp-Lpx = 446.429

**Bu ölçüler dizayn ve bununla ilgili Resimlerin telif hakları ÇEMBERCI DENİZCİLİĞE Aittir Bu döküman veya bunun bir kısmı üçüncü şahıslara verilemez ve bir kopya edilemez ve her ne şekilde olursa olsun maksadı dışında izinsiz kullanılamaz.**

Rbare: Bare-hull resistance (lbs)



—■—  
—○— TMB-65B Lpx/Bpx=2.350 Ap/Vol=5.027 Lpx/As=3.183 Lcg/Lpx=0.420

NavCad(tm) 3.1d

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Bare-hull resistance

vs.

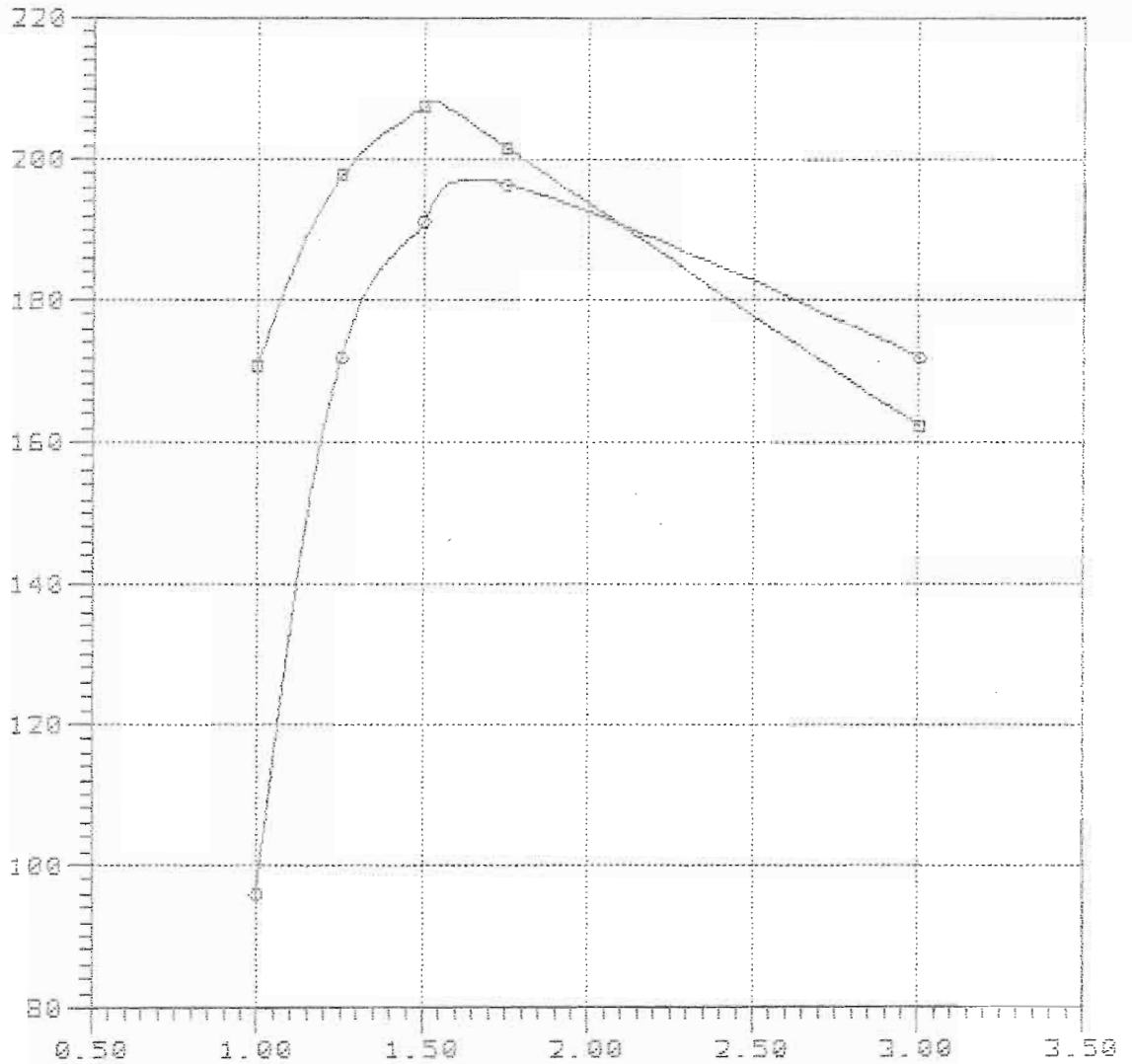
Volumetric Froude number

File: 5-40-388.mdl

Date: 26 Feb 88

Time: 17:15

Rbare: Bare-hull resistance (lbs)



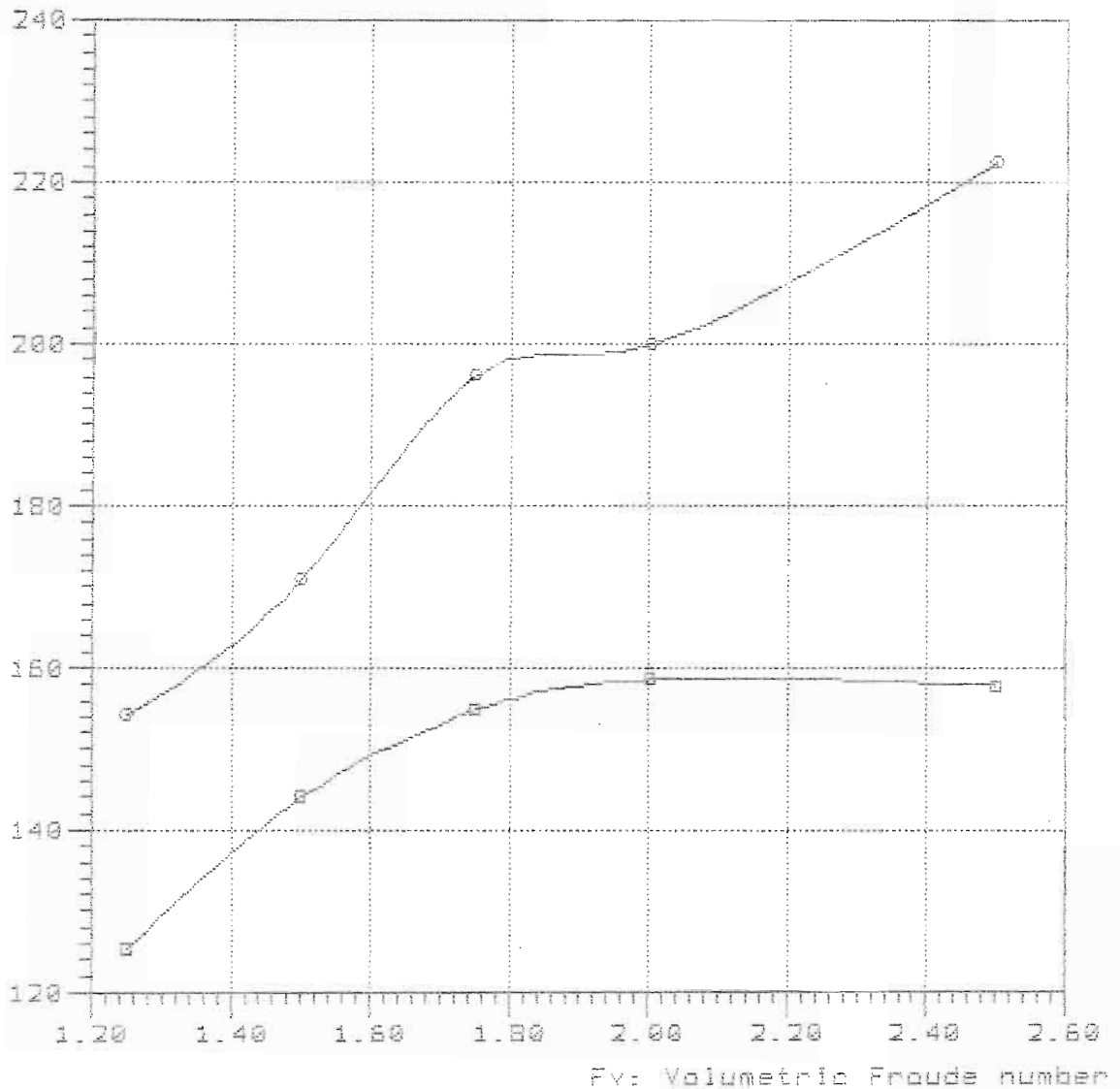
Fv: Volumetric Froude number

Curve legend

—■—

—○— TMB-65B Lpx/Bpx=2.350 Ap/Vol=5.027 Lpx/Ap=3.183 Lcg/Lpx=0.380

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65B Lpx/Bpx=2.350 Ap/Vol=5.027 Lpx/As=3.183 Leg/Lpx=0.460

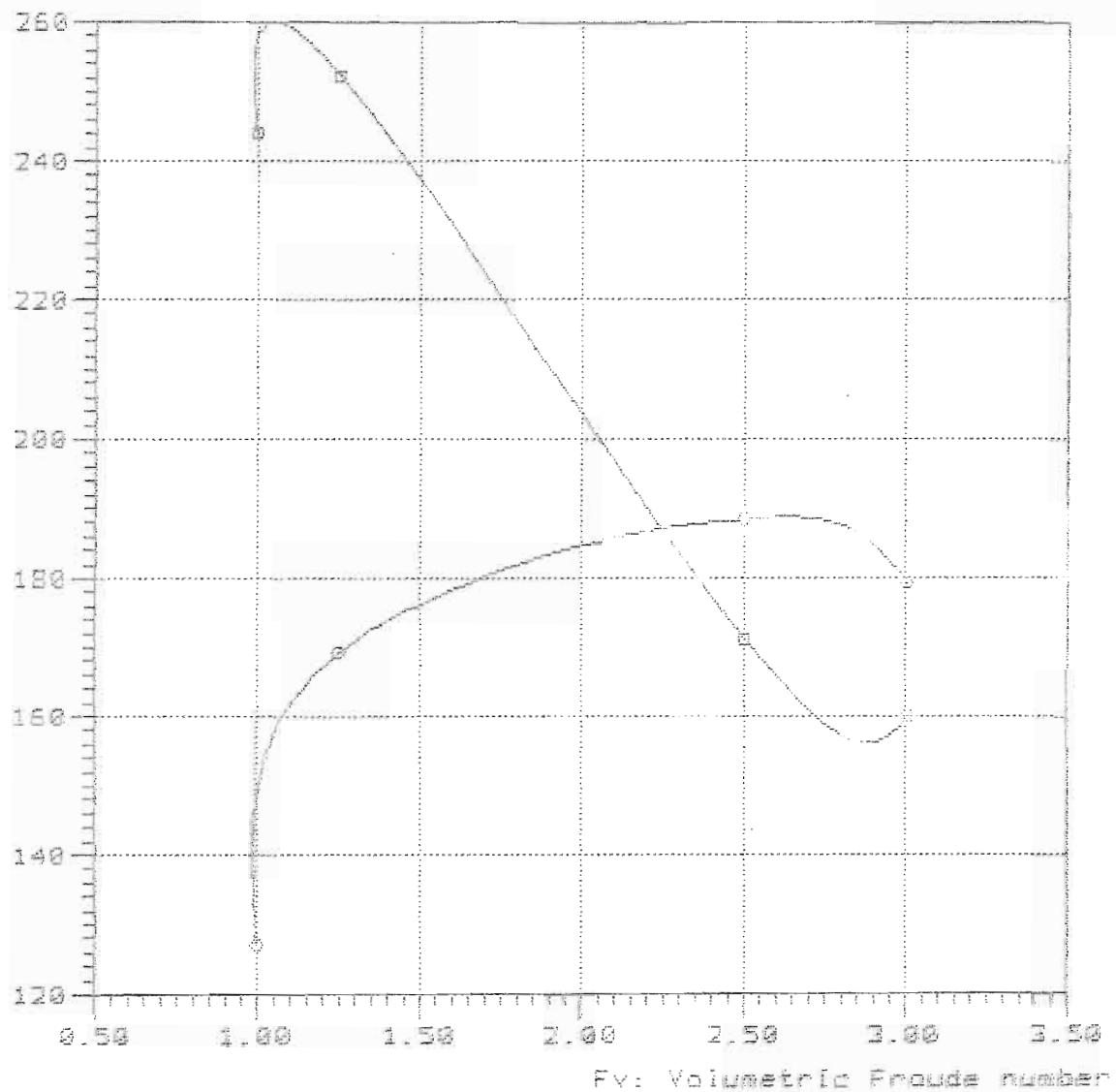


Model = 5237  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 11.200 ft  
Lwl = 11.065 ft  
Bpx = 4.766 ft  
Ap = 39.410 sqft  
Vcg = 1.036 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle = 4.90 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 2.350  
Lpx/Ap = 3.183  
Ap /Vol = 6.305  
Lpx/Vol = 4.493  
Cvload = 0.144  
Lbload = 0.033  
Disp-Lpx = 317.759

Rbare: Bare-hull resistance (lbs)



—■—

—●— TNB-65B Lpx/Bpx=2.350 Rp/Vol=6.306 Lpx/Rp=3.183 Log/Lpx=0.300

NavCad(tm) 3.1d

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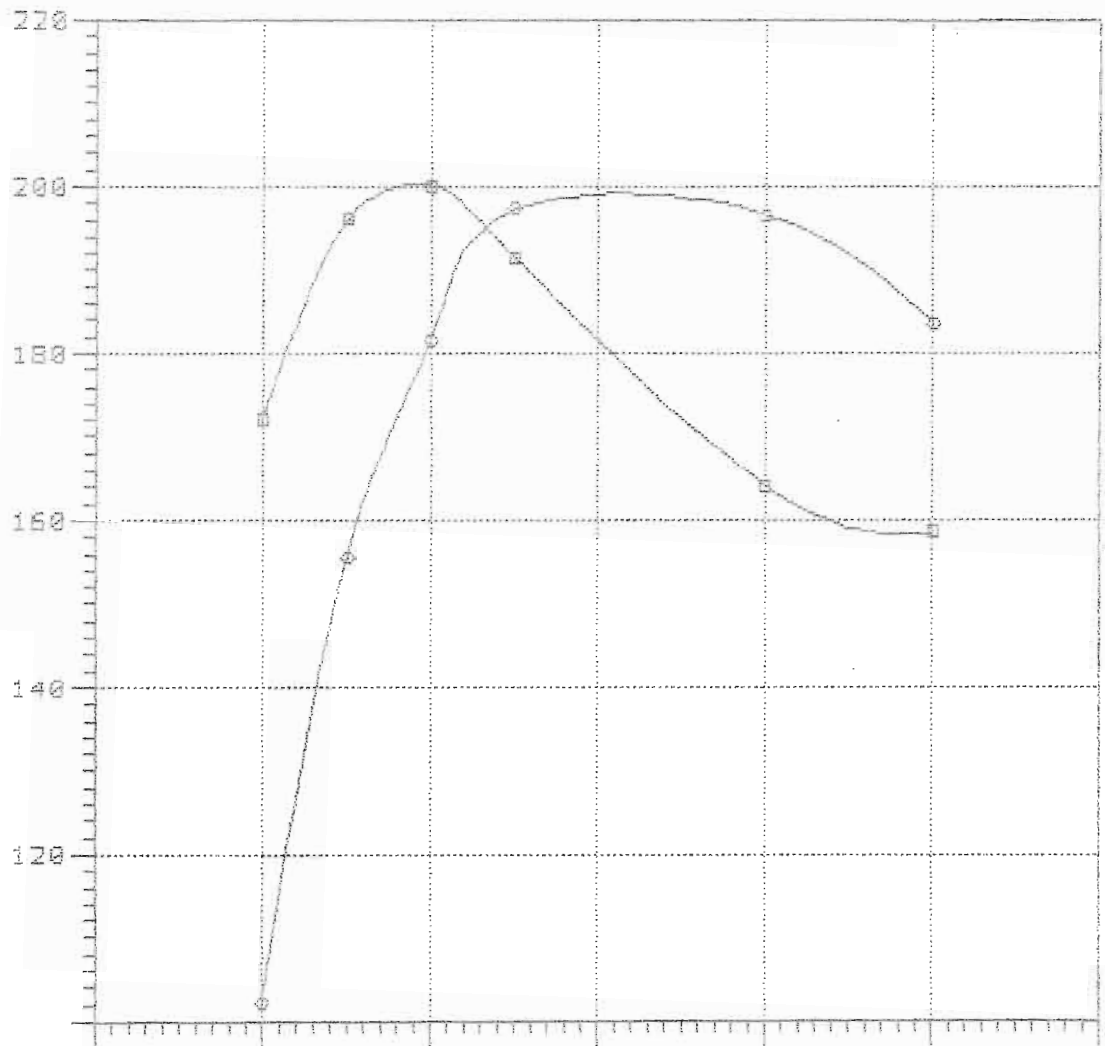
HydroComp, Inc.

File: 6-45-340.mdl

Date: 26 Feb 00

Time: 17:25

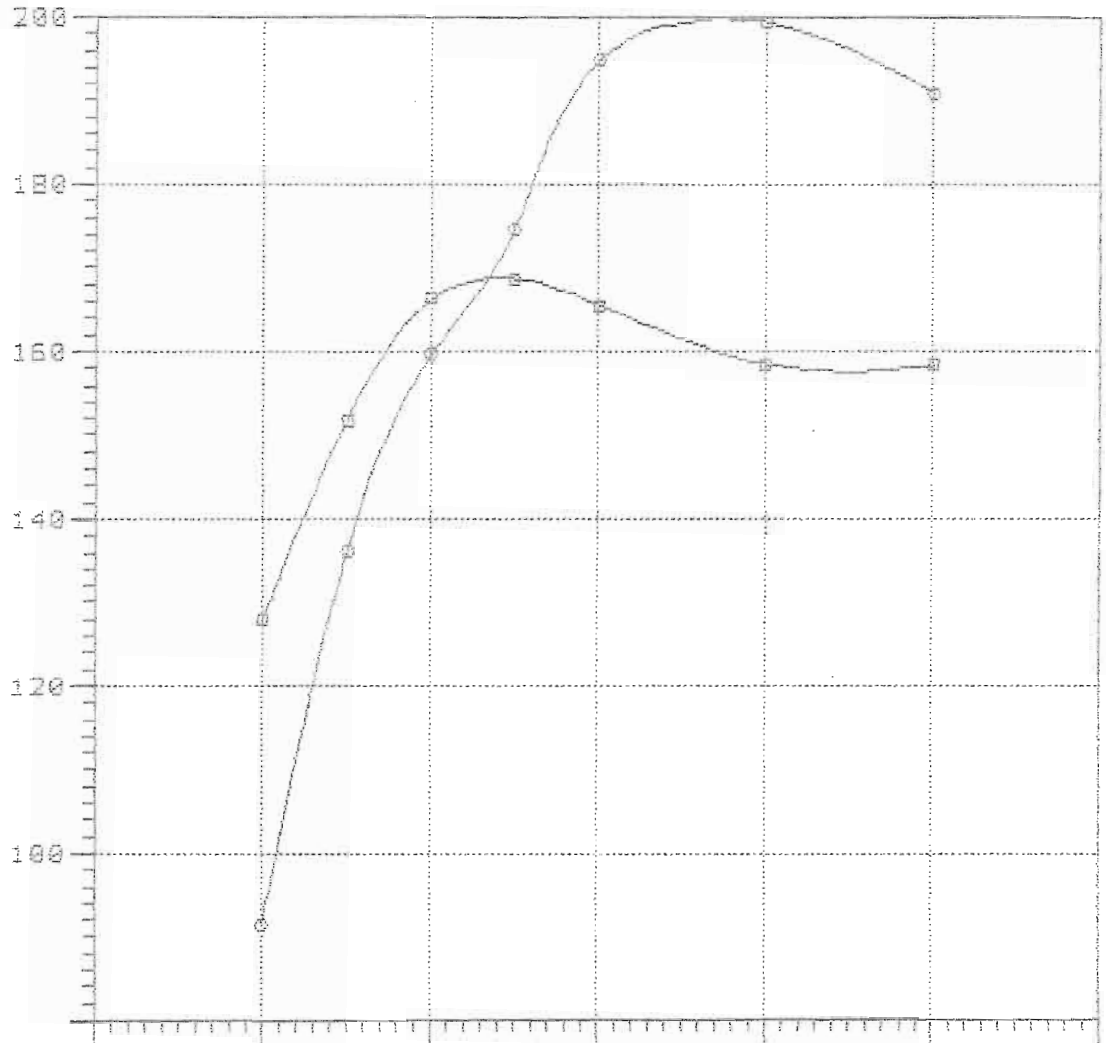
Rbare: Bare-hull resistance (lbs)



—□—

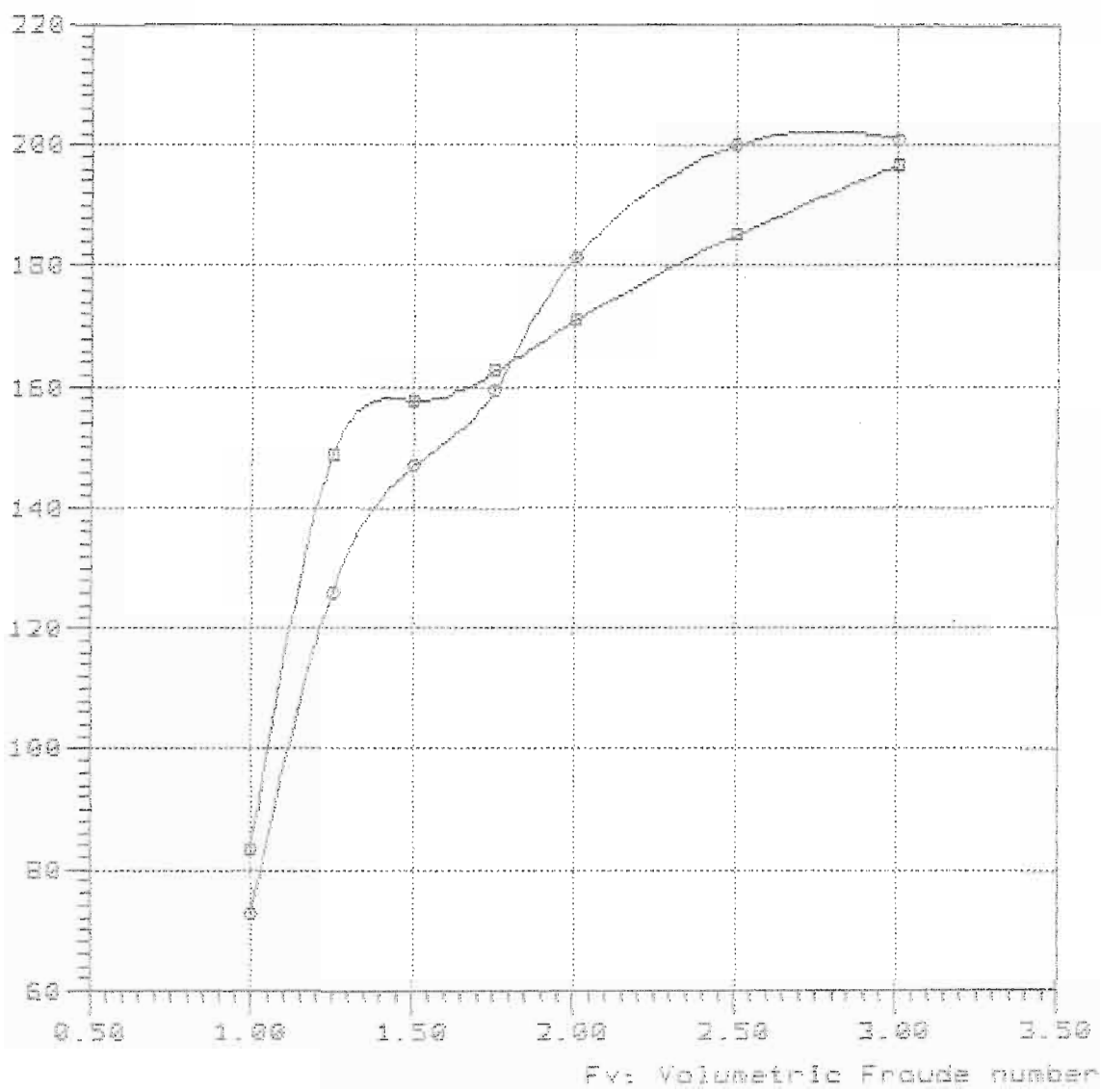
—○—

Rbare: Bare-hull resistance (lba)



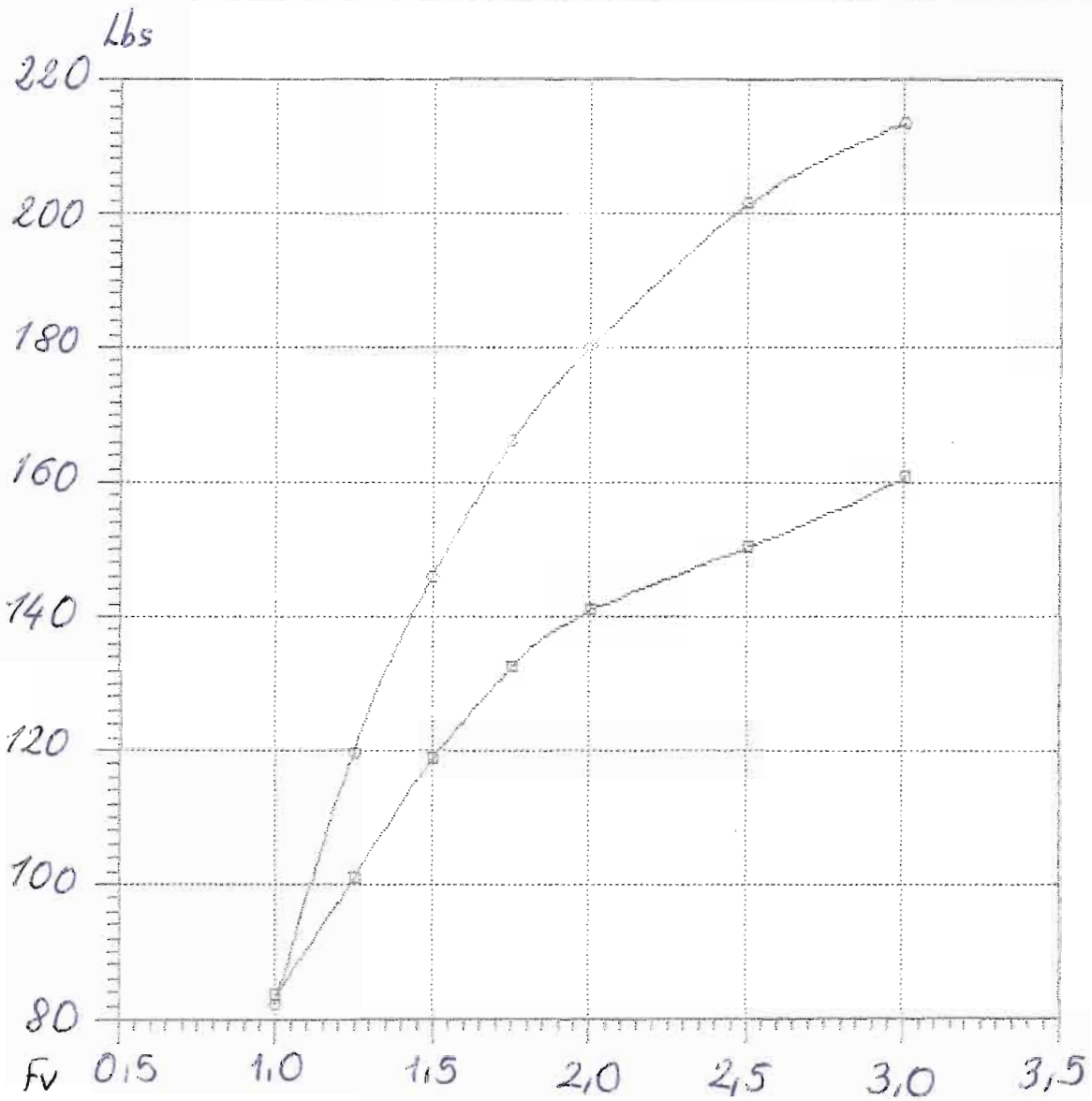
—■—  
—○—

Rbare: Bare-hull resistance (lbs)



—□—  
—○— TMB-65B Lpx/Bpx=2.350 Ap/Vol=6.386 Lox/Bo=3.183 Log/Lpx=0.428

6-45-46 0



—□—  
—○—

Model = 5237  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 12.500 ft  
Lwl = 12.349 ft  
Bpx = 5.319 ft  
Ap = 49.089 sqft  
Vcg = 1.157 ft  
Disp. = 1000.00 Lb

Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

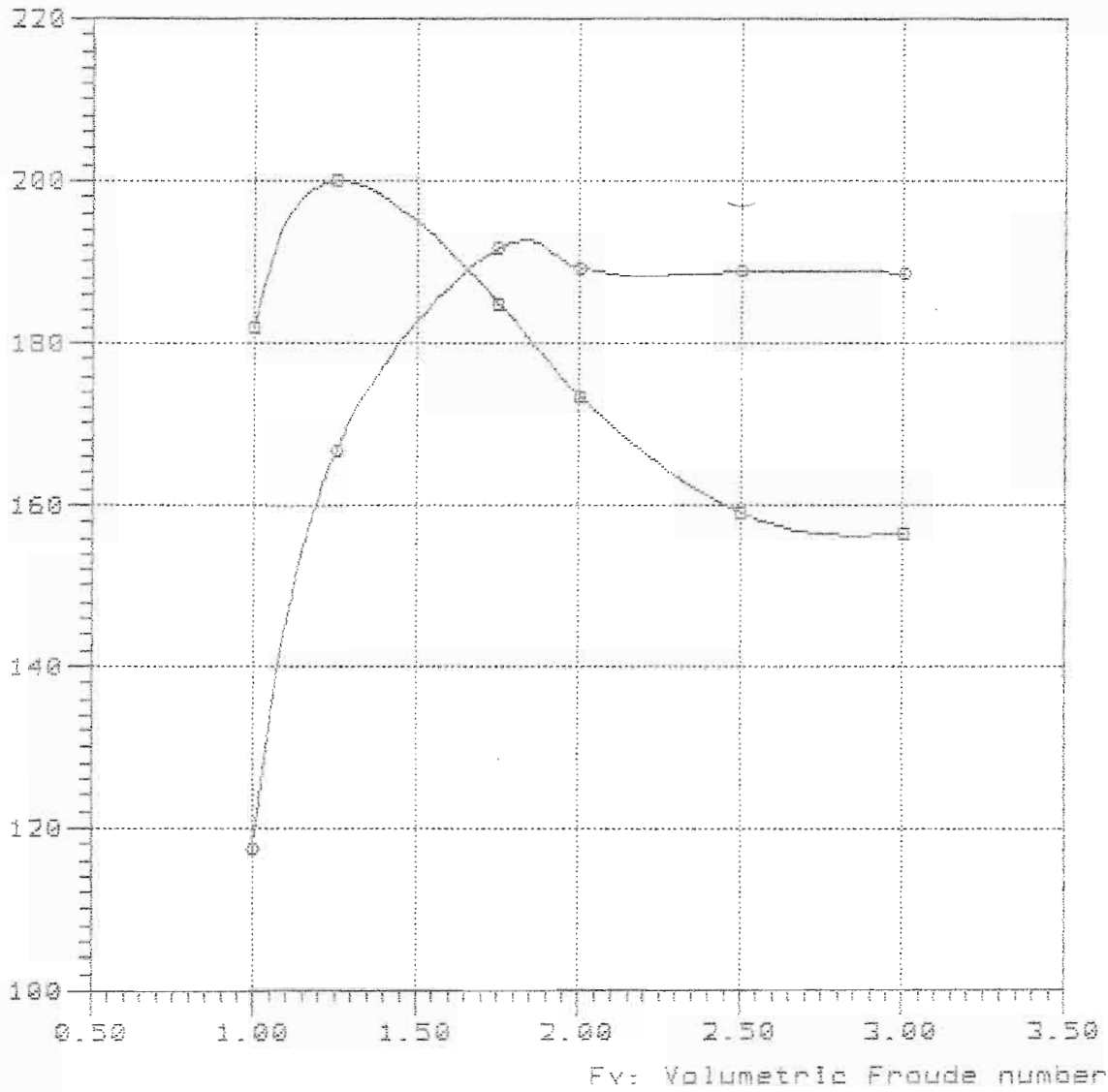
Lpx/Bpx = 2.350  
Lpx/Ap = 3.183  
Ap /Vol = 7.853  
Lpx/Vol = 5.015  
Cvload = 0.104  
Lbload = 0.024  
Disp-Lpx = 228.571

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Bare-hull resistance  
vs.  
Volumetric Froude number

File: 8-50-300.mdl  
Date: 26 Feb 00  
Time: 17:38

Rbare: Bare-hull resistance (lbs)



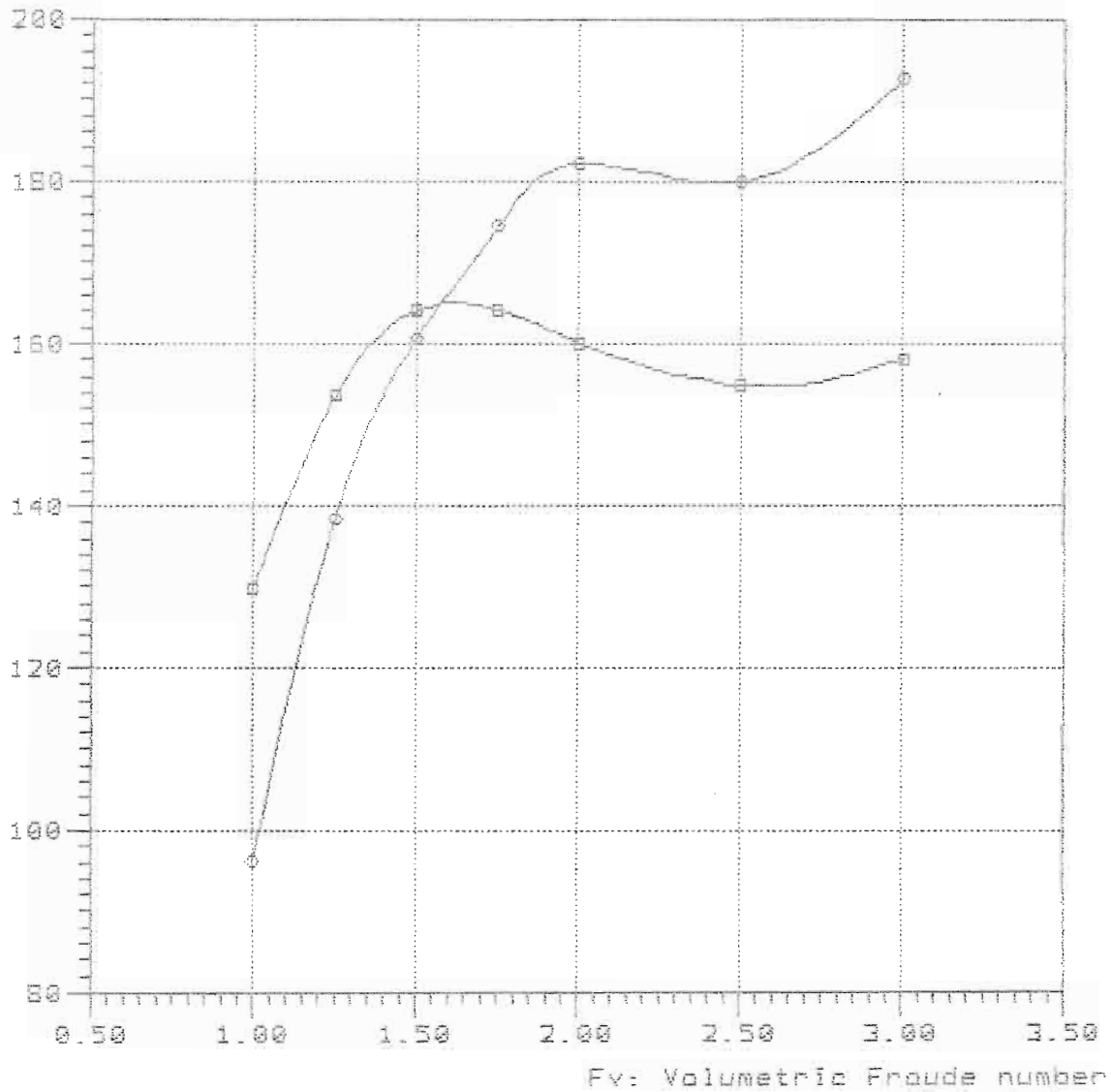
Curve legend

—■—

—●— TMB-65B Lpx/Bpx=2.350 Ap/Vol=7.854 Lpx/Ap=3.183 Lcg/Lpx=0.300



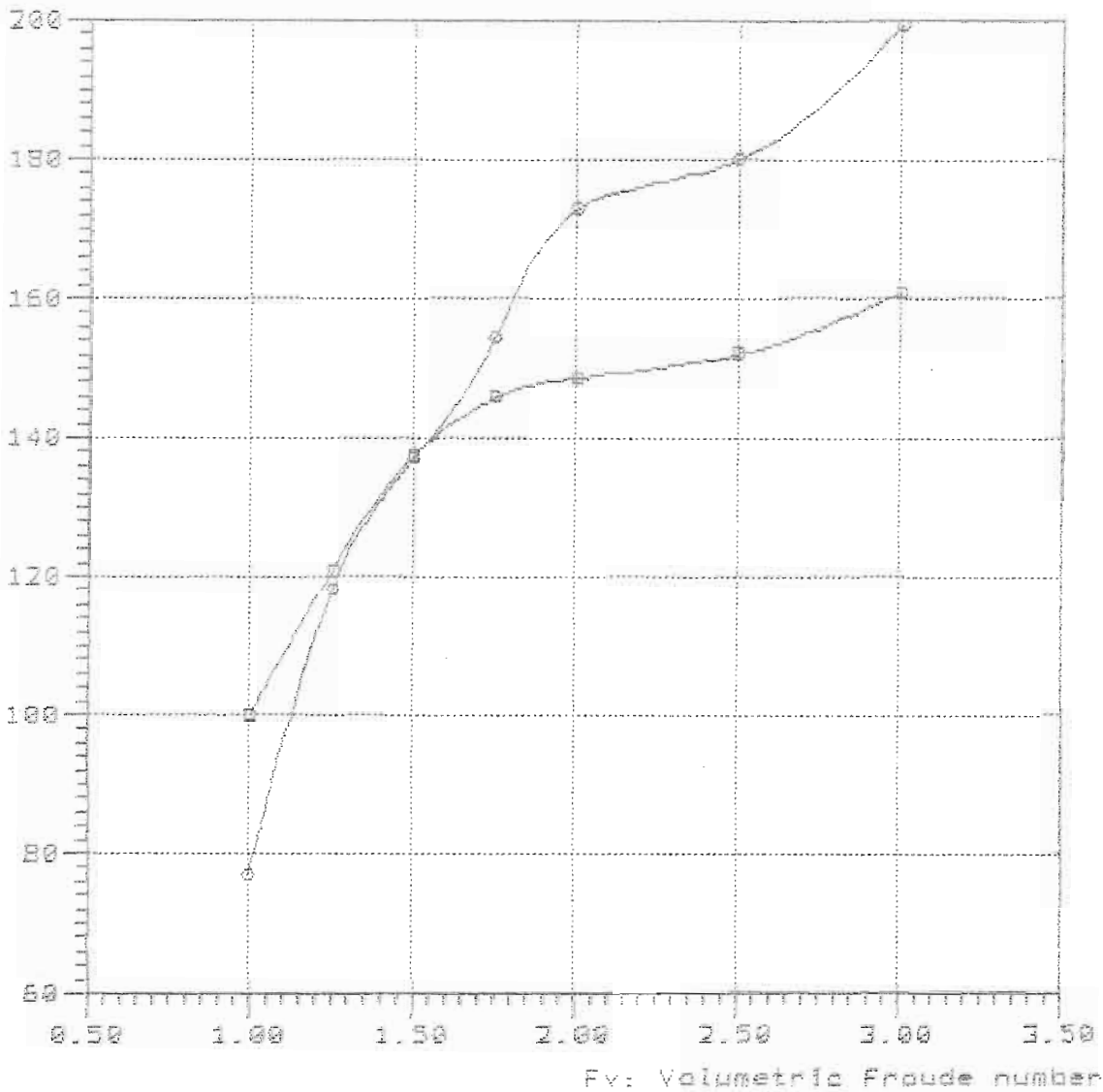
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65B Lpx/Bpx=2.350 Ap/Vol=7.854 Lox/Ap=3.183 Log/Lpx=0.340

Rbare: Bare-hull resistance (lbs)



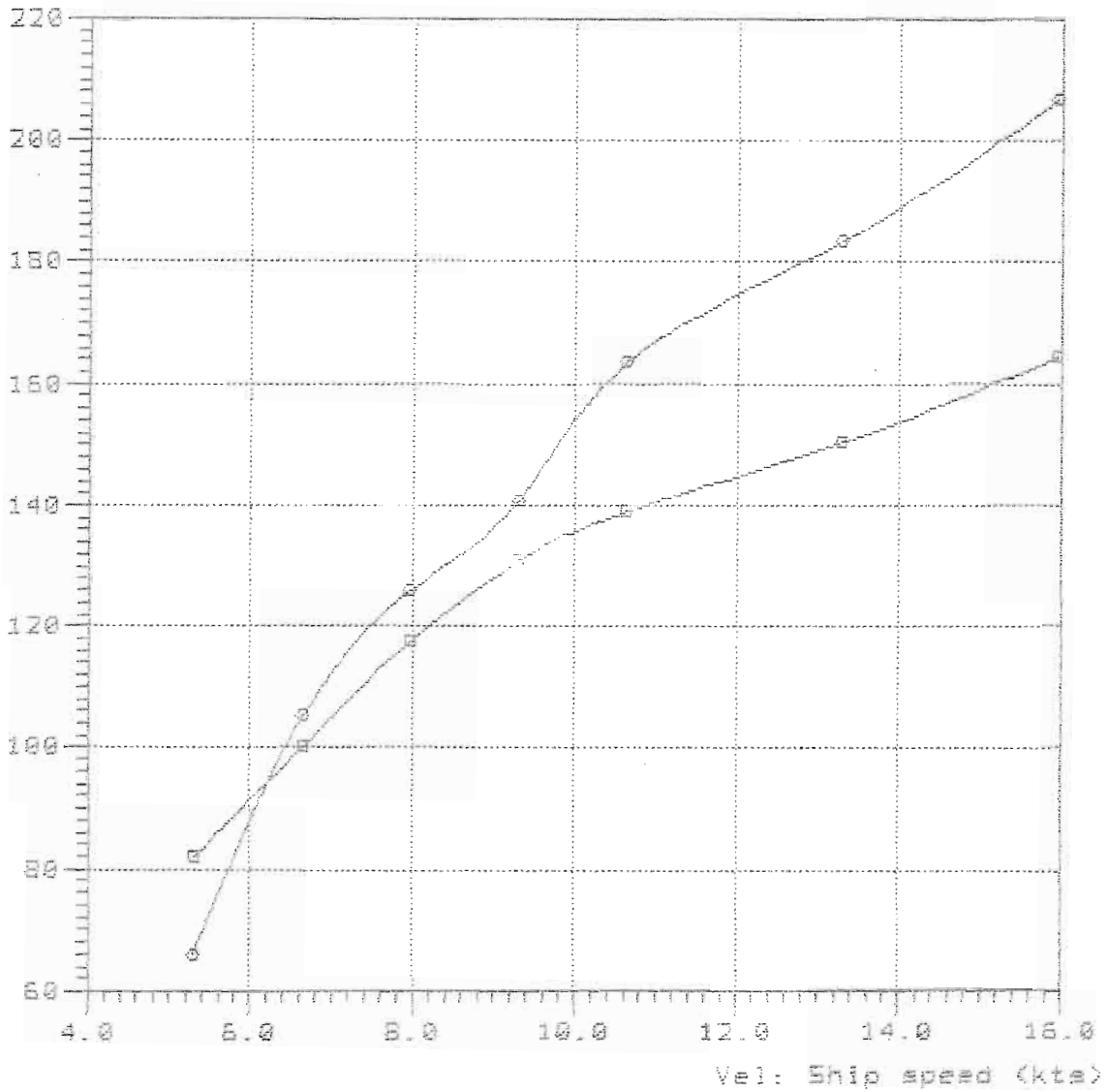
—■—

—●— TMB-638 Lpx/Bpx=2.350 Ap/Vol=7.854 Lpx/As=3.183 Lcg/Lpx=9.388

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File: B-50-420.mdl  
Date: 26 Feb 00  
Time: 17:52

Rbare: Bare-hull resistance (lbs)

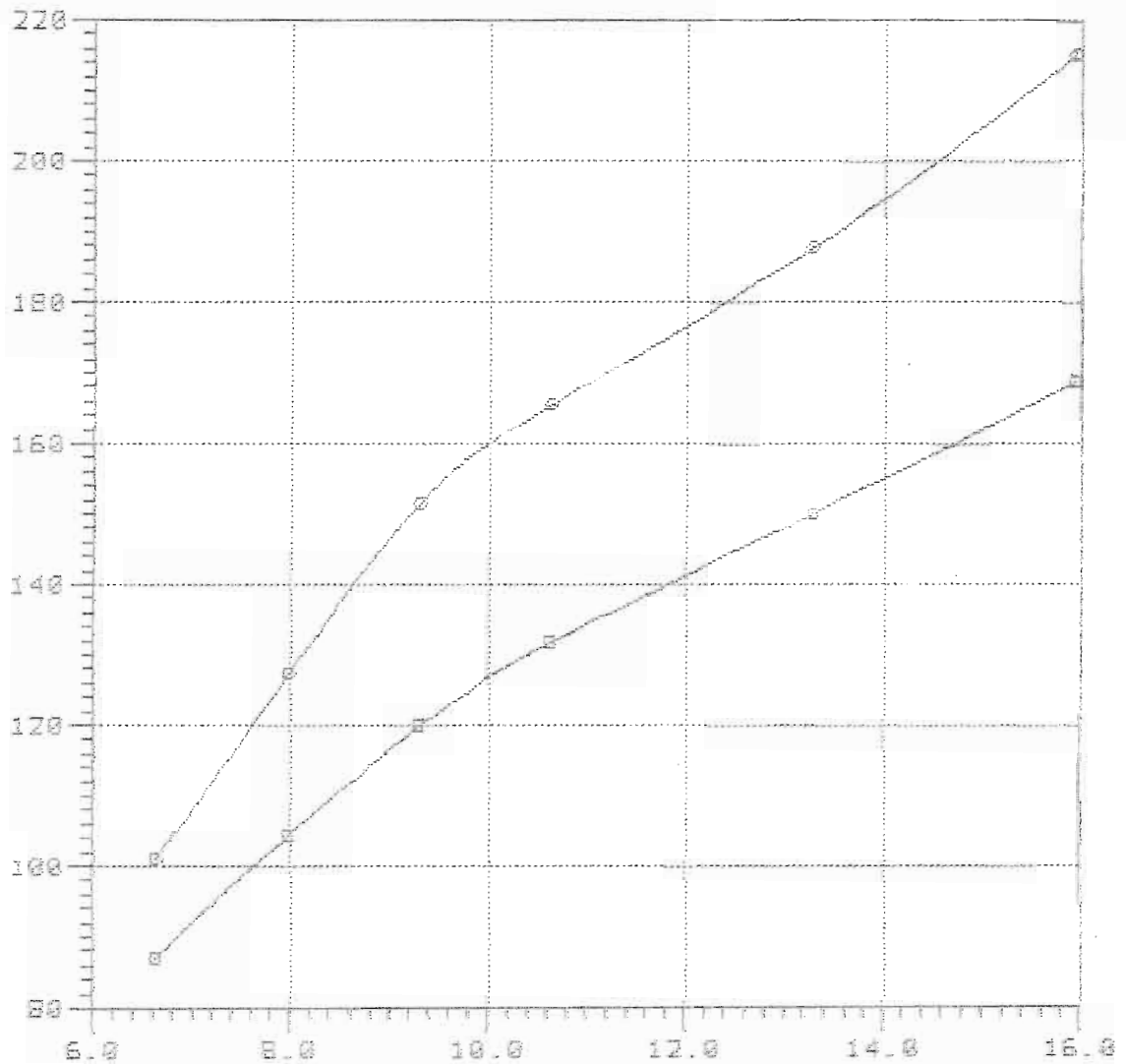


—■—  
—●— TMB-658 Lpx/Bpx=2.350 Ap/Vol=7.854 Lpx/As=3.183 Log/Lpx=0.420

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File: B-50-460.mdl  
Date: 26 Feb 00  
Time: 17:50

Rbare: Bare-hull resistance (lbs)



Vel: Ship speed (kts)

—■—

—●— THB-658 Lpx/Bpx=2.350 Rp/Vel=7.854 Lpx/Rp=3.183 Lcg/Lpx=0.460

Model = 5237  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 13.700 ft  
Lwl = 13.535 ft  
Bpx = 5.830 ft  
Ap = 58.966 sqft  
Vcg = 1.268 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle = 4.90 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 2.350  
Lpx/Ap = 3.183  
Ap /Vol = 9.433  
Lpx/Vol = 5.496  
Cvload = 0.079  
Lbload = 0.018  
Disp-Lpx = 173.616

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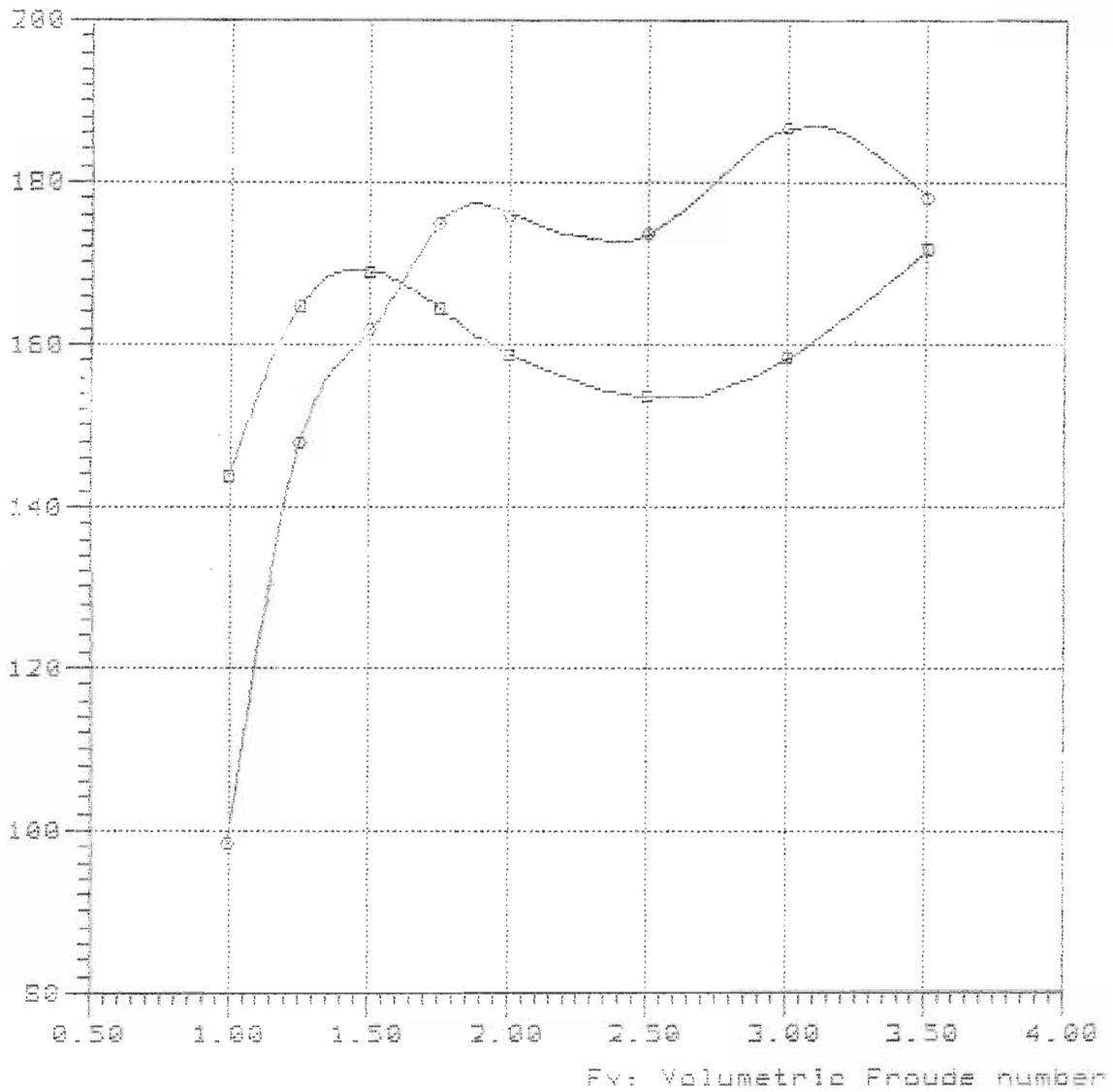
HydroComp, Inc.

File: 10-55-30.mdl

Date: 26 Feb 00

Time: 15:30

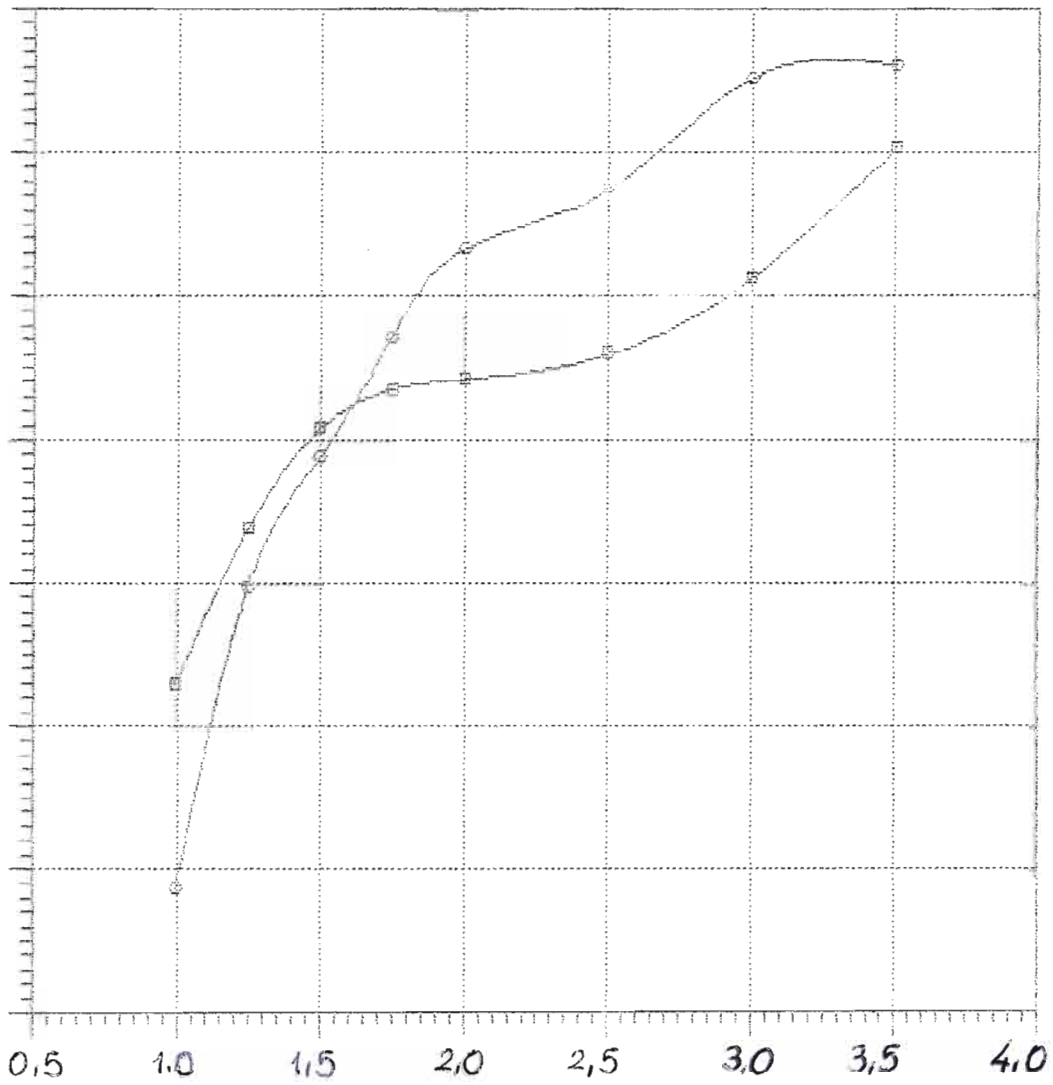
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMS-65B Lpx/Bpx=2.350 Ap/Vol=9.256 Lpx/Ap=3.183 Lcg/Lpx=0.360

10-55-340



—□—  
—○—

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Bare-hull resistance

vs.

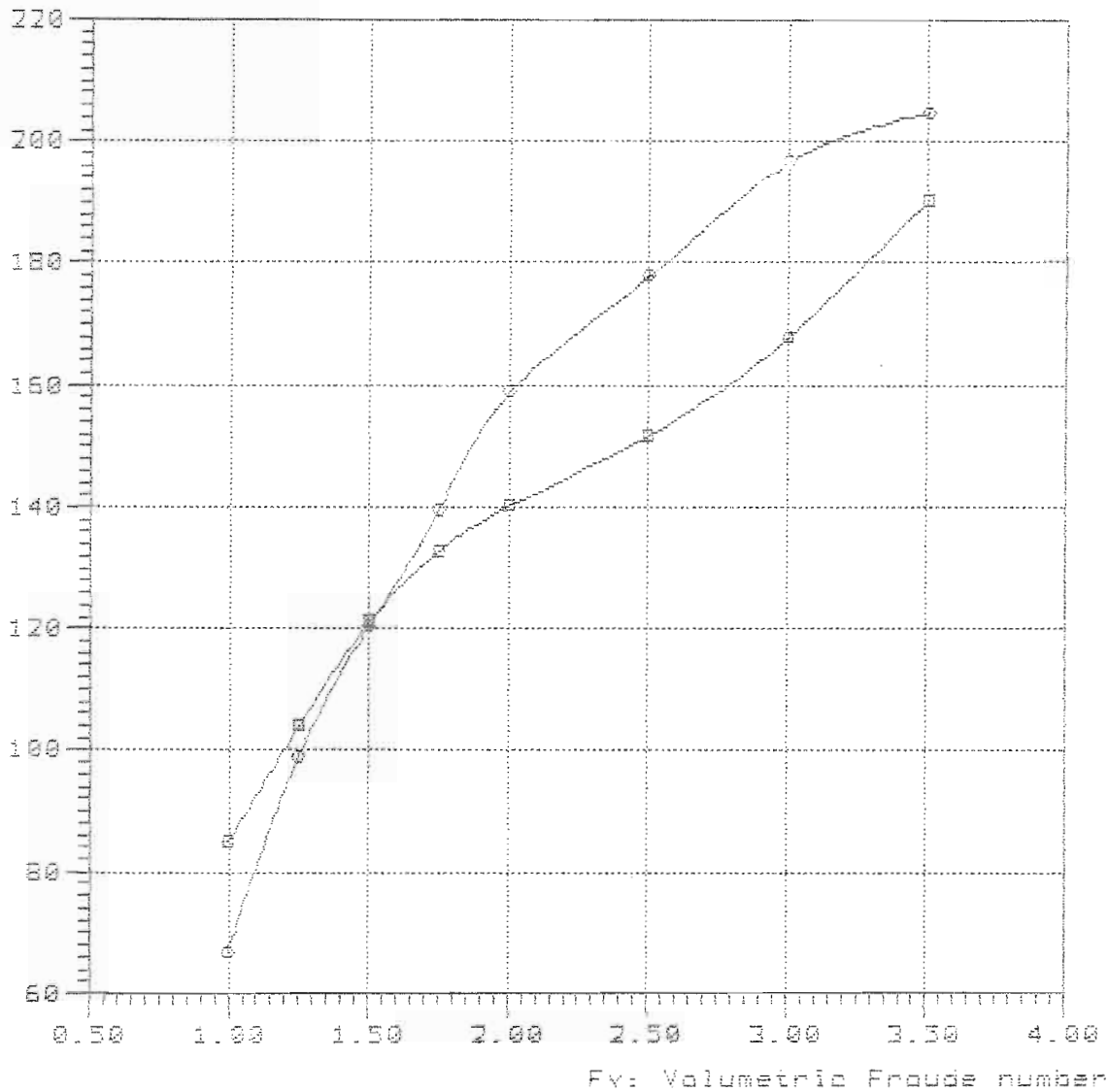
Volumetric Froude number

File: 10-55-38.mdl

Date: 26 Feb 00

Time: 15:31

Rbare: Bare-hull resistance (lbs)



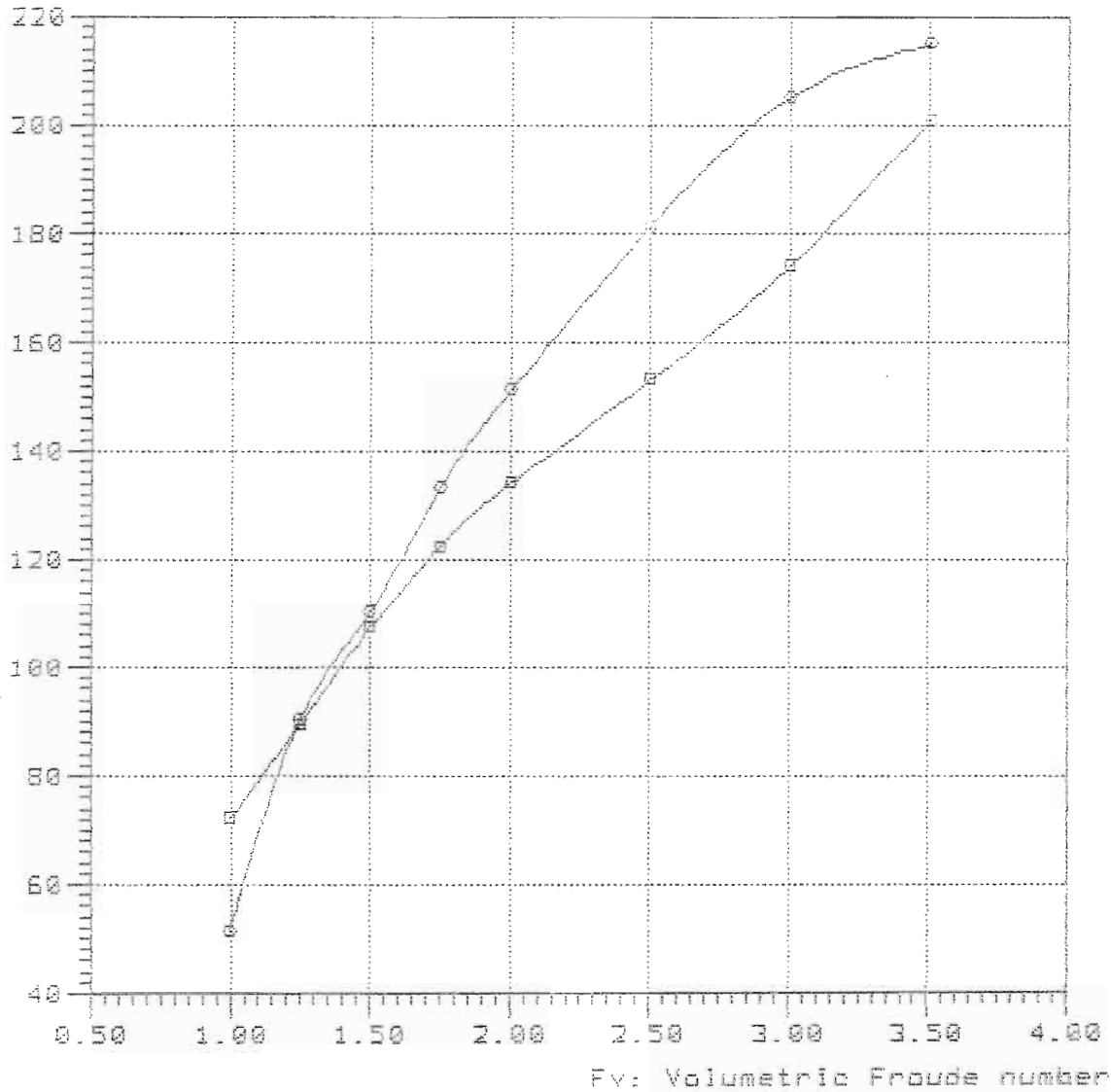
Curve legend

—□—

—○— TMB-65B Lpx/Bpx=2.350 Ap/Vol=9.256 Lpx/As=3.153 Lcg/Lpx=0.380



Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Epx=2.356 Ap/Vol=9.256 Lpx/Ap=3.183 Lcg/Lpx=0.420

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### Bare-hull resistance

File: 10-55-46.mdl

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vs.

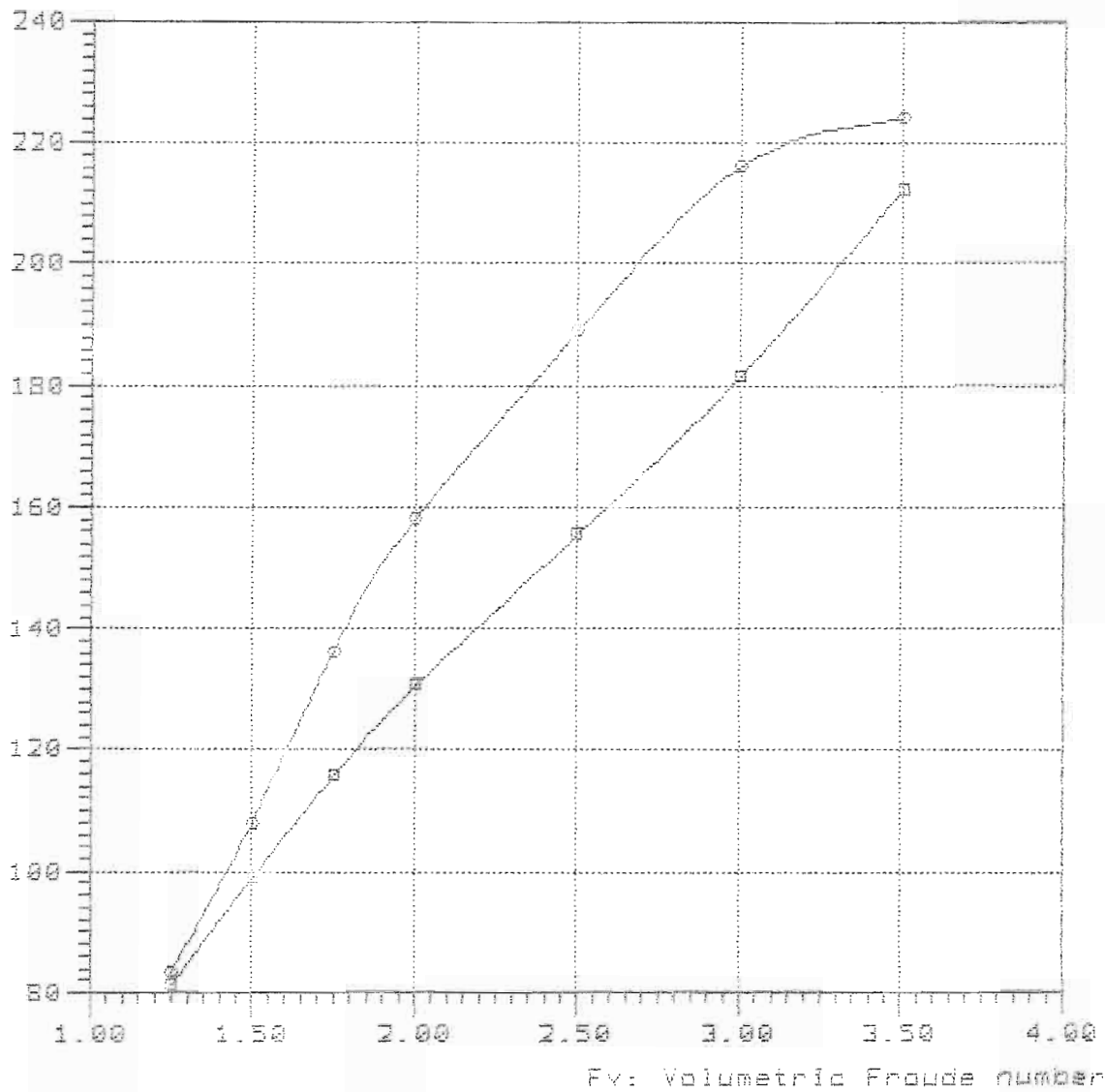
Date: 26 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 15:41

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

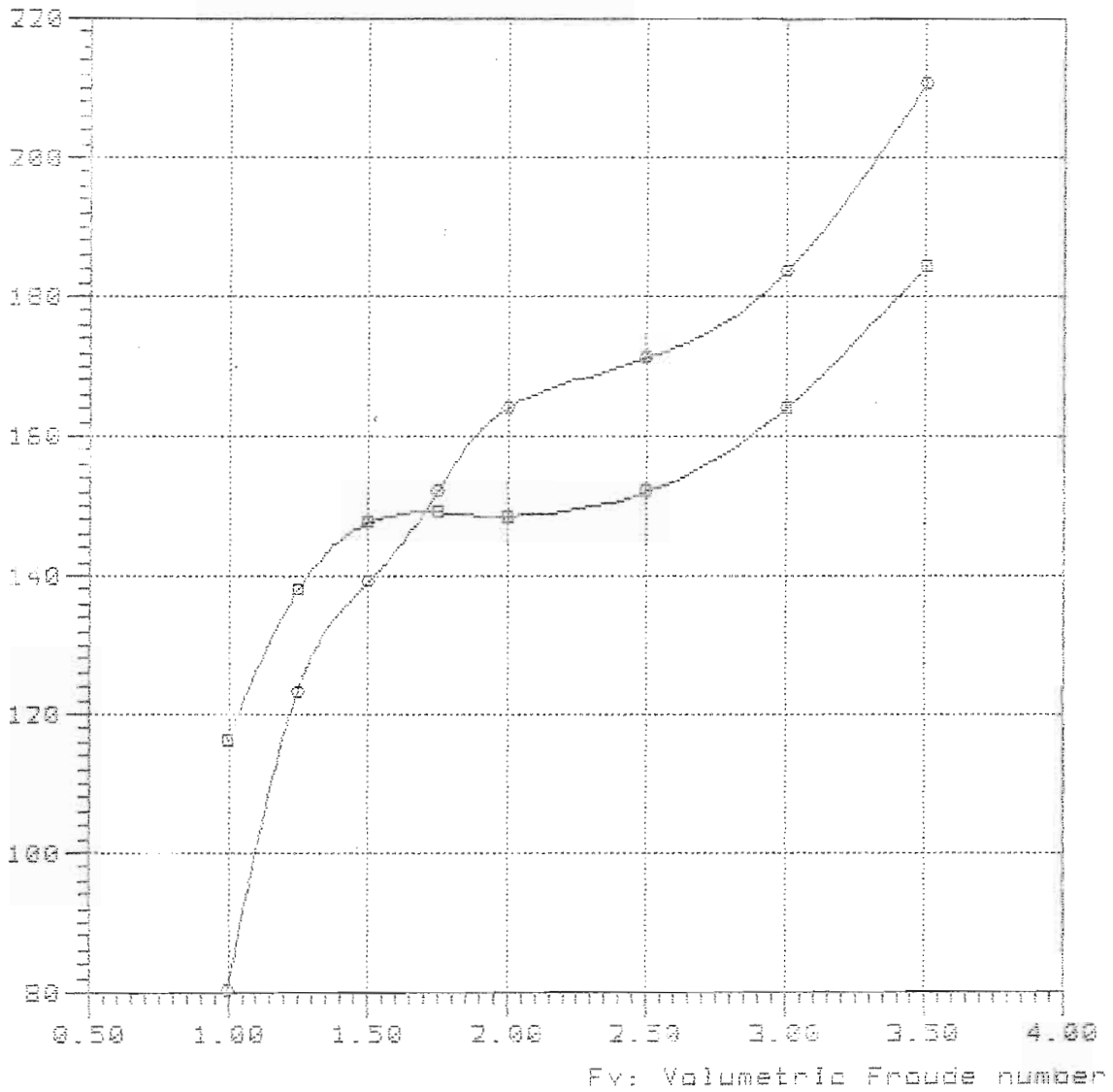
—●— TMB-65B Lpx/Bpx=2.350 Ap/Vol=9.236 Lpx/Ap=3.183 Lcg/Lpx=0.460

Model = 5237  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 15.000 ft  
Lwl = 14.819 ft  
Bpx = 6.383 ft  
Ap = 70.688 sqft  
Vcg = 1.388 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 2.350  
Lpx/Ap = 3.183  
Ap /Vol = 11.309  
Lpx/Vol = 6.018  
Cvload = 0.060  
Lbload = 0.014  
Disp-Lpx = 132.275

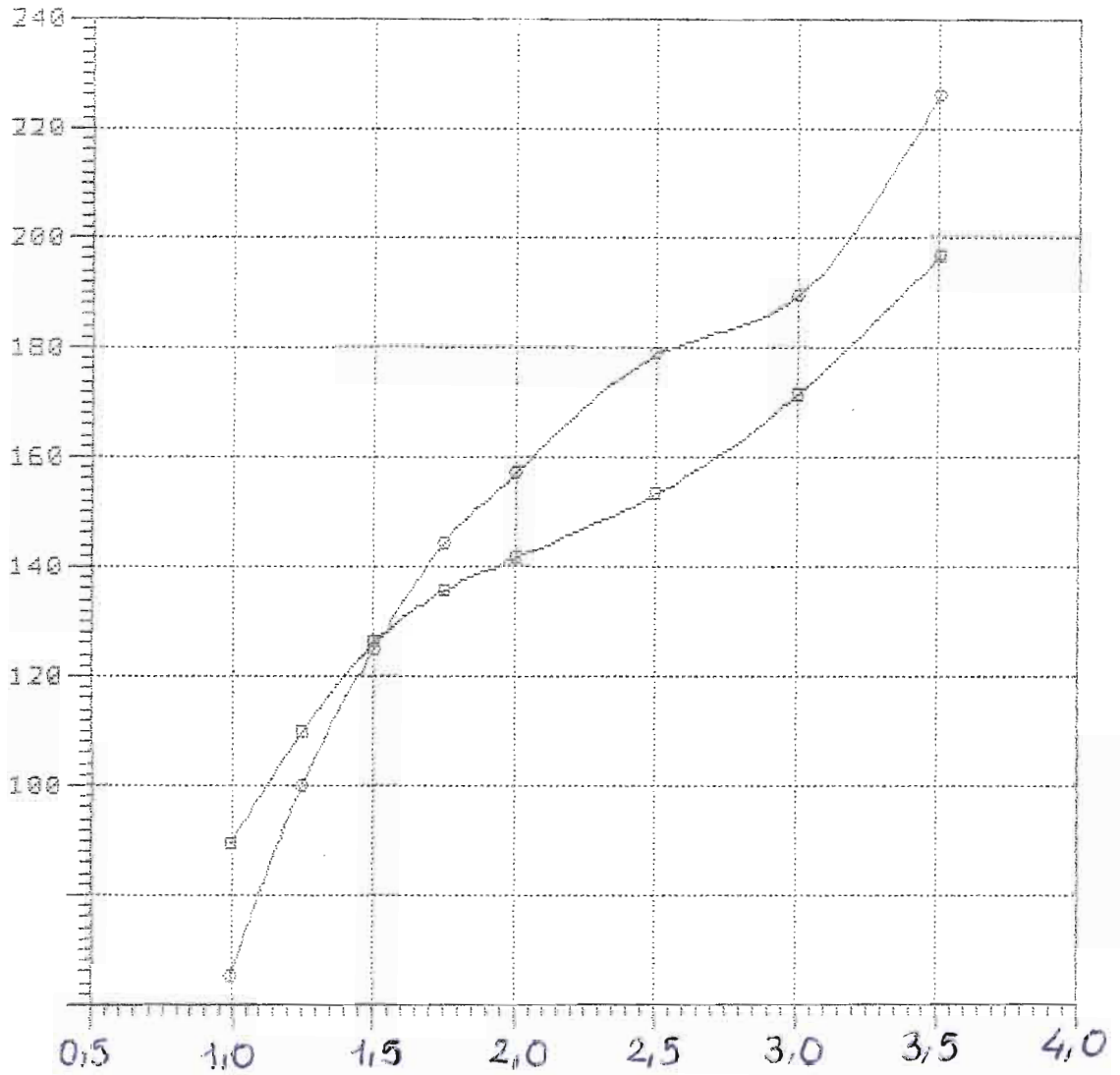
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65B Lpx/Bpx=2.350 Ap/Vol=11.310 Lpx/Ap=3.183 Log/Lpx=0.300

Rbare: Bare-hull resistance (lbs)



—□—  
—○—

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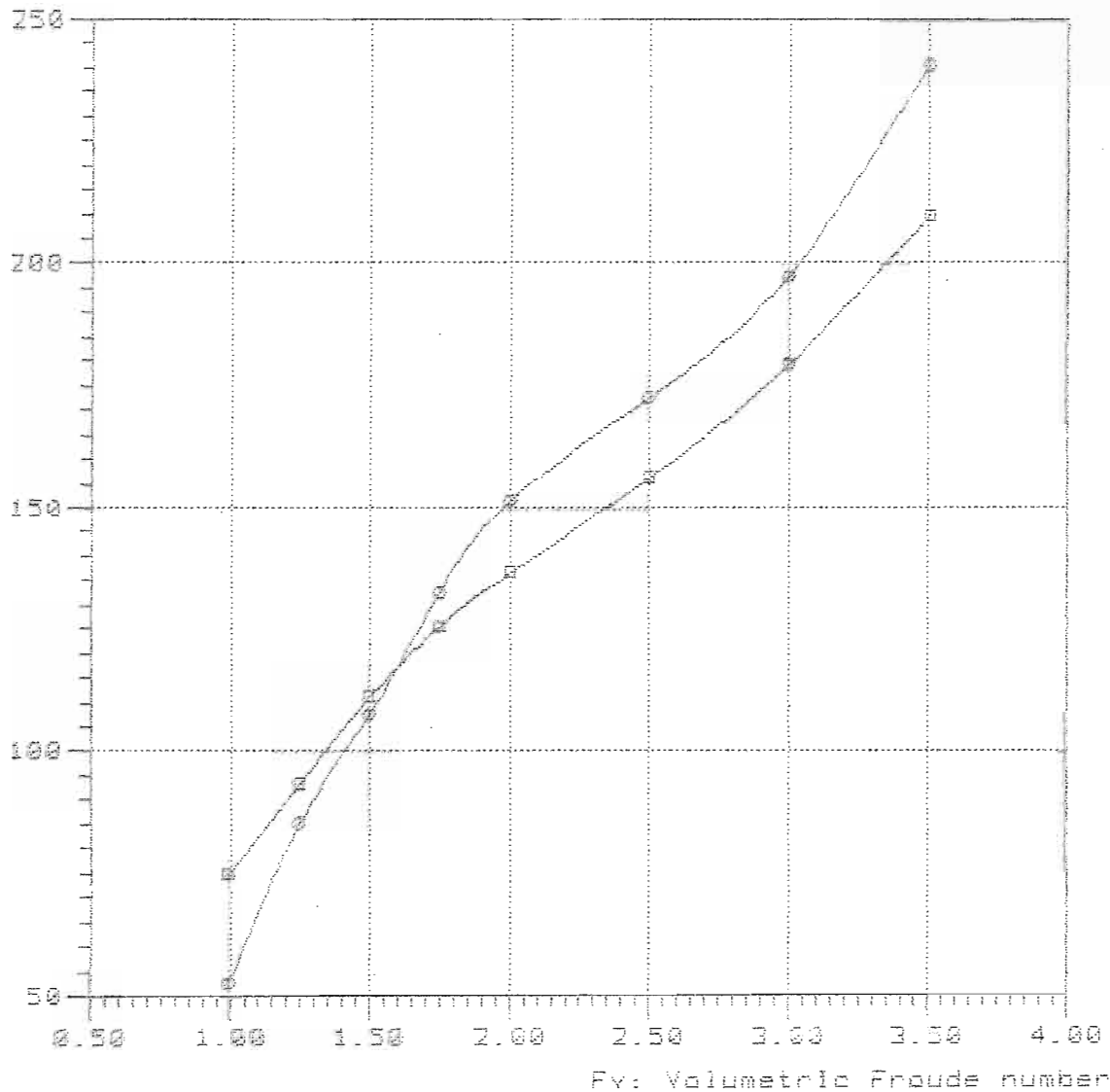
HydroComp, Inc.

File: 11-60-38.mdl

Date: 26 Feb 00

Time: 15:56

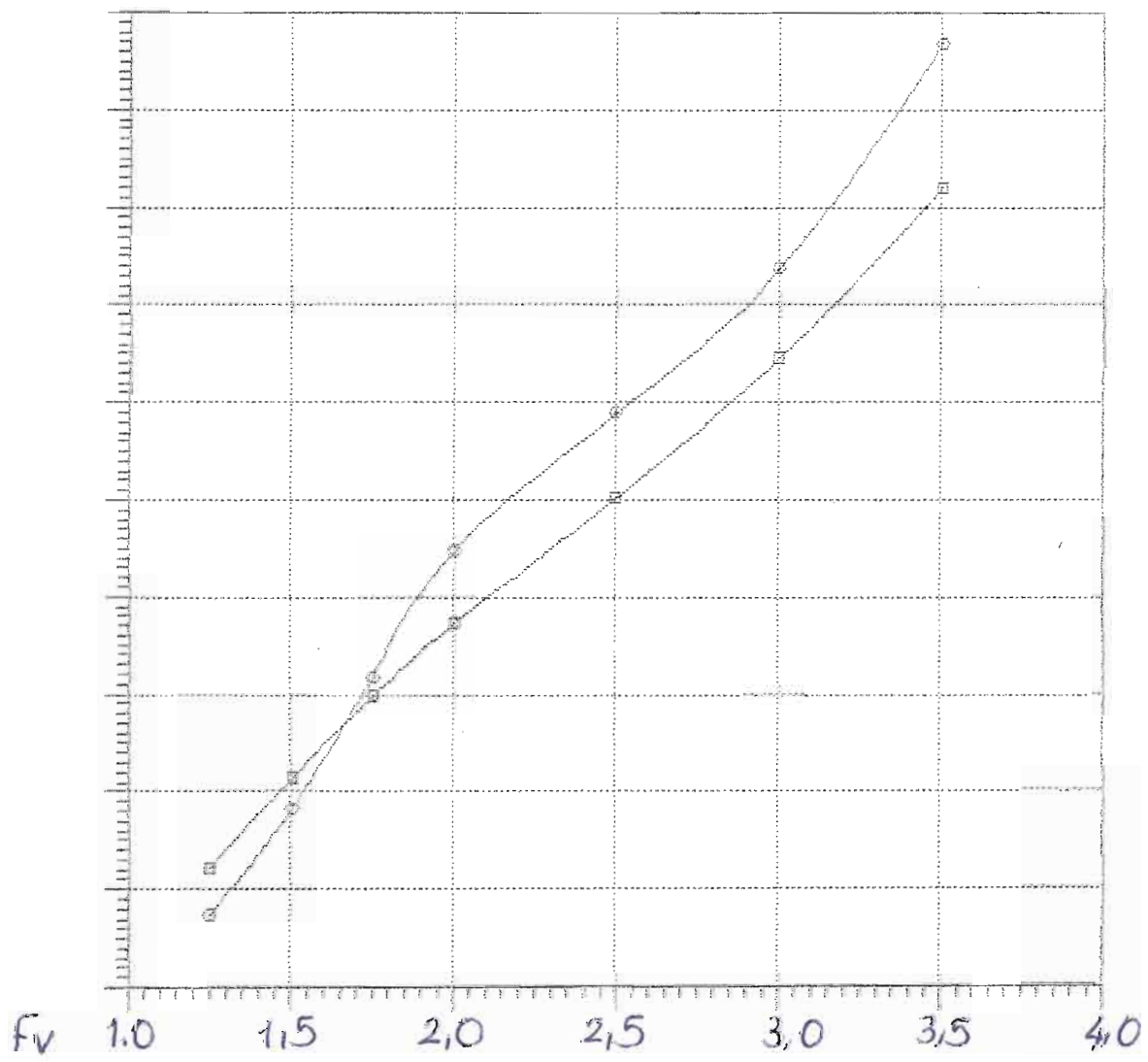
Rbare: Bare-hull resistance (lbs)



—□—

—○— RMS-65B Lpx/Bpx=2.354 Ap/Vol=11.310 Lpx/Ap=3.183 Log/Lpx=0.286

11-60-42



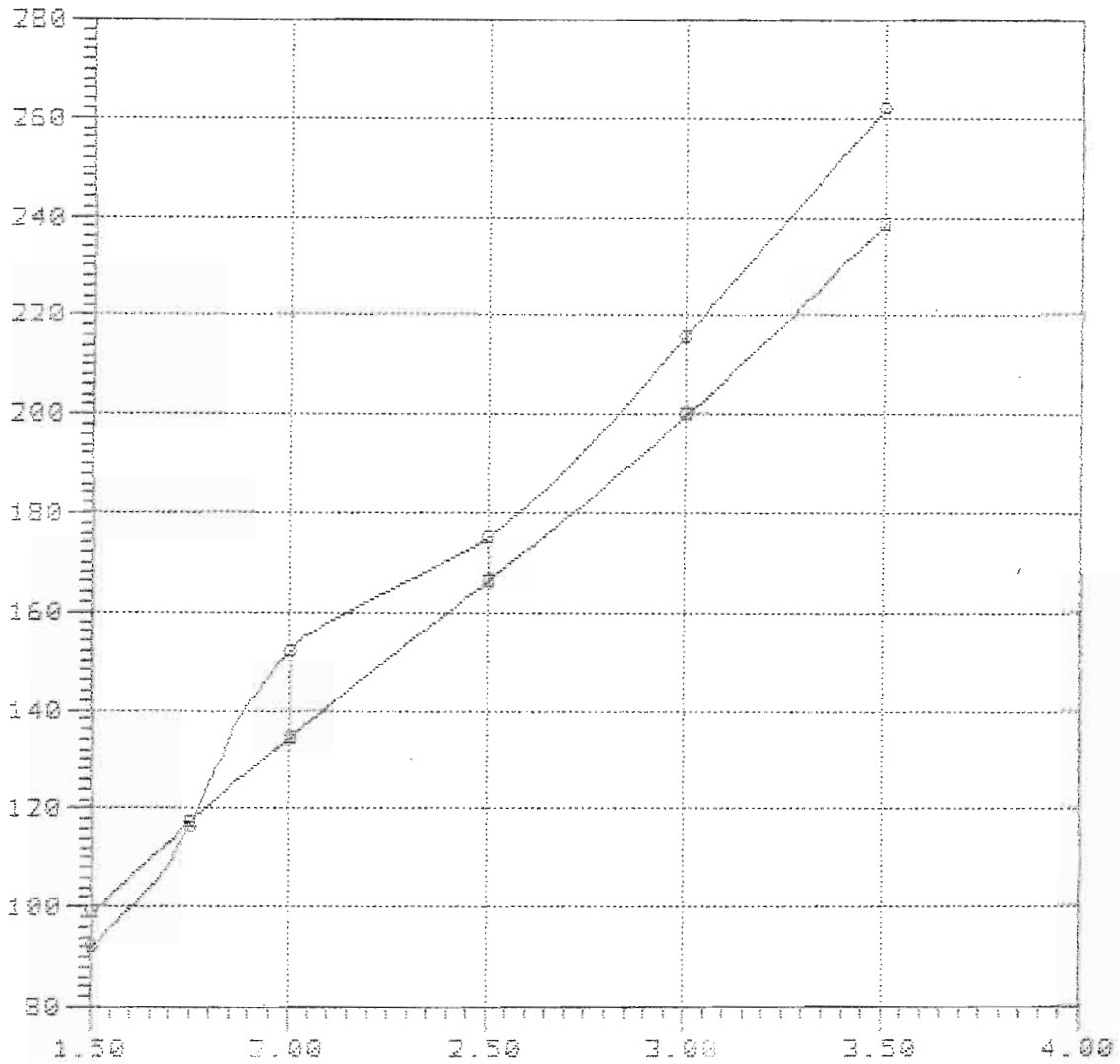
—□—  
—○—

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Bare-hull resistance  
vs.  
Volumetric Froude number

File: 11-83-46.md1  
Date: 26 Feb 00  
Time: 15:57

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

Curve legend

—○—

—●— TMB-65B Lpx/Bpx=2.350 Ap/Vol=11.318 Lpx/Rp=3.185 Lcg/Lpx=0.468



Model = 5237  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 16.200 ft  
Lwl = 16.005 ft  
Bpx = 6.894 ft  
Ap = 82.451 sqft  
Vcg = 1.499 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

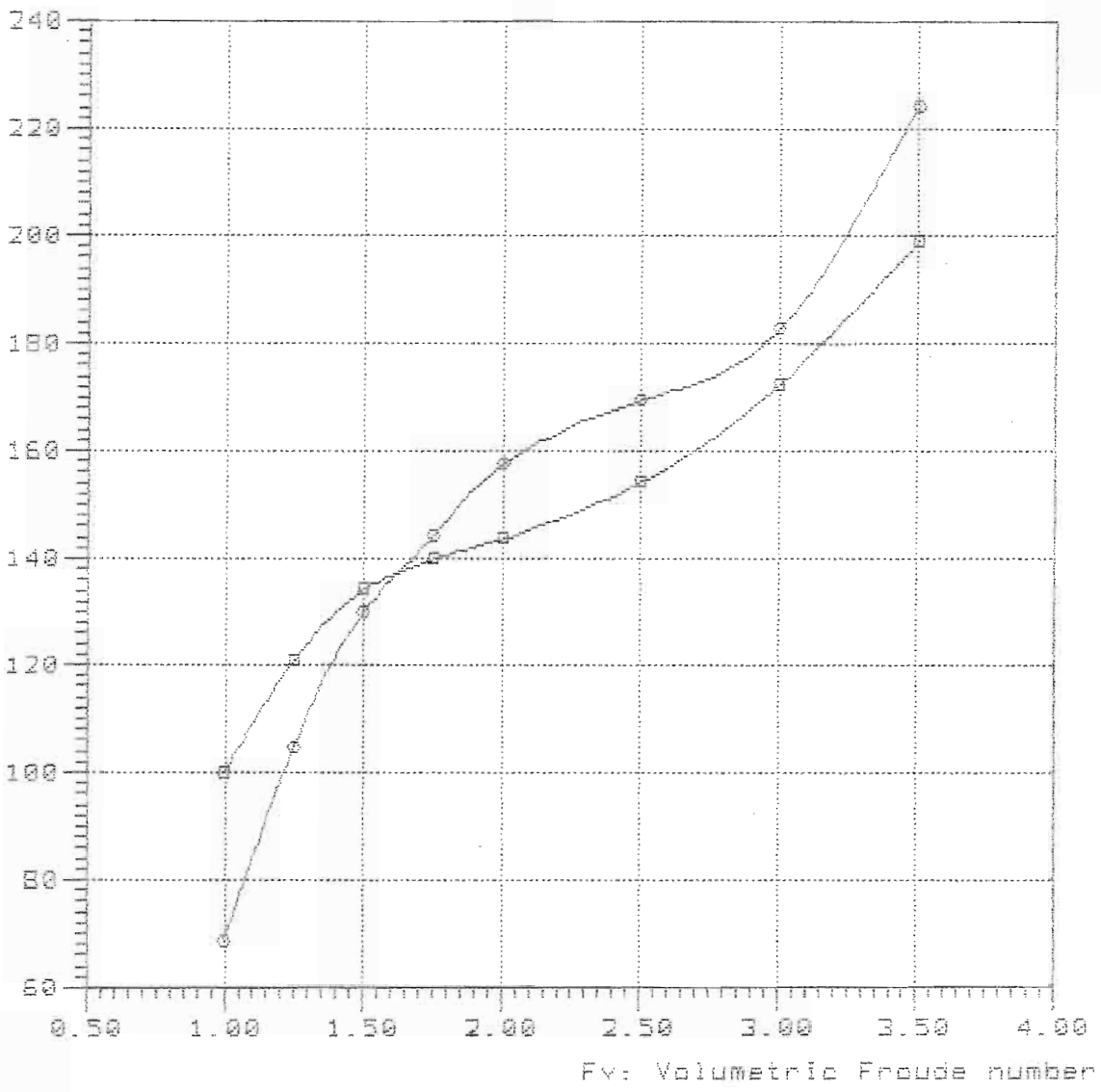
Lpx/Bpx = 2.350  
Lpx/Ap = 3.183  
Ap /Vol = 13.191  
Lpx/Vol = 6.499  
Cvload = 0.048  
Lbload = 0.011  
Disp-Lpx = 105.004

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Bare-hull resistance  
vs.  
Volumetric Froude number

File: 13-85-30.mdl  
Date: 26 Feb 00  
Time: 16:21

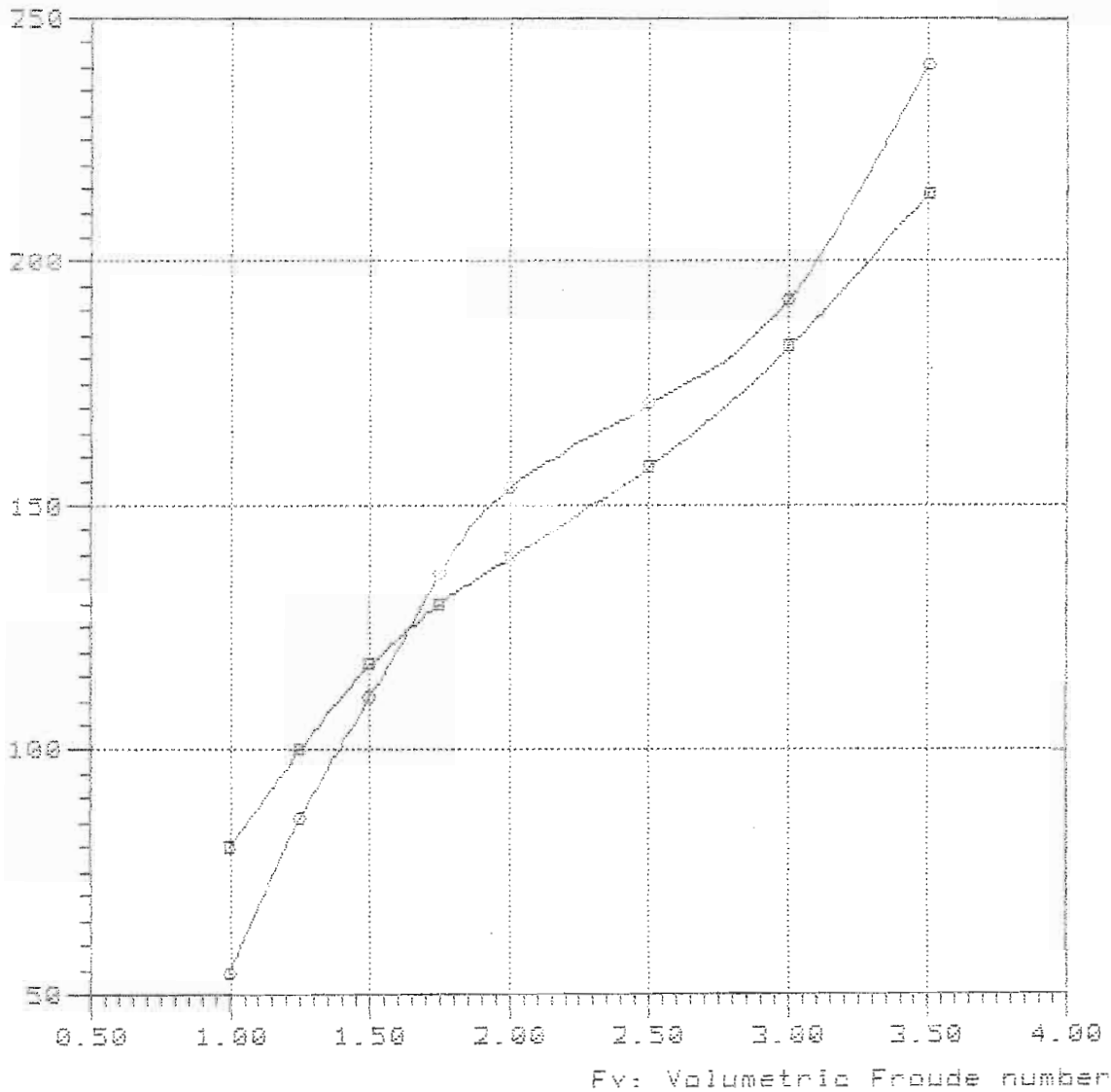
Rbare: Bare-hull resistance (lbs)



Curve legend

- 
- TMB-65B Lpx/Bpx=2.350 Ap/Vol=13.192 Lpx/Ap=3.183 Log/Lpx=0.300

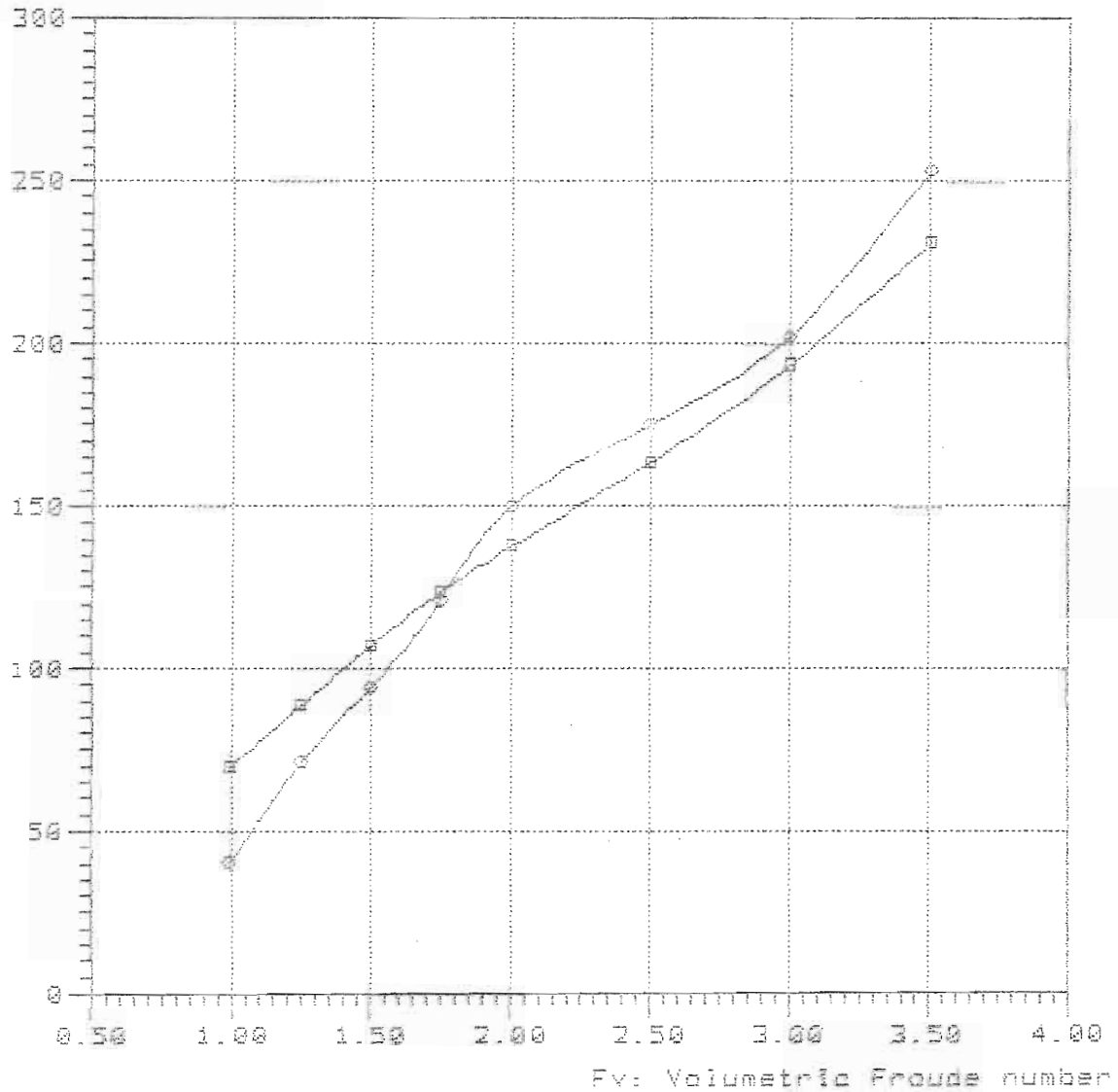
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-658 Lpx/Bpx=2.350 Rp/Vol=13.192 Lpx/Rp=3.183 Lcg/Lpx=0.340

Rbare: Bare-hull resistance (lba)



—○—

—○— TMB-65B Lpx/Bpx=2.350 Ap/Vol=13.192 Lpx/Ap=3.183 Lcg/Lpx=0.380

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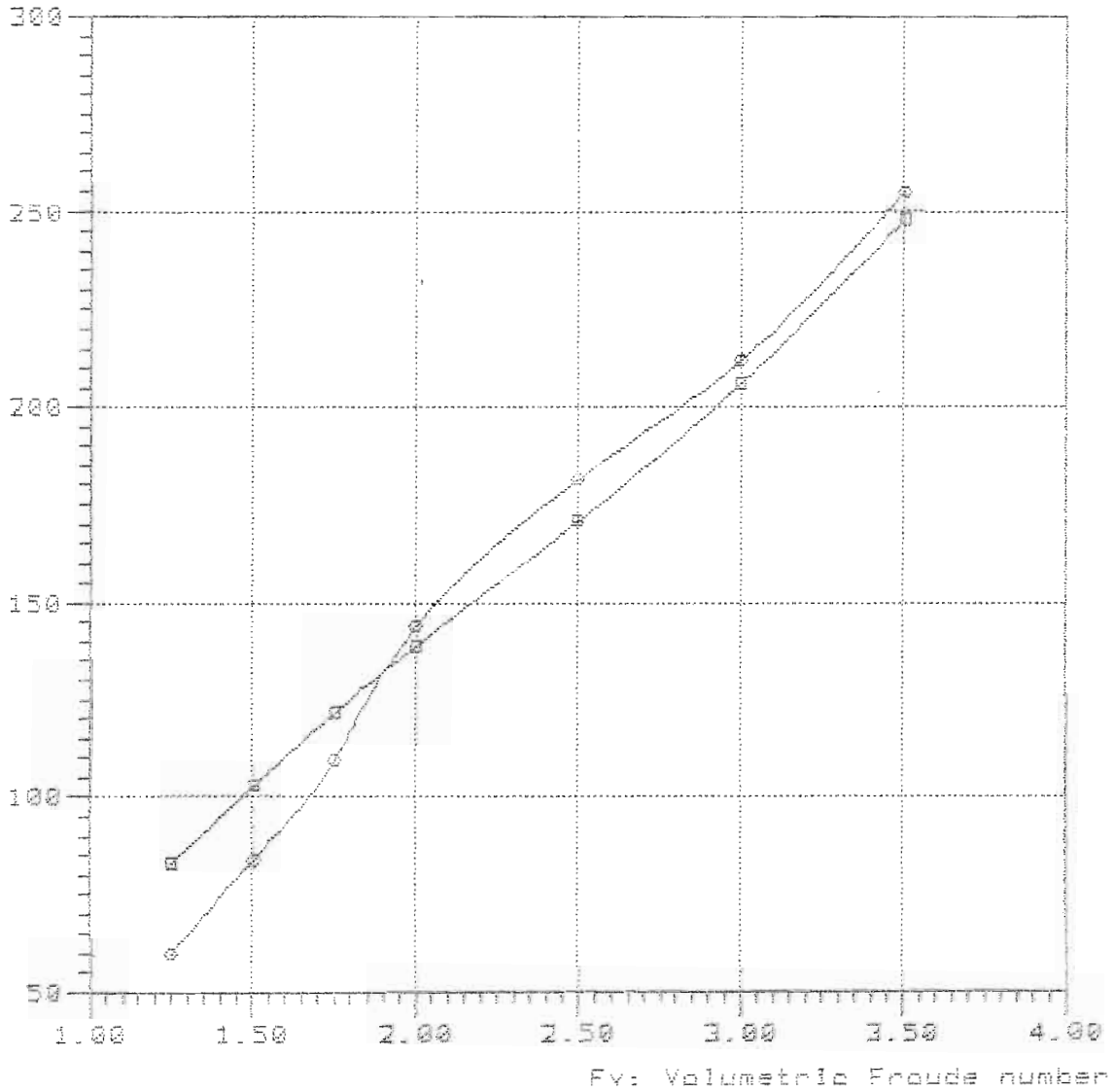
HydroComp, Inc.

File: 13-65-42.mdl

Date: 26 Feb 00

Time: 16:24

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMS-638 Lpx/Bpx=2.358 Ap/Vol=13.192 Lpx/Ap=3.183 Lcg/Lpx=0.428

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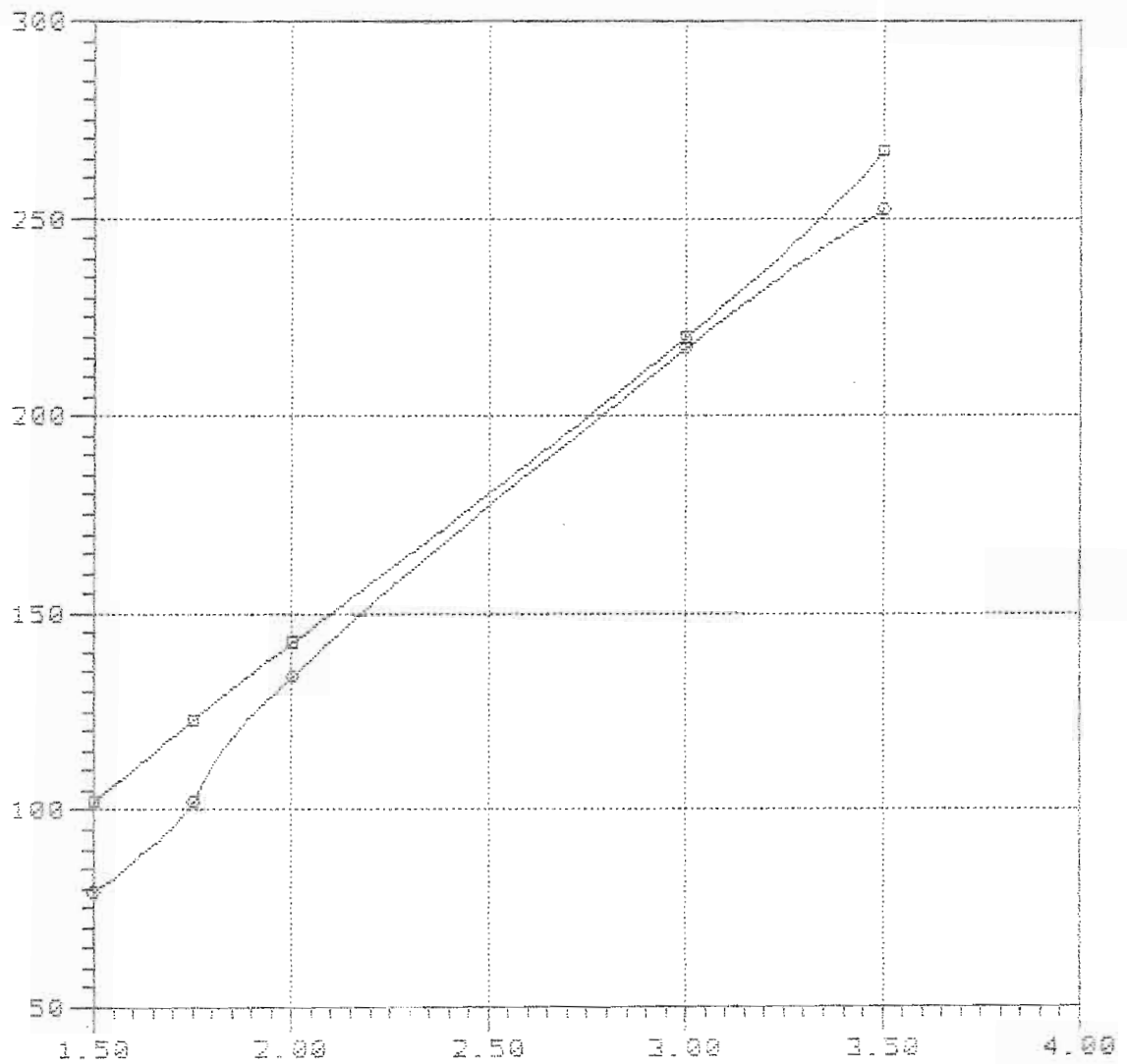
HydroComp, Inc.

File: 13-85-46.mdl

Date: 26 Feb 00

Time: 16:34

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—

—●— TMB-658 Lpx/Bpx=2.350 Ap/Vol=13.192 Lpx/Ap=3.183 Lcg/Lpx=0.460

Model = 5237  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 17.500 ft  
Lwl = 17.289 ft  
Bpx = 7.447 ft  
Ap = 96.214 sqft  
Vcg = 1.619 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle = 4.90 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

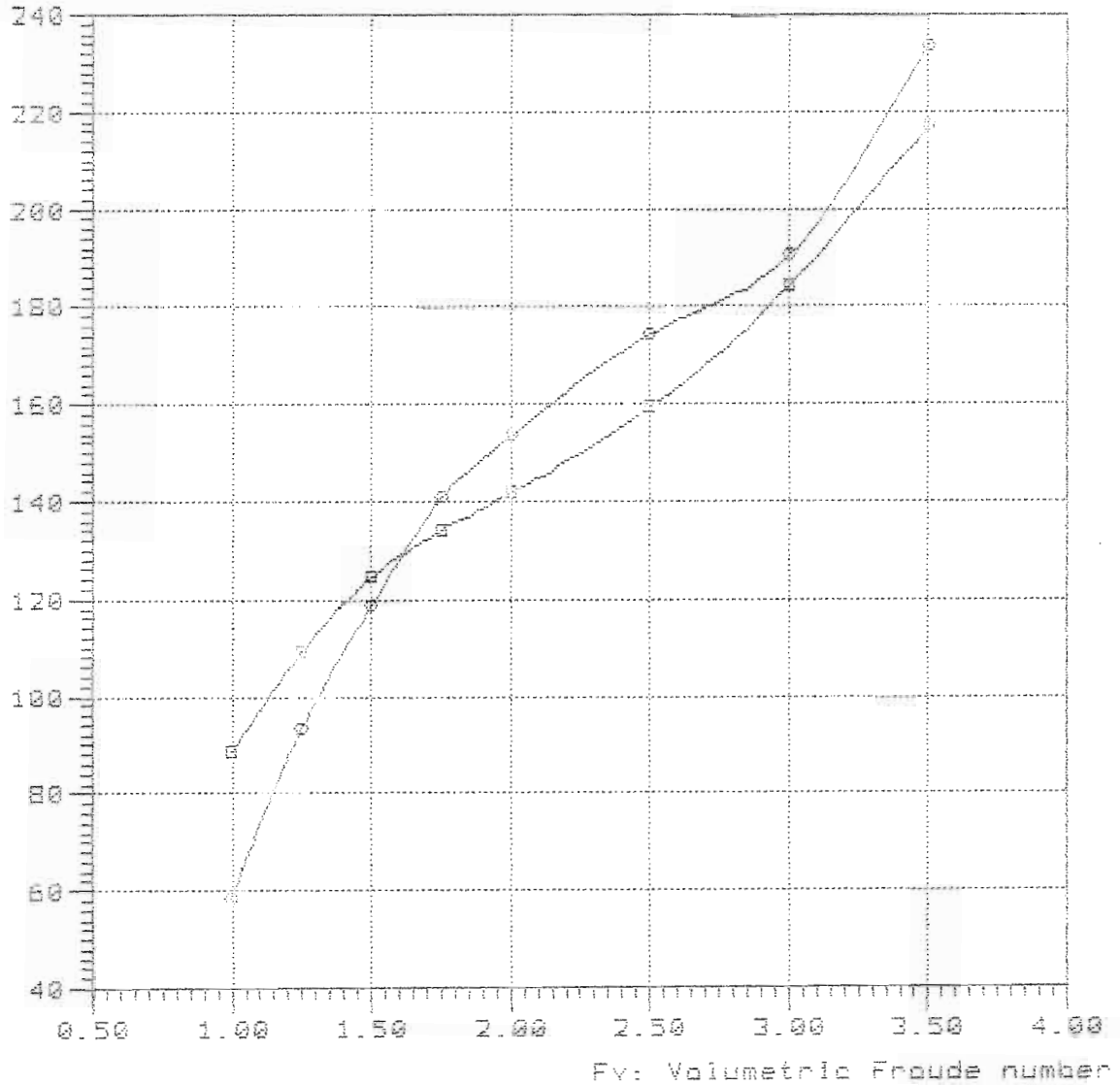
Lpx/Bpx = 2.350  
Lpx/Ap = 3.183  
Ap /Vol = 15.392  
Lpx/Vol = 7.021  
Cvload = 0.038  
Lbload = 0.009  
Disp-Lpx = 83.299

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○— TMB-658 Lpx/Bpx=2.350 Ap/Val=15.394 Lpx/Ap=3.183 Lcg/Lpx=0.300



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### Bare-hull resistance

vs.

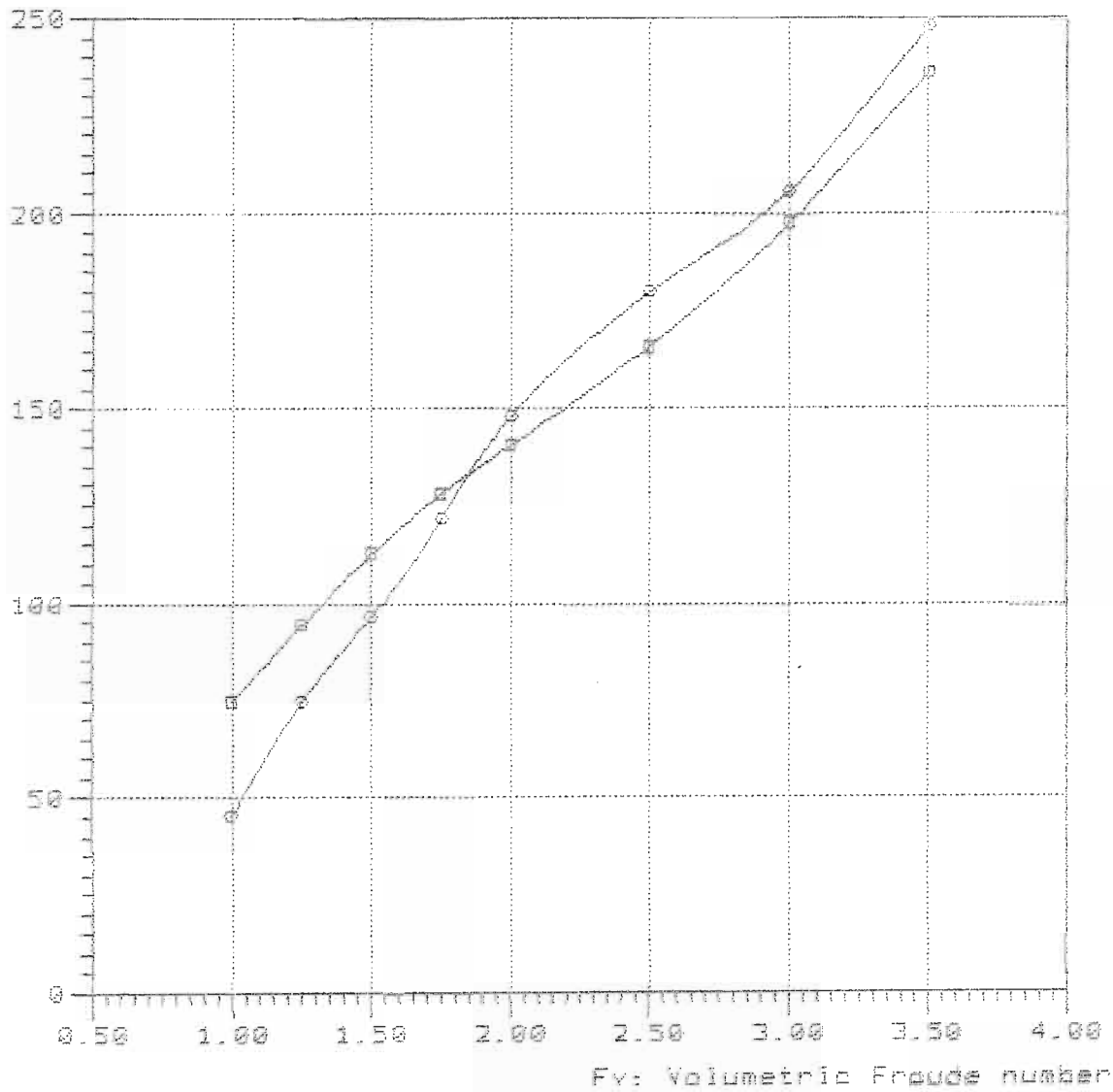
### Volumetric Froude number

File: 15-70-34.mdl

Date: 26 Feb 00

Time: 16:36

Rbare: Bare-hull resistance (lbs)

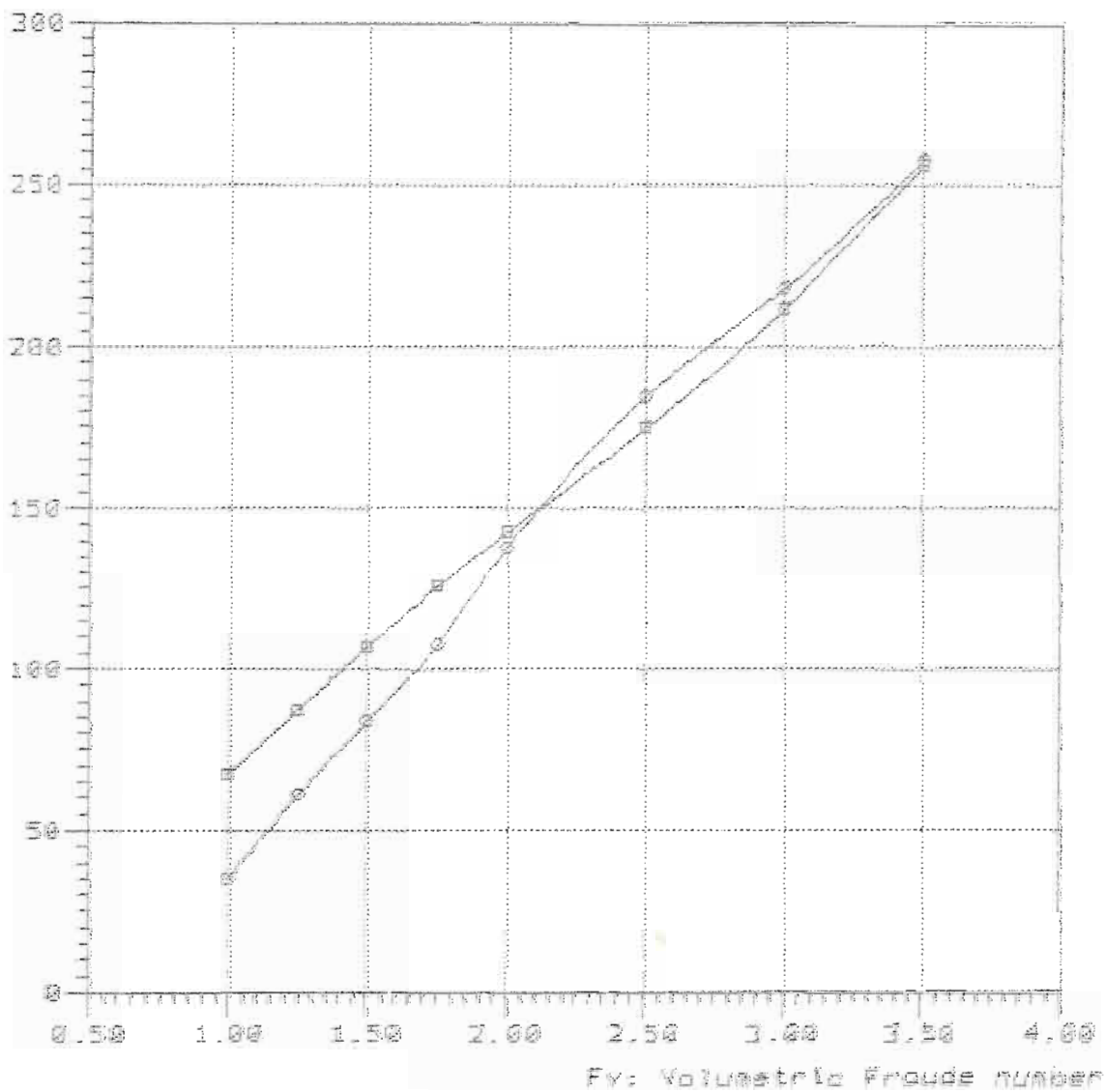


#### Curve legend

—○—

—□— TMB-65B Lpx/Bpx=2.350 Ap/Vol=13.394 Lpx/Ap=3.183 Log/Lpx=0.340

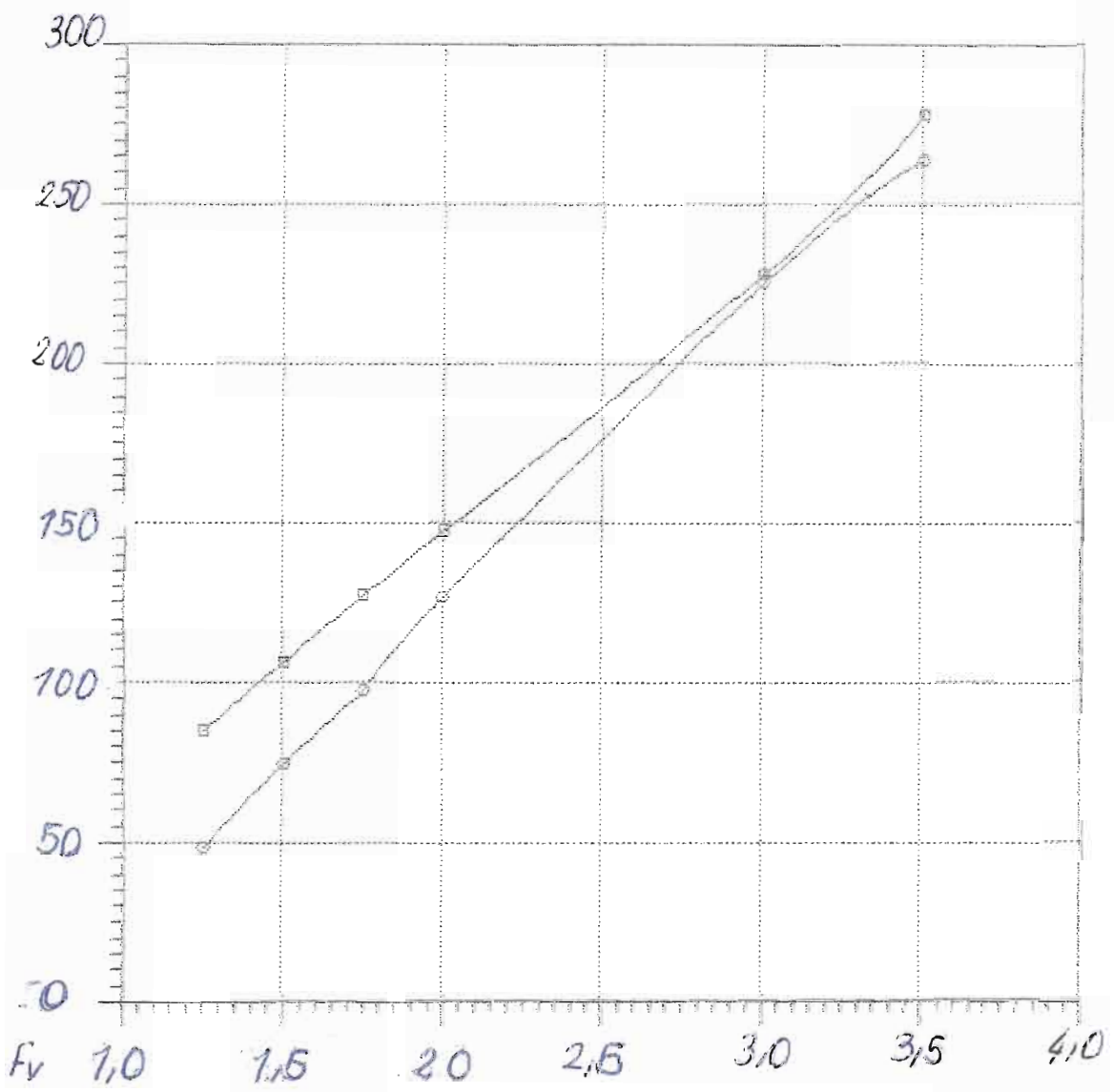
Rbare: Bare-hull resistance (lbs)



—■—

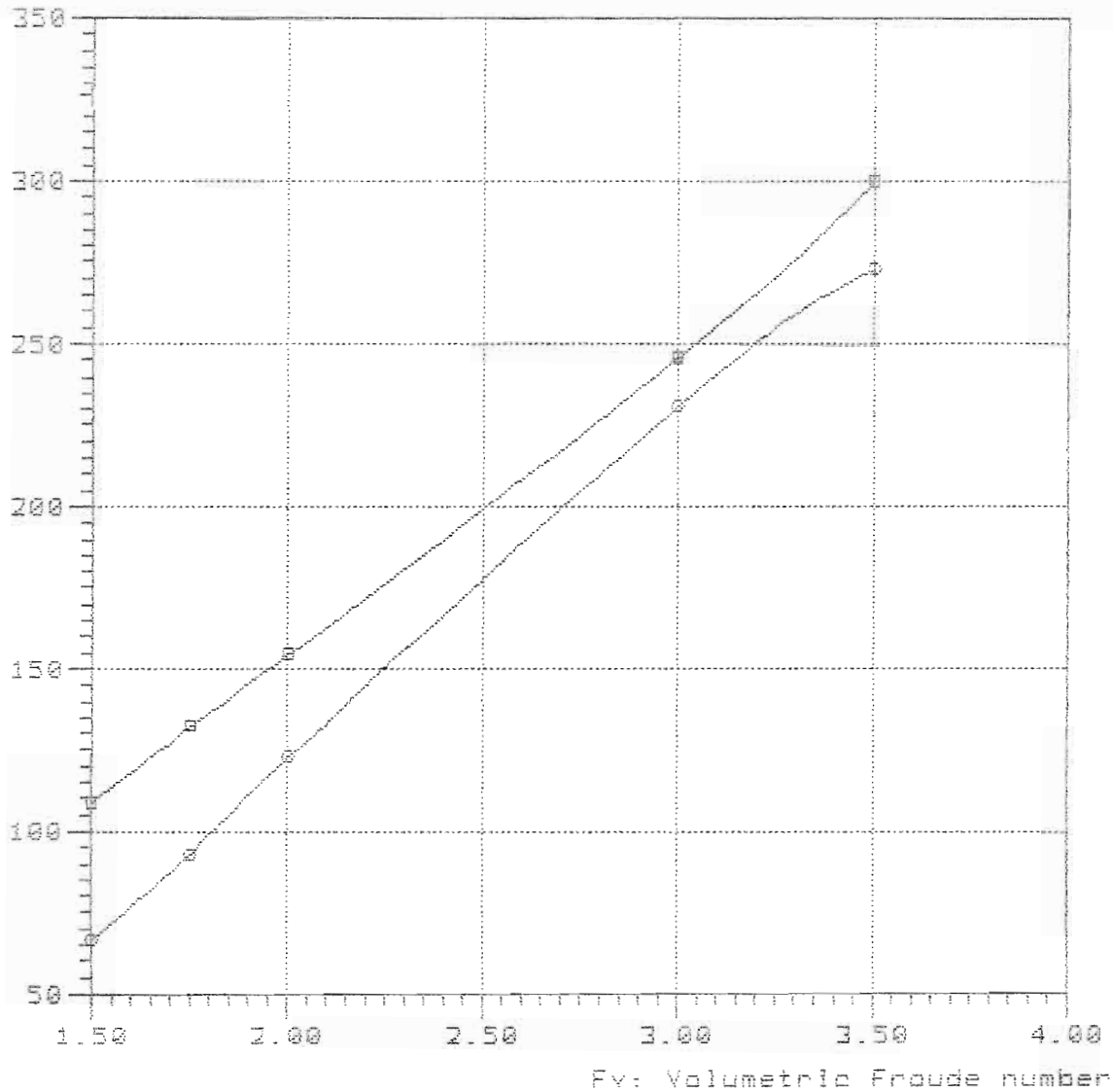
—○— TMB-65B Lpx/Bpx=2.350 Ap/Vol=15.394 Lpx/As=3.183 Log/Lex=0.380

15-70-42



—□—  
—○—

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—●— TNB-63B Lpx/Bpx=2.350 Ap/Vol=15.394 Lpx/Ap=3.183 Log/Lpx=0.460

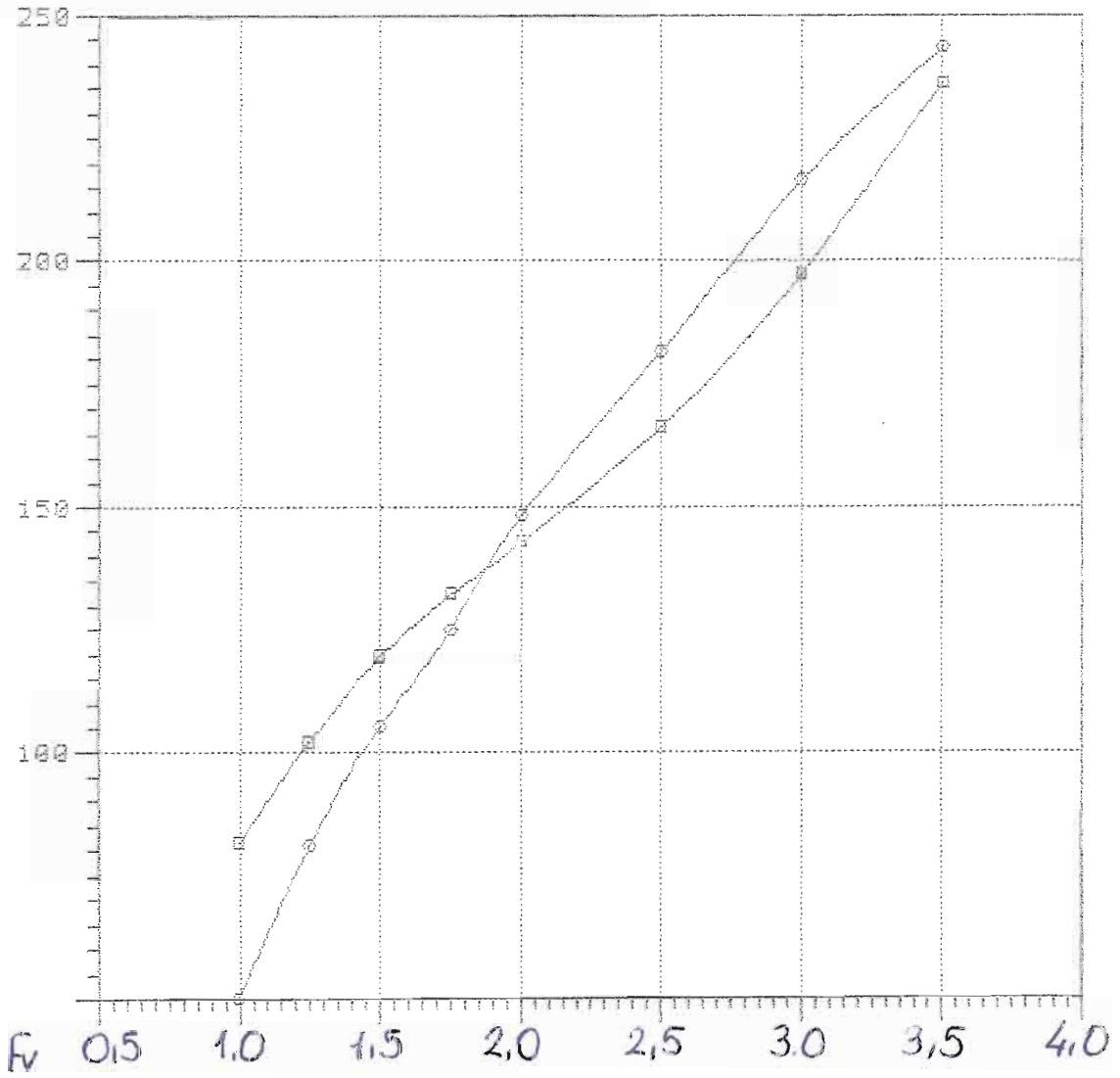
Model = 5237  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 18.700 ft  
Lwl = 18.475 ft  
Bpx = 7.957 ft  
Ap = 109.862 sqft  
Vcg = 1.731 ft  
Disp. = 1000.00 Lb

Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 2.350  
Lpx/Ap = 3.183  
Ap /Vol = 17.576  
Lpx/Vol = 7.502  
Cvload = 0.031  
Lbload = 0.007  
Disp-Lpx = 68.270

Rbare: Bare-hull resistance (lbs)



—■—  
—○—

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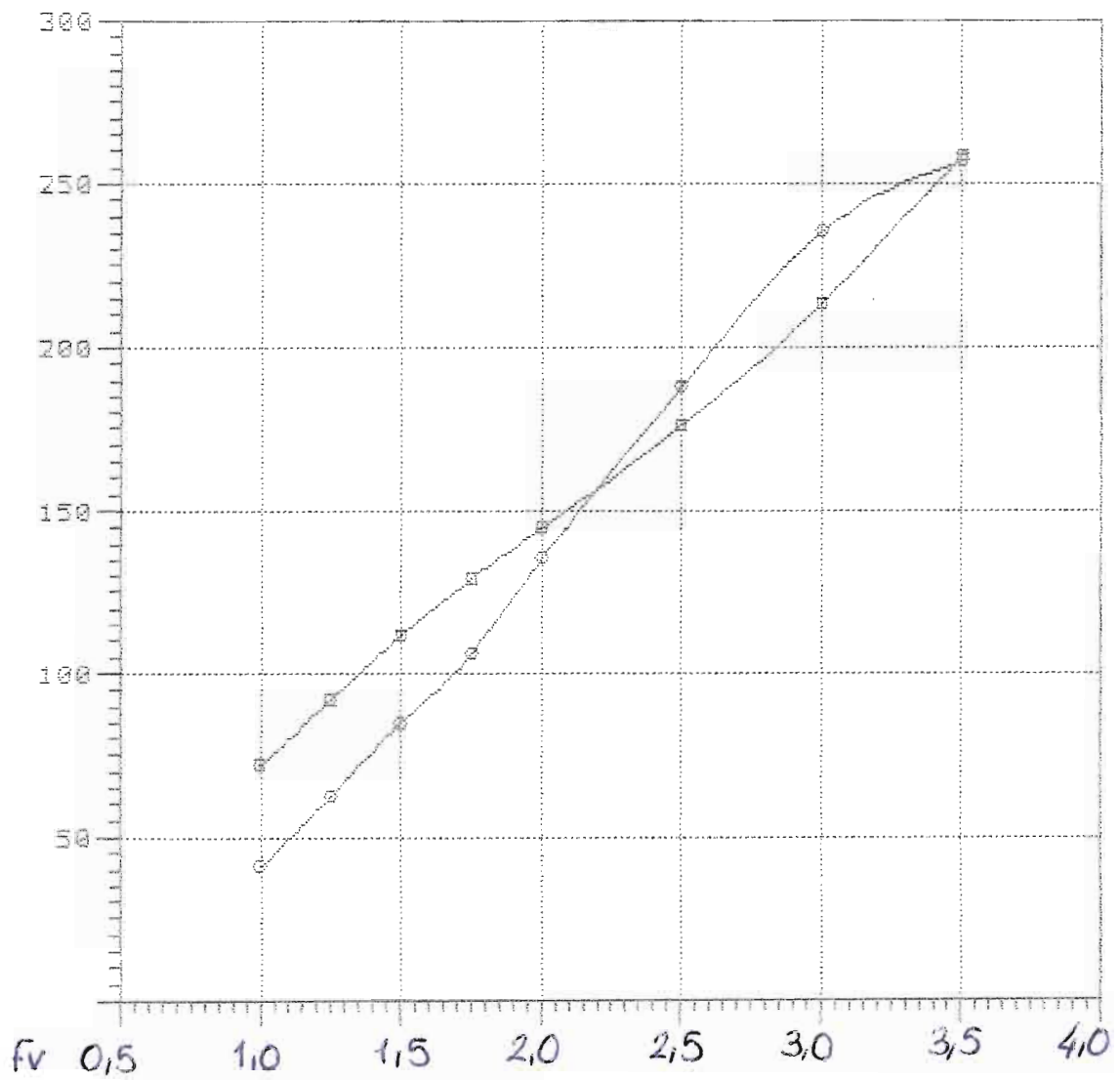
HydroComp, Inc.

File: 18-75-34.mdl

Date: 26 Feb 00

Time: 16:38

Rbare: Bare-hull resistance (lbs)



—■—

—○—

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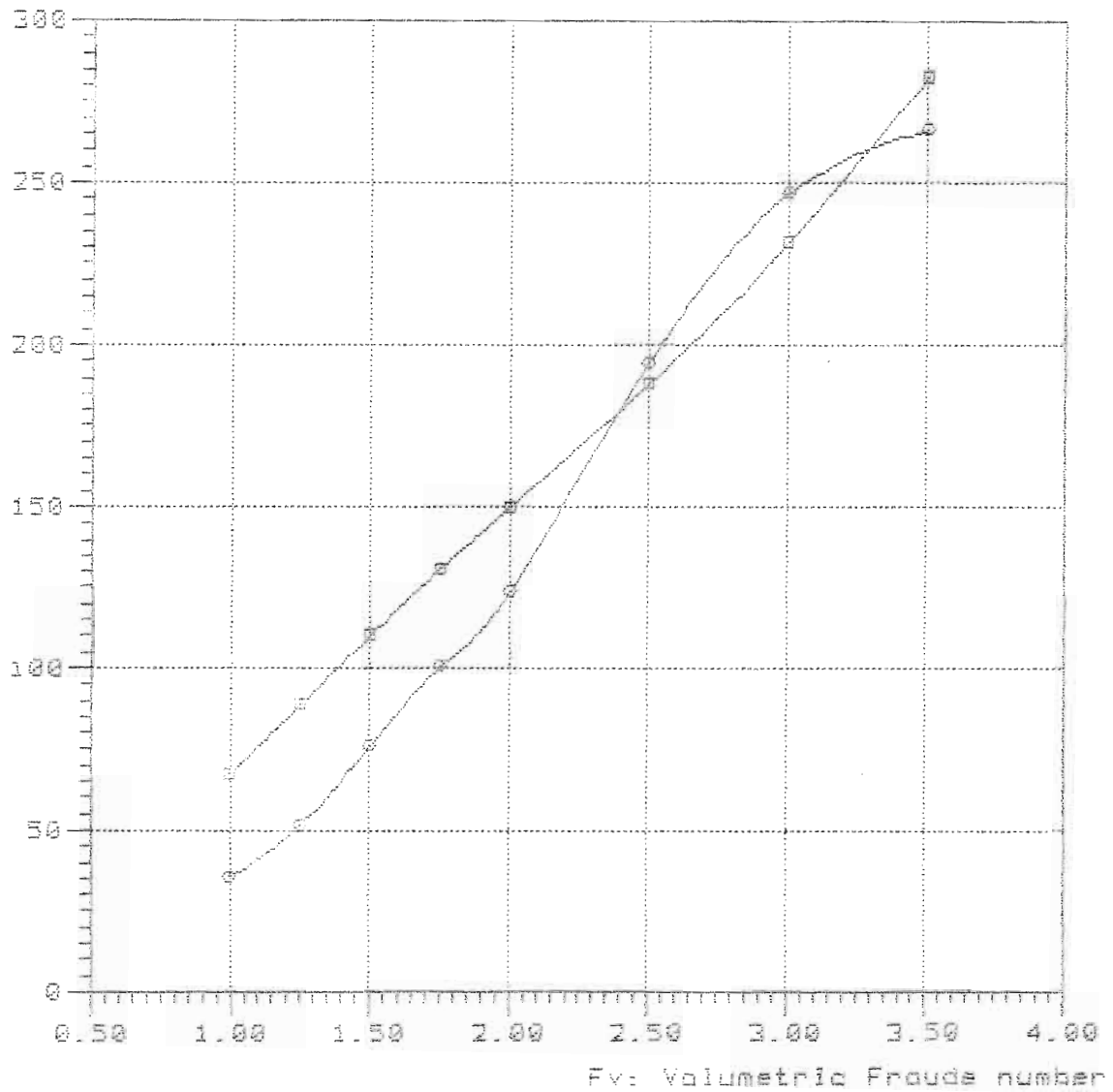
HydroComp, Inc.

File: 18-75-38.mdl

Date: 26 Feb 00

Time: 17:05

Rbare: Bare-hull resistance (lbs)

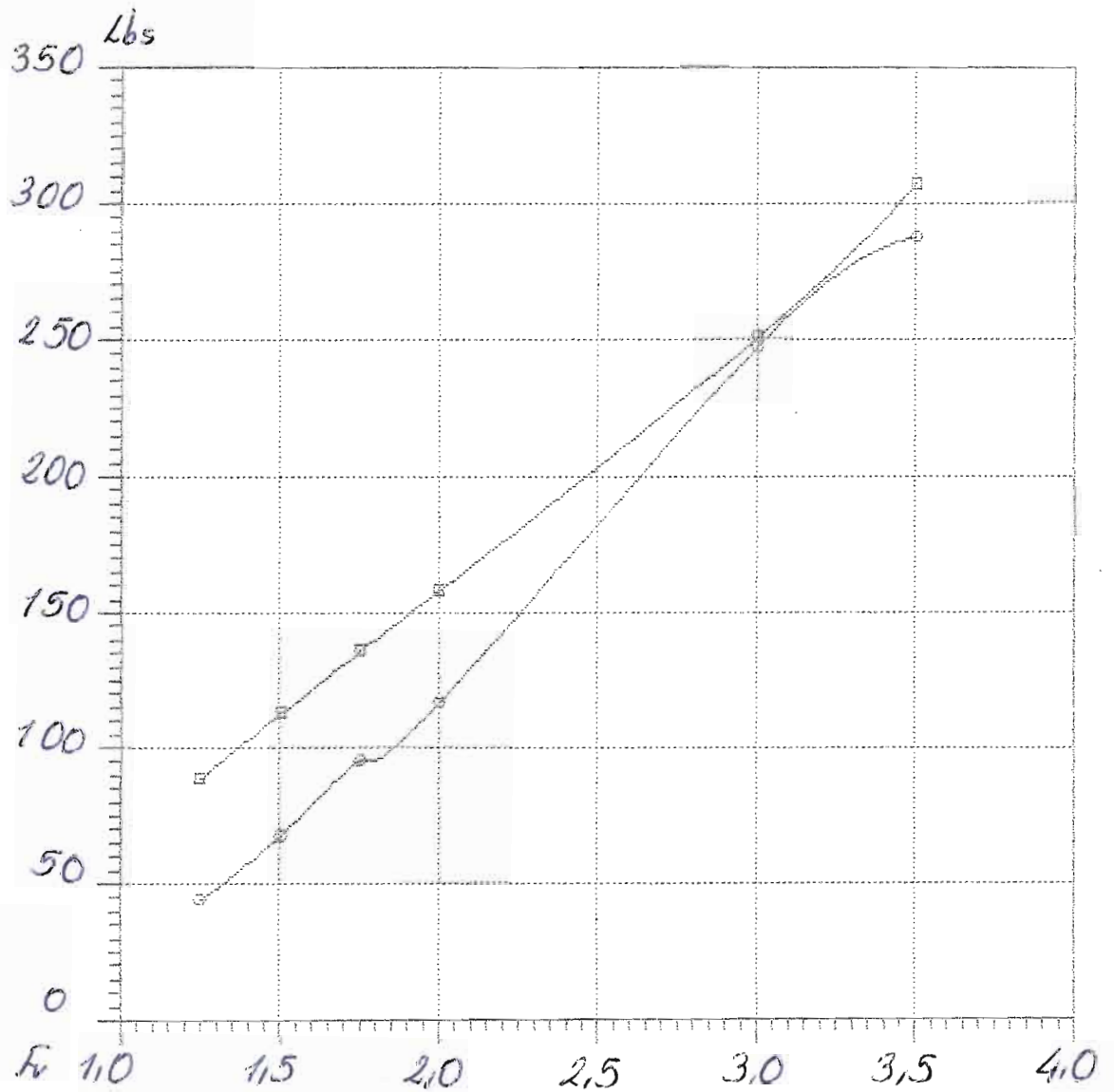


—■—

—●— TMB-65B Lpx/Bpx=2.350 Ap/Vol=17.578 Lpx/Ap=3.193 Log/Lpx=0.380



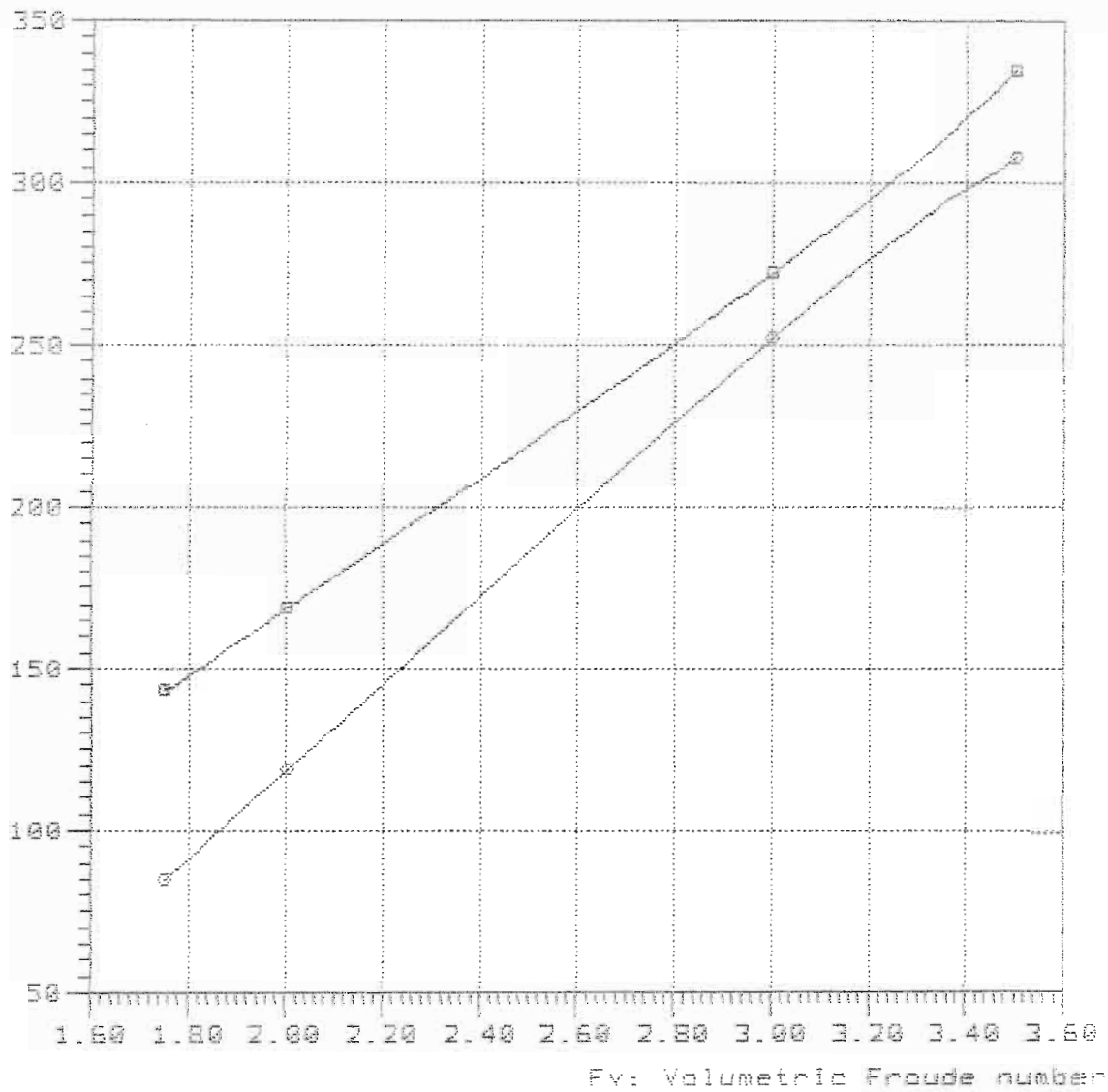
18-75-42



—□—

—○—

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=2.350 Ap/Vol=17.57B Lpx/Ap=3.183 Log/Lpx=0.460

5238

Model = 5238  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

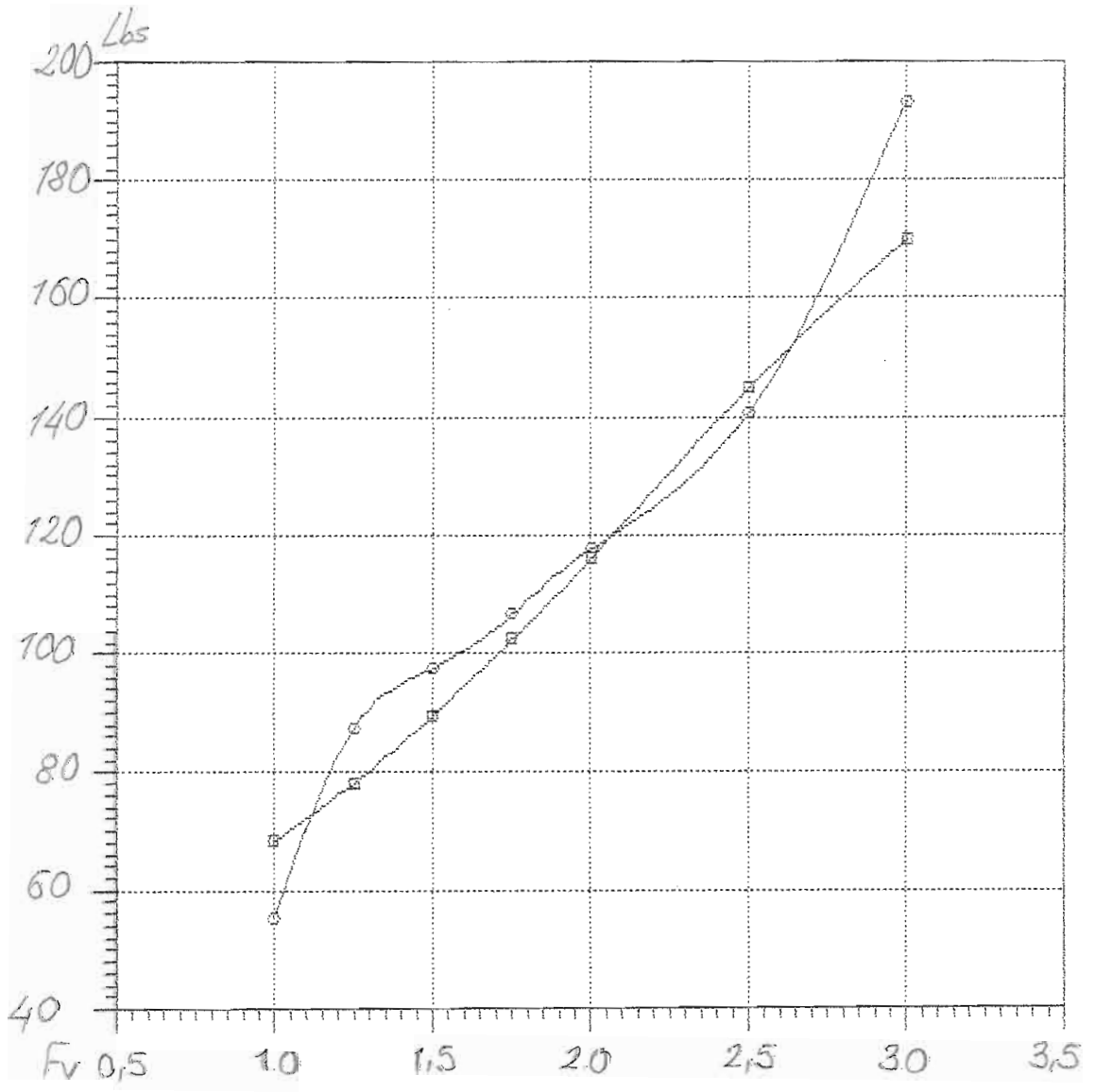
Lpx = 20.000 ft  
Lwl = 19.761 ft  
Bpx = 2.132 ft  
Ap = 30.895 sqft  
Vcg = 0.925 ft  
Disp = 1000.00 Lb  
Deadrise = 37.40 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 9.381  
Lpx/Ap = 12.947  
Ap /Vol = 4.943  
Lpx/Vol = 8.024

**Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCİ DENİZCİLİĞE Aittir  
Bu doküman veya bunun bir kısmı  
üçüncü şahıslara verilemez. Taksir  
veya kopya edilemez ve her ne maksadla  
olursa olsun maksadı dışında  
izinsiz kullanılamaz.**

Cvload = 1.612  
Lbload = 0.047

5-80-300



—□—  
—○—

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### Bare-hull resistance

File: 5-80-340.mdl

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vs.

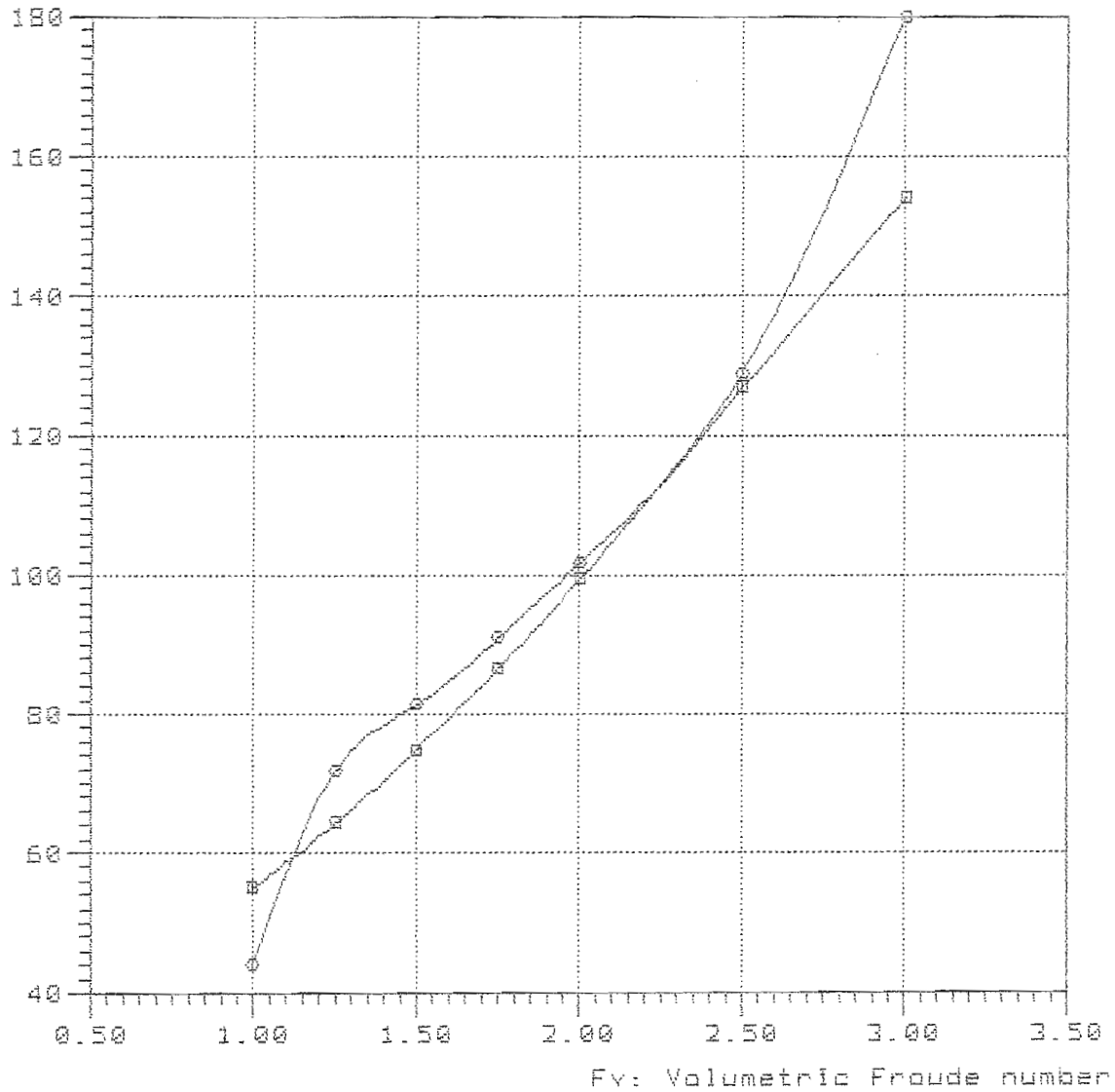
Date: 24 Feb 88

HydroComp, Inc.

### Volumetric Froude number

Time: 10:33

Rbare: Bare-hull resistance (lbs)

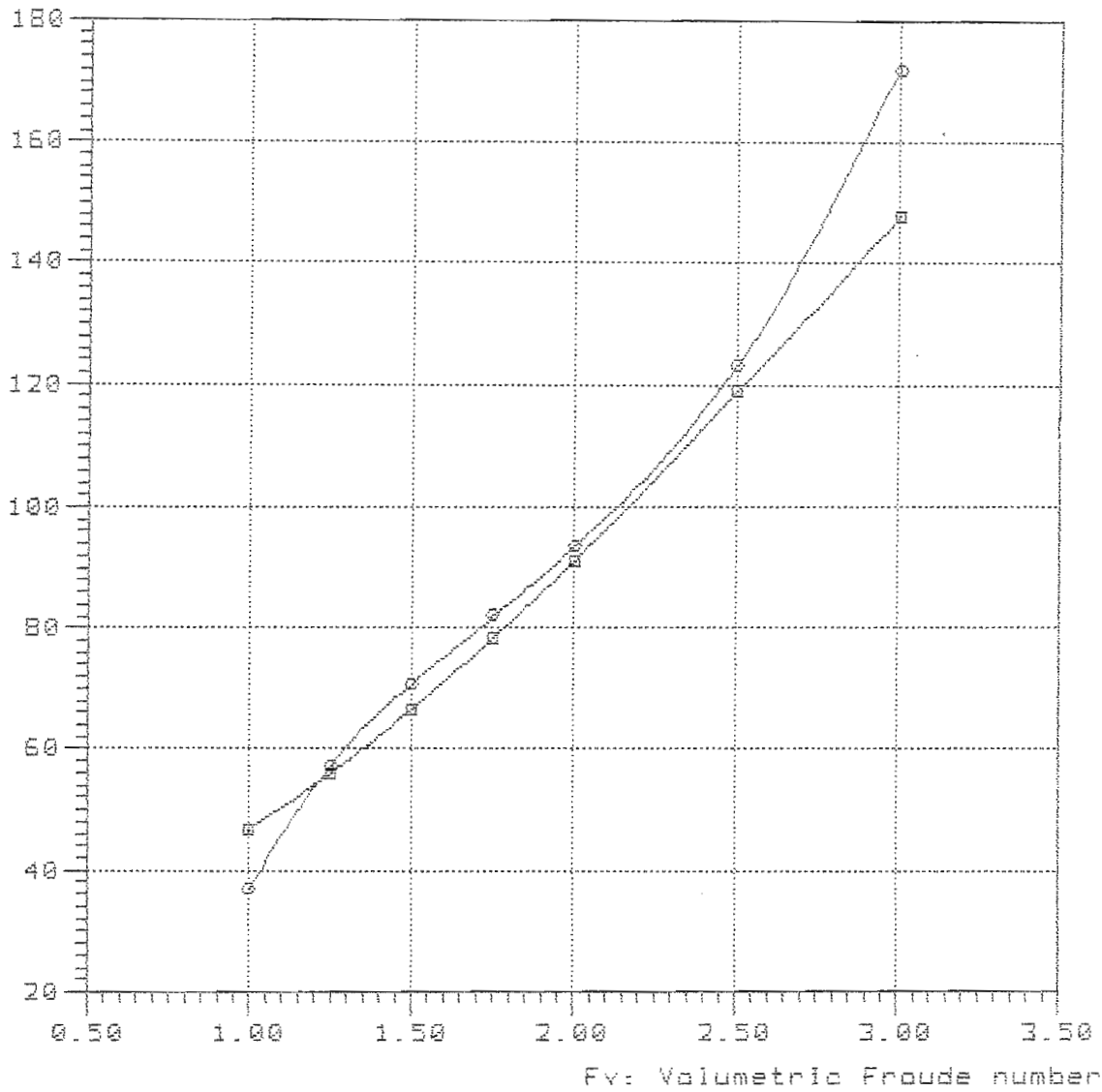


#### Curve legend

—■—

—○— TMB-65E Lpx/Bpx=9.380 Ap/Vol=4.943 Lpx/Ap=12.947 Log/Lpx=0.340

Rbare: Bare-hull resistance (lbs)



—□—  
—○— TMB-65E Lpx/Bpx=9.380 Ap/Vol=4.943 Lpx/Ap=12.947 Lcg/Lpx=0.380

Model = 5238  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 21.200 ft  
Lwl = 20.946 ft  
Bpx = 2.260 ft  
Ap = 34.714 sqft  
Vcg = 0.981 ft  
Disp = 1000.00 Lb  
Deadrise = 37.40 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 9.381  
Lpx/Ap = 12.947  
Ap /Vol = 5.554  
Lpx/Vol = 8.505  
Cvload = 1.354  
Lbload = 0.039



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Bare-hull resistance

vs.

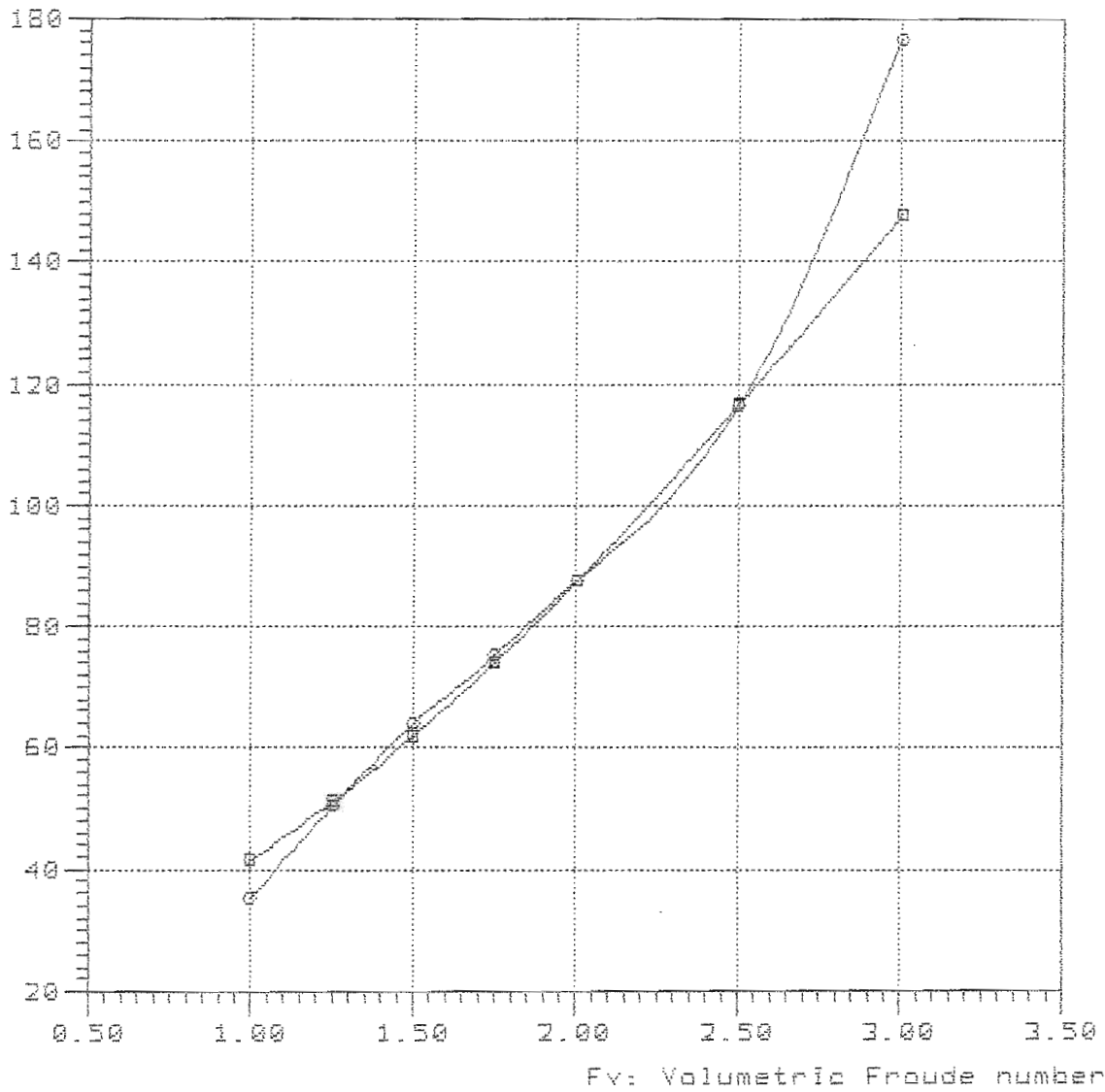
Volumetric Froude number

File: 5-80-420.mdl

Date: 24 Feb 00

Time: 10:40

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—○— TMB-65B Lpx/Bpx=9.380 Ap/Vol=4.943 Lpx/Ap=12.947 Log/Lpx=0.420

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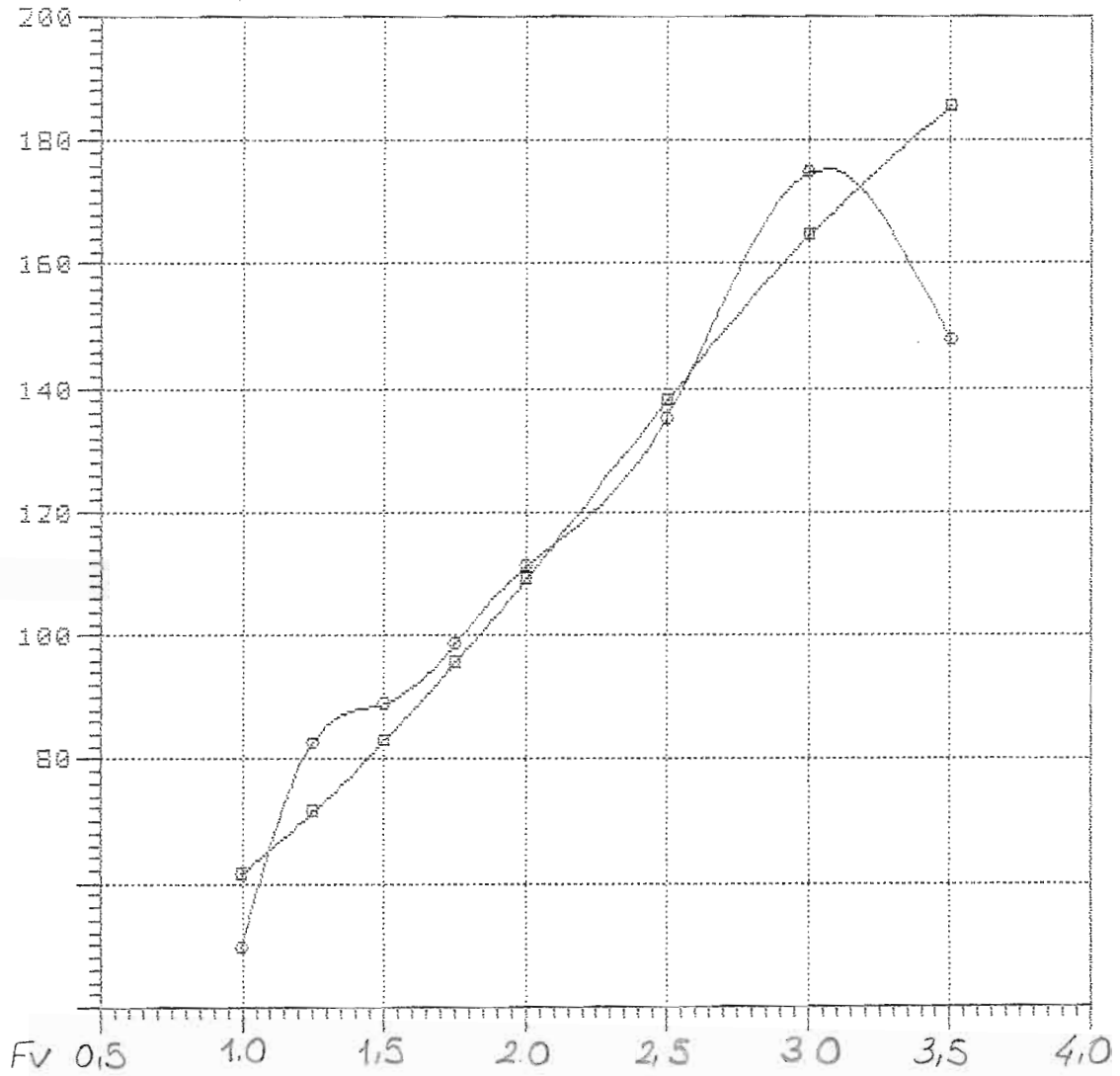
HydroComp, Inc.

File: 6-85-300.mdl

Date: 24 Feb 00

Time: 10:43

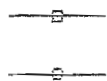
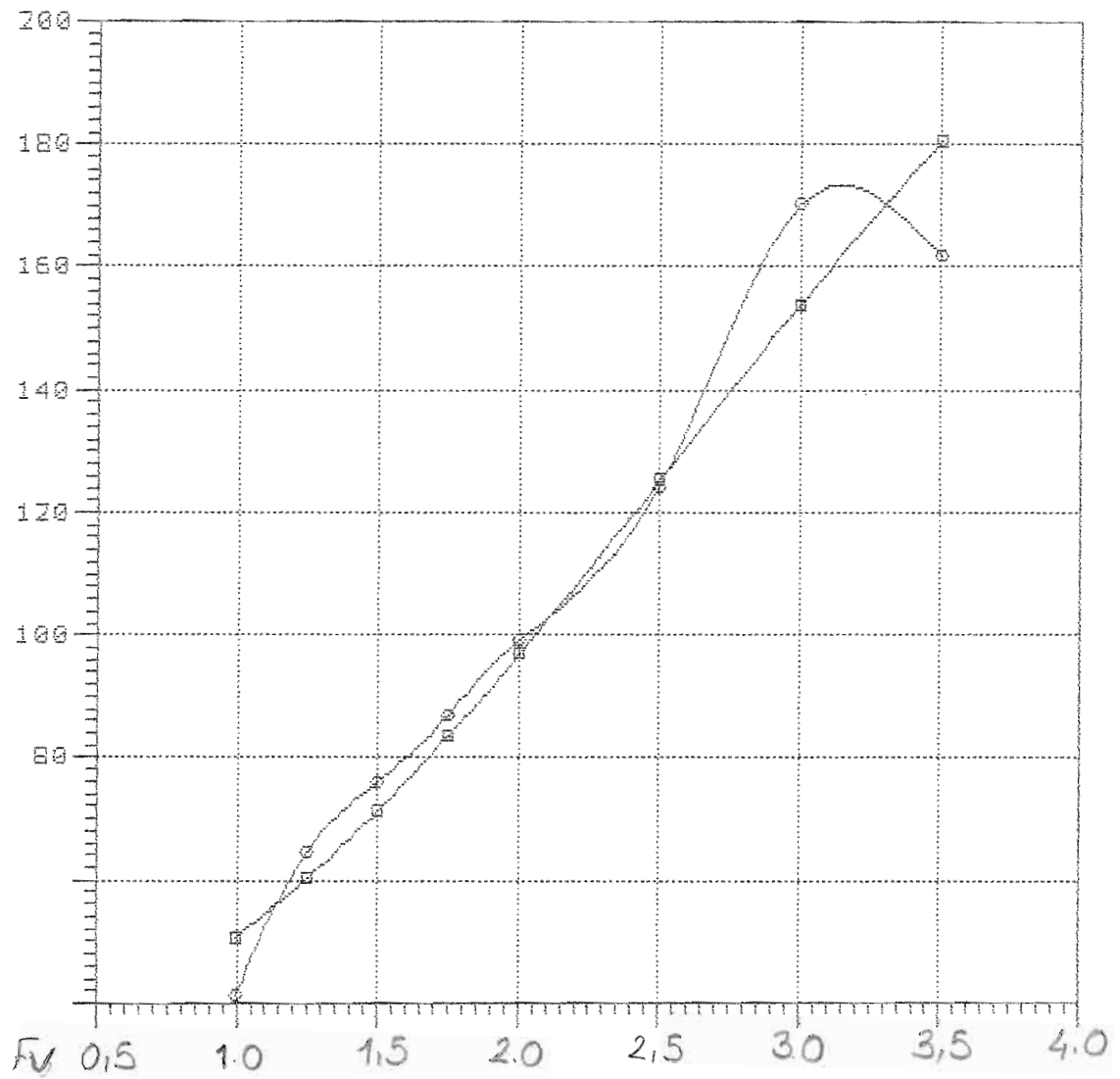
Rbare: Bare-hull resistance (lbs)



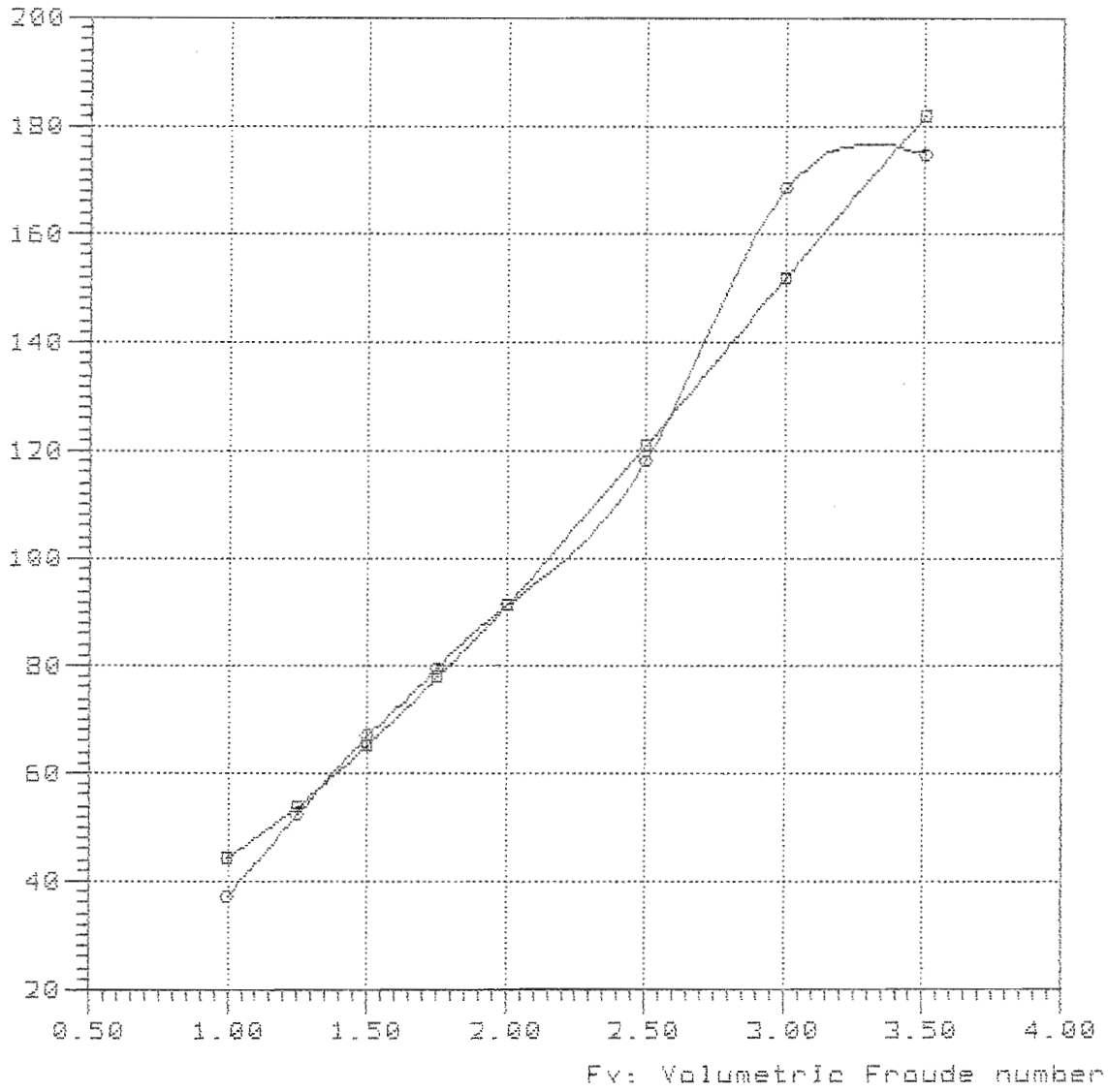
— □ —

— ○ —

Rbare: Bare-hull resistance (lbs)

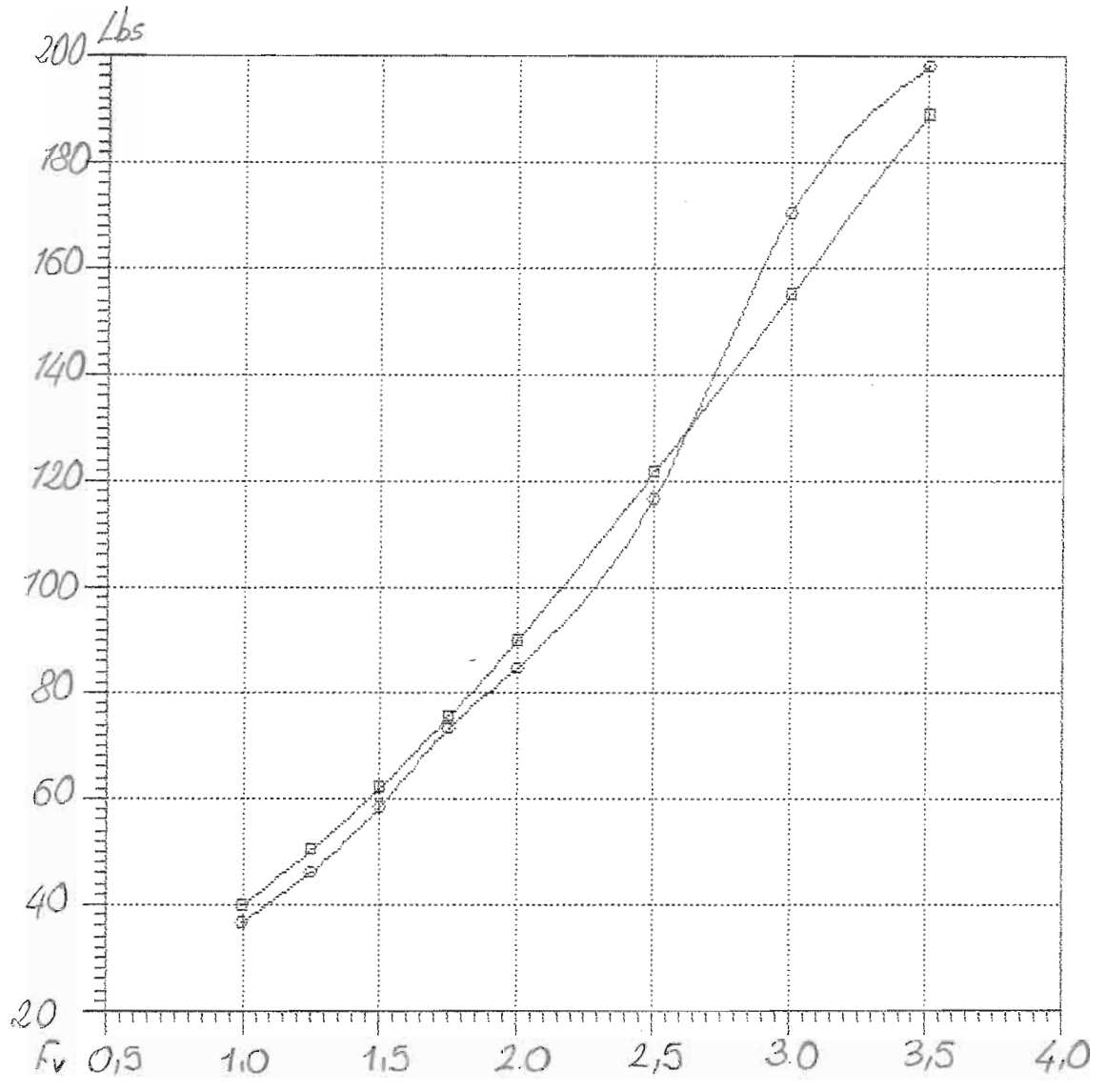


Rbare: Bare-hull resistance (lbs)



—■—  
—○— TMB-658 Lpx/Bpx=9.380 Ap/Vol=5.554 Lpx/Ap=12.947 Lcg/Lpx=0.380

6-85-420



—□—  
—○—

Model = 5238  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 22.500 ft  
Lwl = 22.231 ft  
Bpx = 2.399 ft  
Ap = 39.102 sqft  
Vcg = 1.054 ft  
Disp = 1000.00 Lb  
Deadrise = 37.40 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 9.379  
Lpx/Ap = 12.947  
Ap /Vol = 6.256  
Lpx/Vol = 9.027  
Cvload = 1.132  
Lbload = 0.033

NavCad(tm) 3.1d

### Bare-hull resistance

File: 6-90-300.mdl

(c) Copyright 1995

vs.

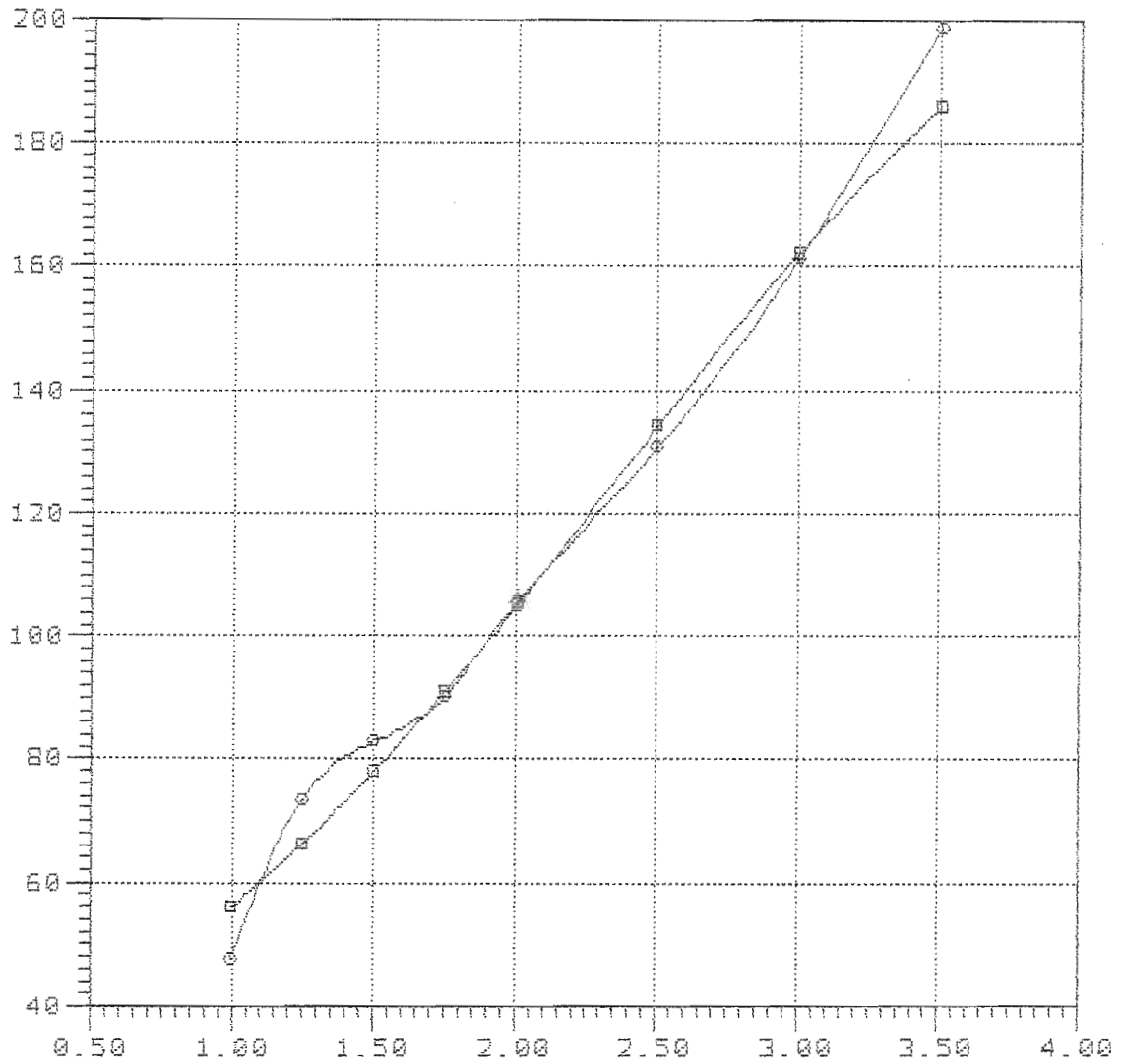
Date: 24 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 10:58

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

#### Curve legend

—■—

—○— TMB-65B Lpx/Bpx=9.380 Ap/Vol=6.256 Lpx/Ap=12.947 Log/Lpx=0.300

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

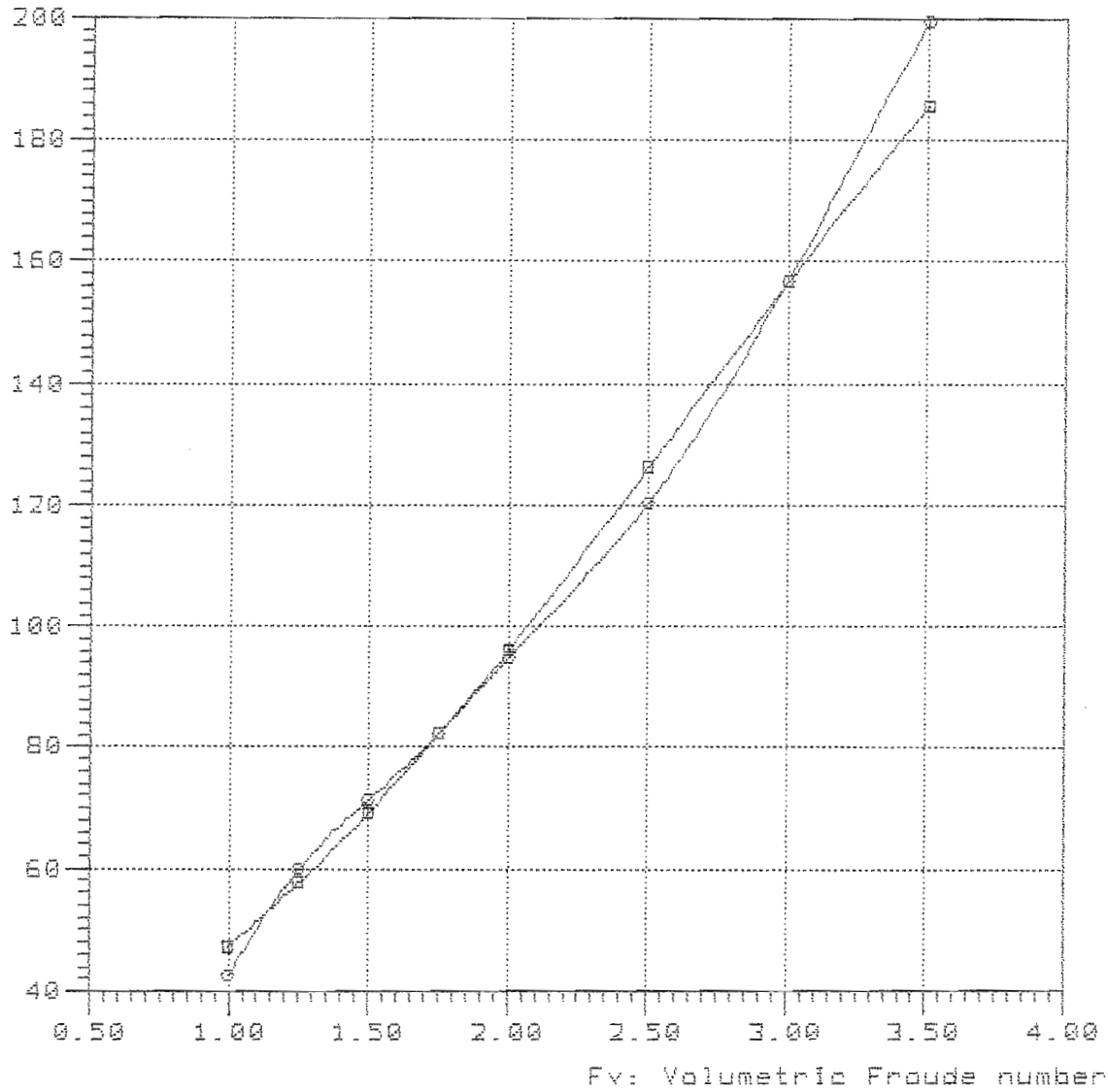
### Volumetric Froude number

File: 6-98-340.mdl

Date: 24 Feb 00

Time: 11:01

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-65B Lpx/Bpx=9.380 Ap/Vol=6.256 Lpx/Ap=12.947 Log/Lpx=0.340



NavCad(tm) 3.1d

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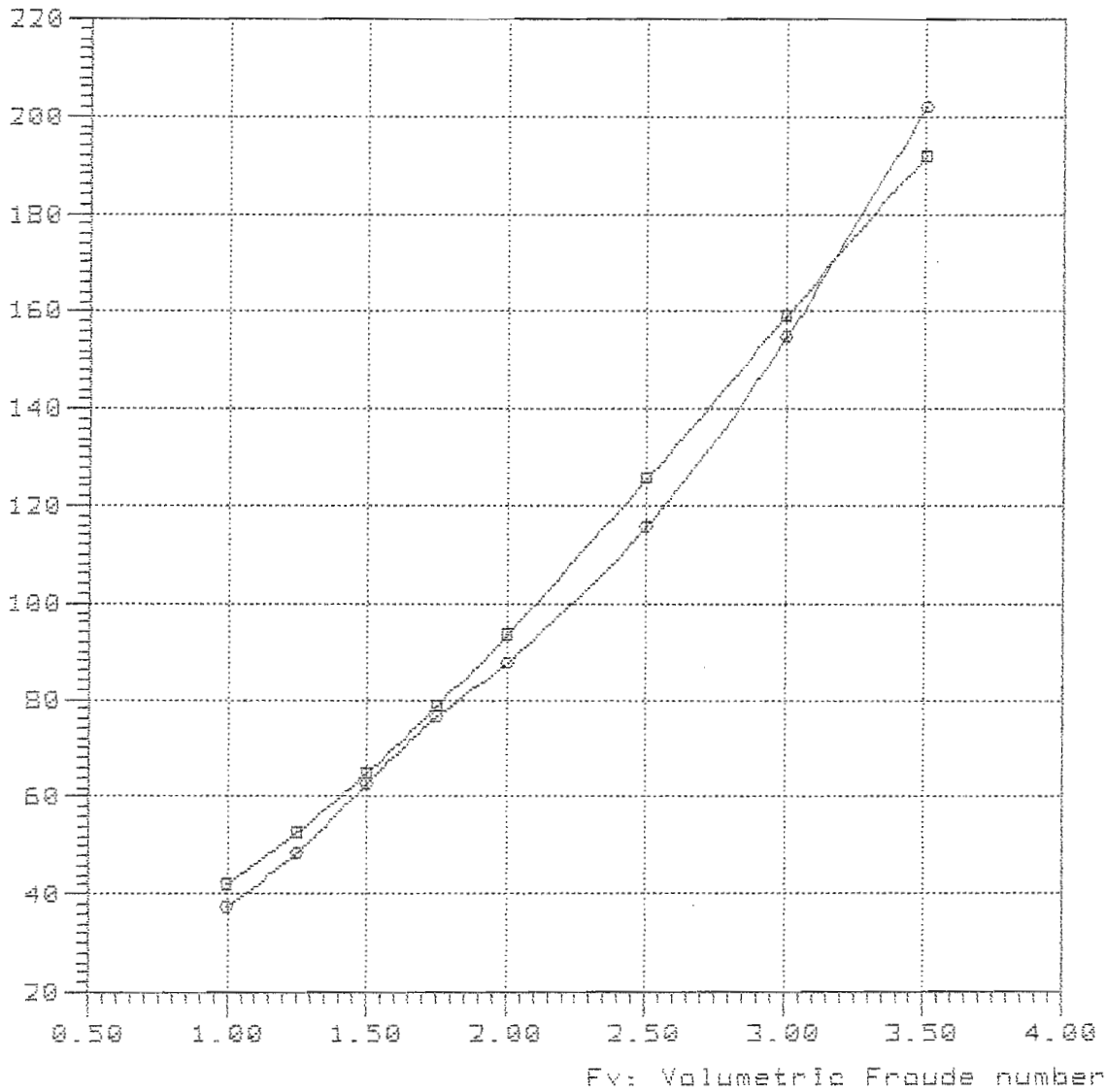
HydroComp, Inc.

File: 6-90-380.mdl

Date: 24 Feb 88

Time: 11:05

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-658 Lpx/Bpx=9.380 Ap/Vol=6.256 Lpx/Ap=12.947 Log/Lpx=0.380

NavCad(tm) 3.1d

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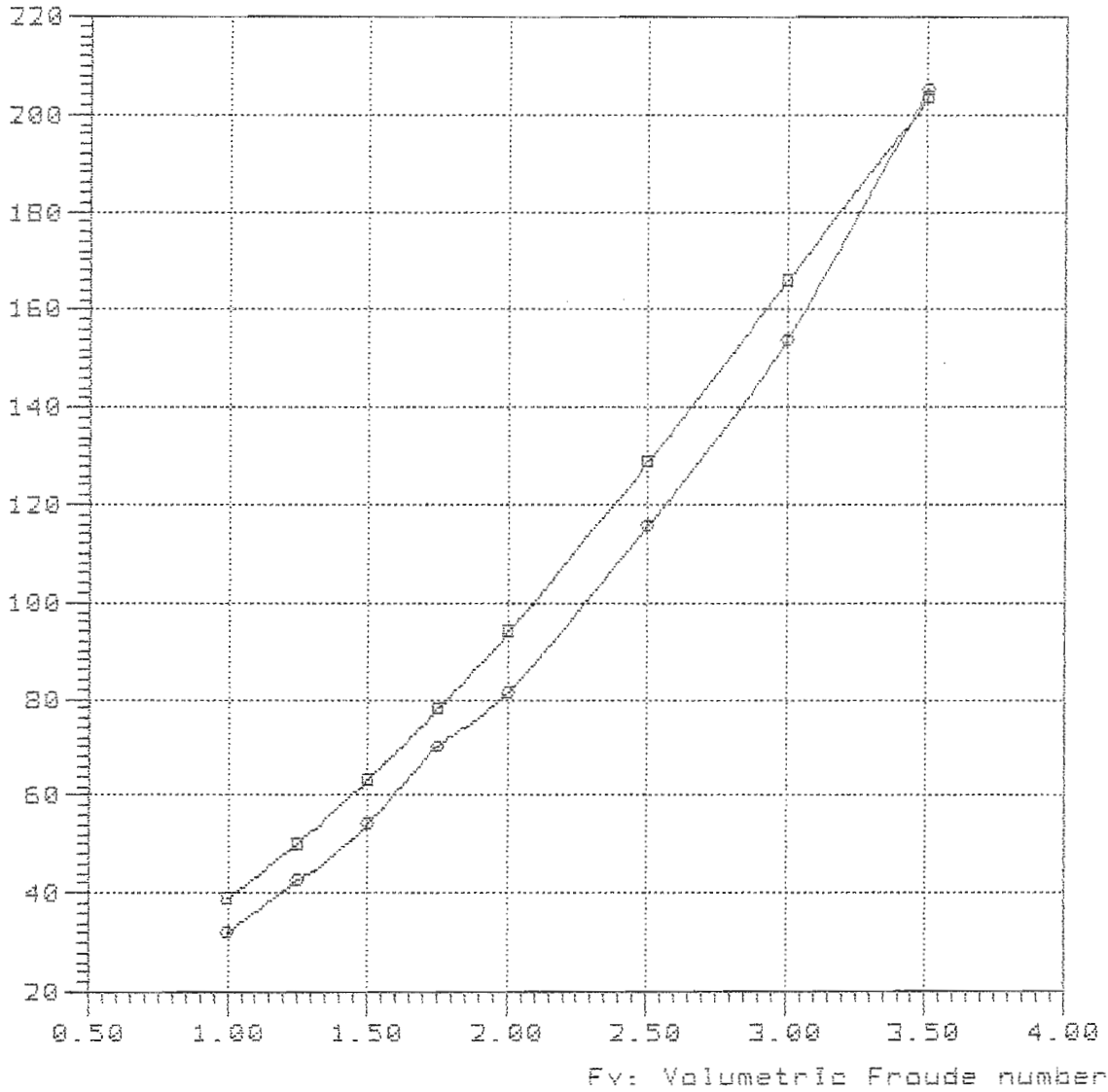
HydroComp, Inc.

File: 6-90-420.mdl

Date: 24 Feb 00

Time: 11:08

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65B Lpx/Bpx=9.380 Ap/Vol=6.256 Lpx/Ap=12.947 Log/Lpx=0.420

Model = 5238  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 23.700 ft  
Lwl = 23.416 ft  
Bpx = 2.527 ft  
Ap = 43.384 sqft  
Vcg = 1.110 ft  
Disp = 1000.00 Lb  
Deadrise = 37.40 degree  
Shaft Ang= 0.00 degree

Vce = 0.00 inç

Lpx/Bpx = 9.379  
Lpx/Ap = 12.947  
Ap /Vol = 6.941  
Lpx/Vol = 9.508  
Cvload = 0.968  
Lbload = 0.028

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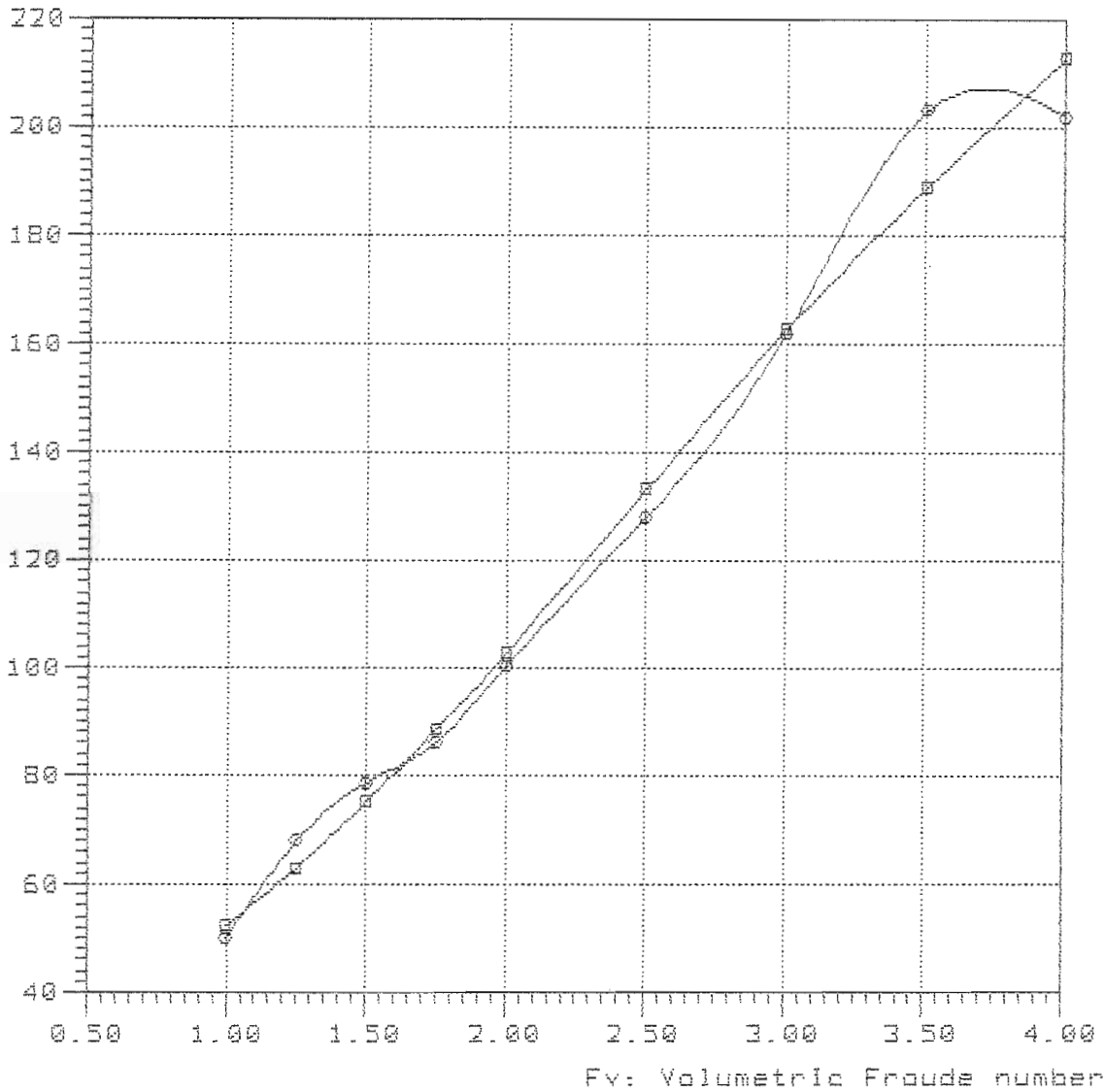
HydroComp, Inc.

File: 7-95-300.mdl

Date: 24 Feb 00

Time: 11:12

Rbare: Bare-hull resistance (lba)



—□—

—○— TMB-65B Lpx/Bpx=9.380 Ap/Vol=6.941 Lpx/Ap=12.947 Lcg/Lpx=0.300

NavCad(tm) 3.1d

File: 7-95-340.mdl

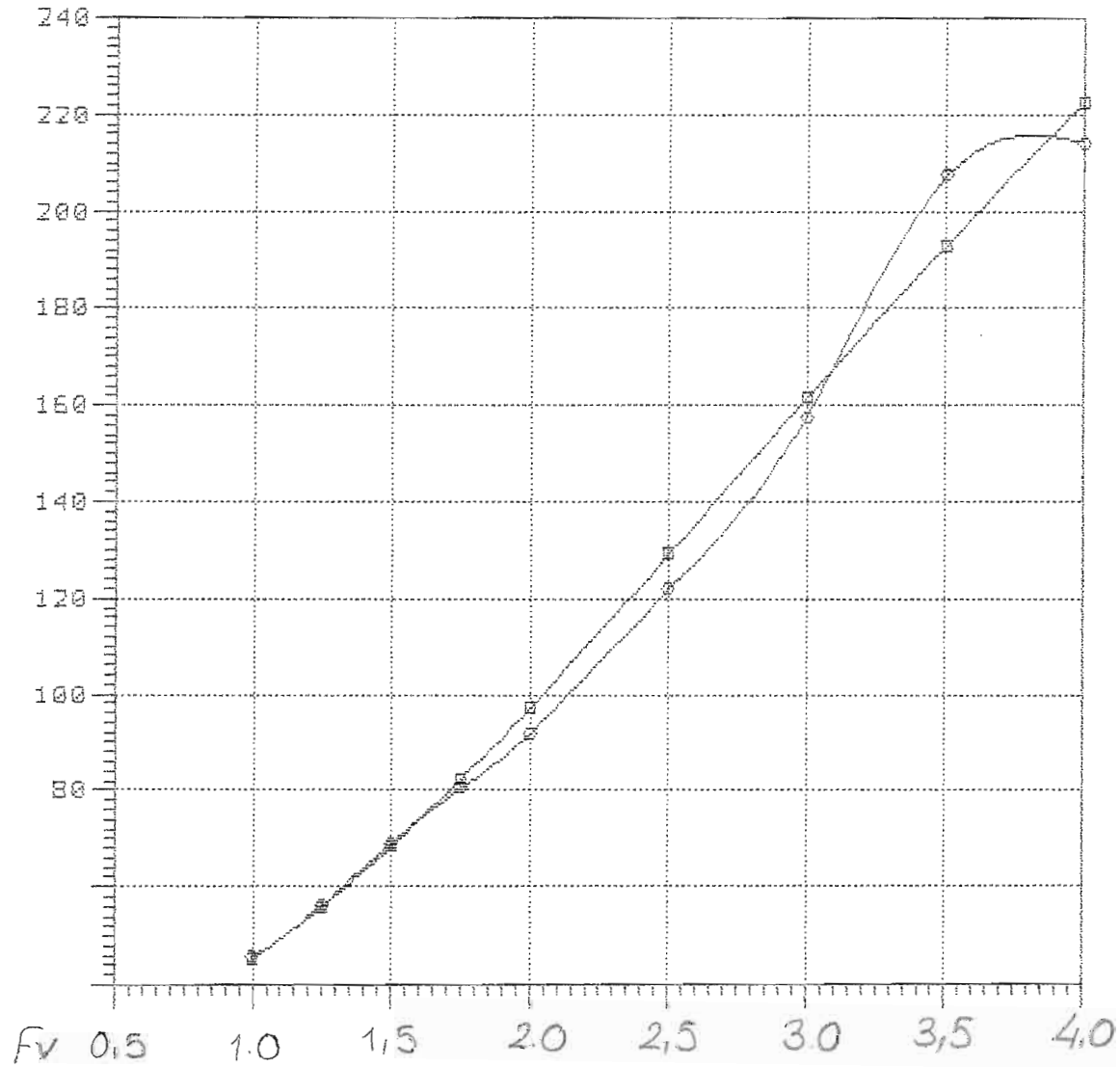
(c) Copyright 1995

Date: 24 Feb 00

HydroComp, Inc.

Time: 11:15

Rbare: Bare-hull resistance (lbs)



—■—

—○—

NavCad(tm) 3.1d

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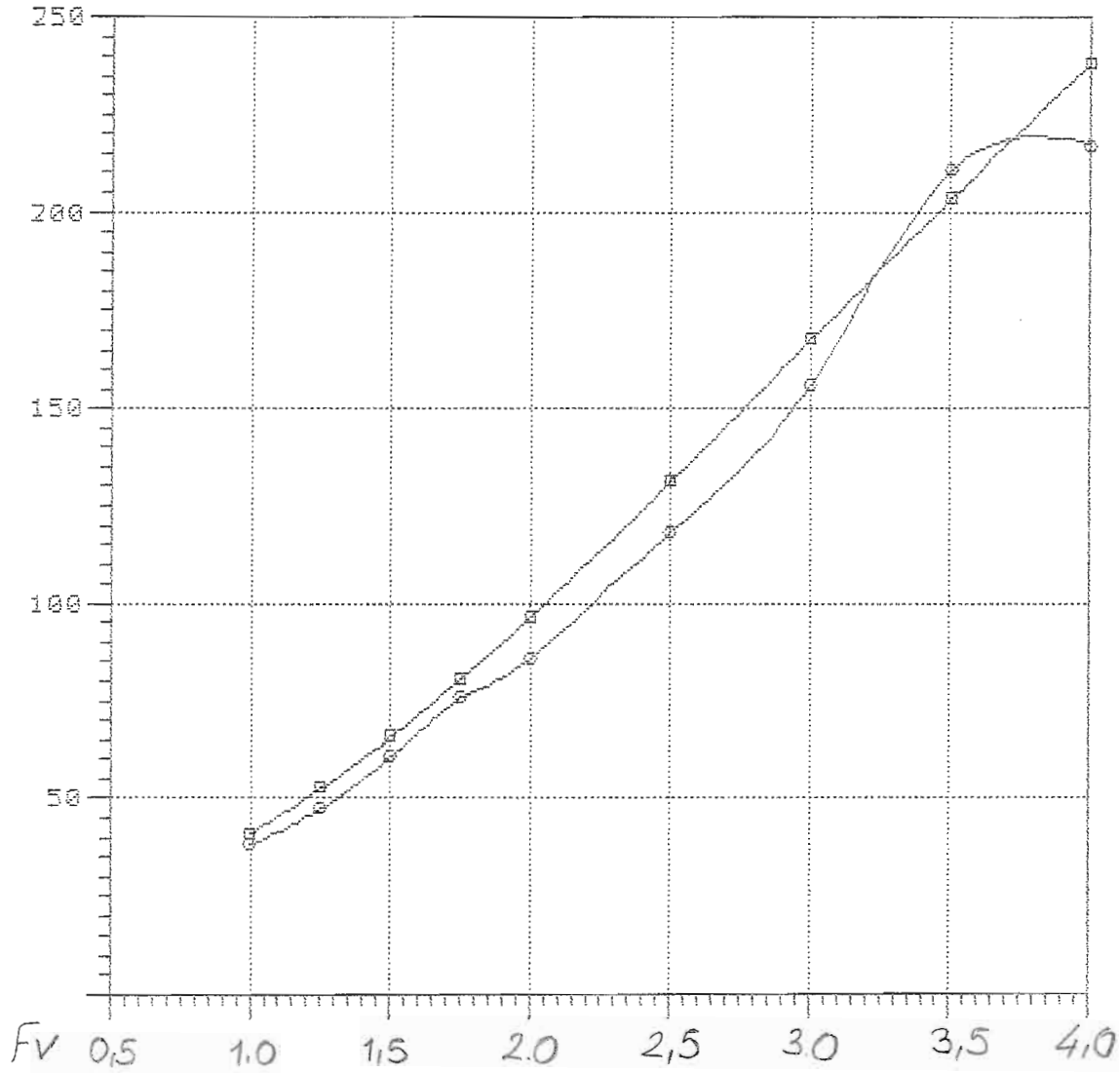
HydroComp, Inc.

File: 7-95-380.mdl

Date: 24 Feb 00

Time: 11:18

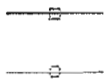
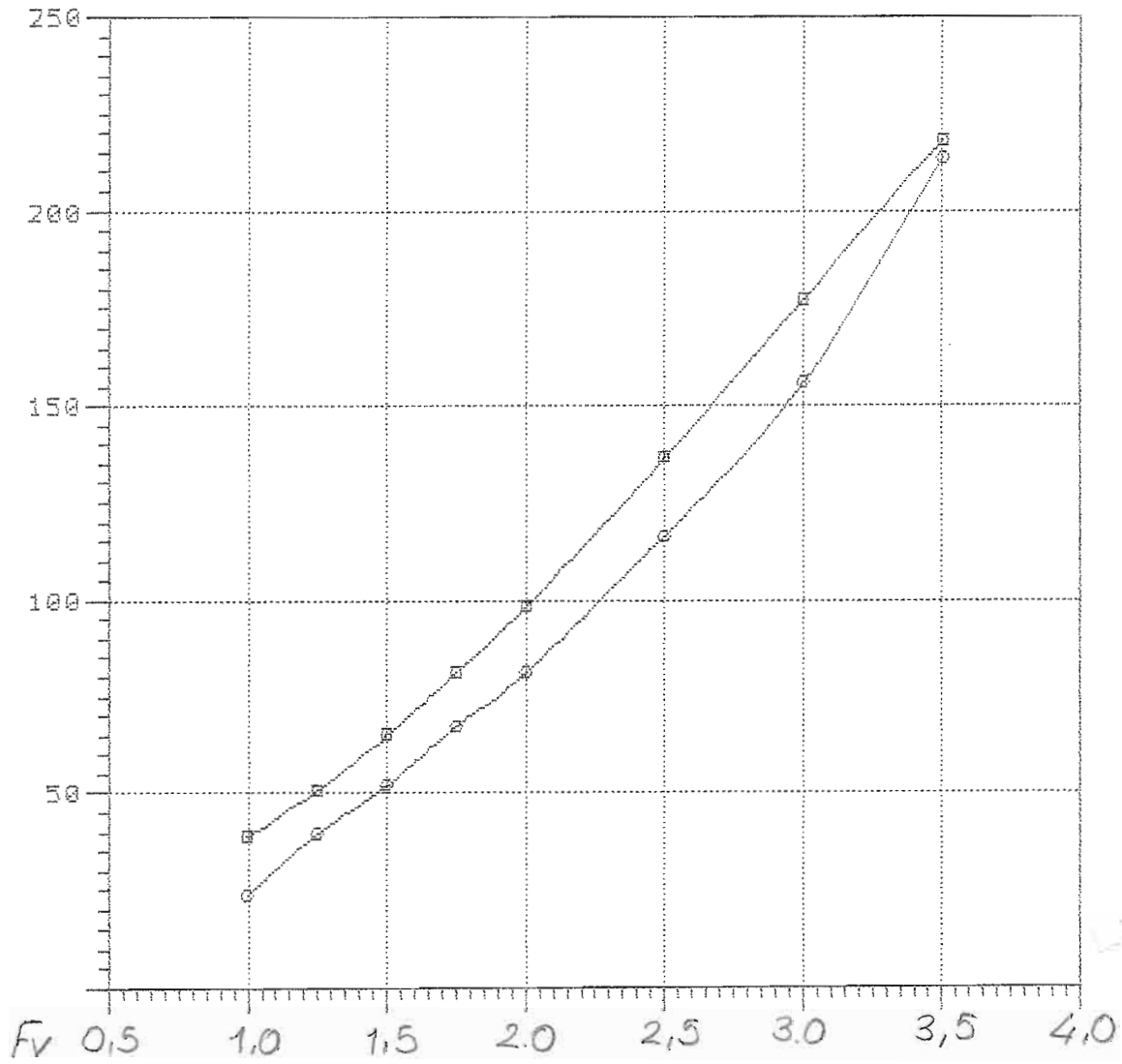
Rbare: Bare-hull resistance (lbs)



—■—

—○—

Rbare: Bare-hull resistance (lbs)



Model = 5238  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 25.000 ft  
Lwl = 24.701 ft  
Bpx = 2.665 ft  
Ap = 48.274 sqft  
Vcg = 1.171 ft  
Disp = 1000.00 Lb  
Deadrise = 37.40 degree  
Shaft Ang= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 9.381  
Lpx/Ap = 12.947  
Ap /Vol = 7.723  
Lpx/Vol = 10.030  
Cvload = 0.826  
Lbload = 0.024



NavCad(tm) 3.1d

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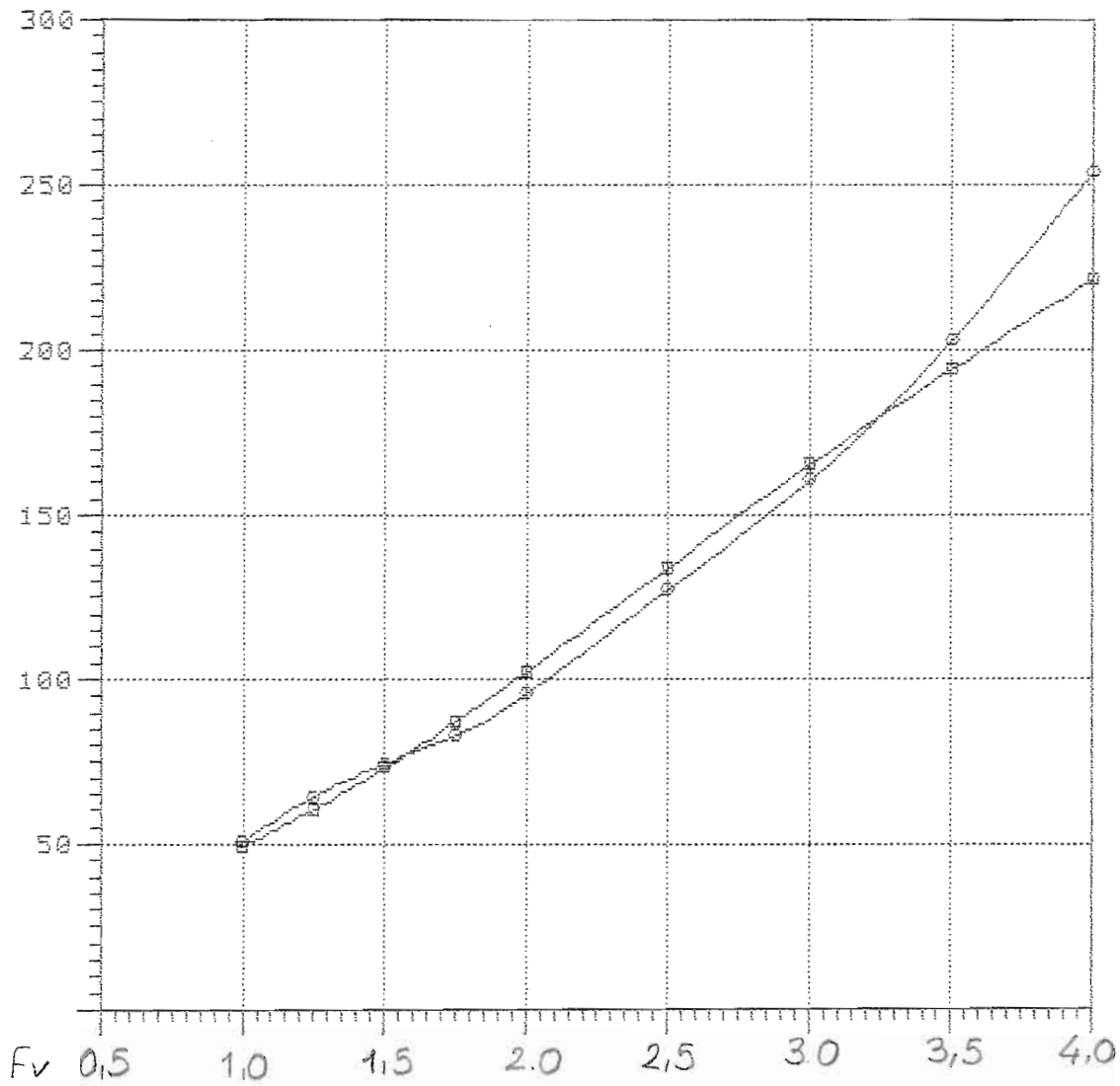
HydroComp, Inc.

File: B-10-300.mdl

Date: 24 Feb 00

Time: 11:25

Rbare: Bare-hull resistance (lbe)



—□—

—○—

NavCad(tm) 3.1d

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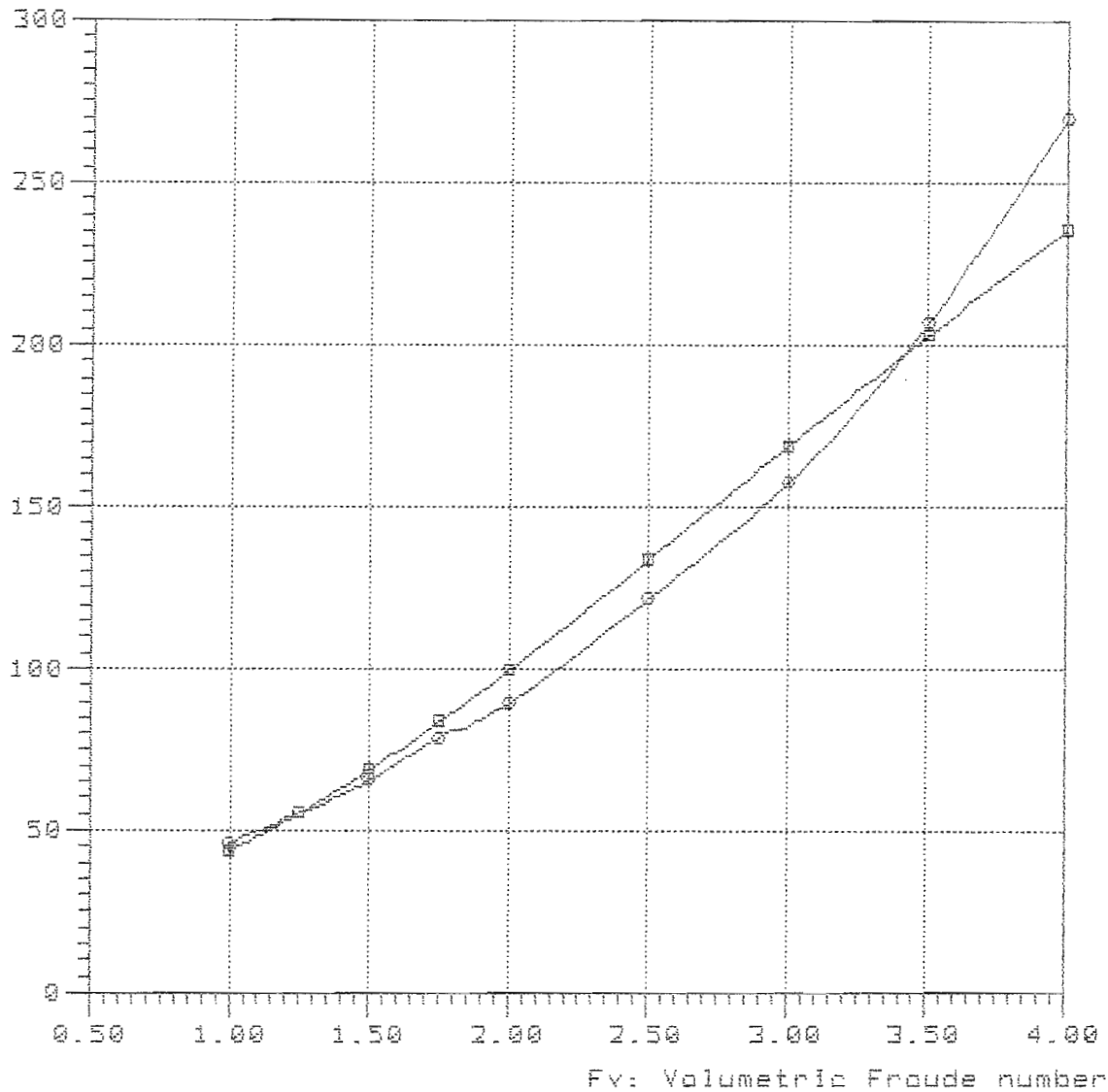
HydroComp, Inc.

File: 8-10-340.mdl

Date: 24 Feb 00

Time: 11:31

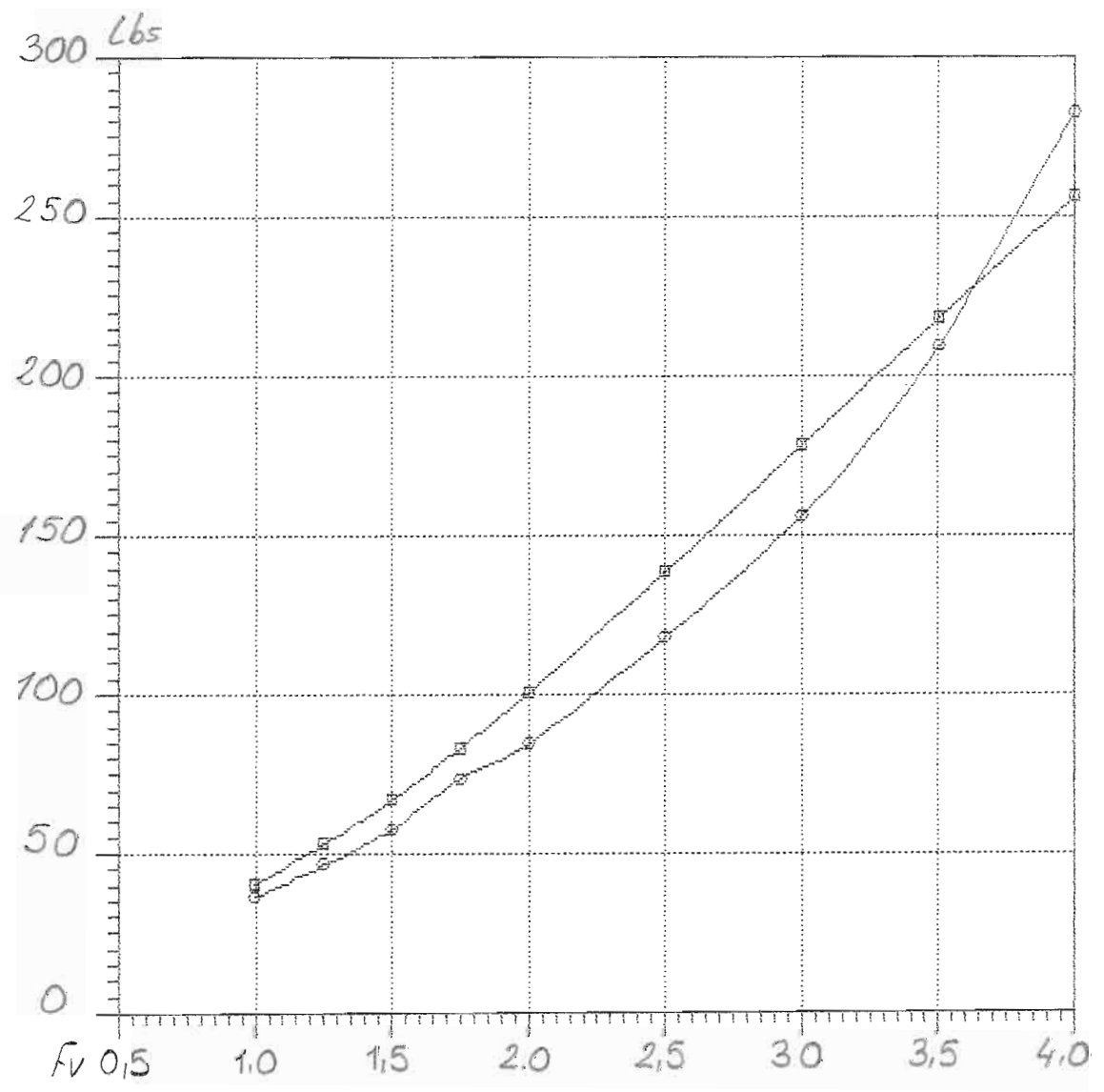
Rbare: Bare-hull resistance (lbs)



—■—

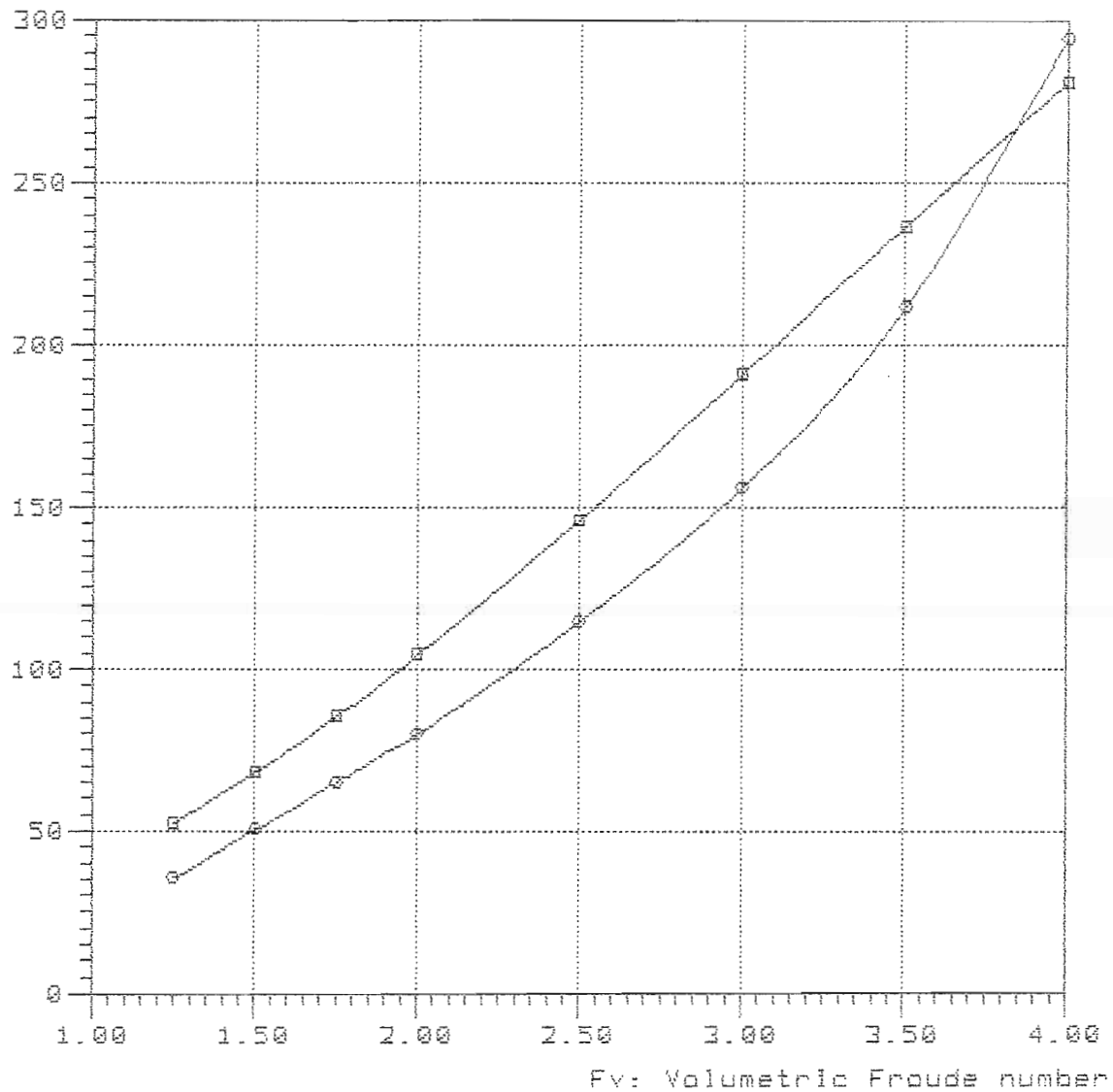
—○— TMB-65B Lpx/Bpx=9.380 Ap/Vol=7.724 Lpx/Ap=12.947 Log/Lpx=0.340

8-10-380



—□—  
—○—

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=9.380 Ap/Vol=7.724 Lpx/Ap=12.947 Lcg/Lpx=0.420

5239

Model = 5239  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 16.200 ft  
Lwl = 16.006 ft  
Bpx = 3.454 ft  
Ap = 41.212 sqft  
Vcg = 0.750 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 in

Lpx/Bpx = 4.690  
Lpx/Ap = 6.368  
Ap /Vol = 6.593  
Lpx/Vol = 6.499  
Cvload = 0.379  
Lbload = 0.031  
Disp-Lpx = 105.004

**Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCİ DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez. Faksir  
veya kopya edilemez ve her ne maksadla  
süre olursa olsun maksadı dışında  
izinsiz kullanılamaz.**

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### Bare-hull resistance

vs.

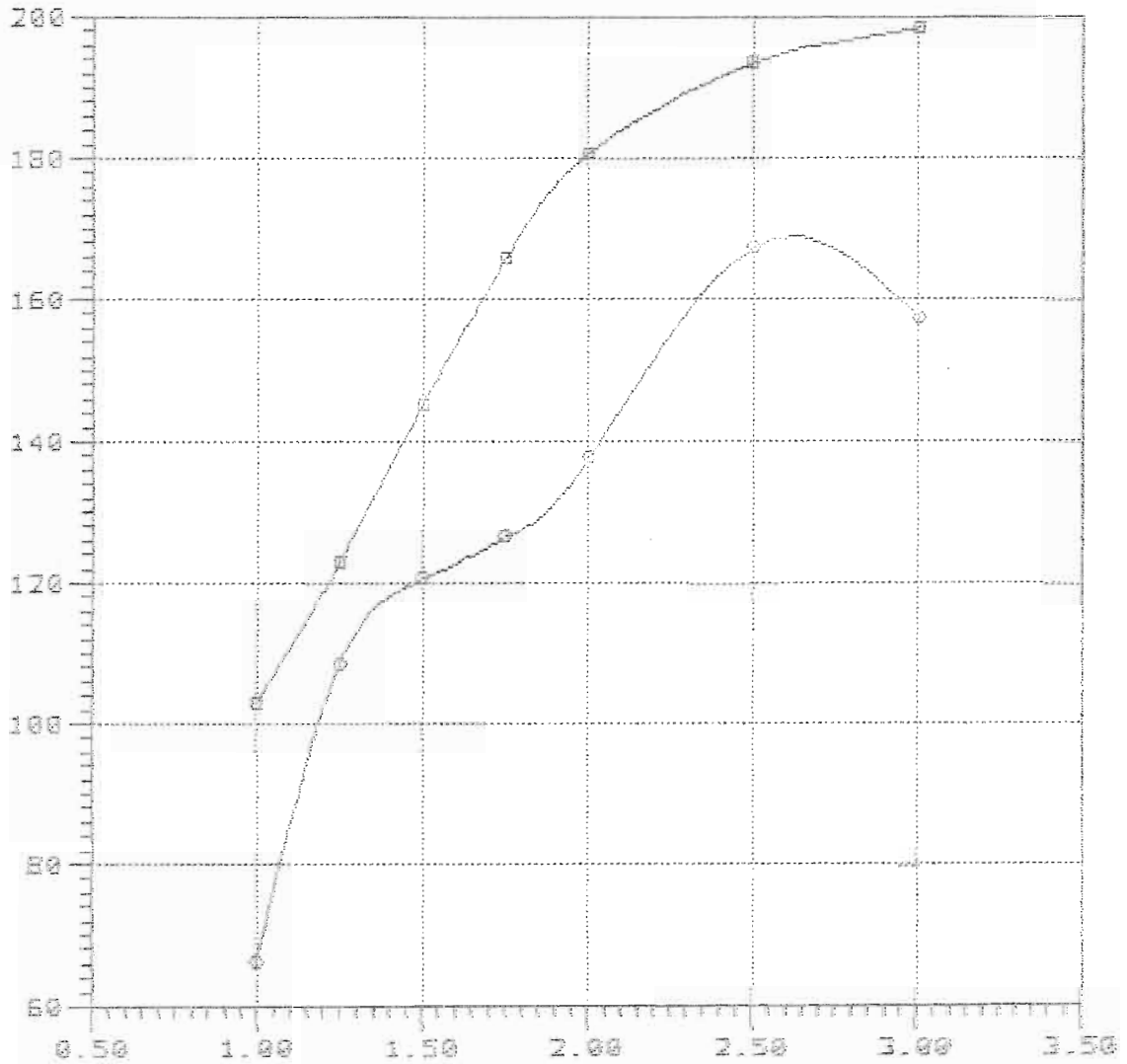
### Volumetric Froude number

File: 7-65-300.md1

Date: 28 Feb 00

Time: 9:29

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

#### Curve legend

—■—

—○— TMB-658 Lpx/Epw=4.63 Ap/Vol=6.594 Lpw/Ap=6.368 Lcg/Lpw=0.300

NavCad(tm) 3.1d

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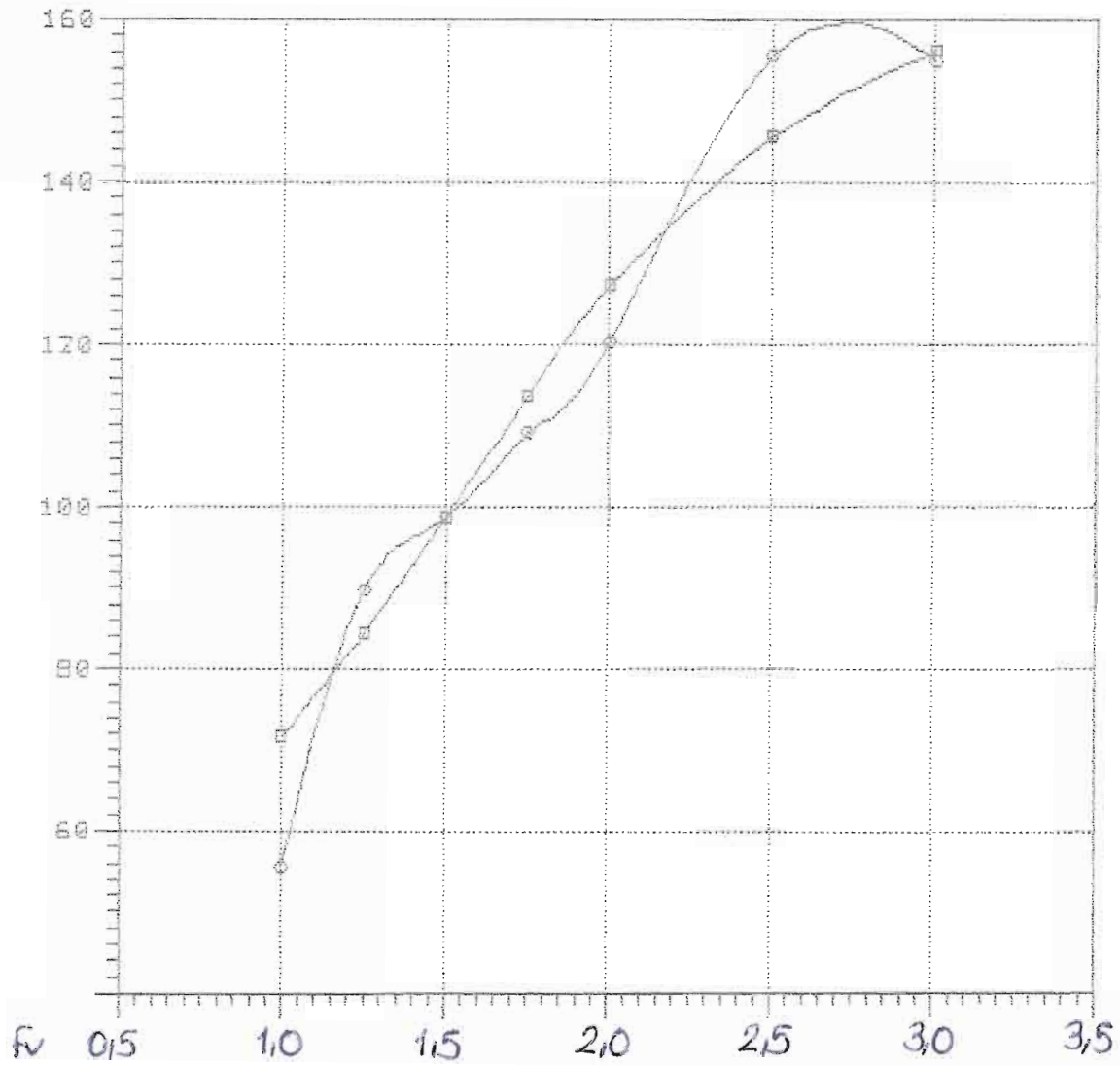
HydroComp, Inc.

File: 7-65-348.mdl

Date: 28 Feb 00

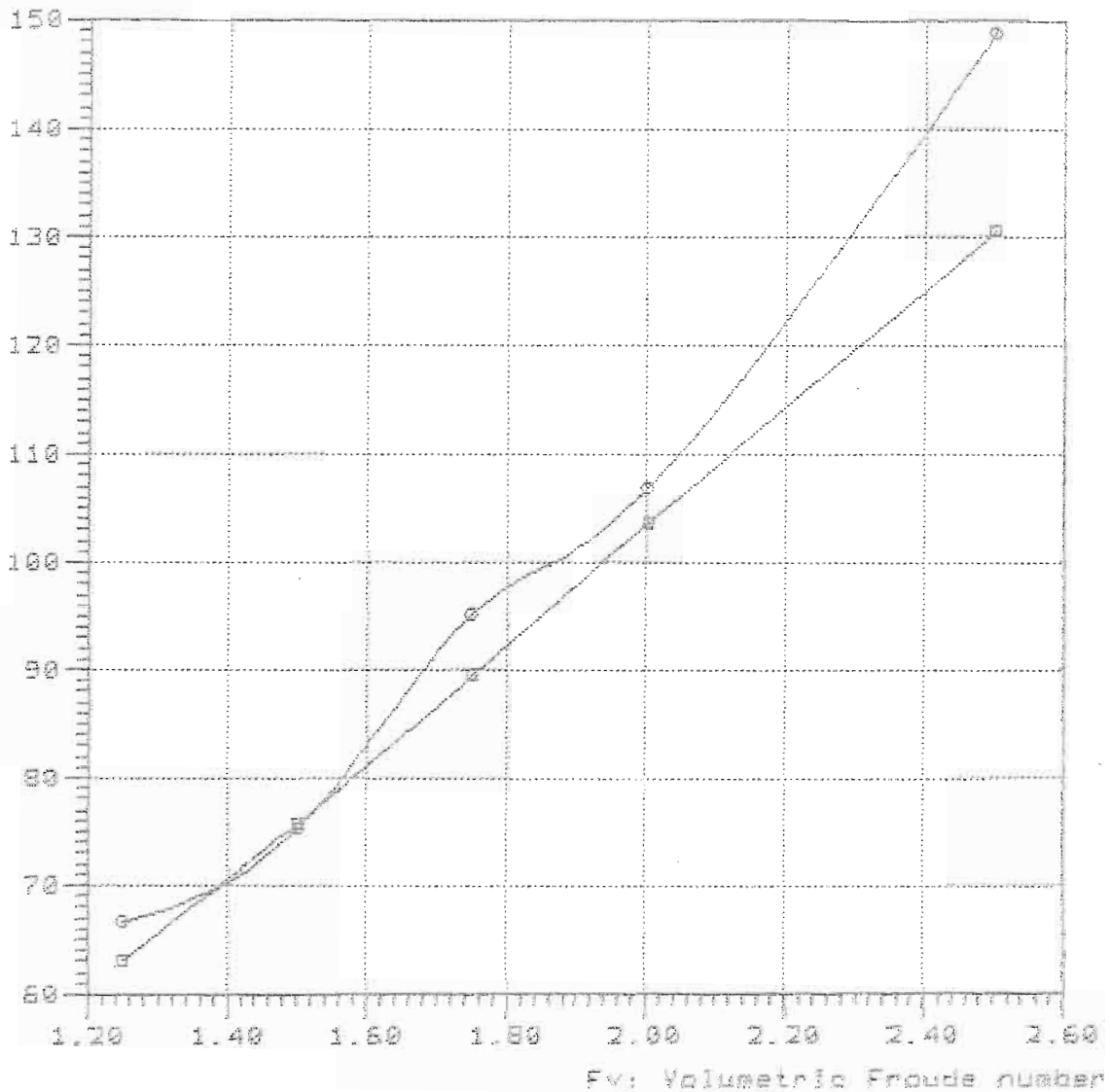
Time: 9:38

Rbare: Bare-hull resistance (lbs)





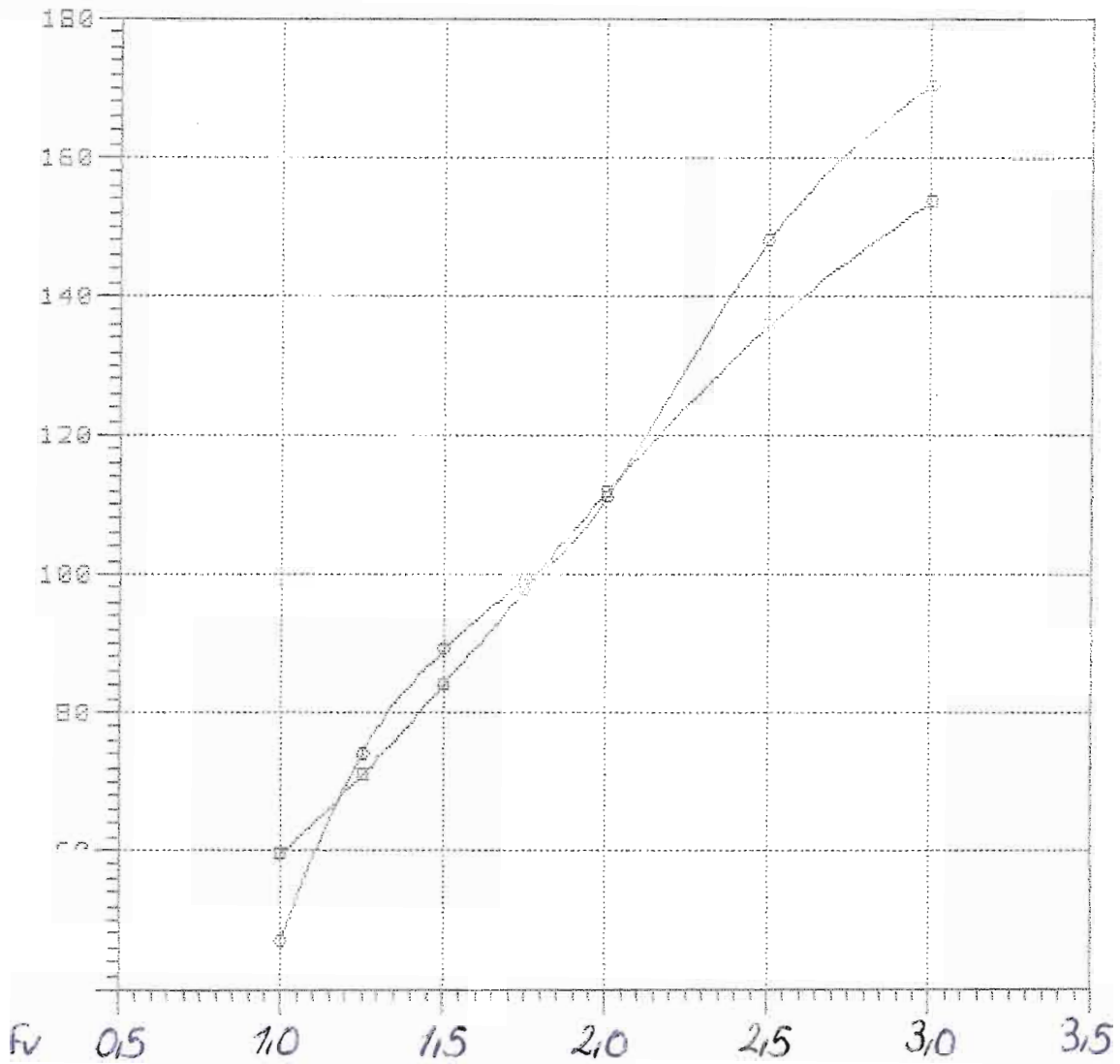
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=4.69 Ap/Vol=6.554 Lpx/As=6.366 Lcg/Lpx=0.420

Rbare: Bare-hull resistance (lbe)

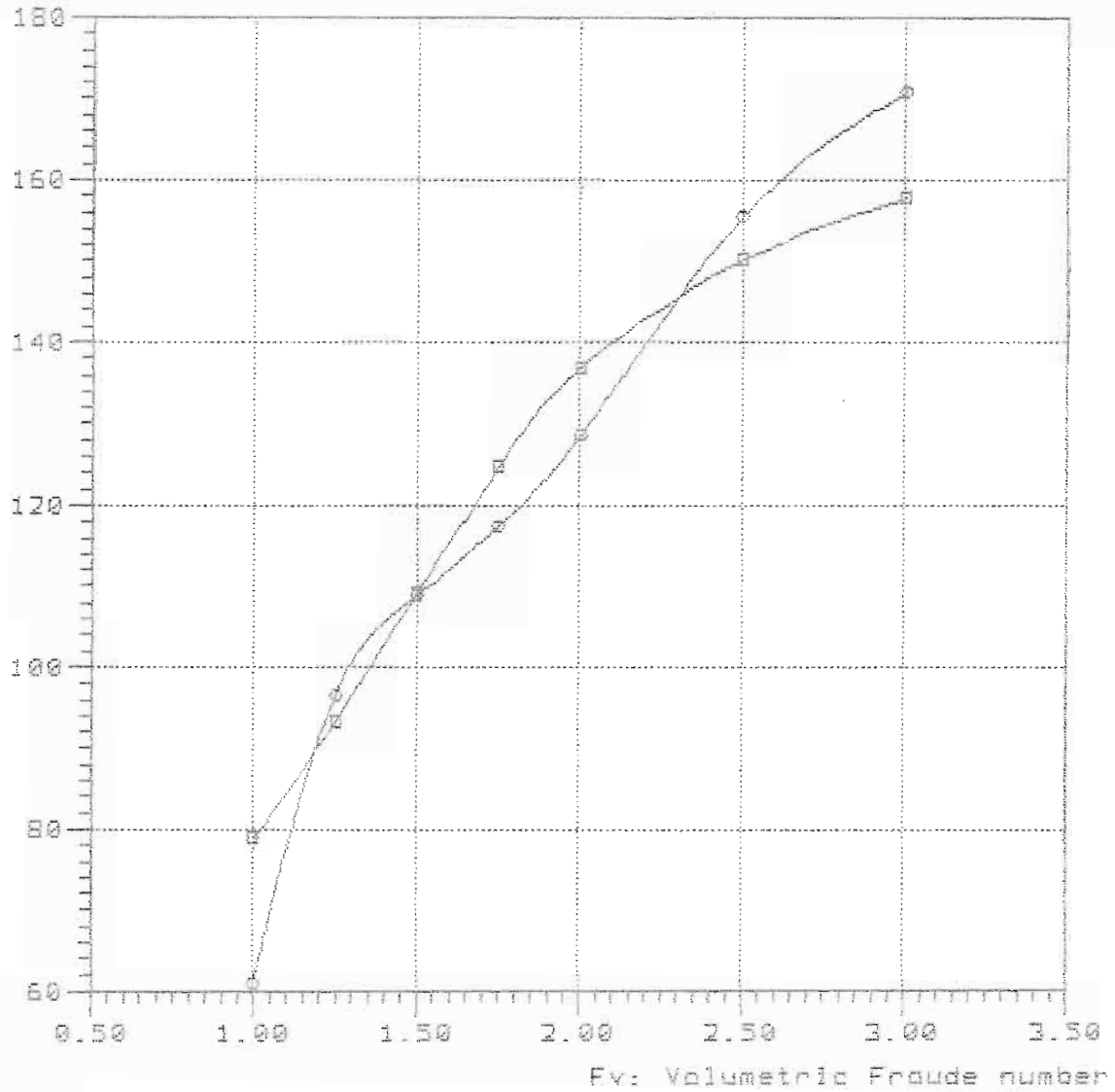


Model = 5239  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 17.500 ft  
Lwl = 17.290 ft  
Bpx = 3.731 ft  
Ap = 48.092 sqft  
Vcg = 0.810 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.690  
Lpx/Ap = 6.368  
Ap /Vol = 7.694  
Lpx/Vol = 7.021  
Cvload = 0.301  
Lbload = 0.025  
Disp-Lpx = 83.299

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

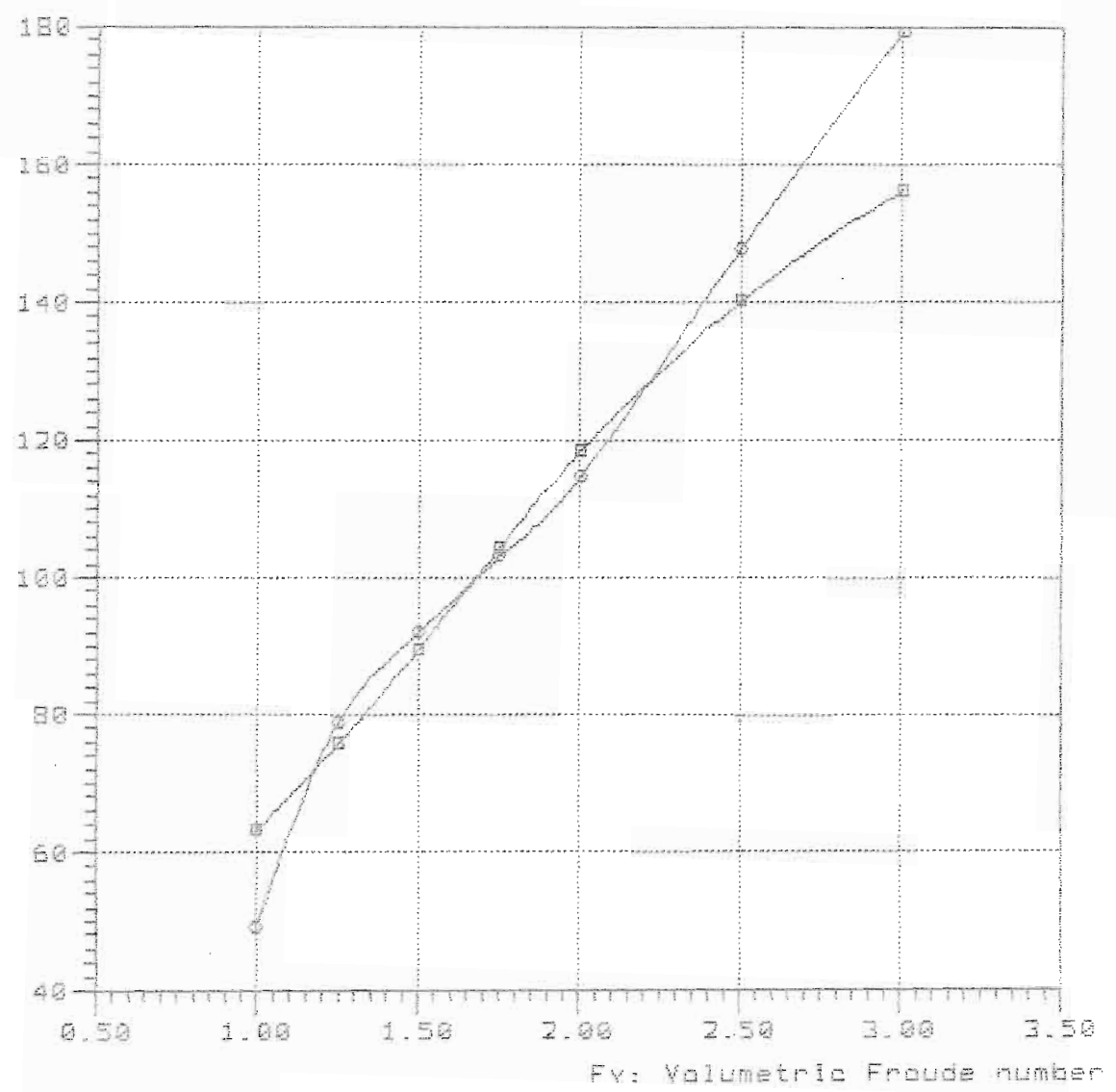
—○— TMB-65B Lpx/Bpx=4.69 Ap/Vol=7.695 Lpx/Ap=6.368 Lcg/Lpx=0.300

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Bare-hull resistance  
vs.  
Volumetric Froude number

File: B-70-340.mdl  
Date: 28 Feb 00  
Time: 9:44

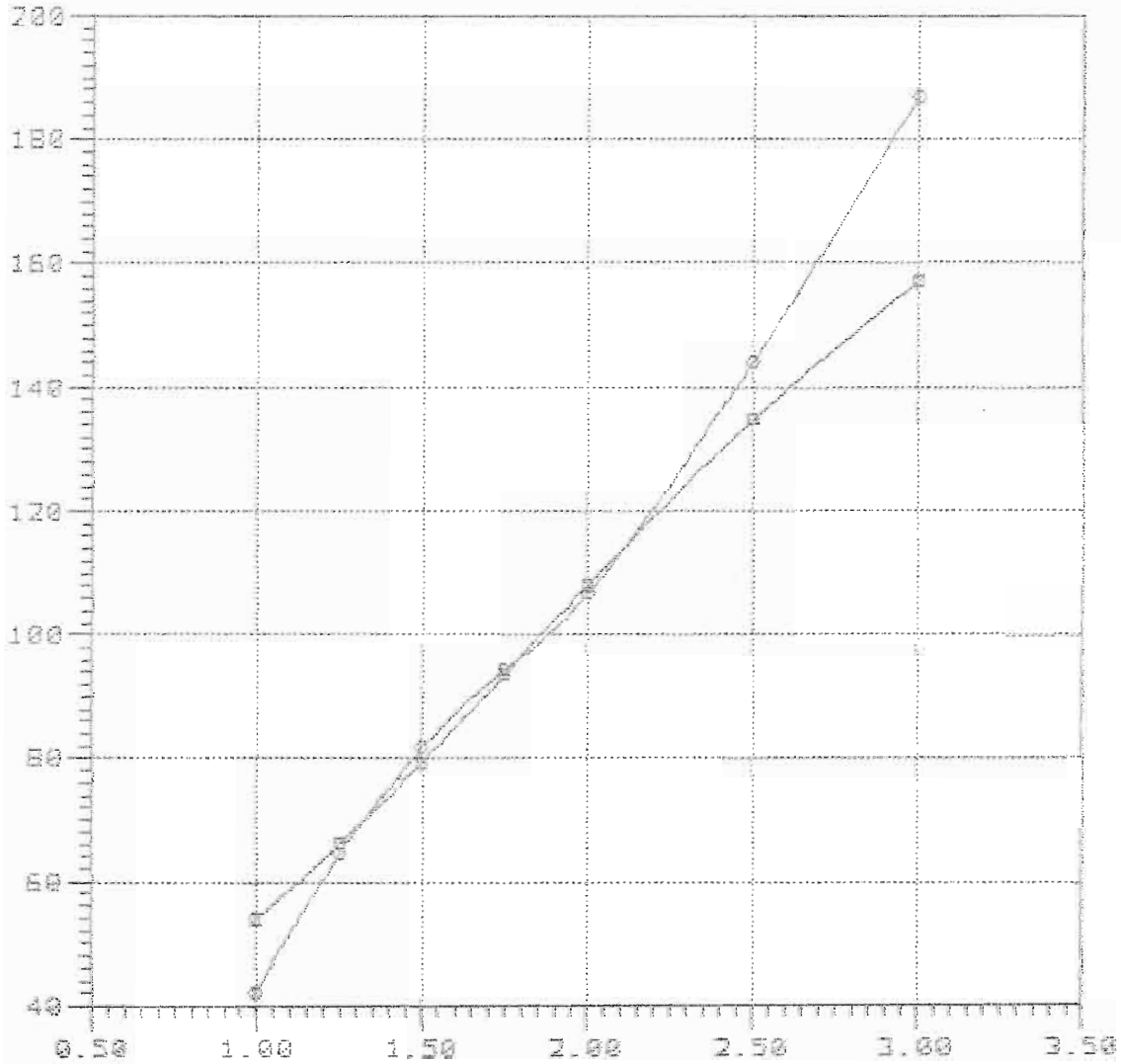
Rbare: Bare-hull resistance (lbs)



Curve legend

- 
- TMB-65B Lpx/Bpx=4.69 Ap/Vol=7.695 Lpx/Ap=6.368 Lcg/Lpx=0.340

Rbare: Bare-hull resistance (lbs)



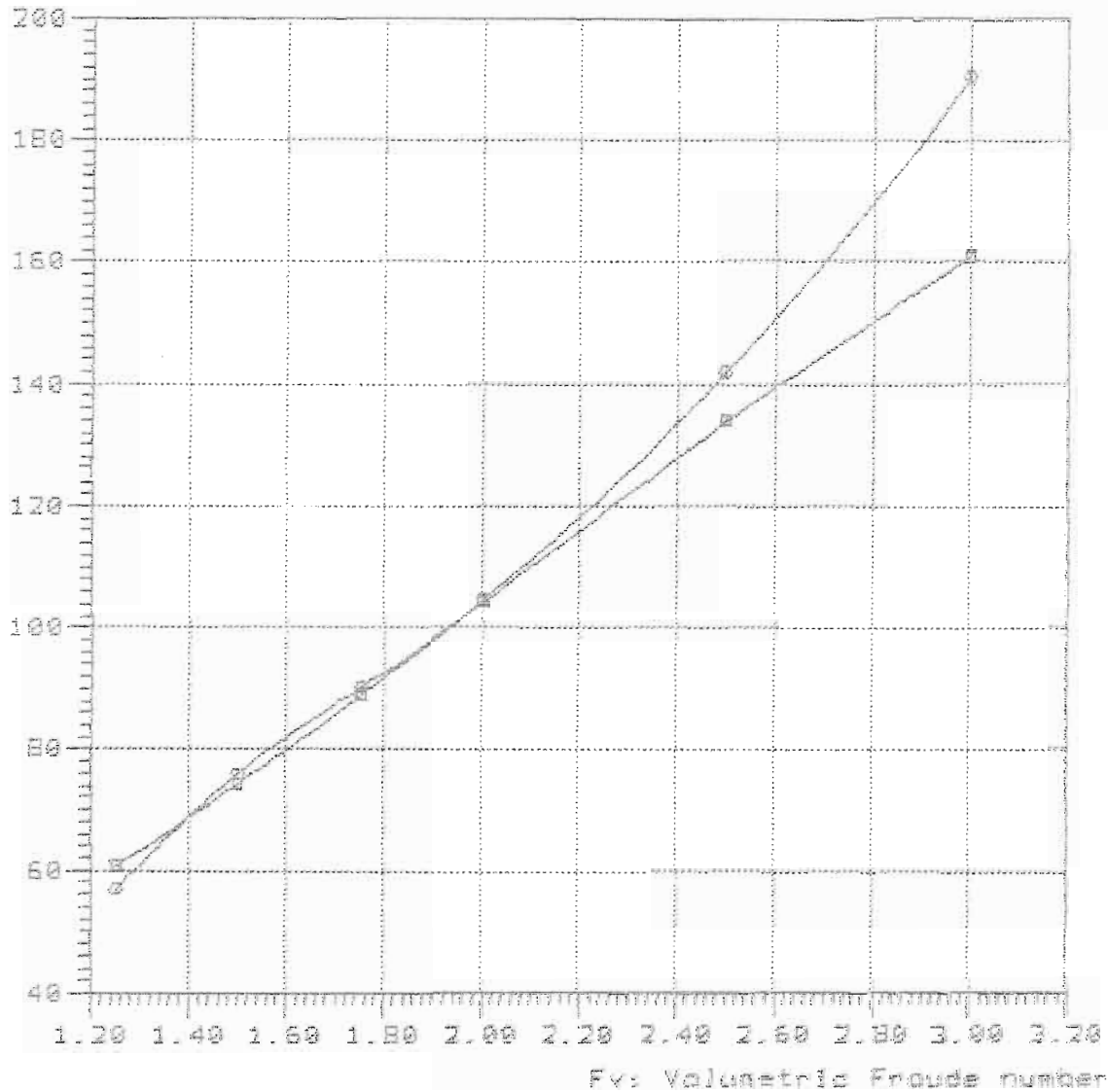
Fv: Volumetric Froude number

Curve legend

—□—

—○— TMB-65B Lpx/Bpx=4.69 Ap/Vol=7.695 Lpx/Ap=6.368 Lcg/Lpx=0.390

Rbare: Bare-hull resistance (lbf)



—■—

—●— TMB-658 Lpx/Spx=4.68 Ap/Vol=7.695 Lpx/As=6.368 Lcg/Lpx=0.420

Model = 5239  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

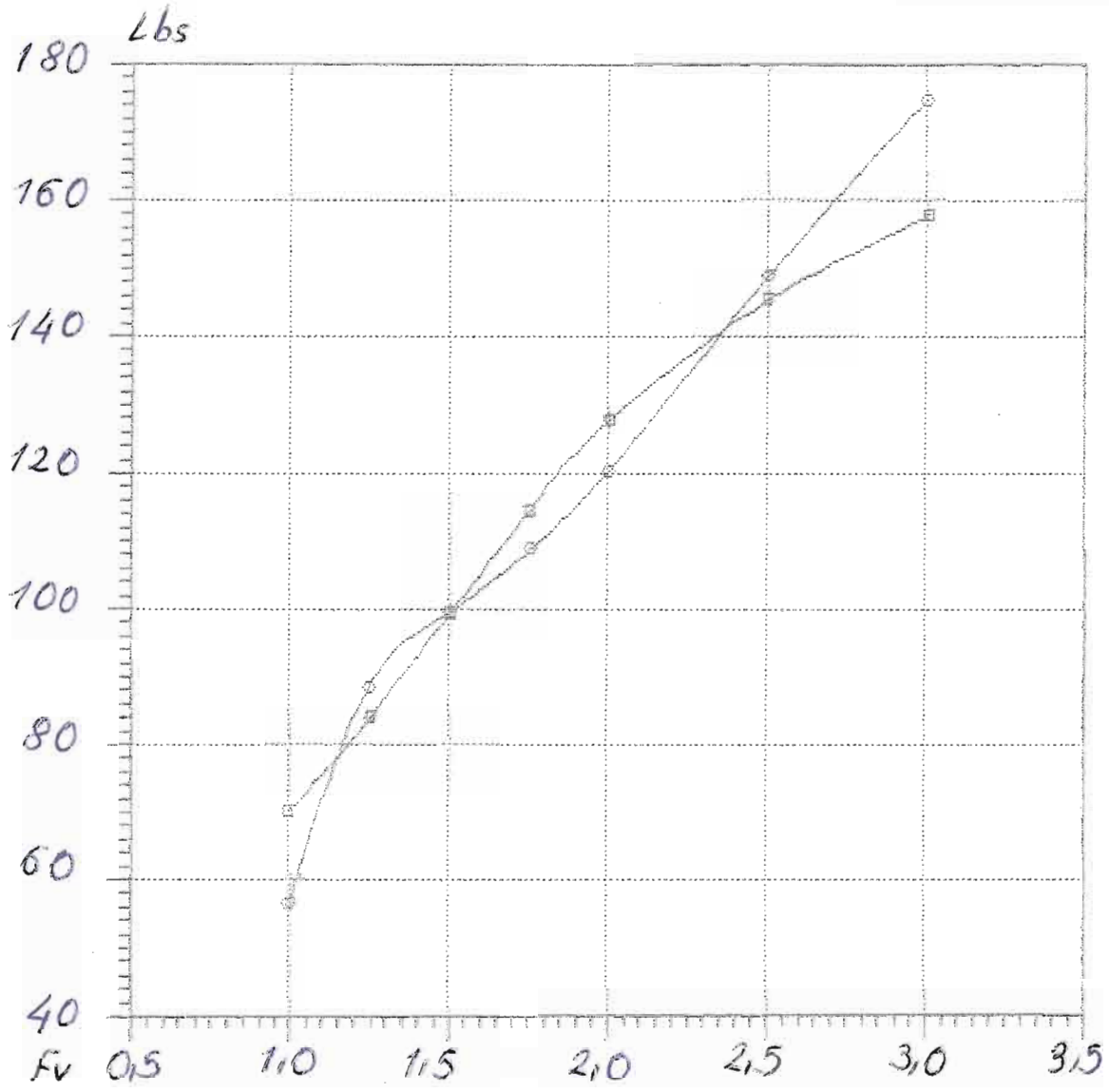
Lpx = 18.700 ft  
Lwl = 18.496 ft  
Bpx = 3.987 ft  
Ap = 54.914 sqft  
Vcg = 0.866 ft  
Disp. = 1000.00 Lb

Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

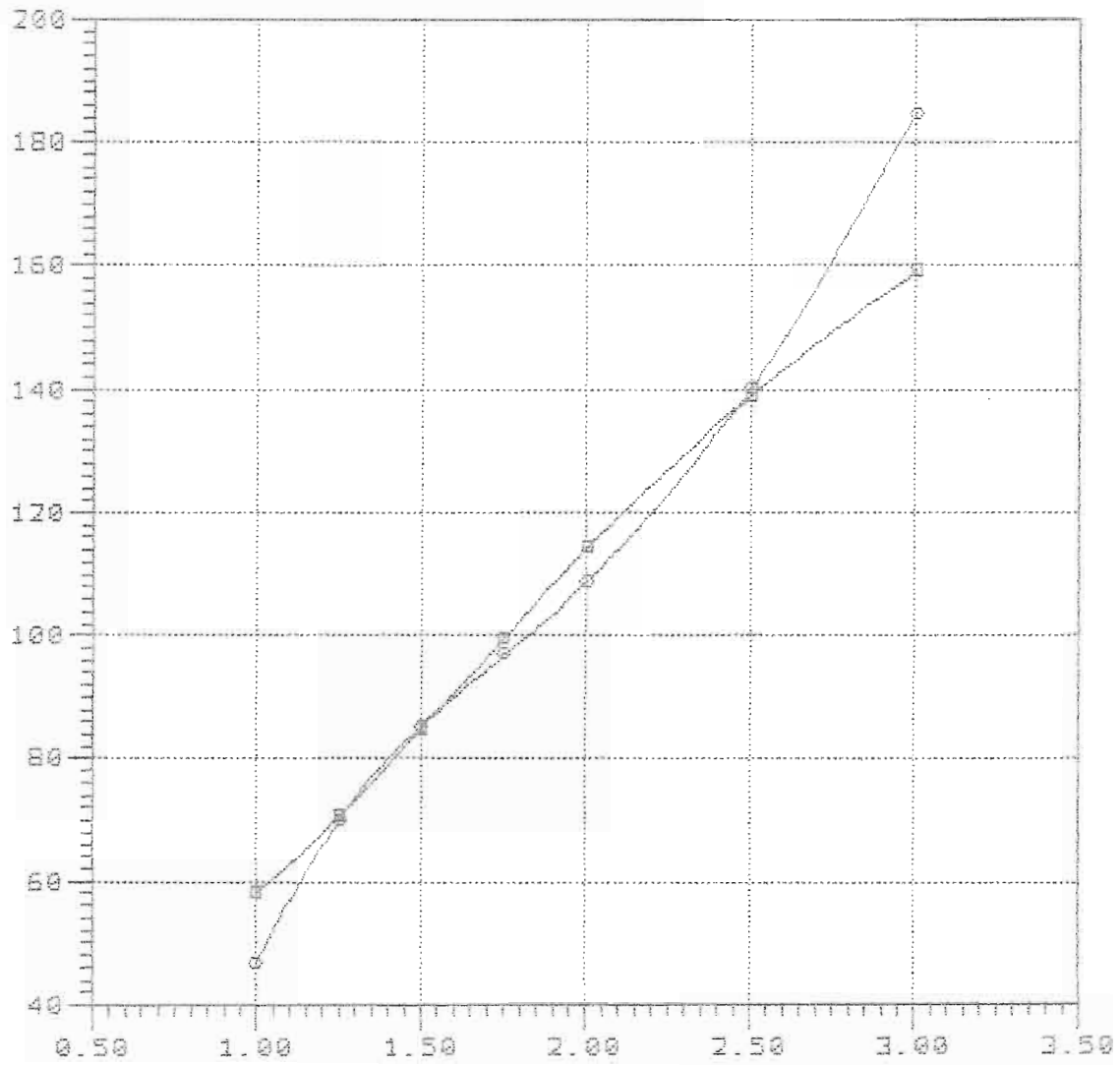
Lpx/Bpx = 4.690  
Lpx/Ap = 6.368  
Ap /Vol = 8.785  
Lpx/Vol = 7.502  
Cvload = 0.247  
Lbload = 0.020  
Disp-Lpx = 68.270



9-75-300



Rbare: Bare-hull resistance (lbs)

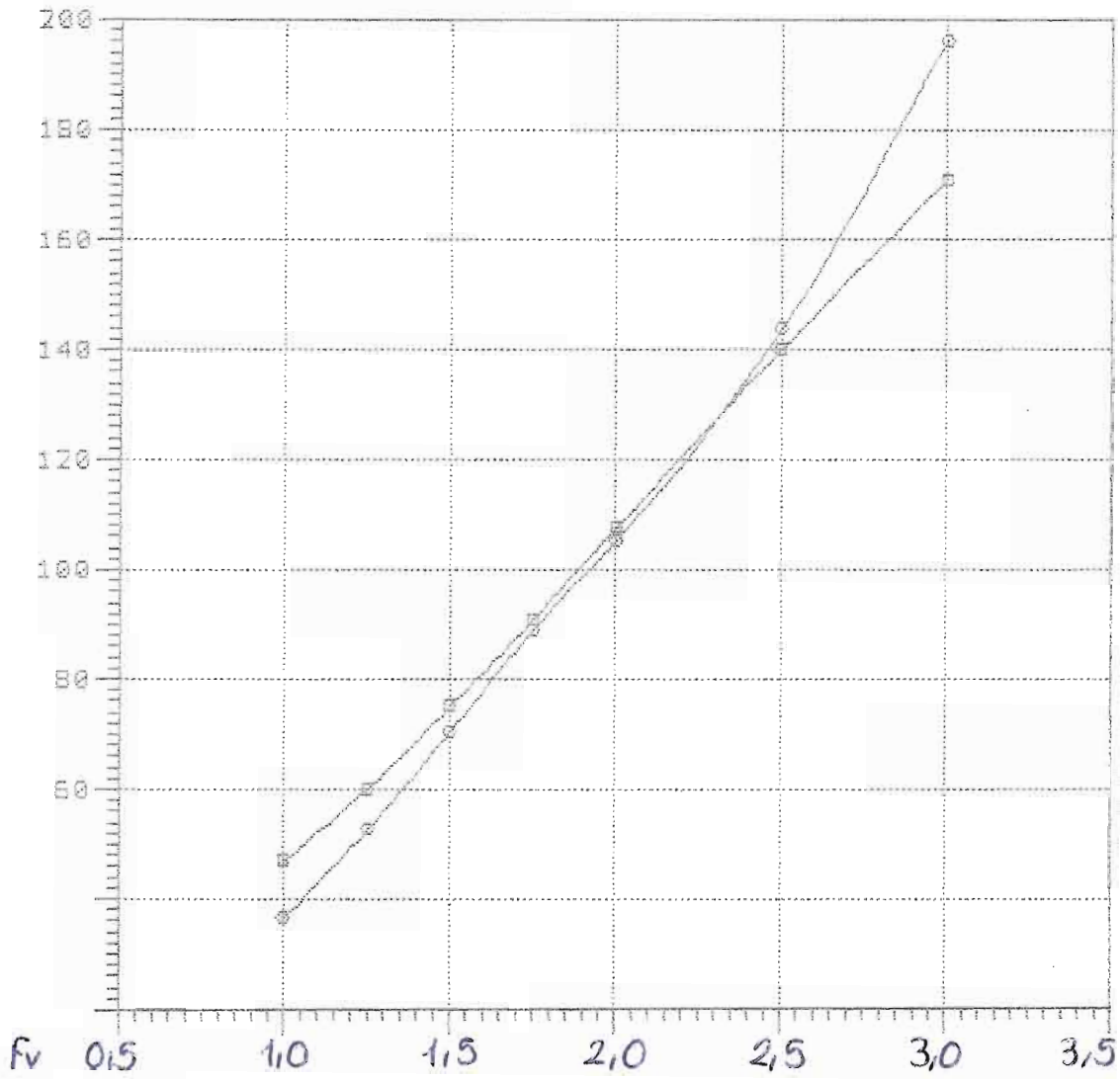


Fv: Volumetric Froude number

—■—

—●— TMB-65B Lpx/Bpx=4.69 Ap/Vol=8.786 Lpx/As=6.368 Lcg/Lpx=0.340

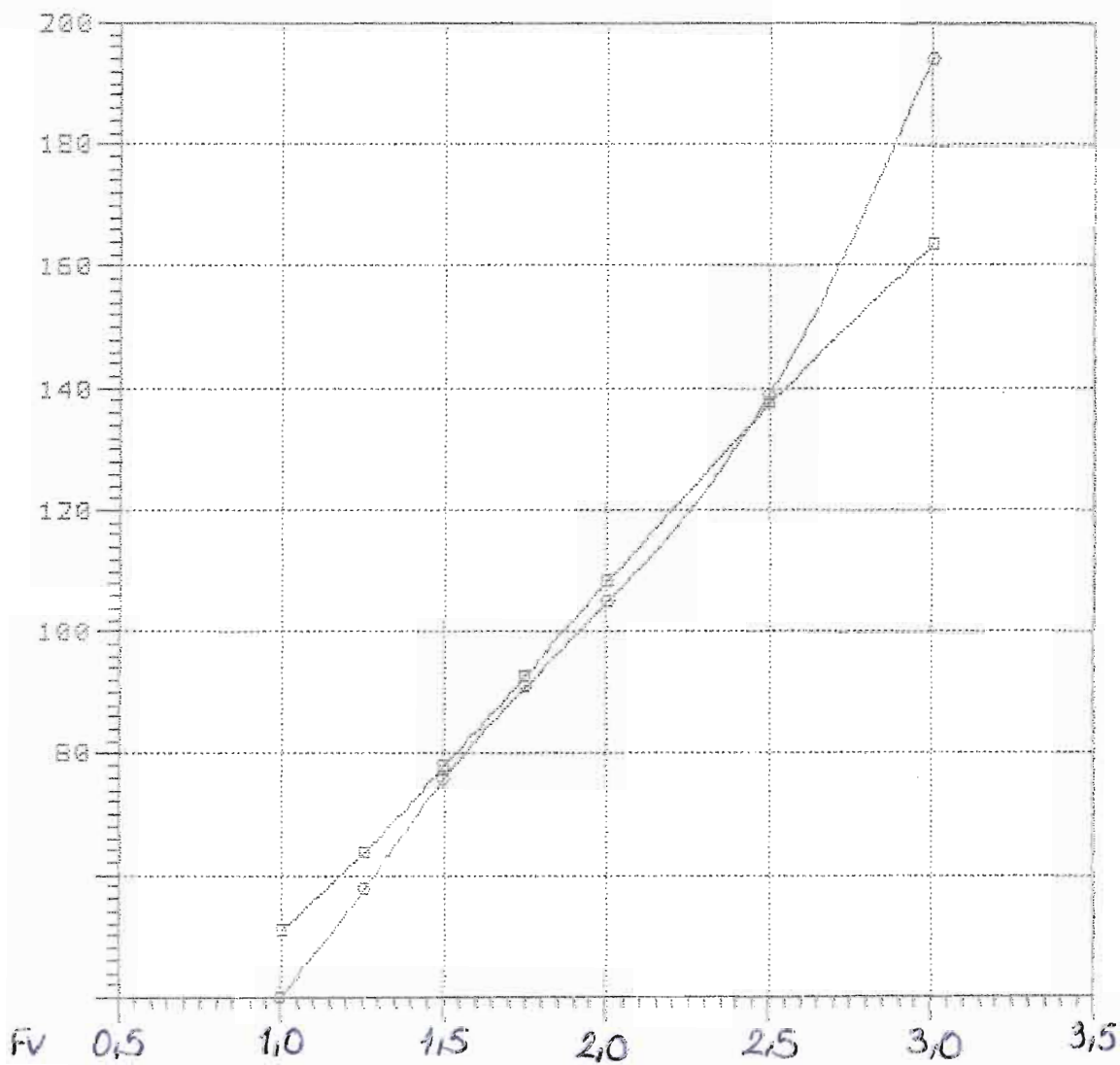
Rbare: Bare-hull resistance (lbs)



—■—

—○—

Rbare: Bare-hull resistance (lba)



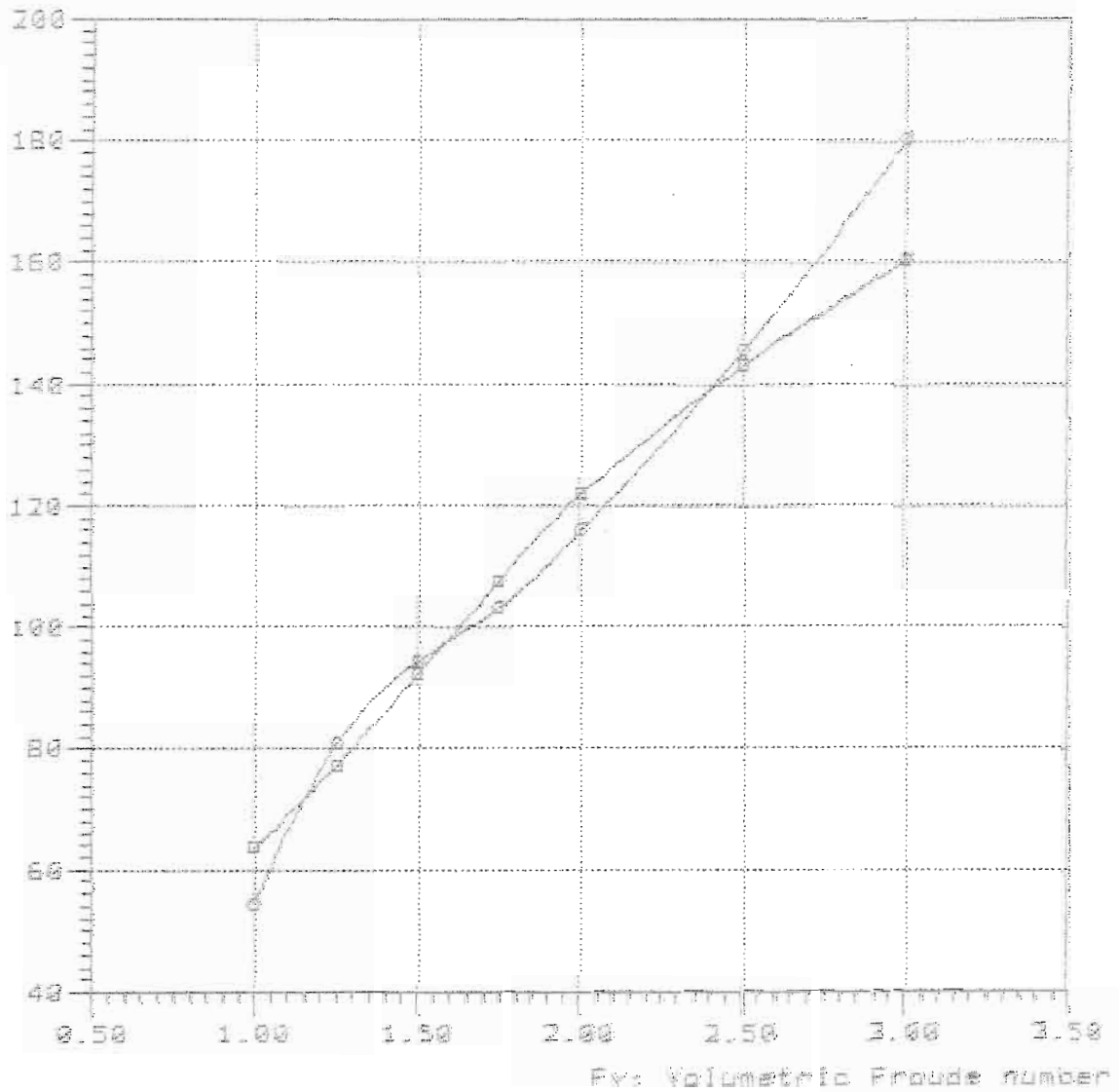
—□—  
—○—

Model = 5239  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 20.000 ft  
Lwl = 19.761 ft  
Bpx = 4.264 ft  
Ap = 62.814 sqft  
Vcg = 0.926 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.690  
Lpx/Ap = 6.368  
Ap /Vol = 10.049  
Lpx/Vol = 8.024  
Cvload = 0.202  
Lbload = 0.016  
Disp-Lpx = 55.804

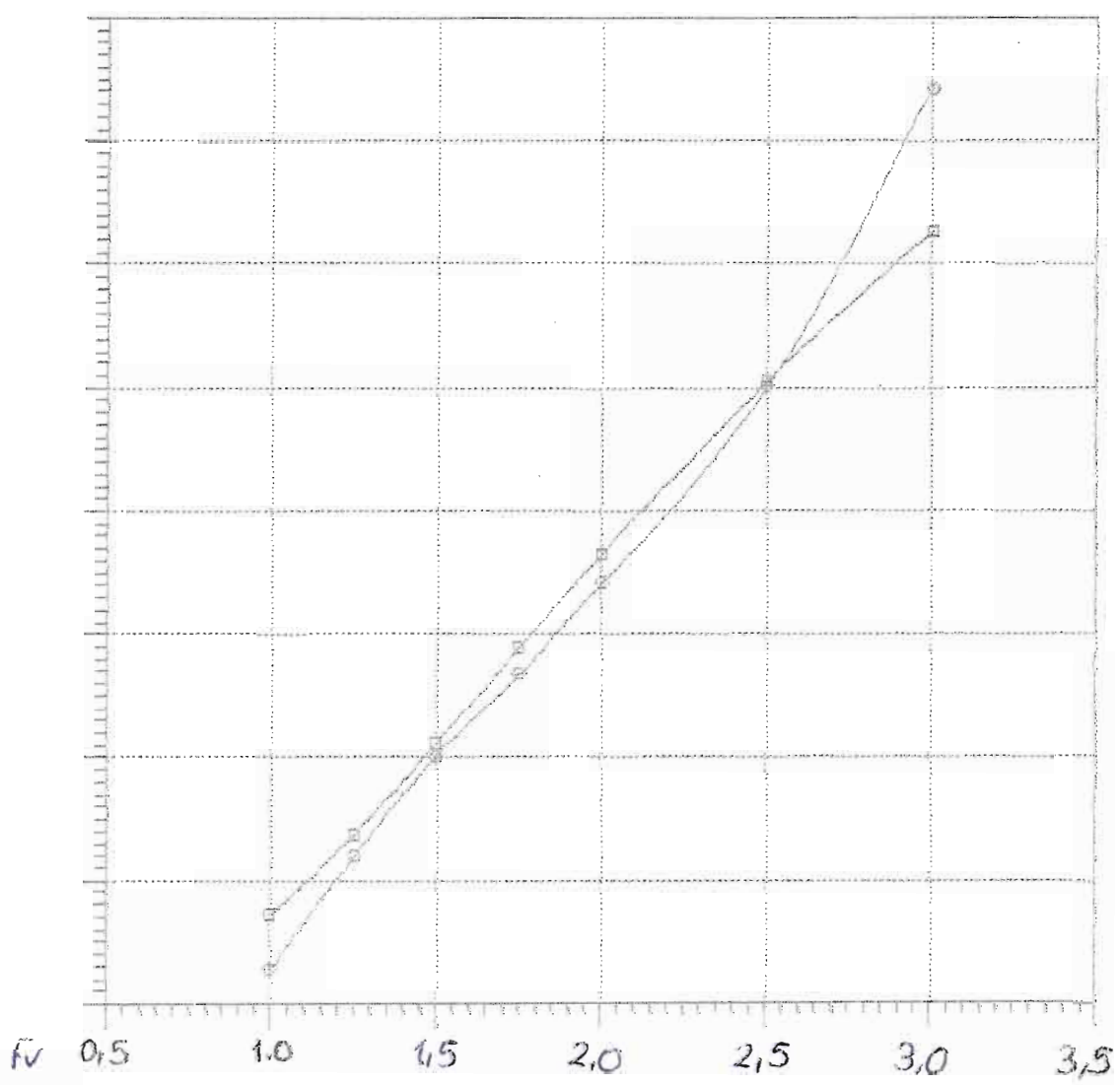
Rbare: Bare-hull resistance (lbs)



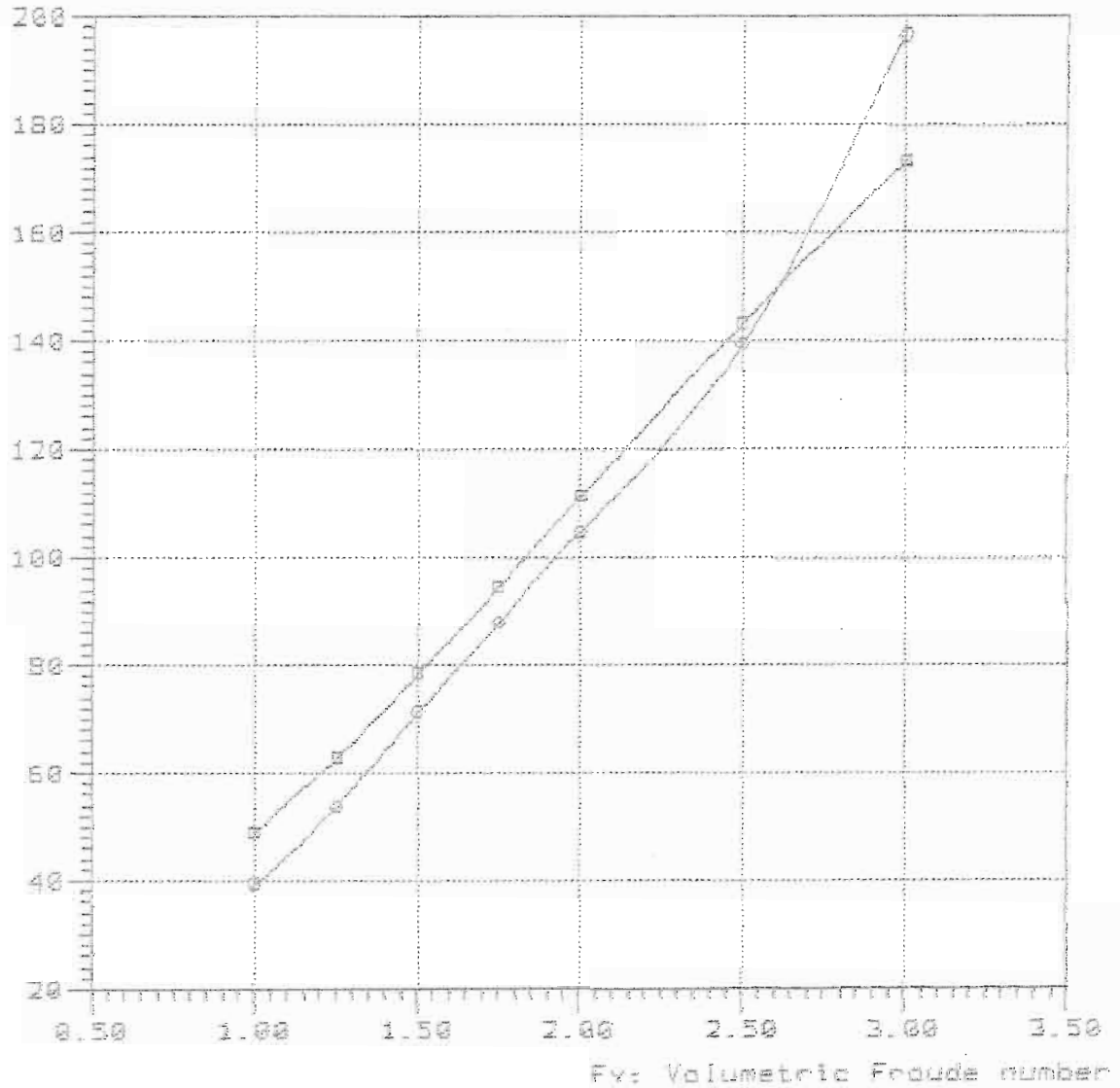
—○—

—□— TNB-658 Lpw/Bpw=4.65 Ap/Vol=10.650 Lpw/Sp=6.368 Lcg/Lex=0.360

10-80-340



Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—●— TMB-65B Lpx/Bpx=4.69 Ap/Vol=10.650 Lpx/As=6.368 Log/Lpx=0.386



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Bare-hull resistance

vs.

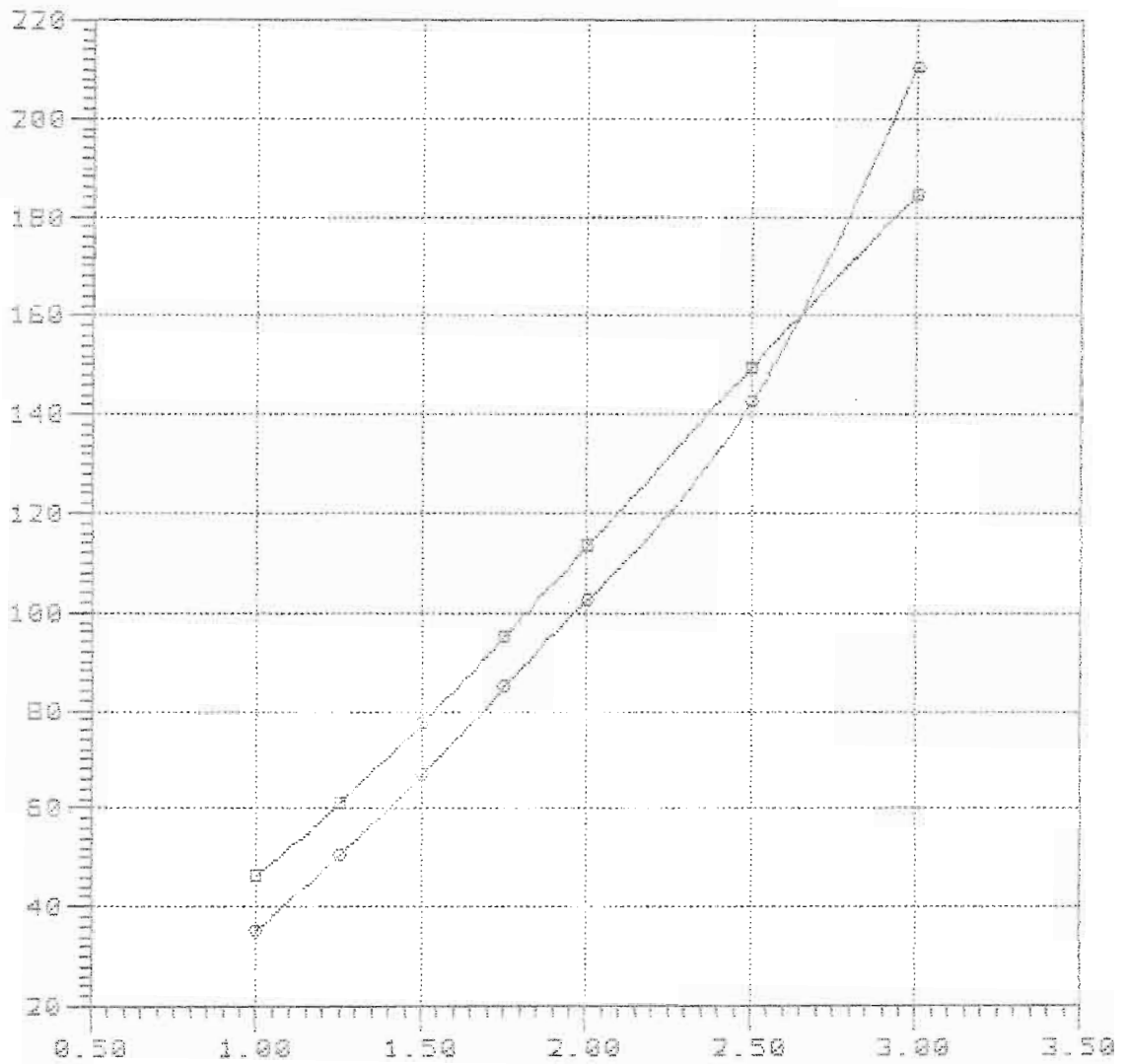
Volumetric Froude number

File: 10-80-42.mdl

Date: 28 Feb 88

Time: 8:19

Rbare: Bare-hull resistance (lbs)



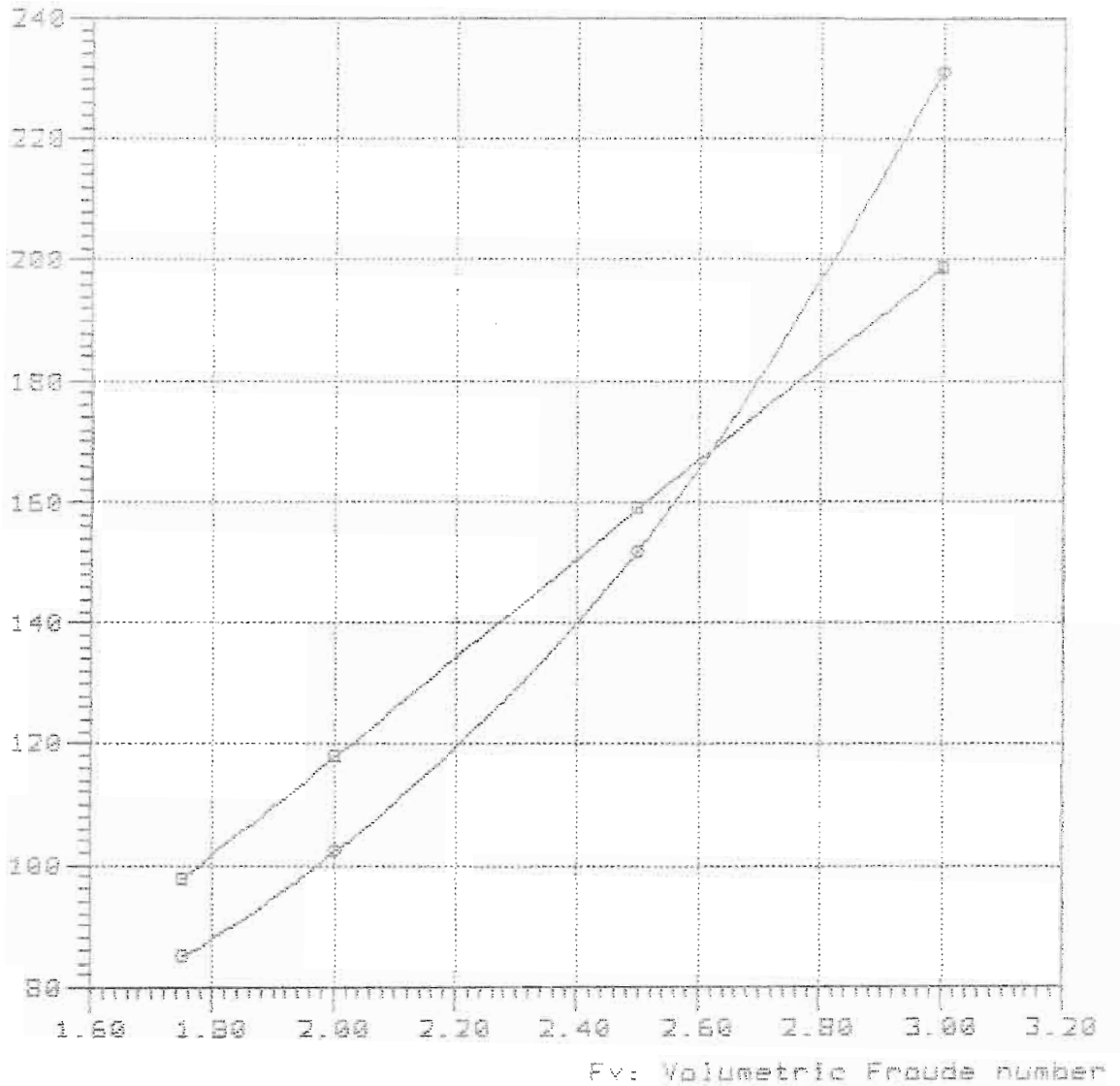
Fv: Volumetric Froude number

Curve legend

—■—

—○— TMB-65B Lpx/Bpx=4.69 Ap/Vol=10.050 Lpx/Ap=6.368 Lcg/Lpx=0.428

Rbare: Bare-hull resistance (lbs)



—■—

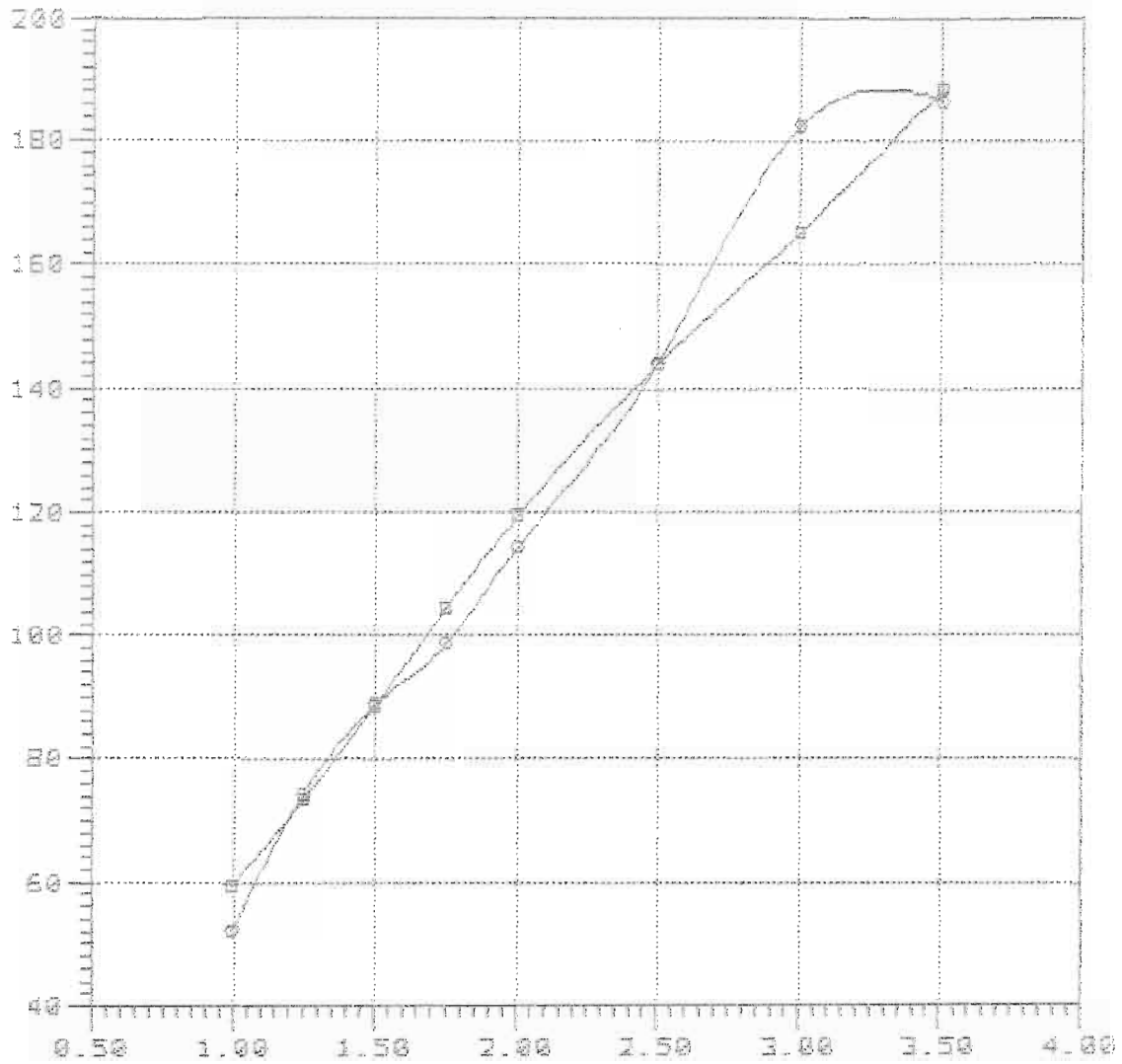
—●— THB-65B Lpx/Bpx=4.69 Ap/Vol=10.050 Lpx/Sp=6.368 Log/Lpx=0.450

Model = 5239  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 21.200 ft  
Lwl = 20.946 ft  
Bpx = 4.520 ft  
Ap = 70.578 sqft  
Vcg = 0.981 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.690  
Lpx/Ap = 6.368  
Ap /Vol = 11.291  
Lpx/Vol = 8.505  
Cvload = 0.169  
Lbload = 0.014  
Disp-Lpx = 46.854

Rbare: Bare-hull resistance (lbs)

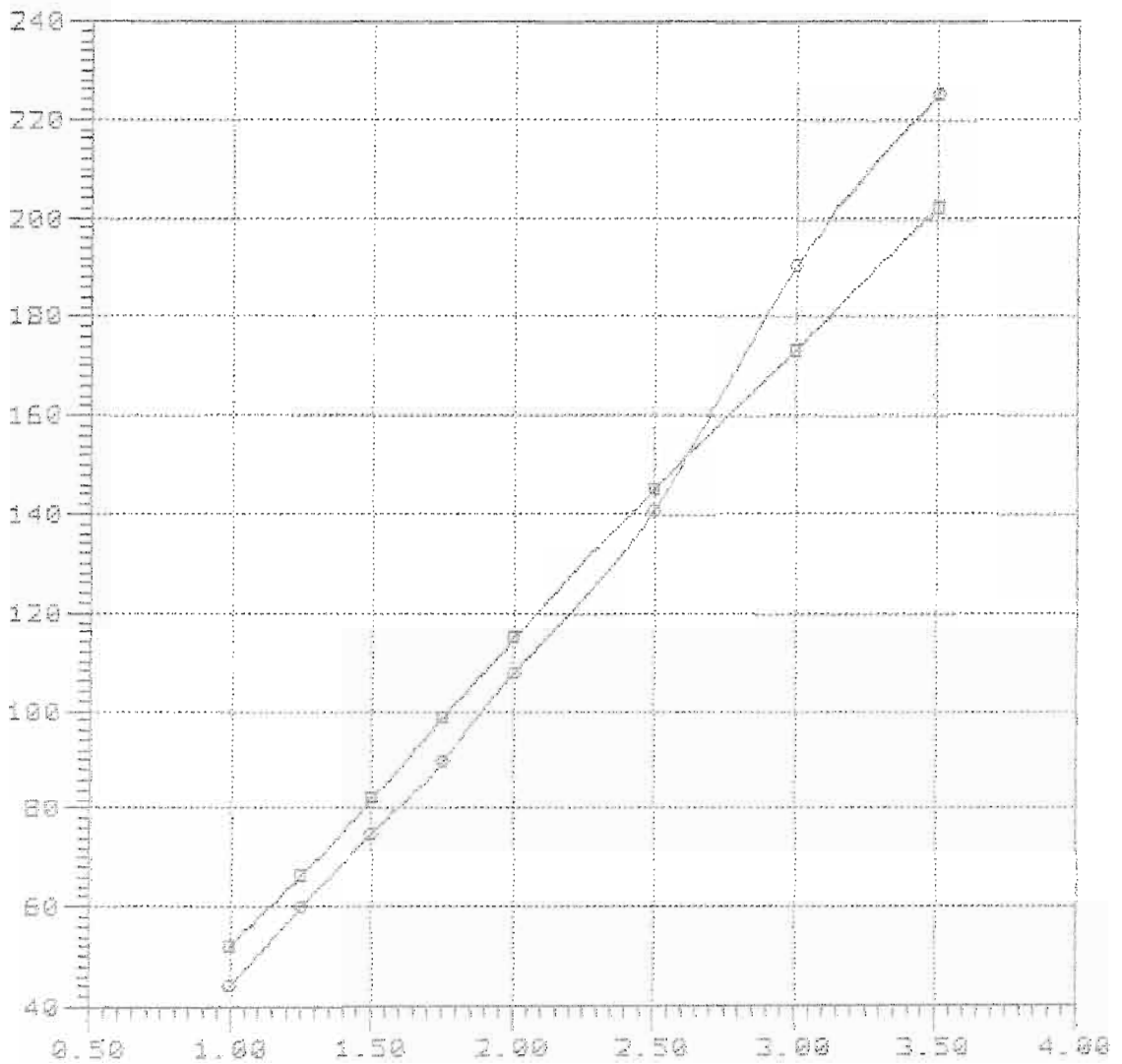


FV: Volumetric Froude number

—■—

—○— 7MB-65B Lpx/Bpx=4.65 Rp/Vol=11.252 Lpx/Rp=6.366 Log/Lpx=0.300

Rbare: Bare-hull resistance (lbs)

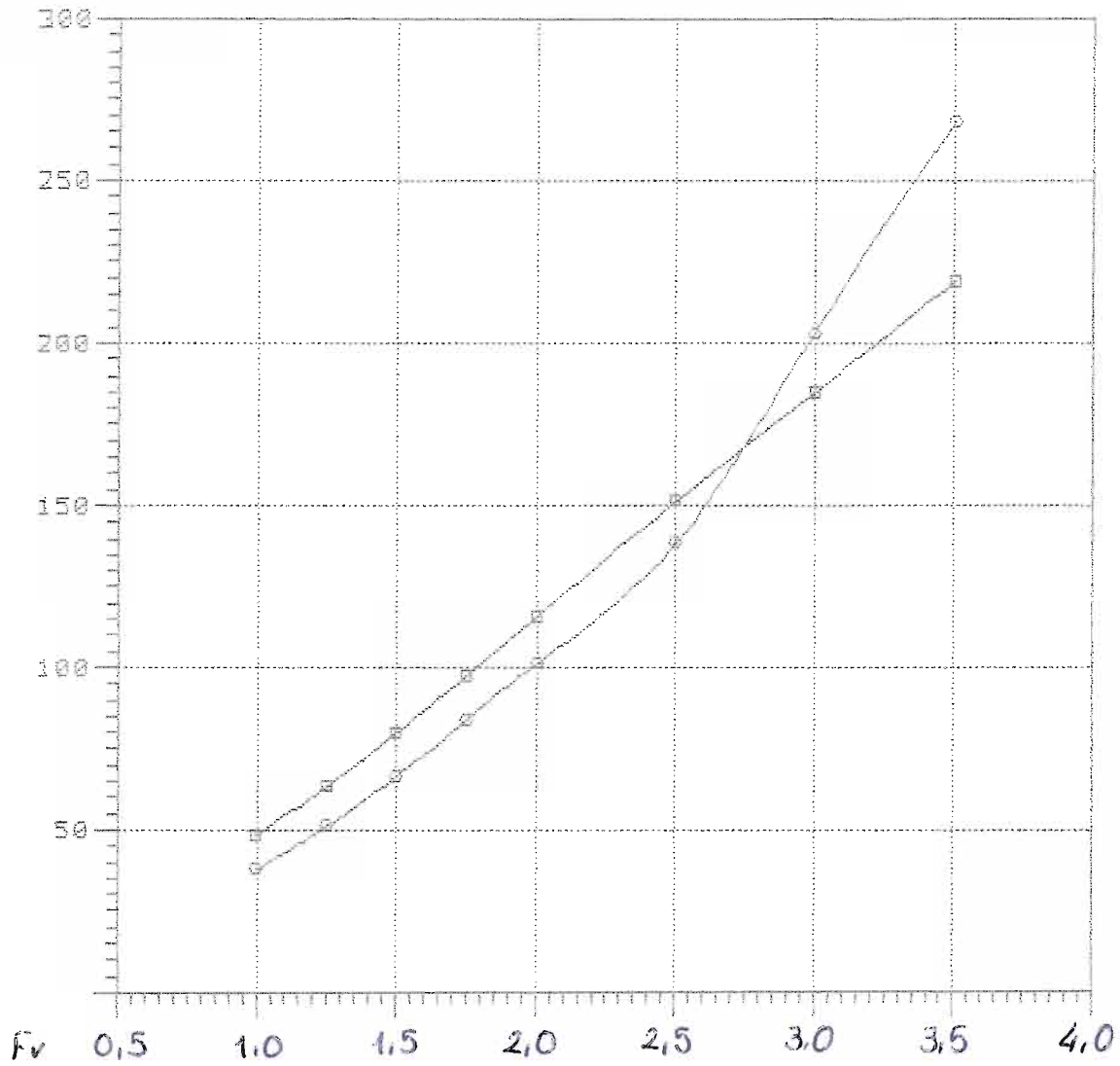


Fv: Volumetric Froude number

—■—

—○— TMB-65B Lpx/Bpx=4.69 Ap/Vol=11.292 Lpx/Ap=6.368 Log/Lpx=0.340

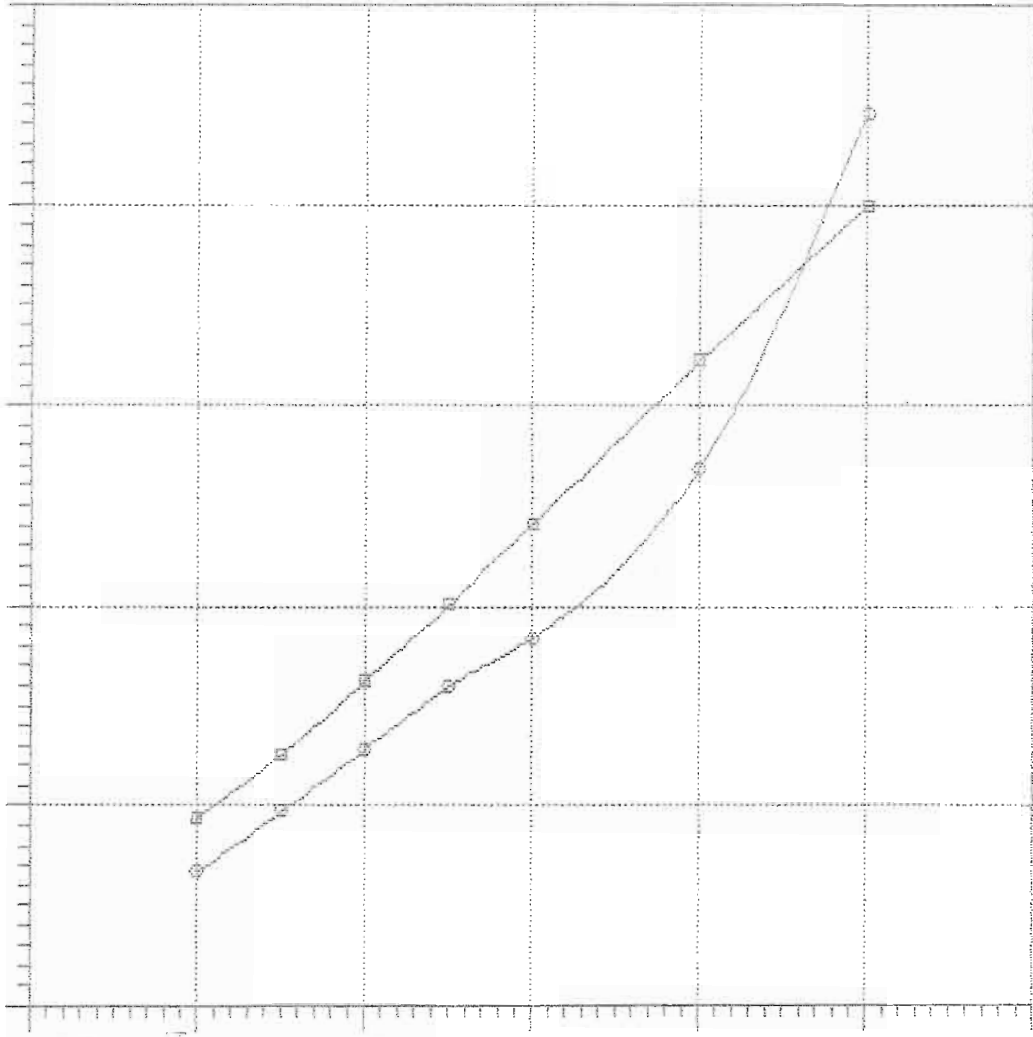
Rbare: Bare-hull resistance (lbs)



—■—

—○—

11-85-420



—□—  
—○—

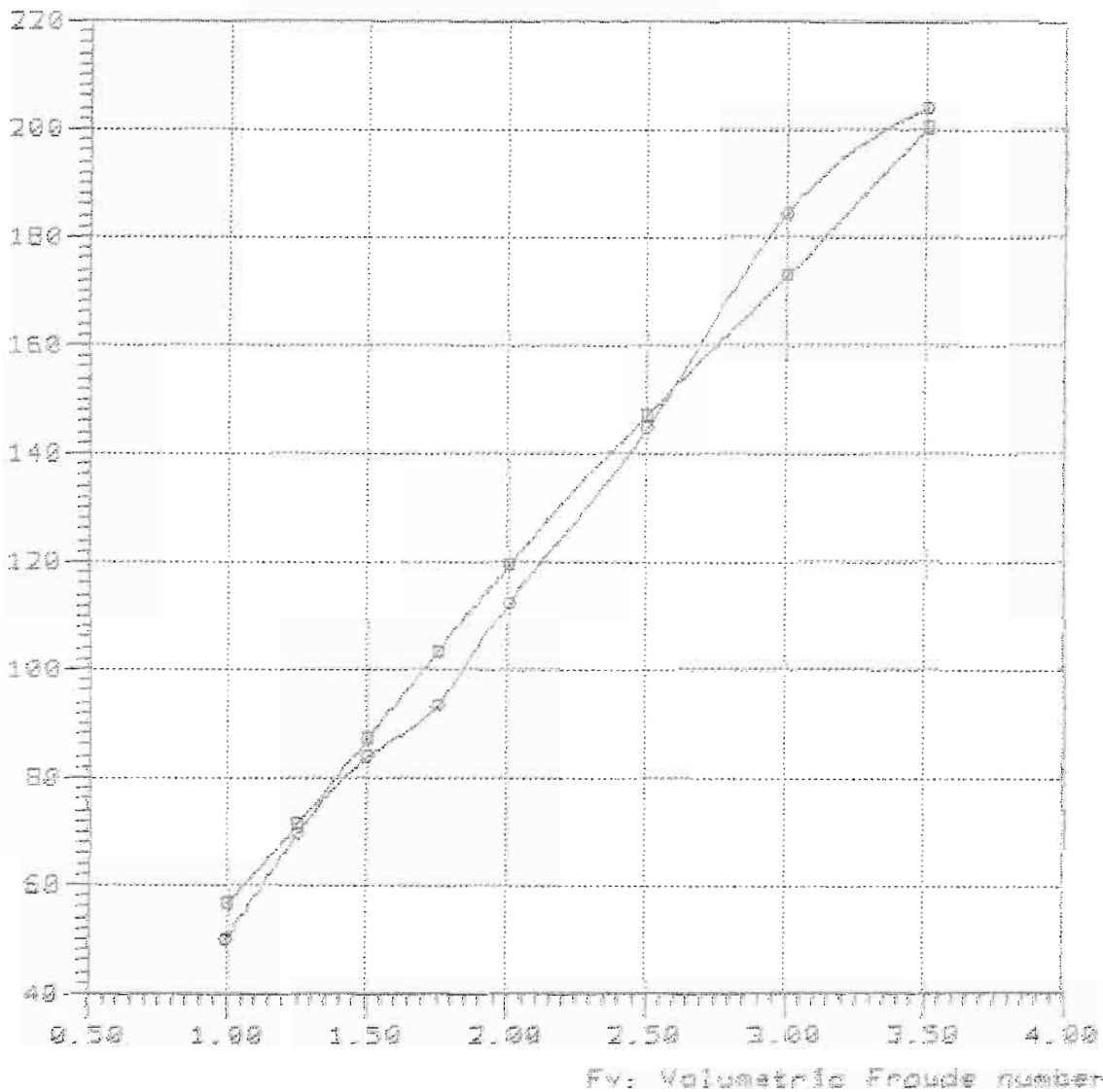
Model = 5239  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 22.500 ft  
Lwl = 22.231 ft  
Bpx = 4.797 ft  
Ap = 79.499 sqft  
Vcg = 1.041 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.690  
Lpx/Ap = 6.368  
Ap /Vol = 12.718  
Lpx/Vol = 9.027  
Cvload = 0.142  
Lbload = 0.012  
Disp-Lpx = 39.193



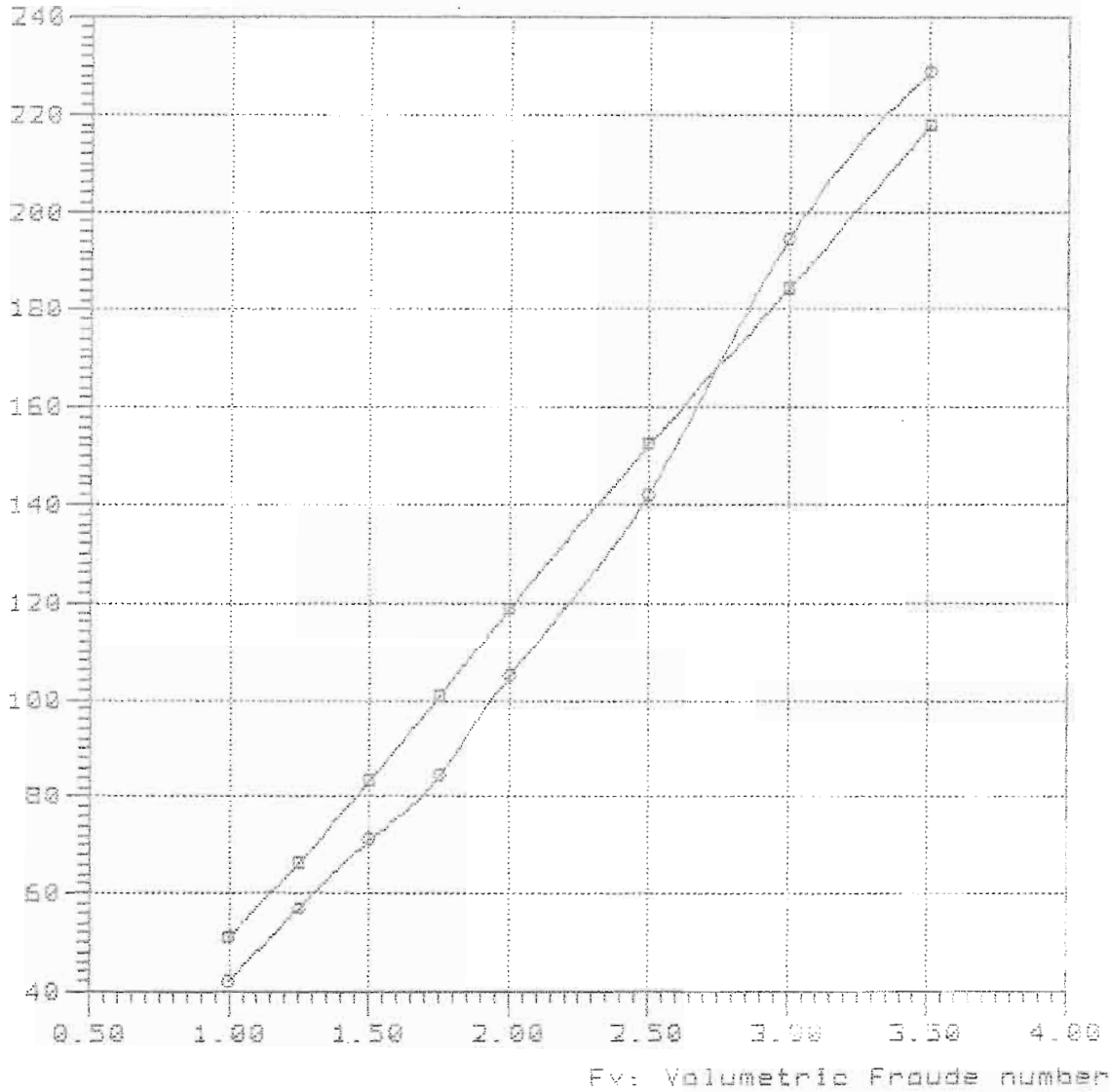
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B 3239 Lpx/Bpx=4.69 Ap/Vol=12.726 Lpx/Ap=6.368 Lcg/Lpx=41.300

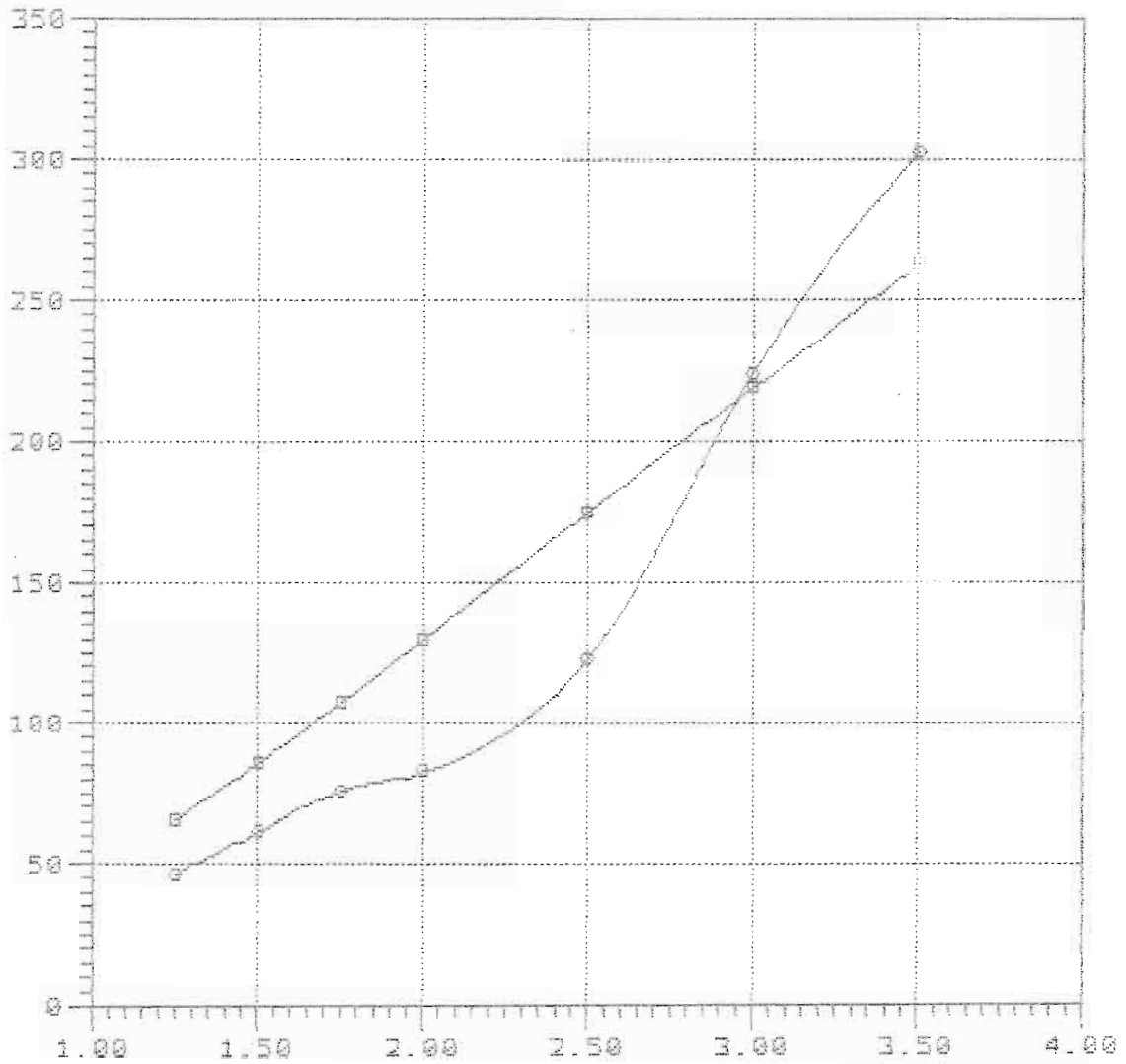
Rbare: Bare-hull resistance (lbs)



Curve legend

- 
- TMS-65B Lpx/Bpx=4.69 Ap/Vol=12.720 Lpx/Ap=6.368 Log/Lpx=0.340

Rbare: Bare-hull resistance (lbs)



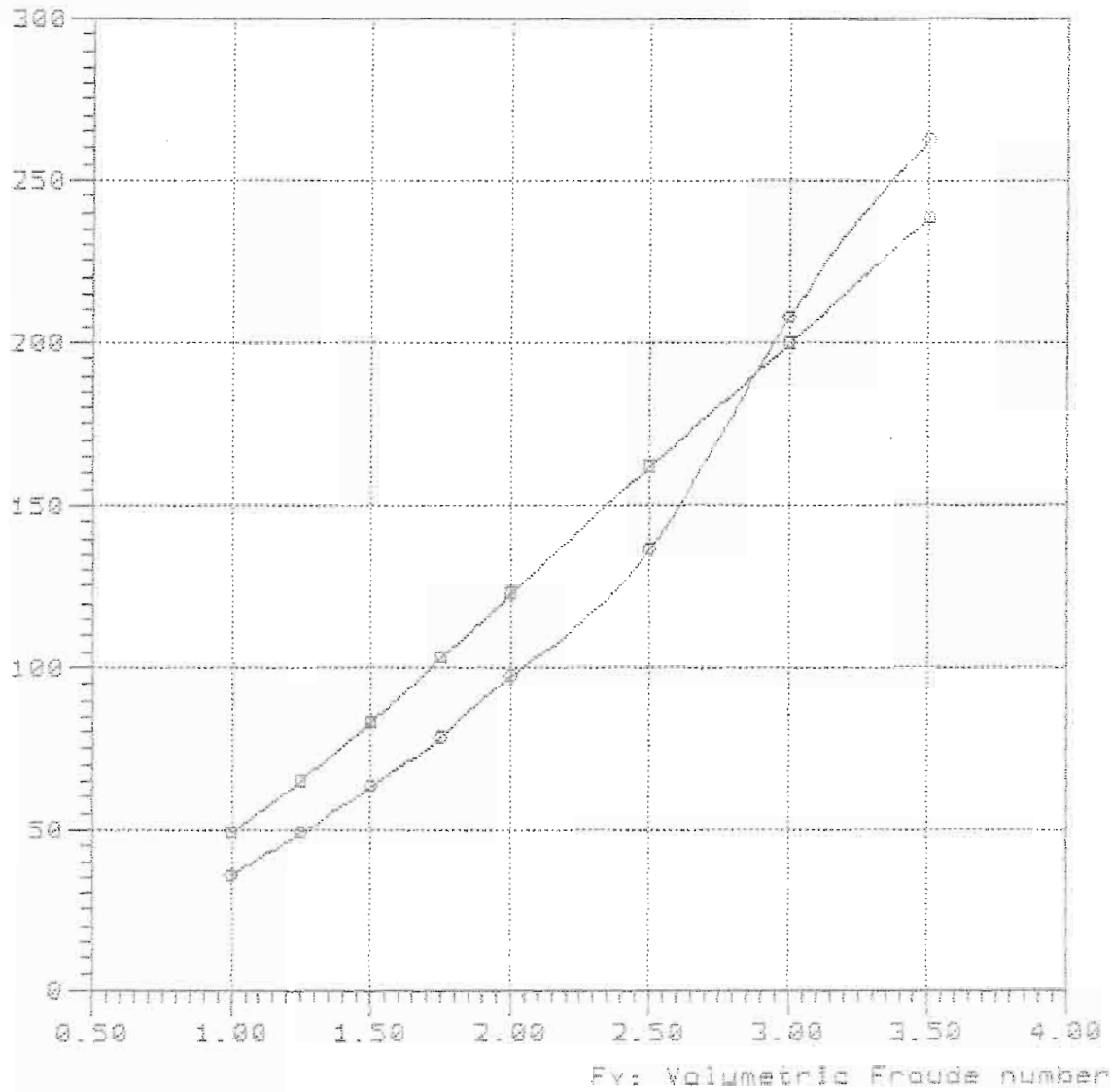
Fv: Volumetric Froude number

—■—

—●— TMB-65B Lpx/Bpx=4.69 Ap/Vol=12.720 Lpx/Ap=6.368 Lcg/Lpx=0.420

Bare-hull resistance  
vs.  
Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



Curve legend

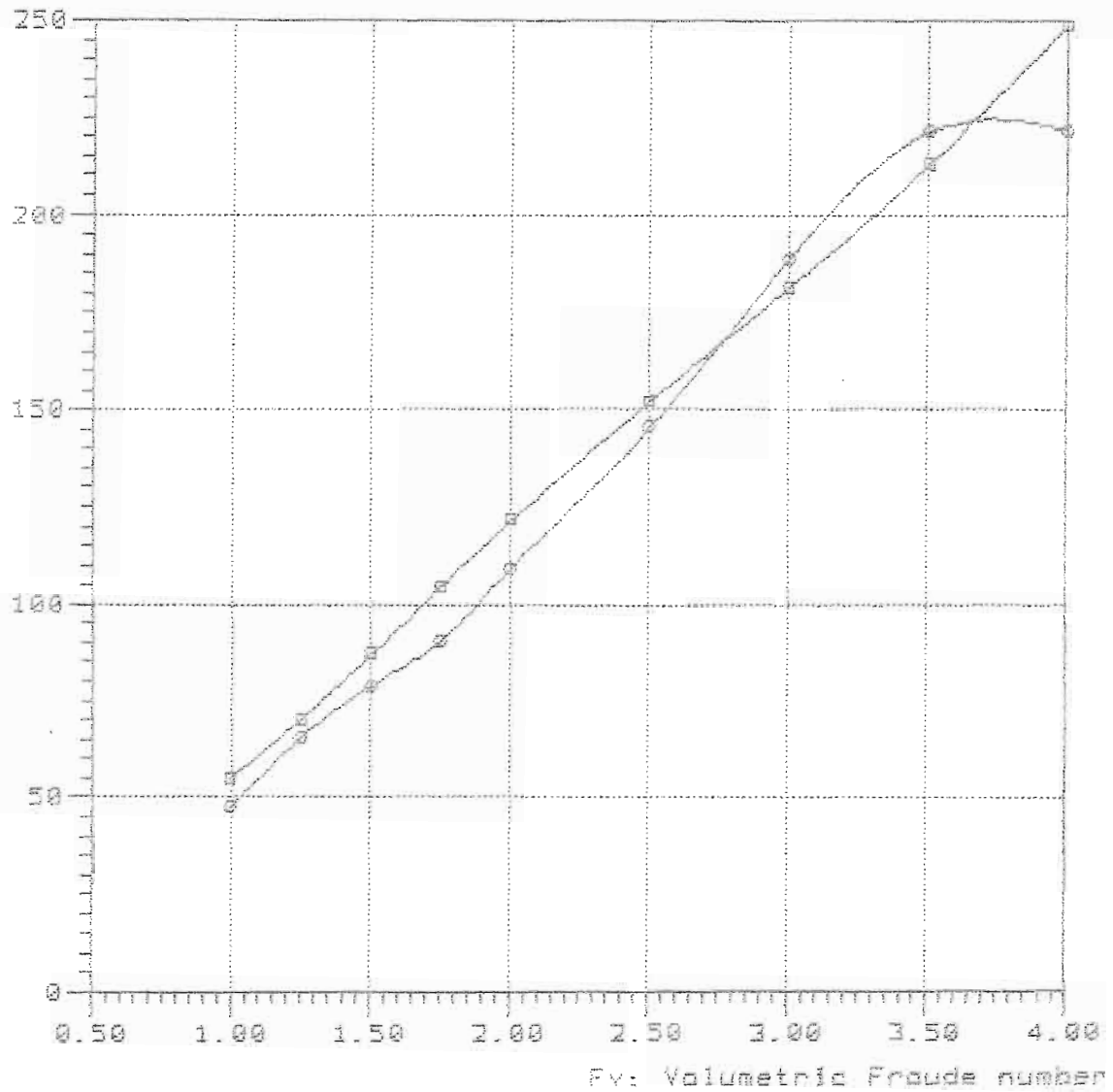
- 
- TMB-65B Lpx/Bpx=4.69 Ap/Vol=12.720 Lpx/As=6.368 Lcg/Lpx=0.380

Model = 5239  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 23.700 ft  
Lwl = 23.416 ft  
Bpx = 5.053 ft  
Ap = 88.205 sqft  
Vcg = 1.097 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.690  
Lpx/Ap = 6.368  
Ap /Vol = 14.111  
Lpx/Vol = 9.508  
Cvload = 0.121  
Lbload = 0.010  
Disp-Lpx = 33.536

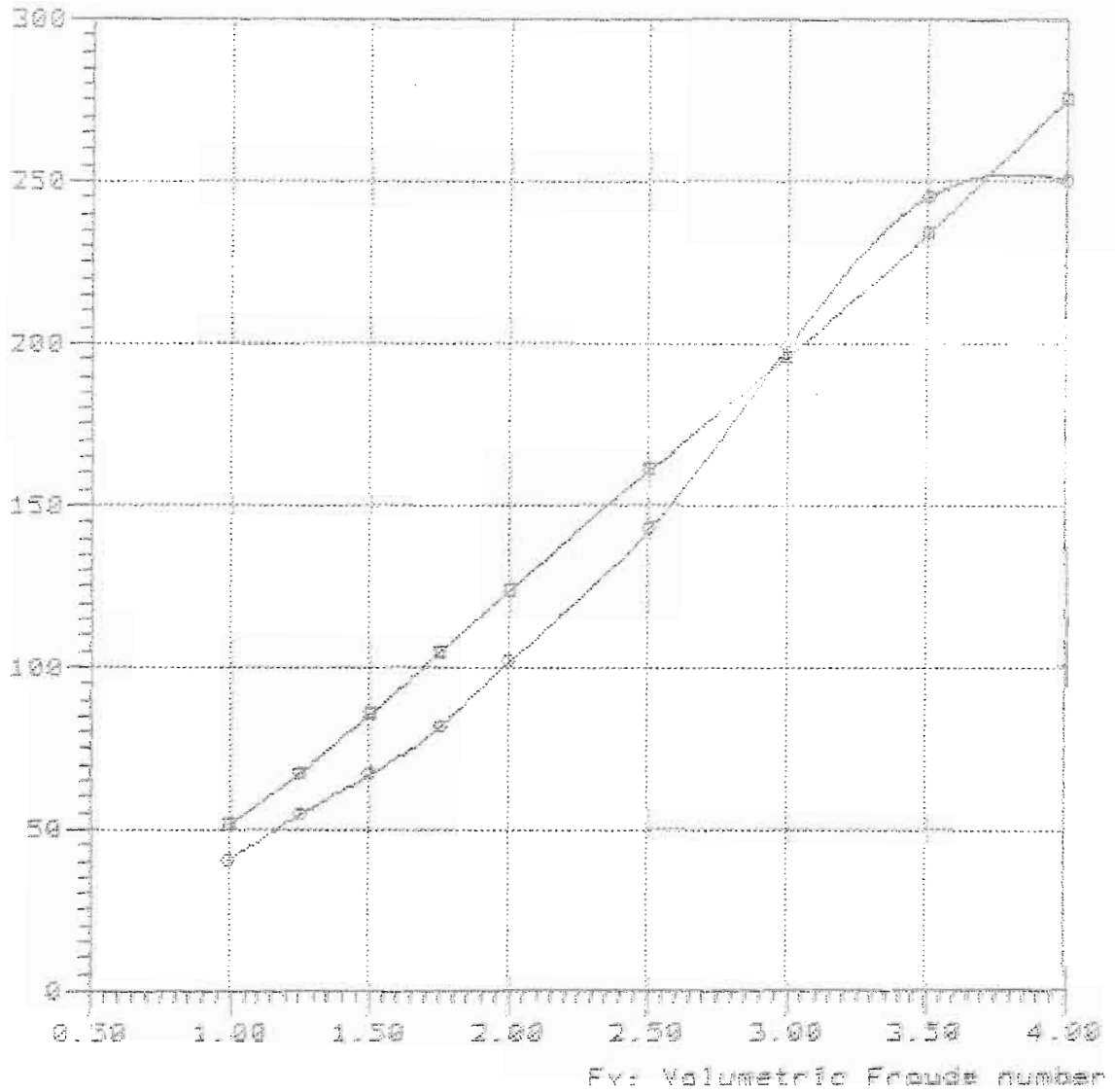
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65B Lpx/Bpx=4.69 Ap/Vol=14.113 Lpx/Ap=6.368 Log/Lpx=0.300

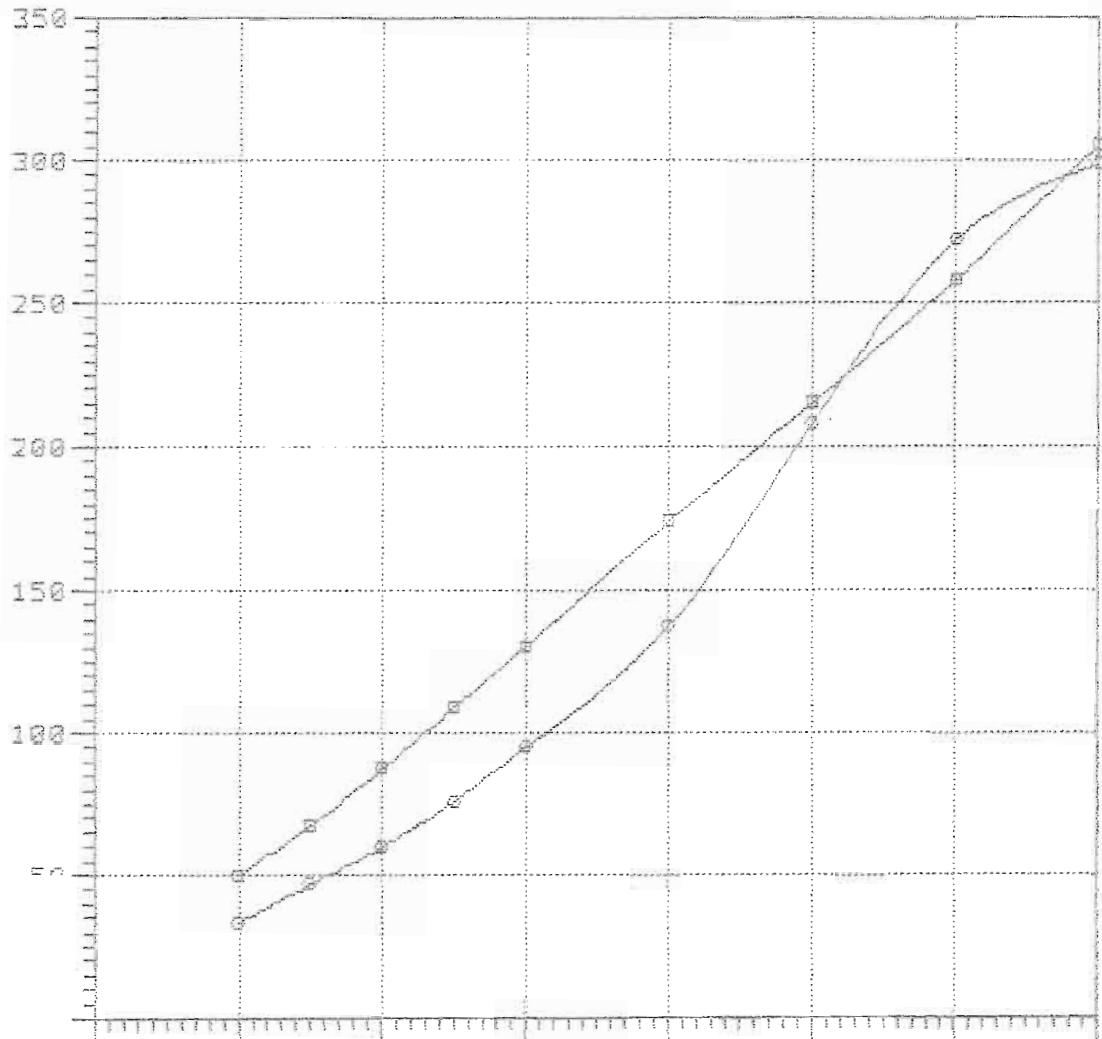
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-55B Lpx/Bpx=4.68 Qp/Yol=14.113 Lpx/Qp=6.368 Log/Lpx=0.340

Rbare: Bare-hull resistance (lbs)

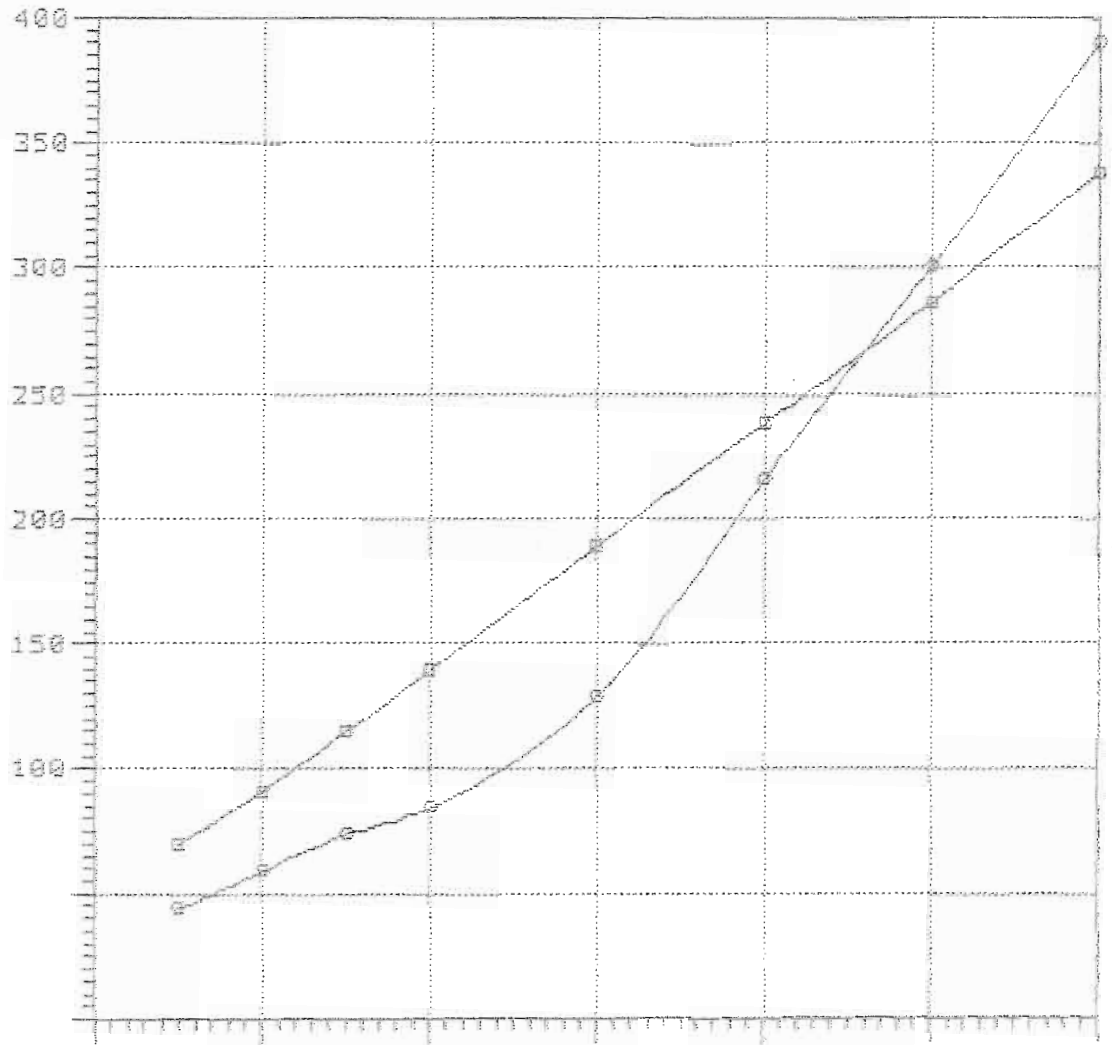


—○—

—○—



Rbare: Bare-hull resistance (lbs)



—○—  
—○—

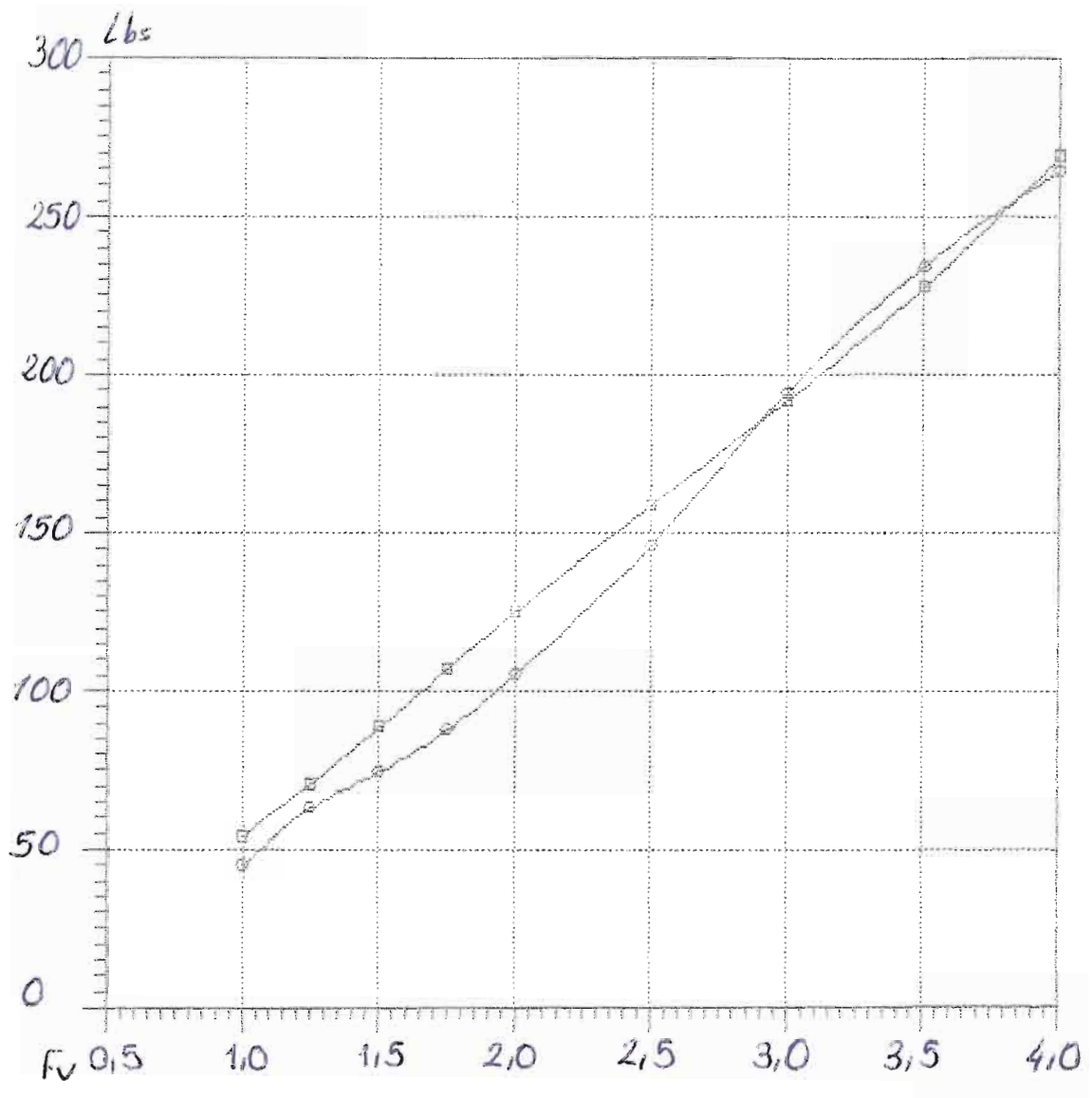
Model = 5239  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 25.000 ft  
Lwl = 24.701 ft  
Bpx = 5.330 ft  
Ap = 98.147 sqft  
Vcg = 1.157 ft  
Disp. = 1000.00 Lb

Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.690  
Lpx/Ap = 6.368  
Ap /Vol = 15.702  
Lpx/Vol = 10.030  
Cvload = 0.103  
Lpload = 0.008  
Disp-Lpx = 28.571

16-10-30



—□—  
—○—

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### Bare-hull resistance

vs.

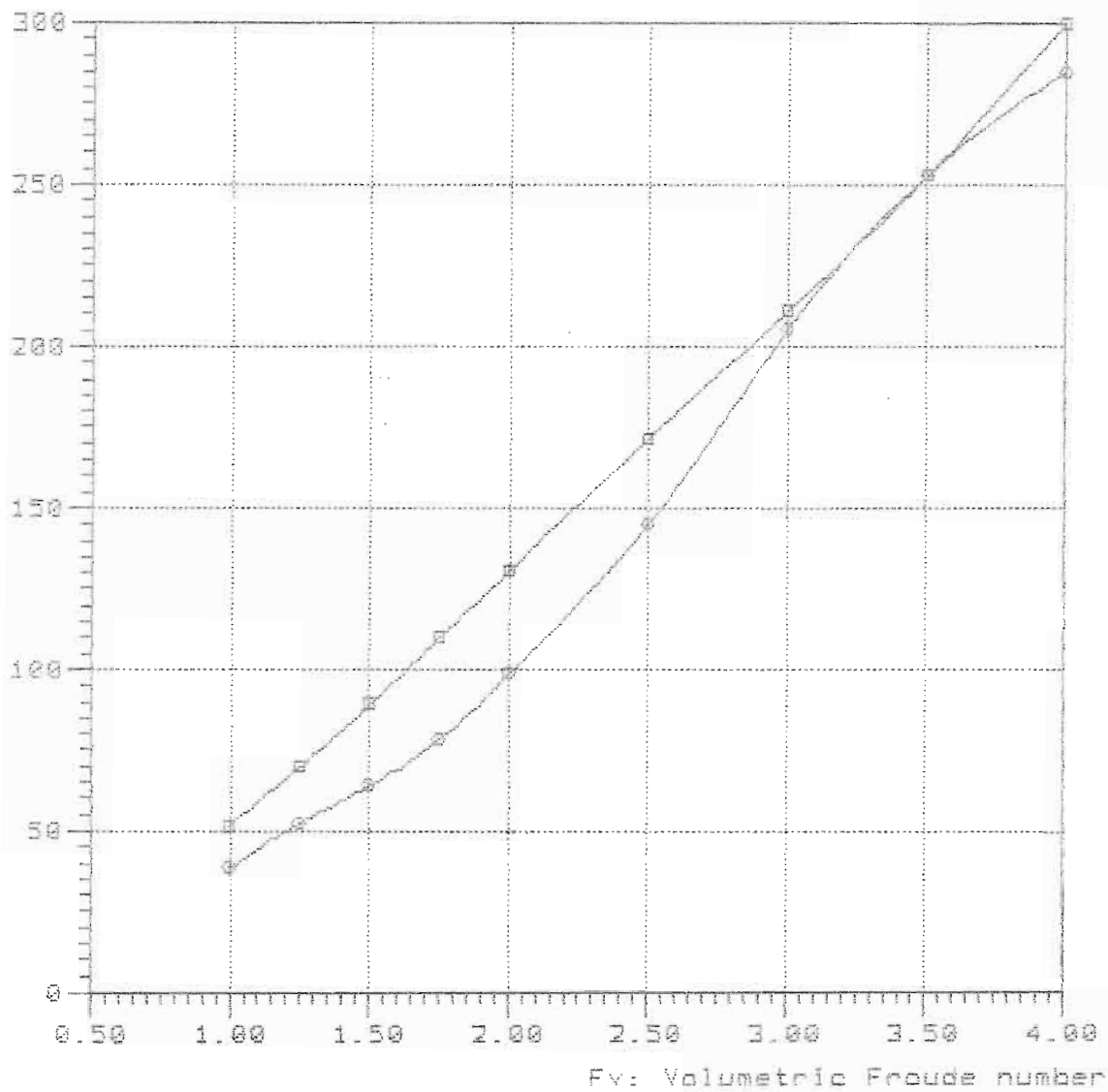
### Volumetric Froude number

File: 16-10-34.mdl

Date: 28 Feb 00

Time: 9:16

Rbare: Bare-hull resistance (lbs)

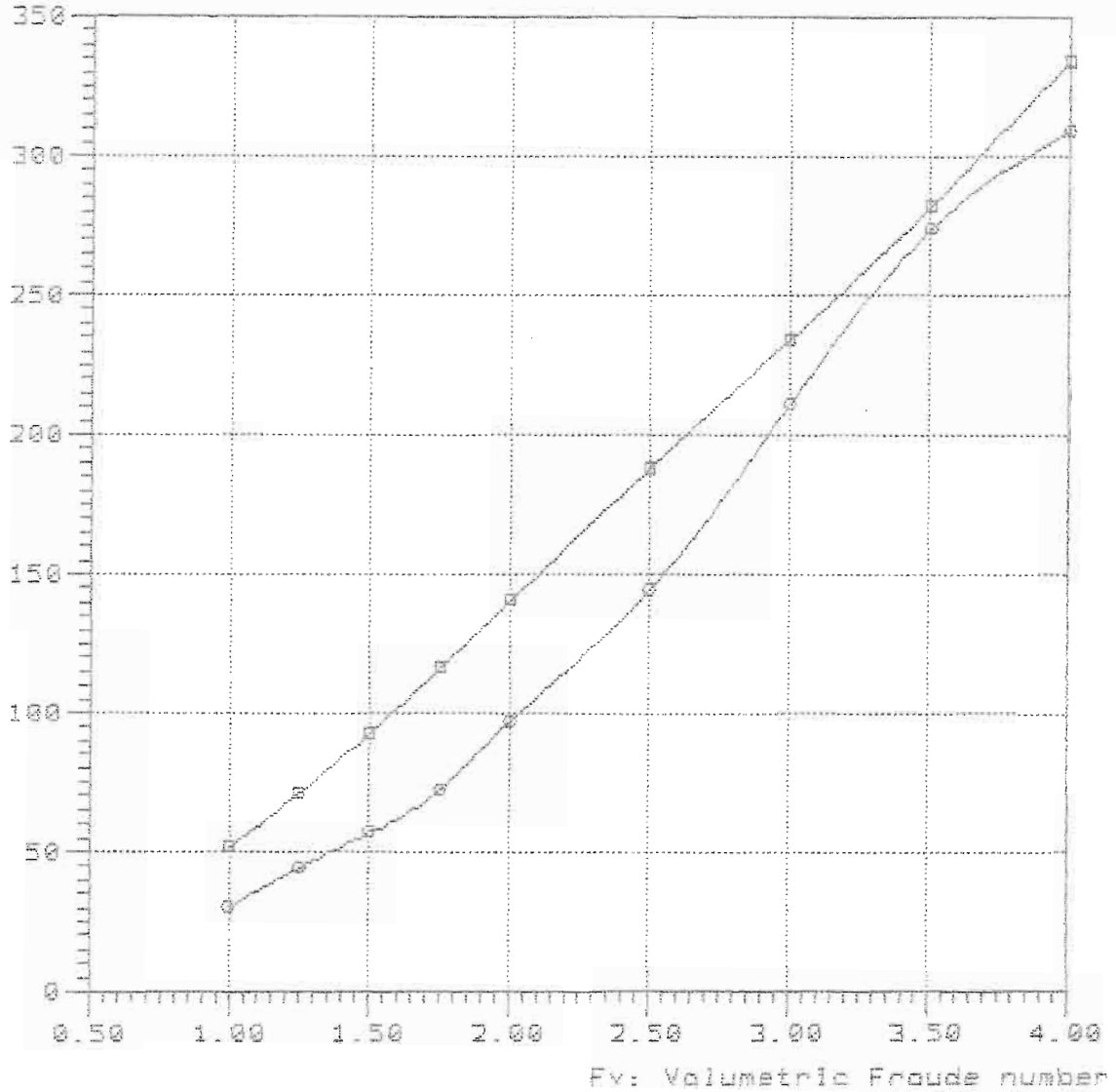


#### Curve legend

—□—

—○— TMB-65B Lpx/Bpx=4.69 Ap/Vol=15.703 Lpx/Ap=6.368 Lcg/Lpx=8.348

Rbare: Bare-hull resistance (lbs)



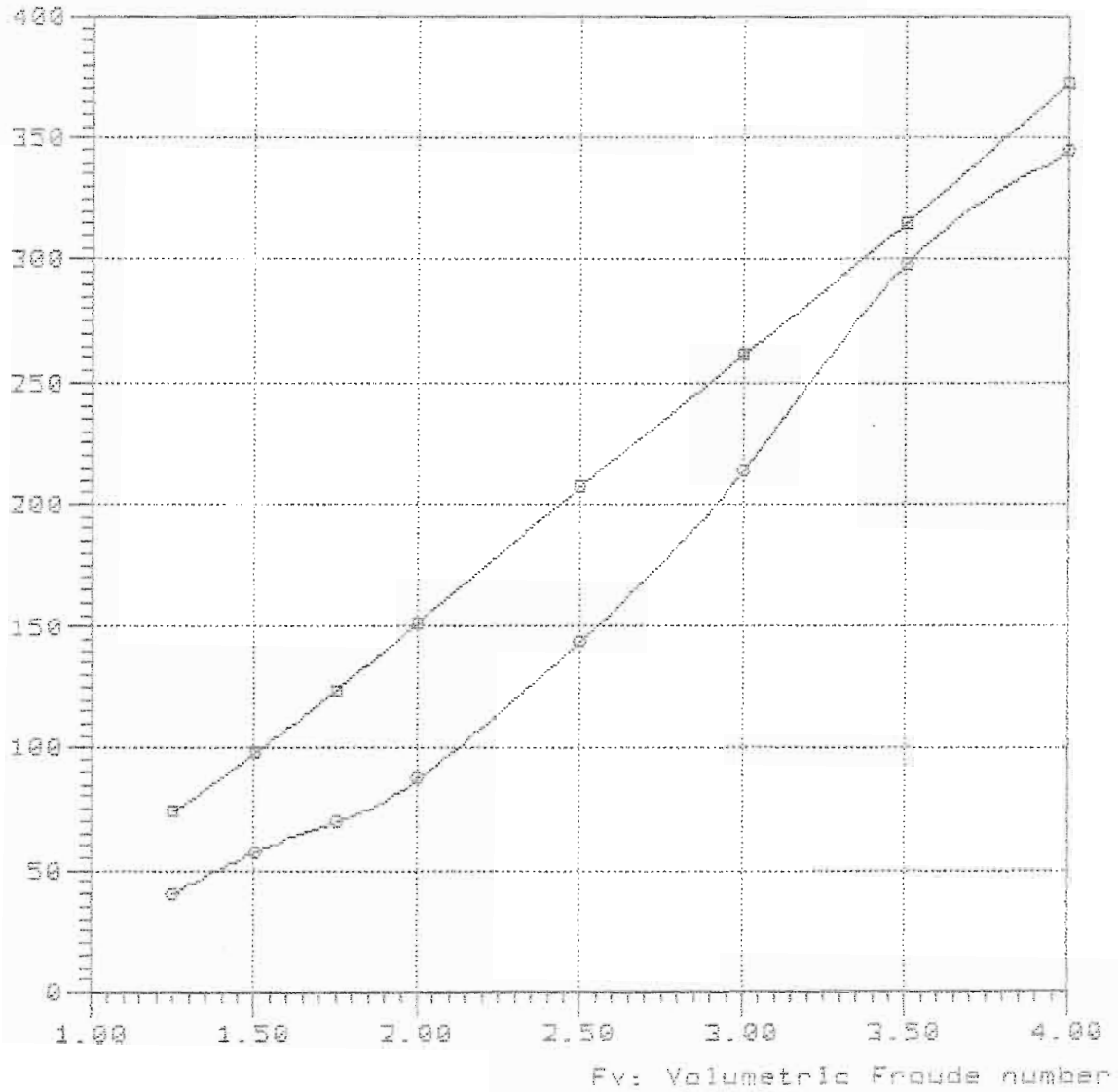
Curve legend

—■—

—●—

TMB-65B Lpx/Bpx=4.69 Ap/Vol=15.703 Lpx/Ap=6.368 Lcg/Lpx=0.380

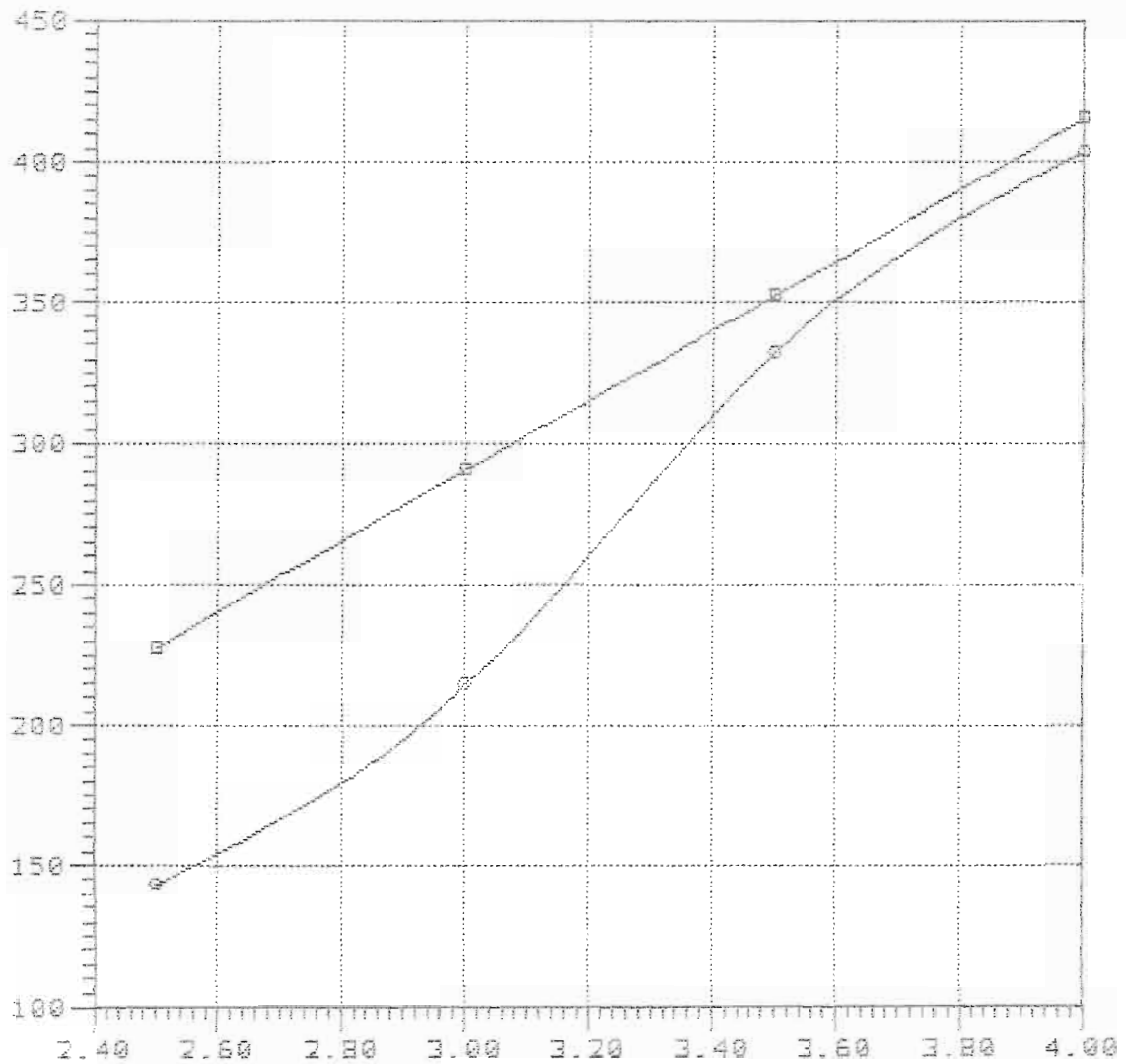
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65B Lpx/Bpx=4.69 Ap/Vol=15.703 Lpx/Ap=6.368 Lcg/Lpx=0.420

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—□—

—○— TMB-658 Lpx/Bpx=4.69 Ap/Vol=15.703 Lpx/Ap=6.368 Lcg/Lpx=0.469

5240



Model = 5240  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 12.500 ft  
Lwl = 12.349 ft  
Bpx = 3.765 ft  
Ap = 34.707 sqft  
Vcg = 0.820 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle = 4.90 degree  
Shaft Angle = 0.00 degree

Vce = 0.00 inc

Lpx/Bpx = 3.320

Lpx/Ap = 4.502

Ap /Vol = 5.552

Lpx/Vol = 5.015

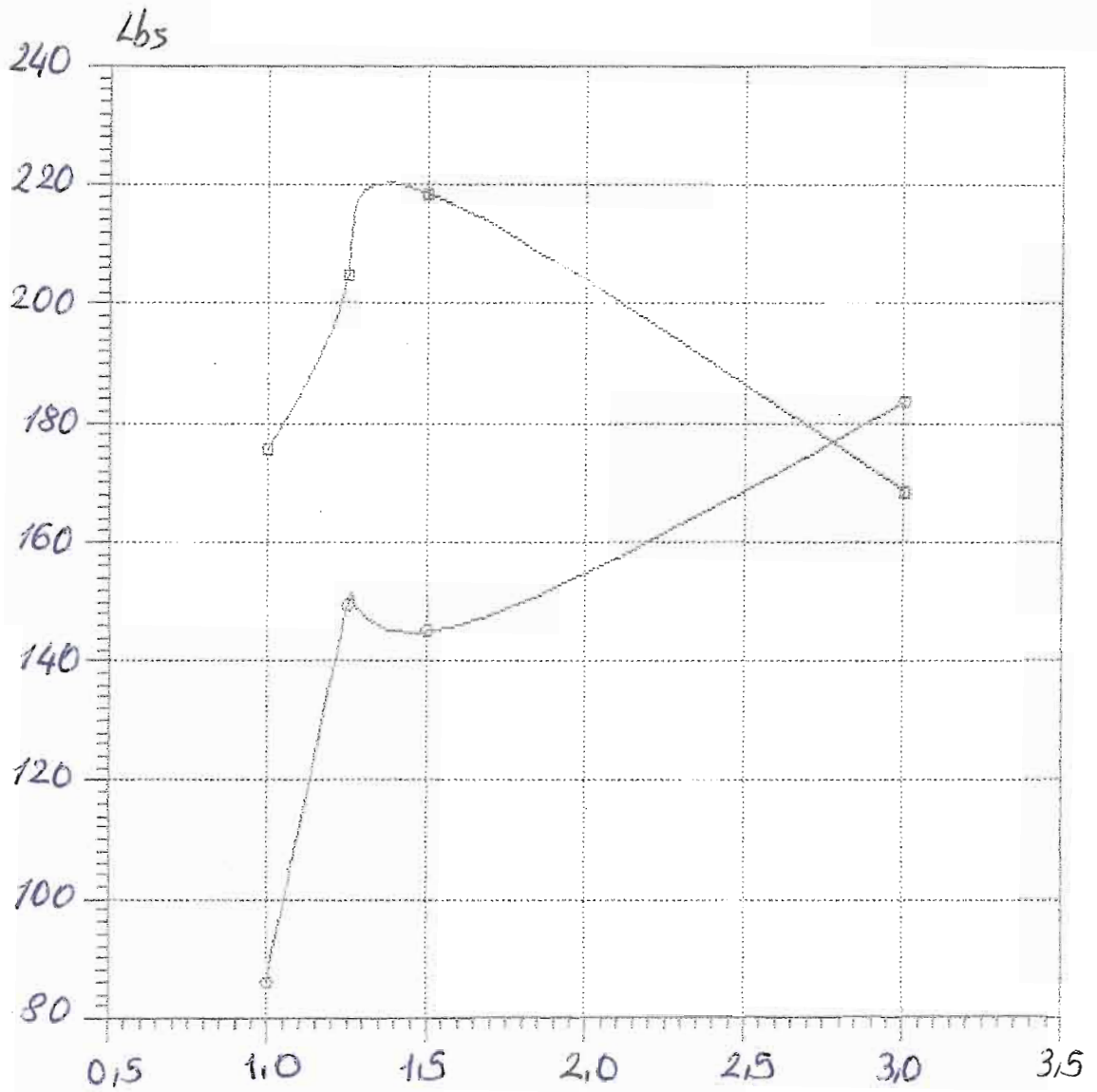
Cvload = 0.293

Lbload = 0.040

  
Disp-Lpx = 228.571

**Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCİ DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez faksir  
veya kopya edilemez ve her ne mak-  
sattı olursa olsun maksadı dışında  
izinsiz kullanılamaz,**

6-50-320



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Bare-hull resistance

vs.

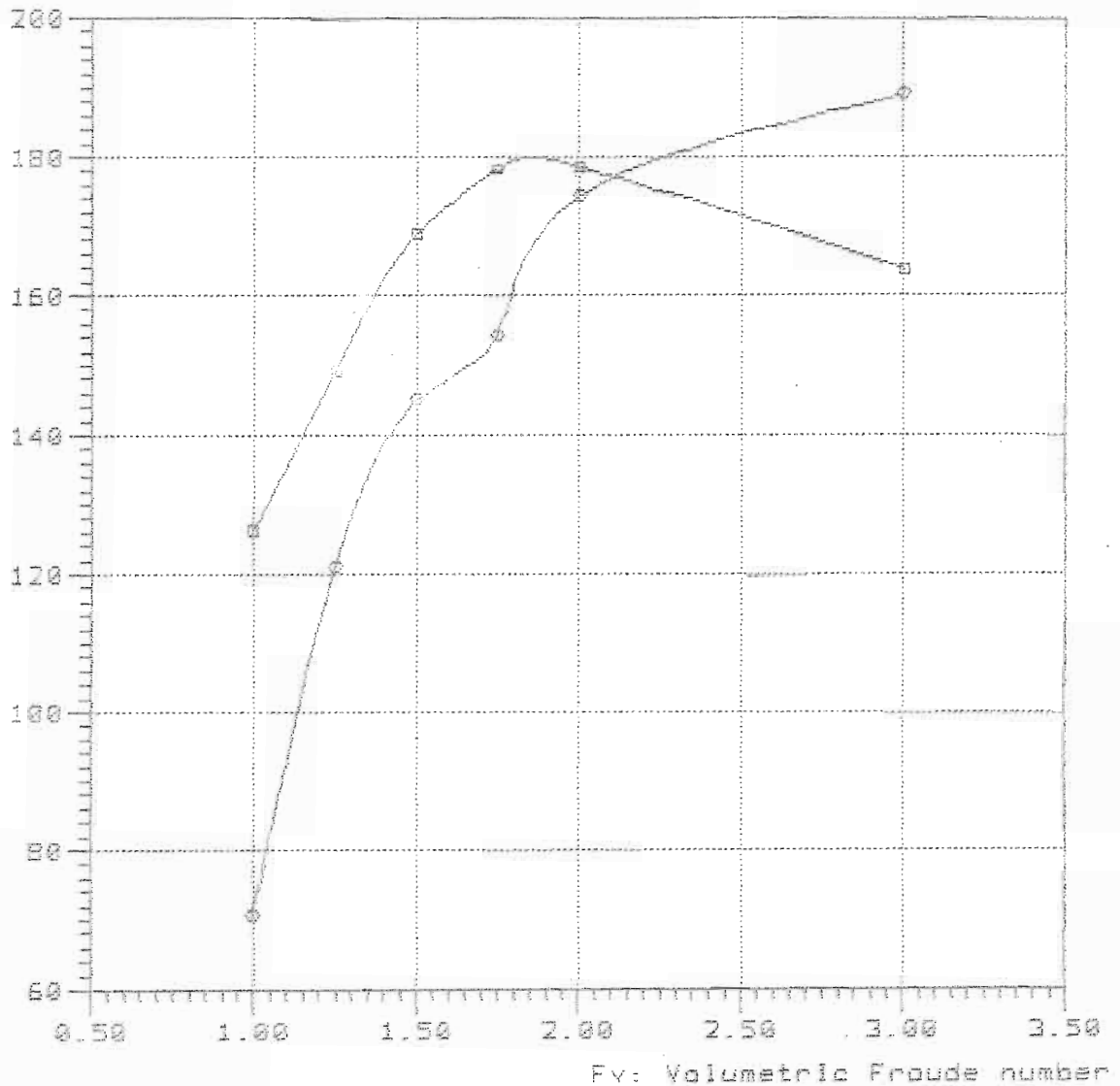
Volumetric Froude number

File: 6-50-340.mdl

Date: 28 Feb 00

Time: 12:07

Rbare: Bare-hull resistance (lba)

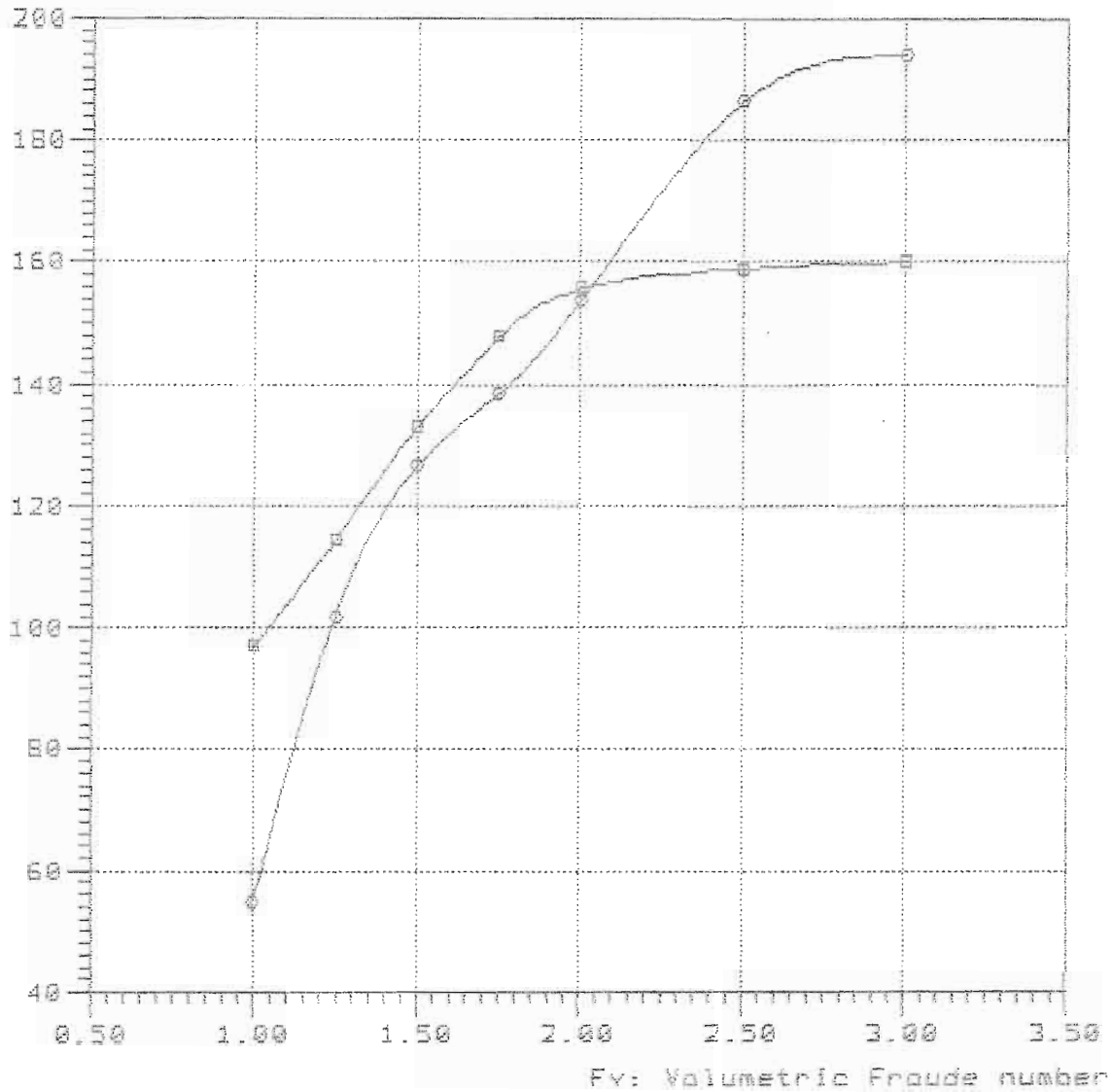


Curve legend

—■—

—◆— TMS-65B 5240 Lpx/Bpx=3.32 Ap/Vol=5.553 Lpx/Ap=4.502 Log/Lpx=0.340

Rbare: Bare-hull resistance (lbs)

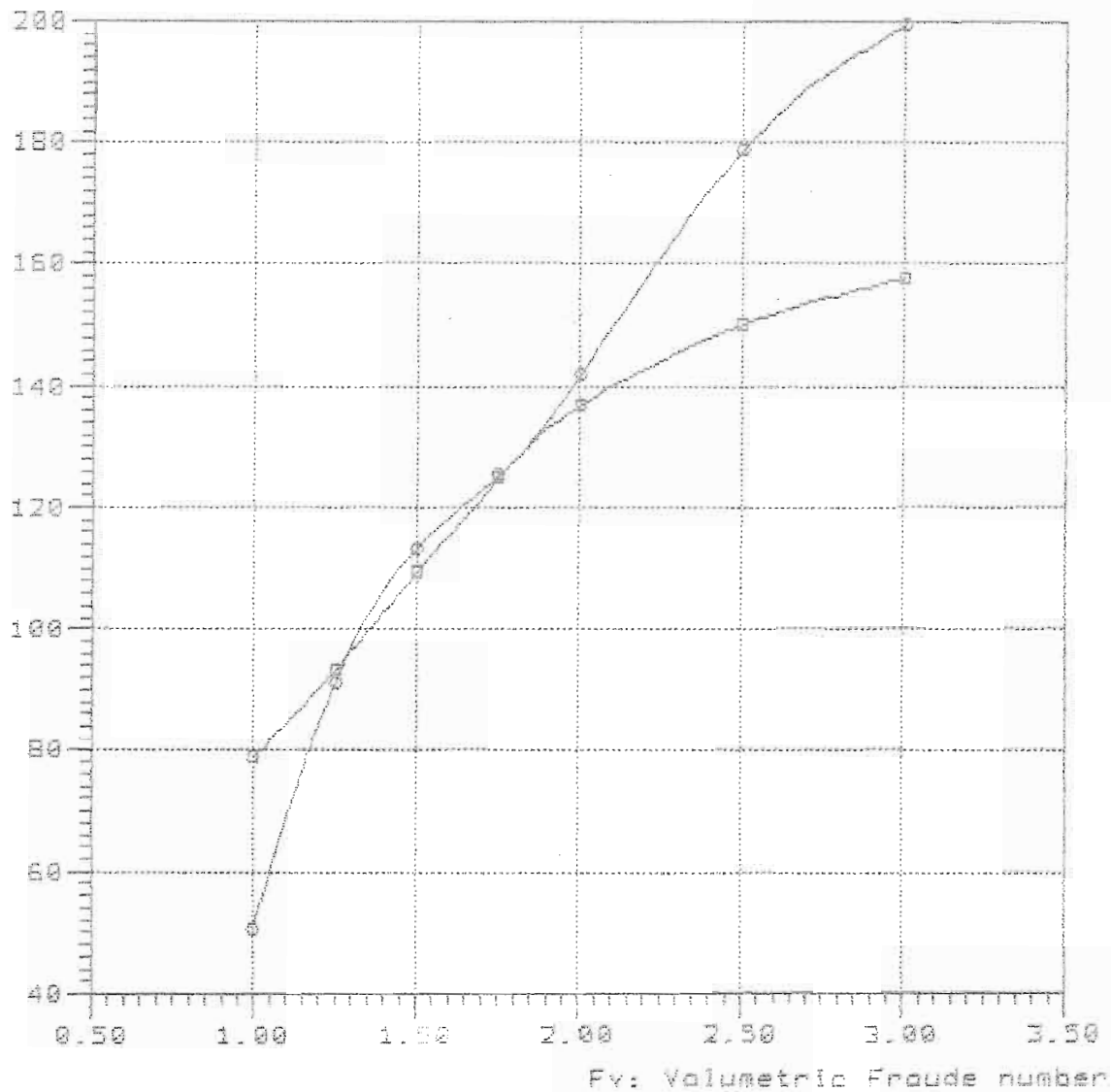


Curve legend

—■—

—○— TMB-65B 5240 Lpx/Bpx=3.32 Ap/Vol=5.553 Lpx/Ap=4.502 Leg/Lpx=0.380

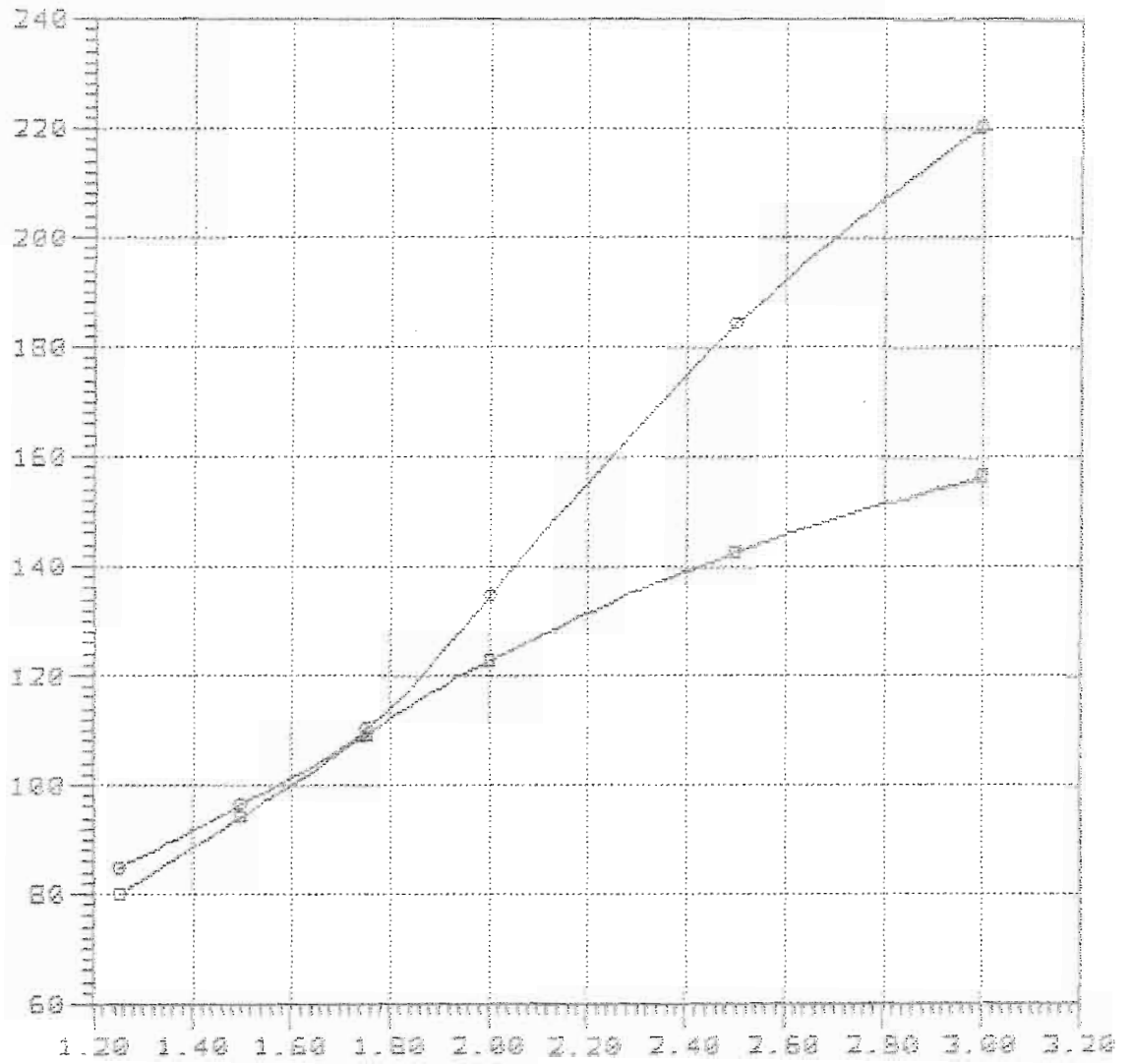
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65B 5240 Lpx/Bpx=3.32 Ap/Vol=5.553 Lpx/As=4.582 Lcg/Lpx=0.428

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—

—●— TMB-63B 5240 Lpx/Bpx=2.32 Ap/Vol=6.670 Lpx/As=4.582 Log/Lpx=0.460

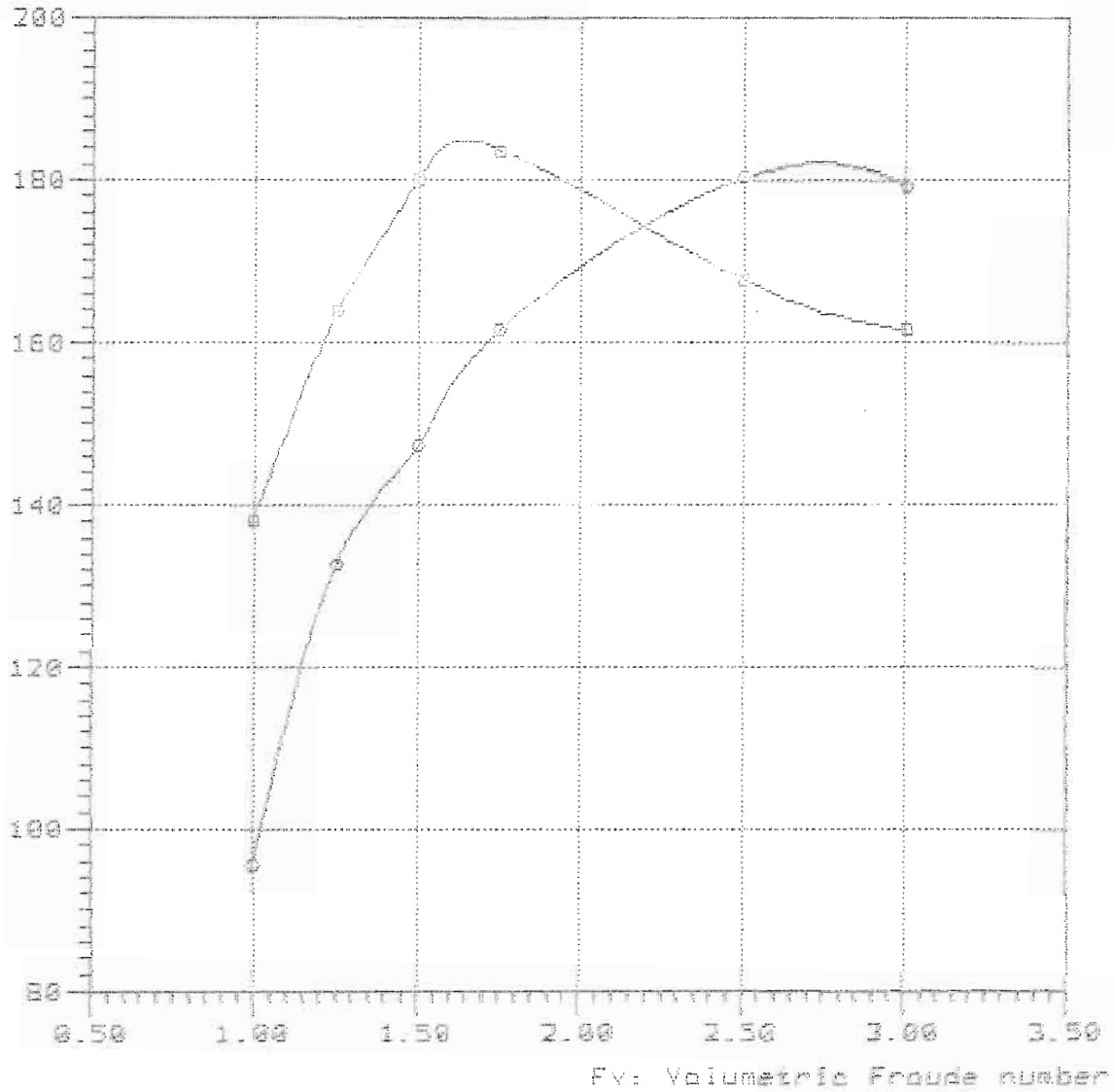
Model = 5240  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 13.700 ft  
Lwl = 13.535 ft  
Bpx = 4.127 ft  
Ap = 41.690 sqft  
Vcg = 0.898 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 6.670  
Lpx/Vol = 5.496  
Cvload = 0.222  
Lbload = 0.030

~~XXXXXXXXXXXX~~  
Disp-Lpx = 173.616

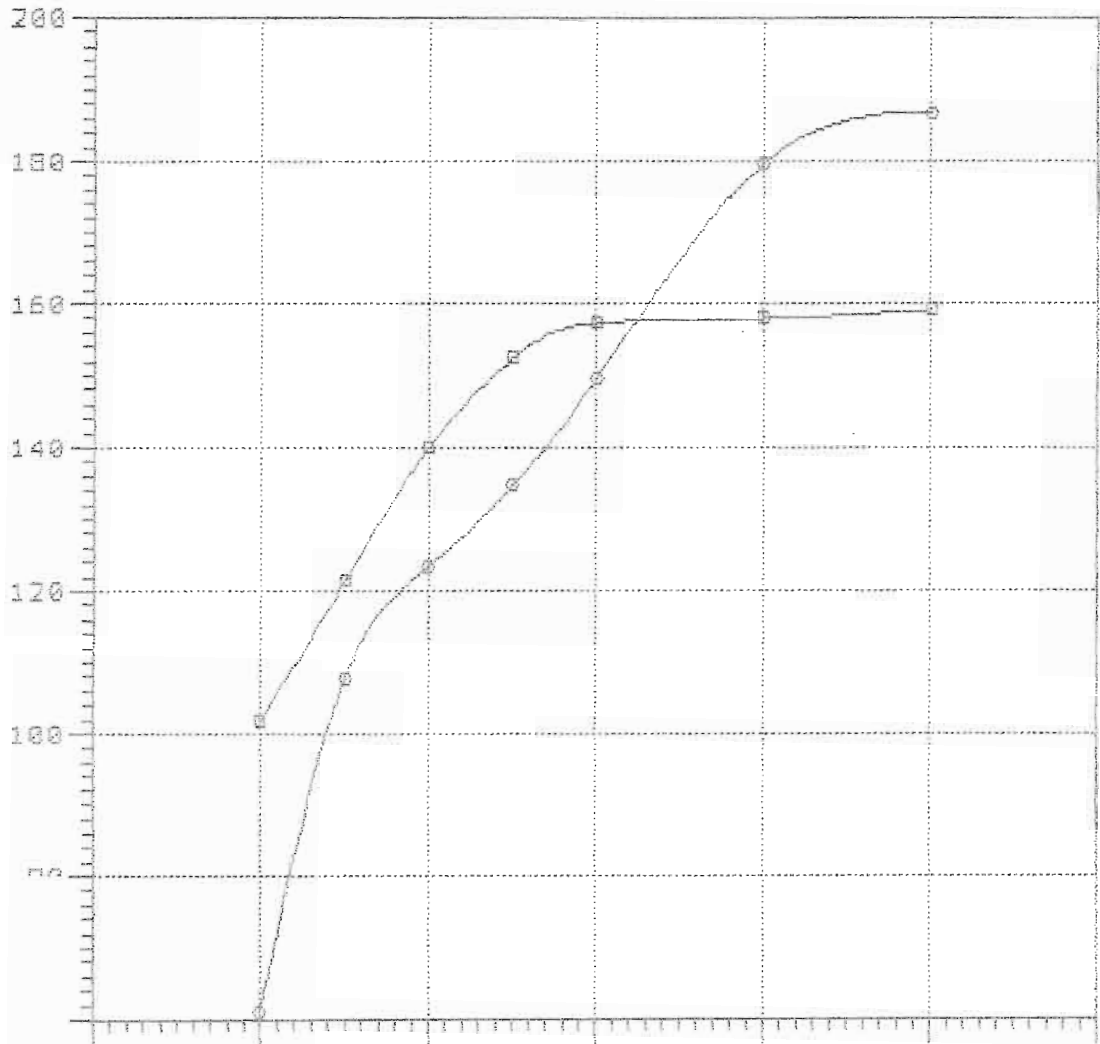
Rbare: Bare-hull resistance (lbs)



—■—  
—●— THB-65B 5240 Lpx/Bpx=3.32 Ap/Vol=6.670 Lpx/Ap=4.502 Lcg/Lpx=0.300

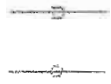
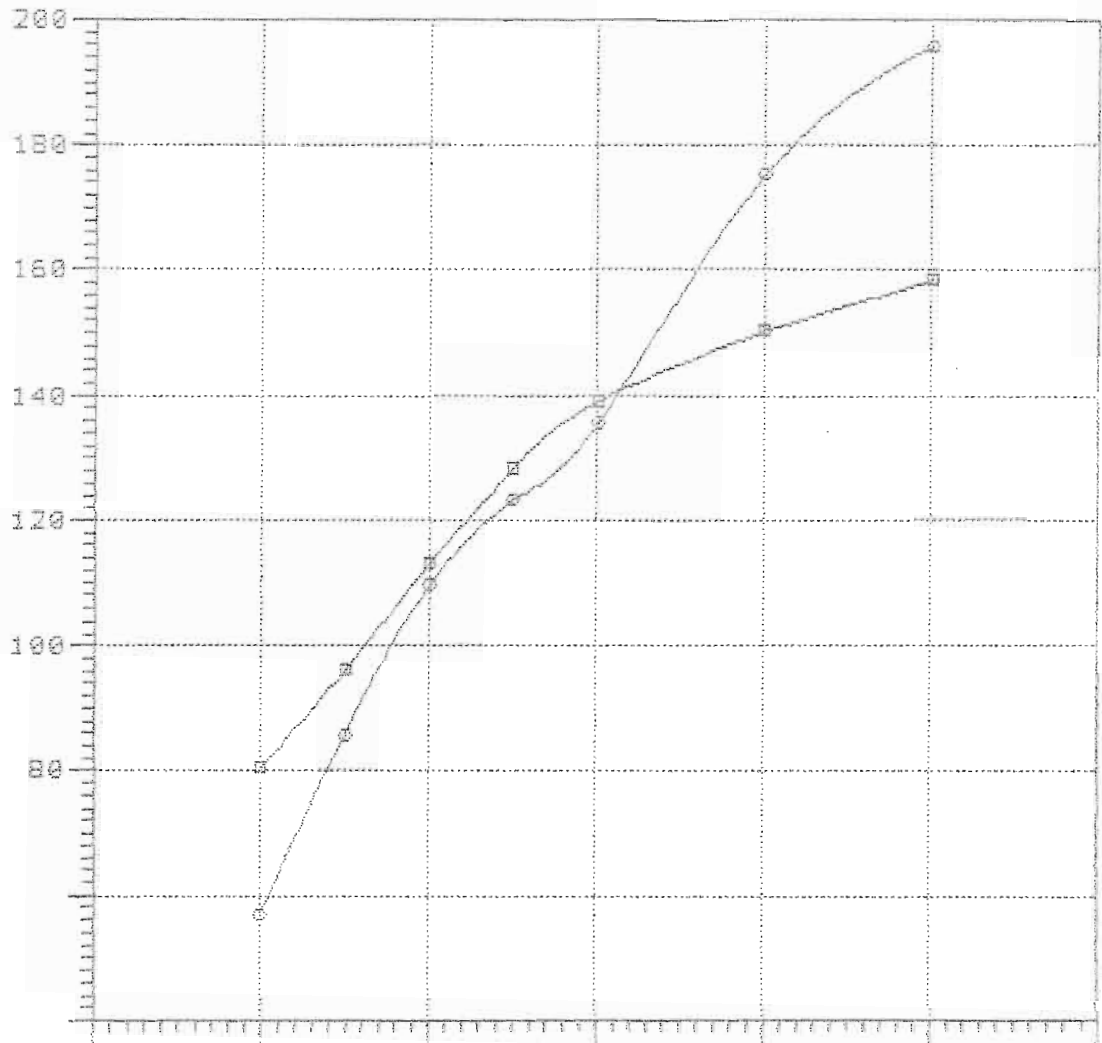


Rbare: Bare-hull resistance (lbs)

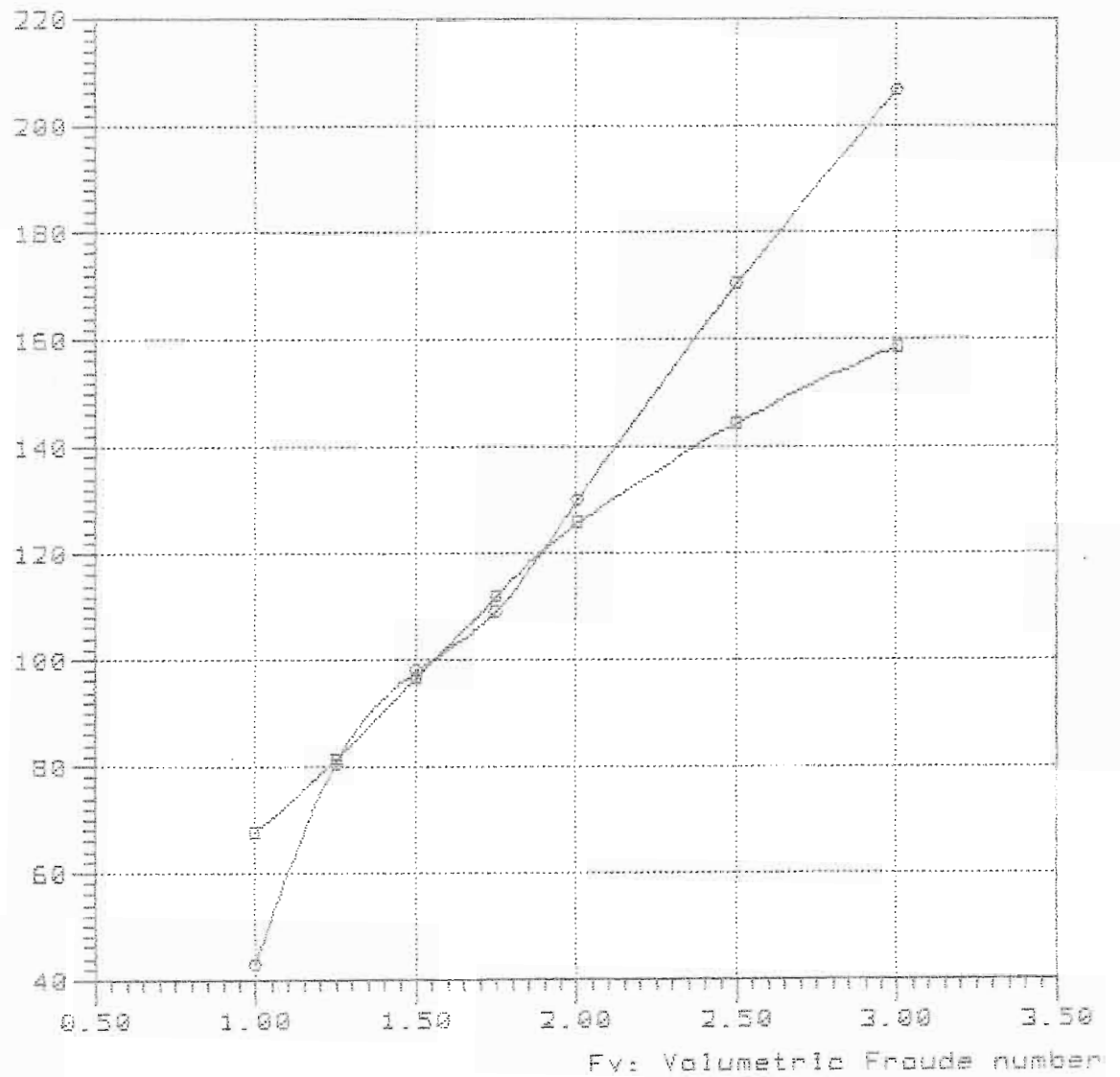


—○—  
—○—

Rbare: Bare-hull resistance (lbs)



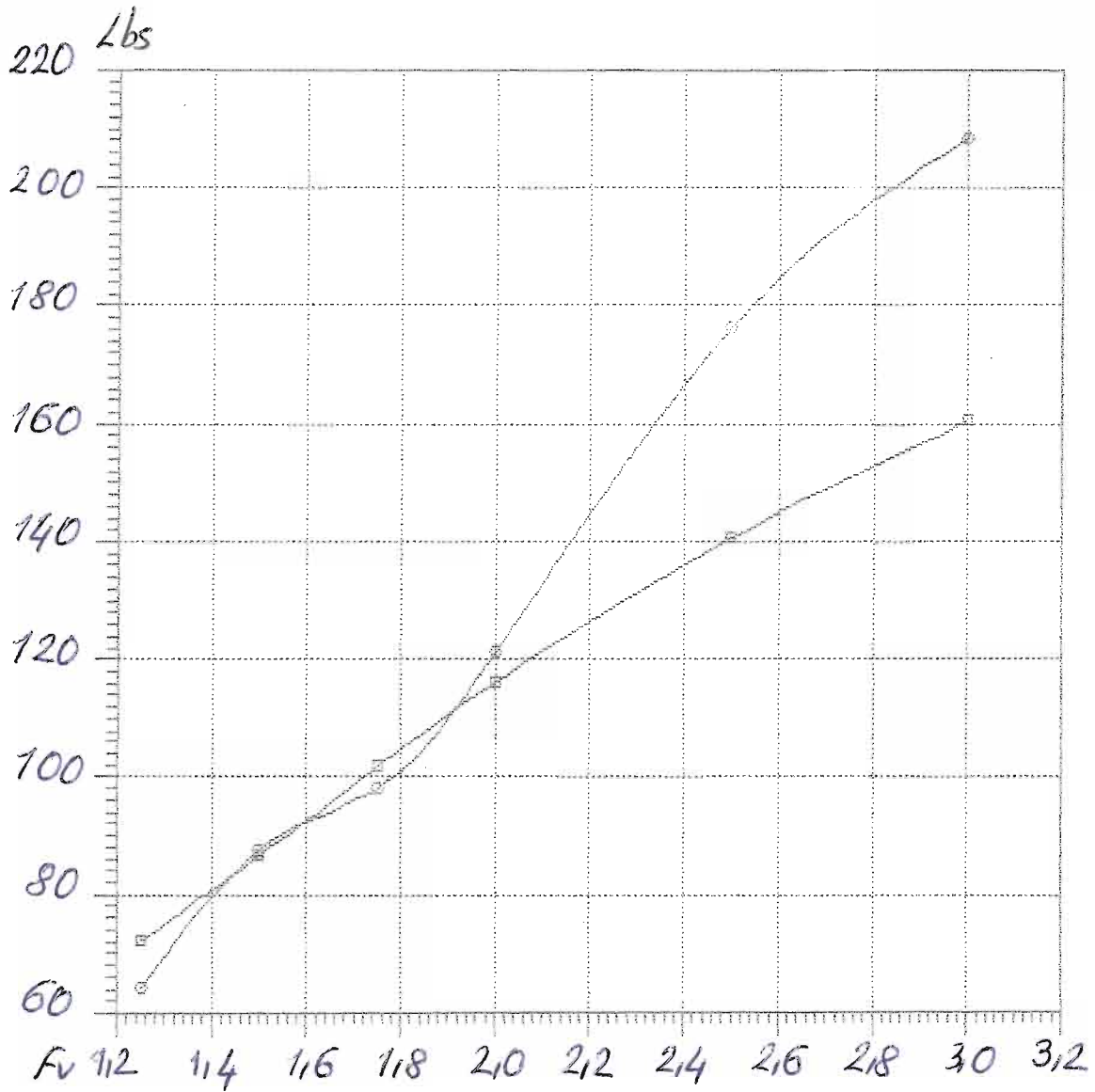
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65B 5240 Lpx/Bpx=3.32 Ap/Vol=5.670 Lpx/Ap=4.502 Lcg/Lpx=0.420

7-55-460



Model = 5240  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 15.000 ft  
Lwl = 14.819 ft  
Bpx = 4.518 ft  
Ap = 49.978 sqft

Vcg = 0.984 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle = 4.90 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 7.996  
Lpx/Vol = 6.018  
Cvload = 0.169  
Lbload = 0.023  
~~XXXXXXXXXXXX~~  
Disp-Lpx = 132.275

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### Bare-hull resistance

vs.

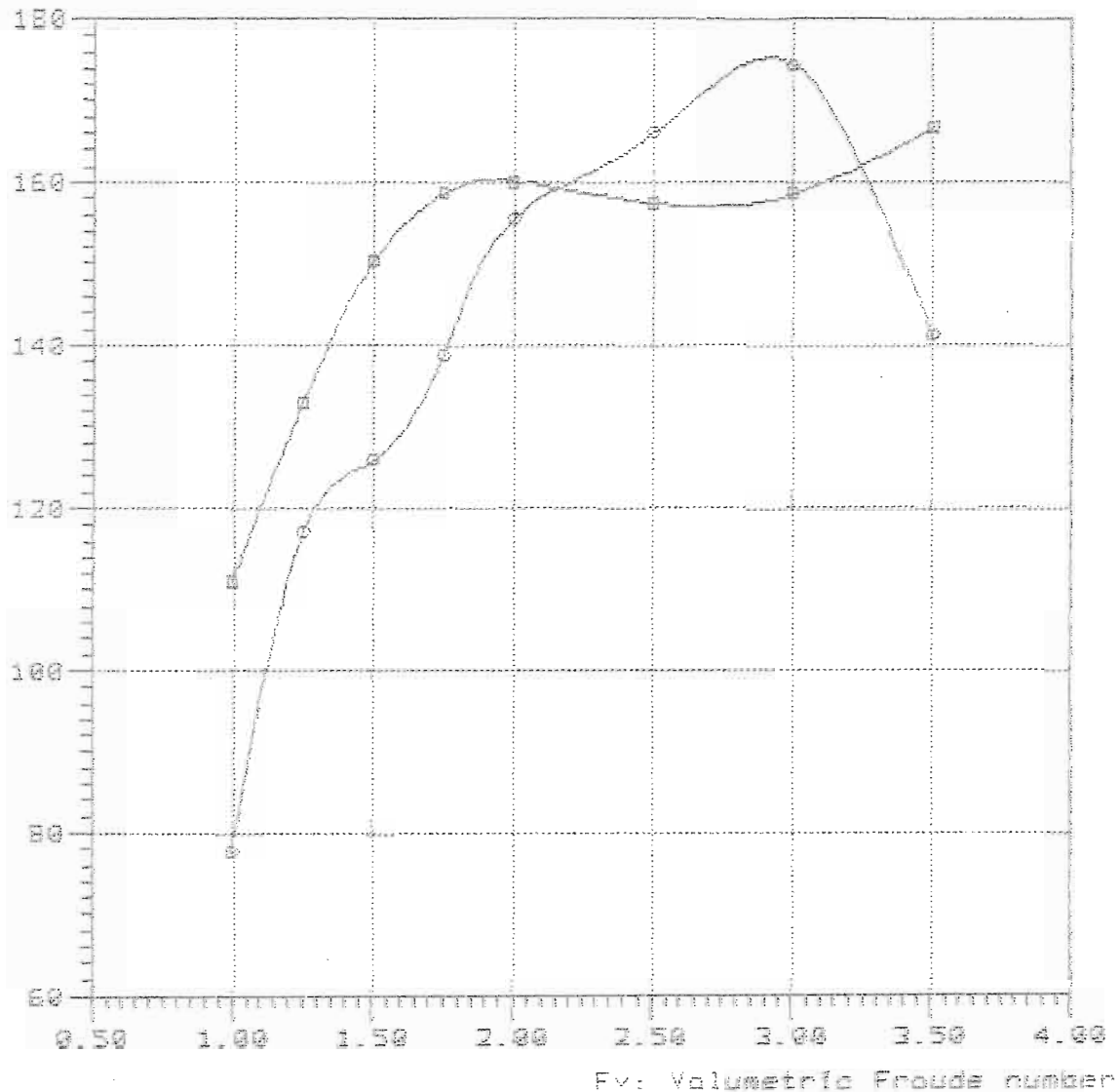
### Volumetric Froude number

File: B-60-300.mdl

Date: 28 Feb 00

Time: 12:33

Rbare: Bare-hull resistance (lbs)

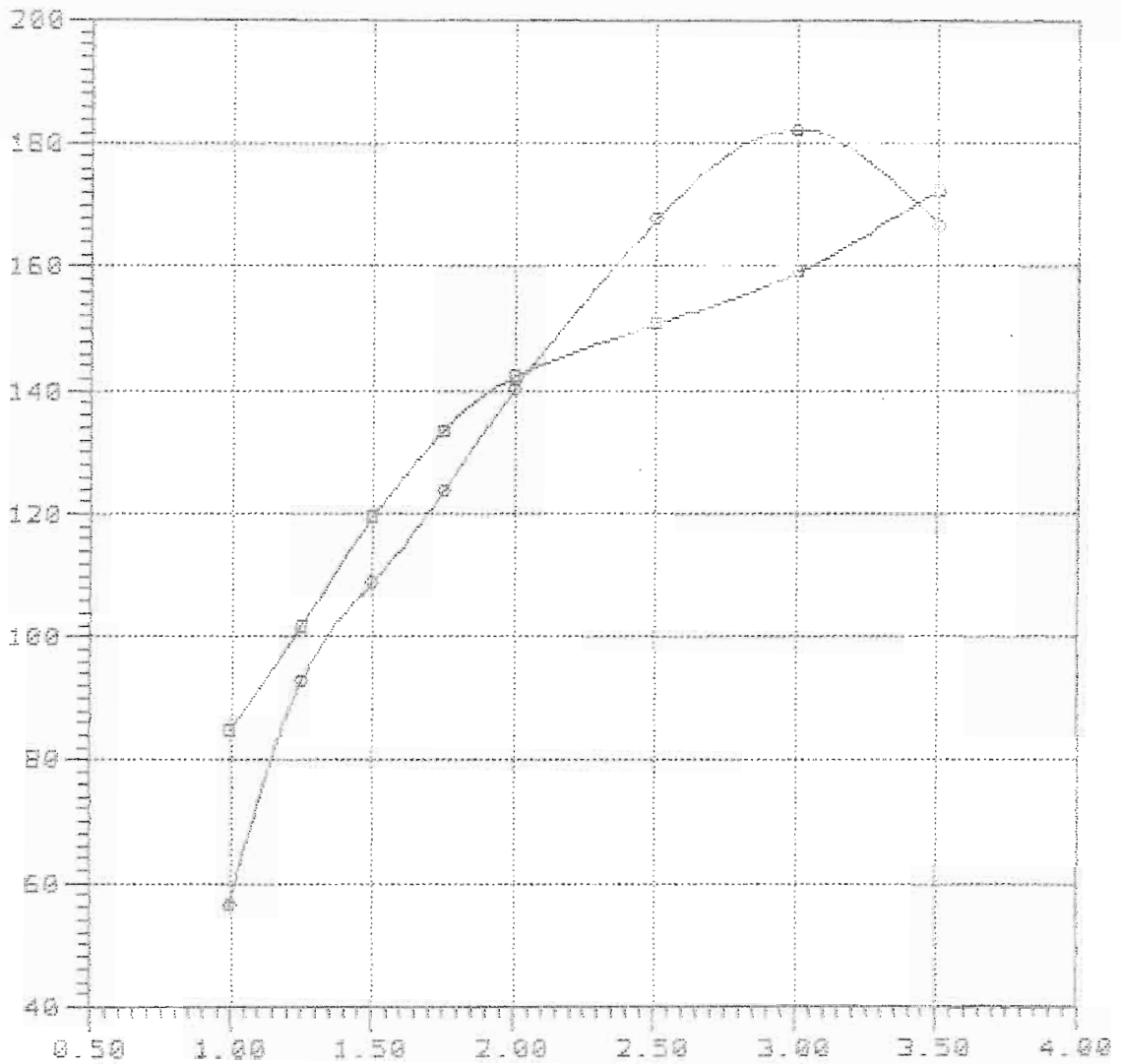


#### Curve legend

—■—

—●— TMB-65B 5240 Lpx/Bpx=3.32 Ap/Vol=7.995 Lpx/Ap=4.302 Log/Lpx=0.360

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—

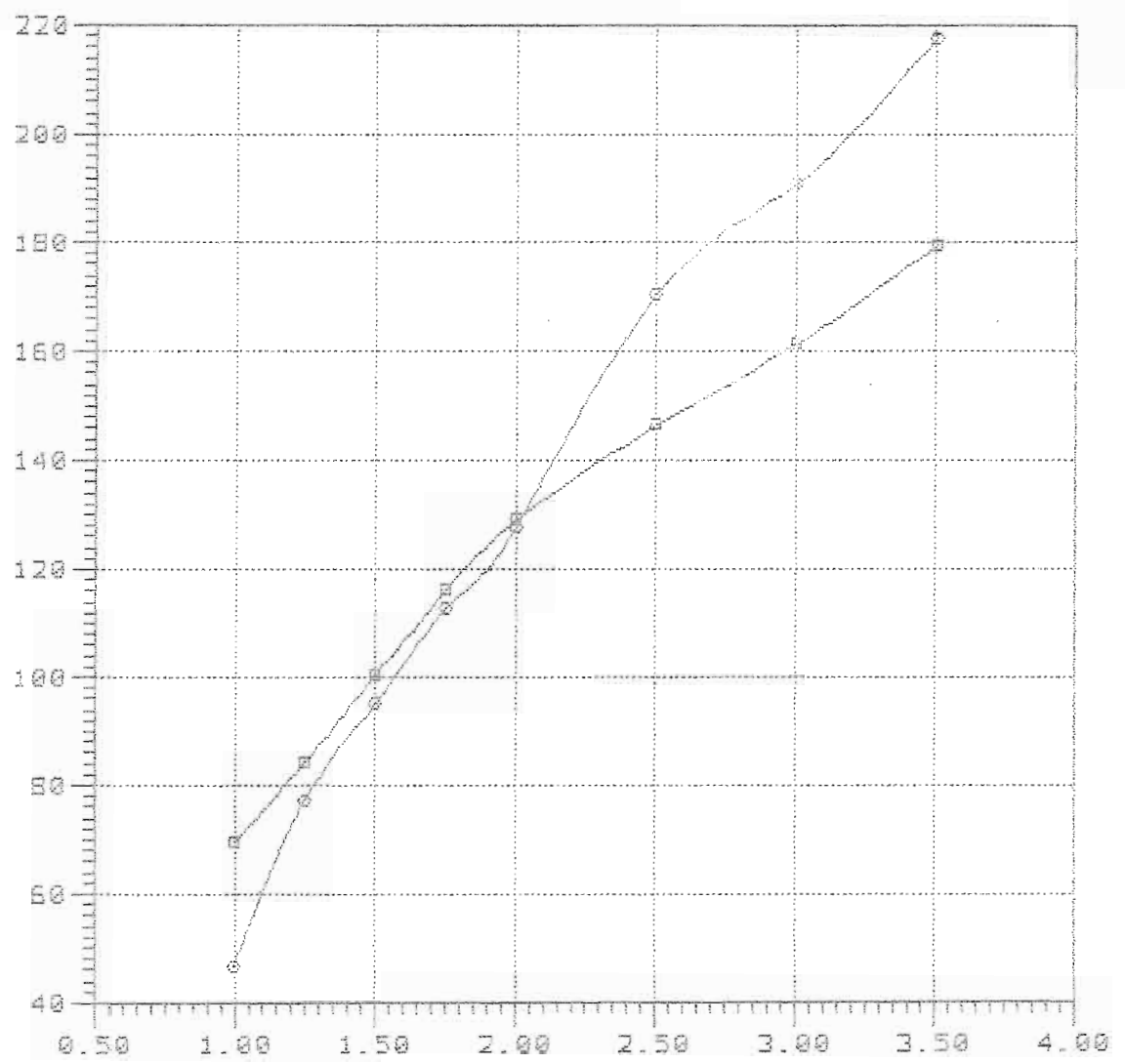
—●— 1MB-65B 5248 Lpx/Rpx=3.32 Rp/Vol=7.996 Lpx/Rp=4.542 Log/Lpx=0.346

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**Bare-hull resistance**  
 vs.  
**Volumetric Froude number**

File: B-60-380.mdl  
 Date: 28 Feb 00  
 Time: 12:35

Rbare: Bare-hull resistance (lbs)



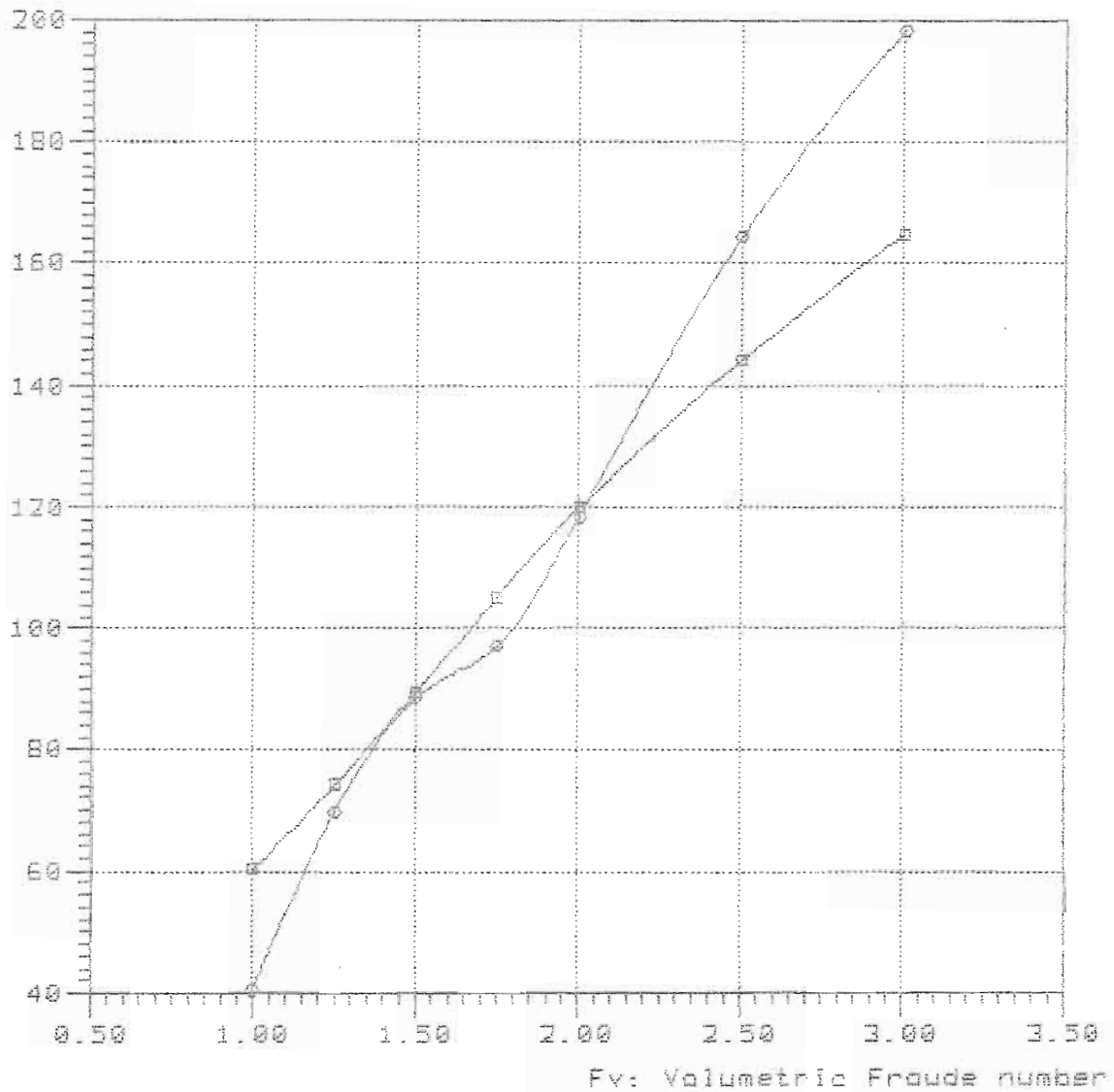
Fv: Volumetric Froude number

Curve legend

- 
- TMB-65B 5240 Lpx/Bpx=3.32 Ap/Vol=7.996 Lpx/Ap=4.502 Log/Lpx=0.380



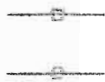
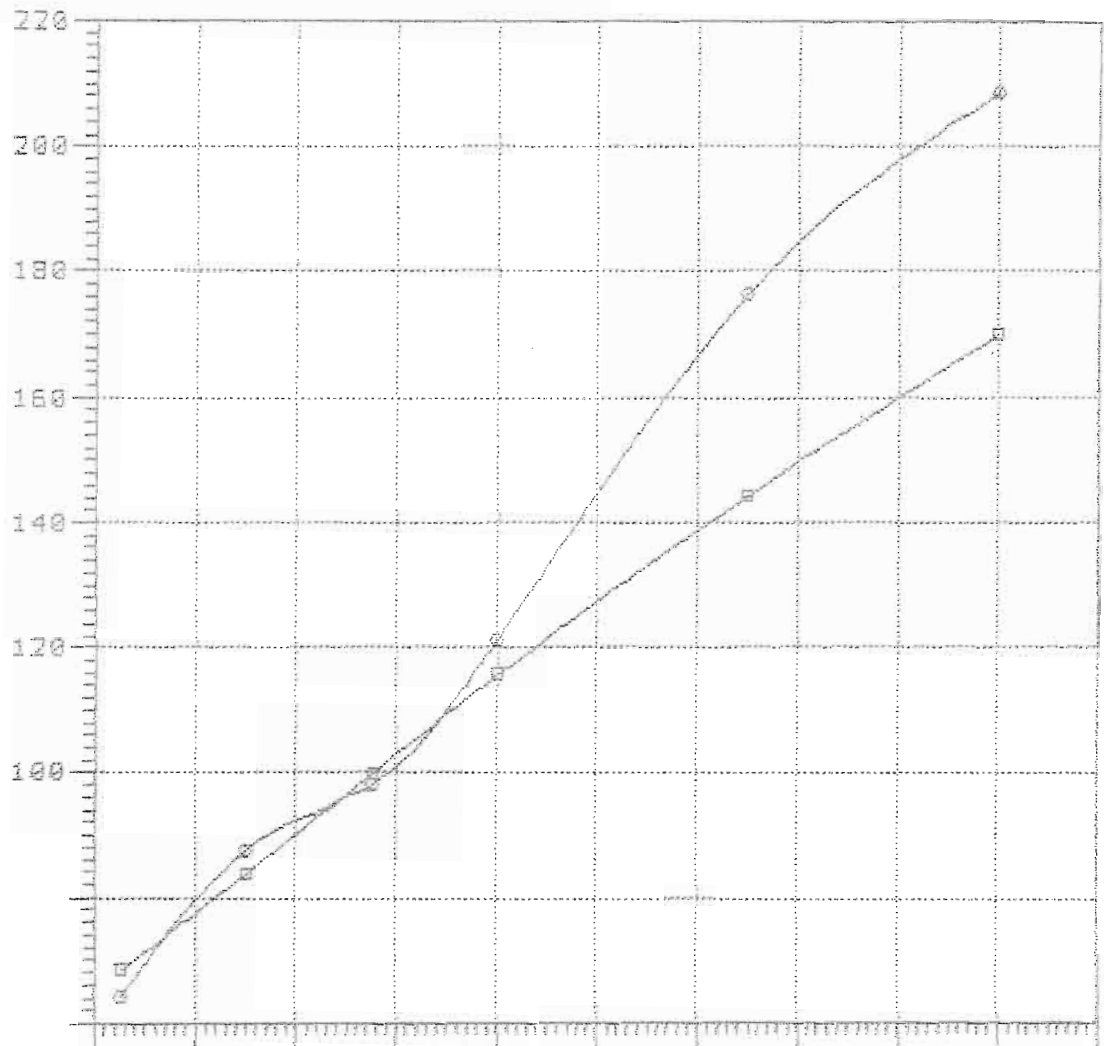
Rbare: Base-hull resistance (lbs)



—■—

—○— TMB-65B 5240 Lpx/Bpx=3.32 Ap/Val=7.896 Lpx/Ap=4.502 Lcg/Lpx=0.420

Rbare: Bare-hull resistance (lbs)



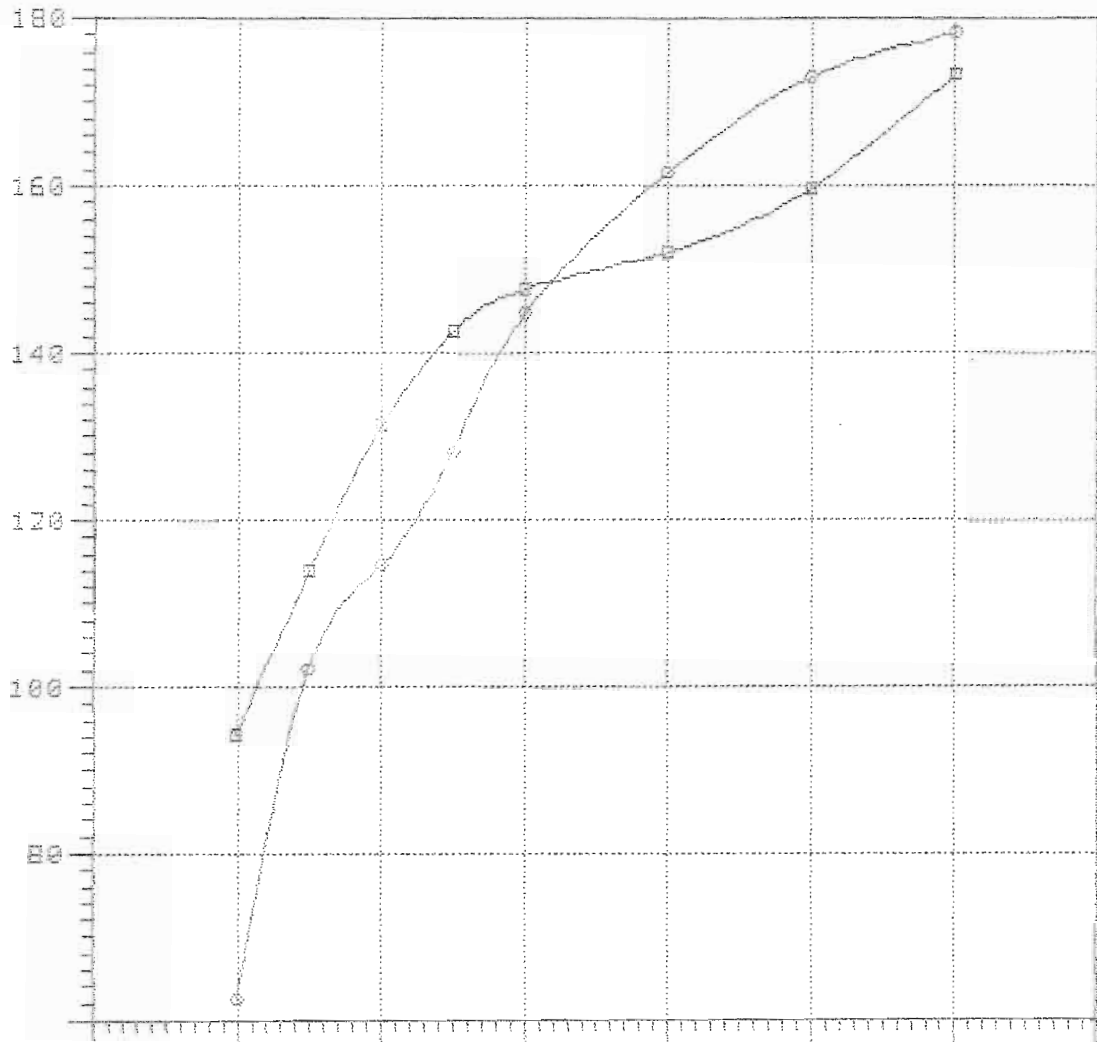
Model = 5240  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 16.200 ft  
Lwl = 16.005 ft  
Bpx = 4.880 ft  
Ap = 58.294 sqft  
Vcg = 1.062 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle = 4.90 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

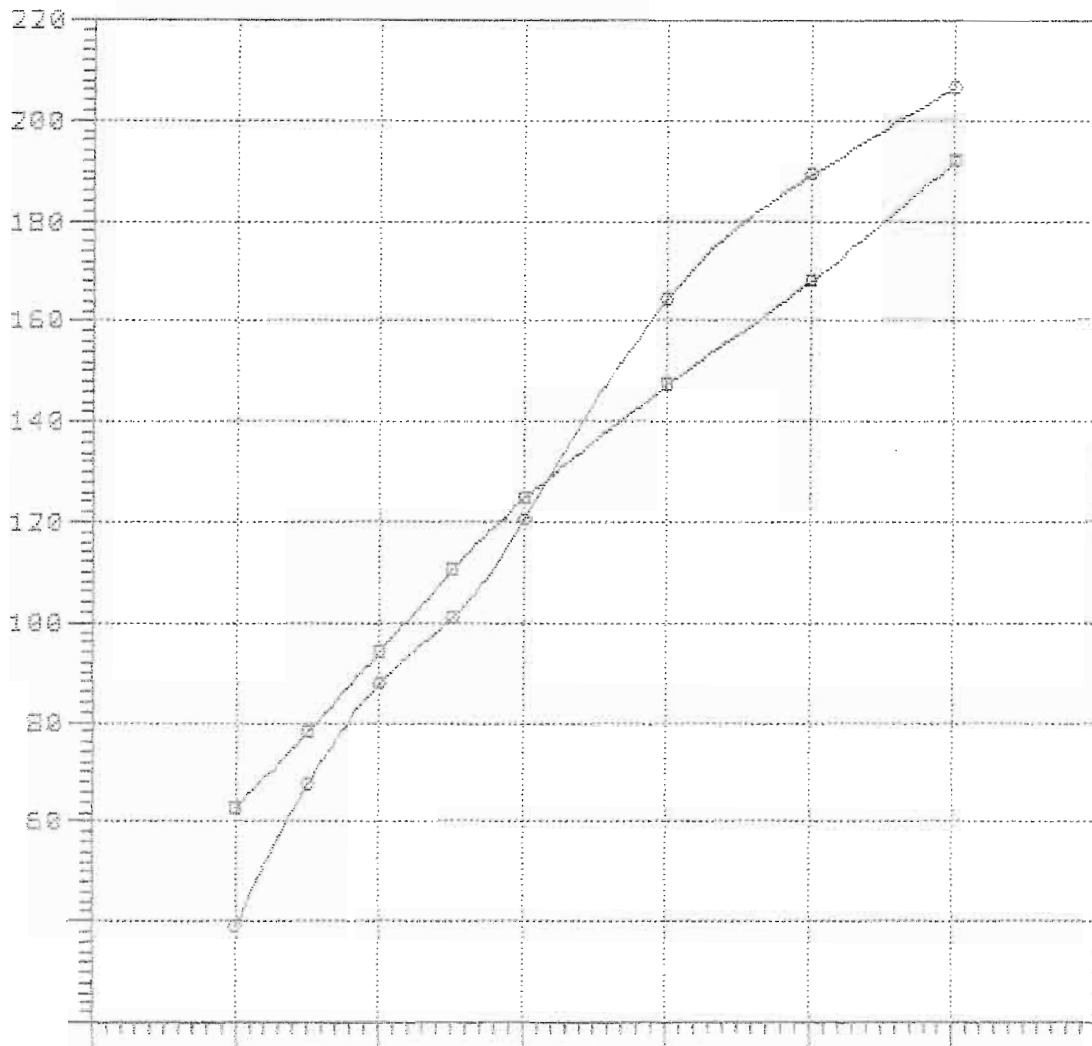
Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 9.326  
Lpx/Vol = 6.499  
Cvload = 0.134  
Lbload = 0.018

~~Friction = 0.000~~  
Disp-Lpx = 105.004

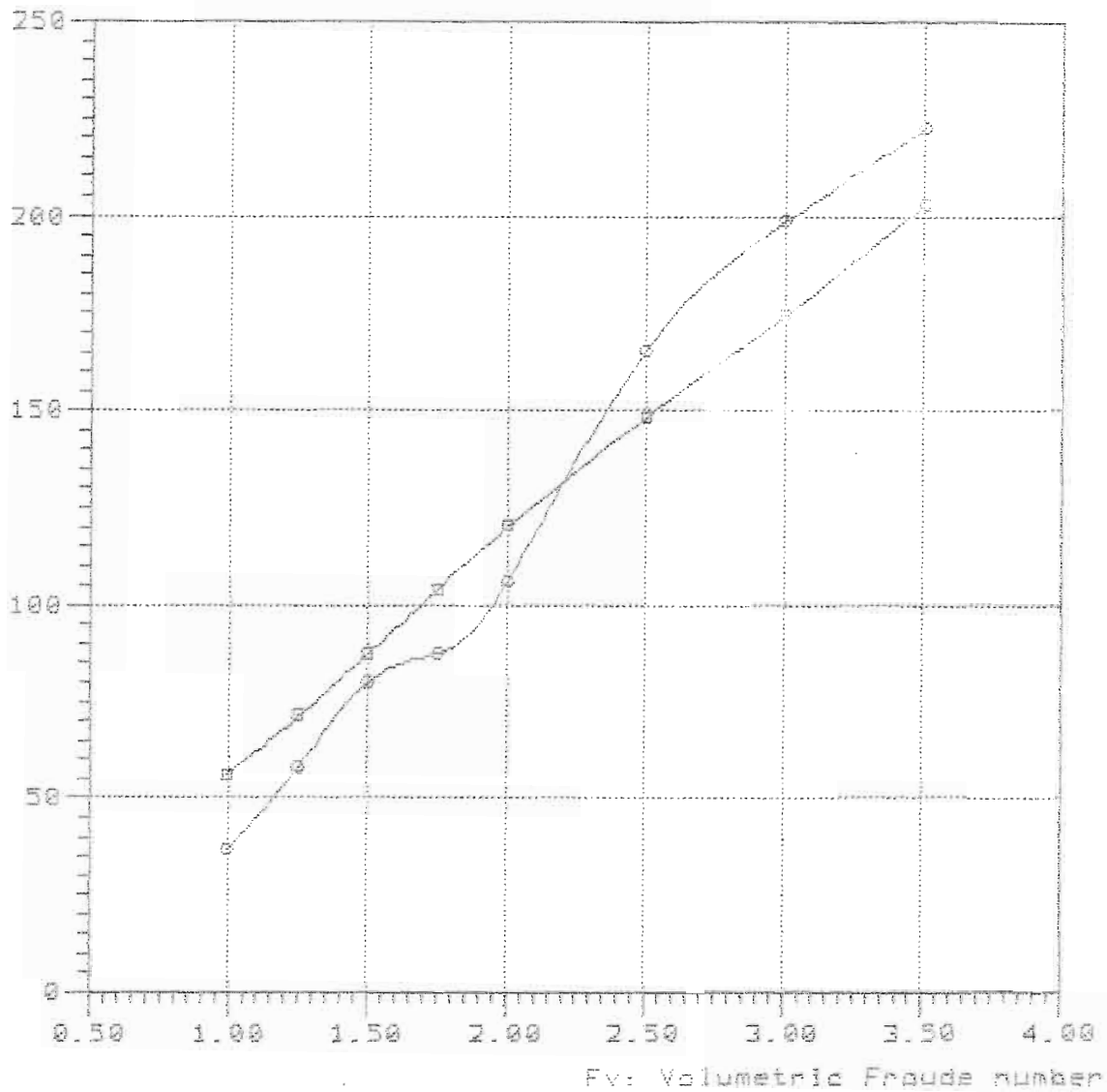
Rbare: Bare-hull resistance (lbs)



Rbare: Bare-hull resistance (lbs)



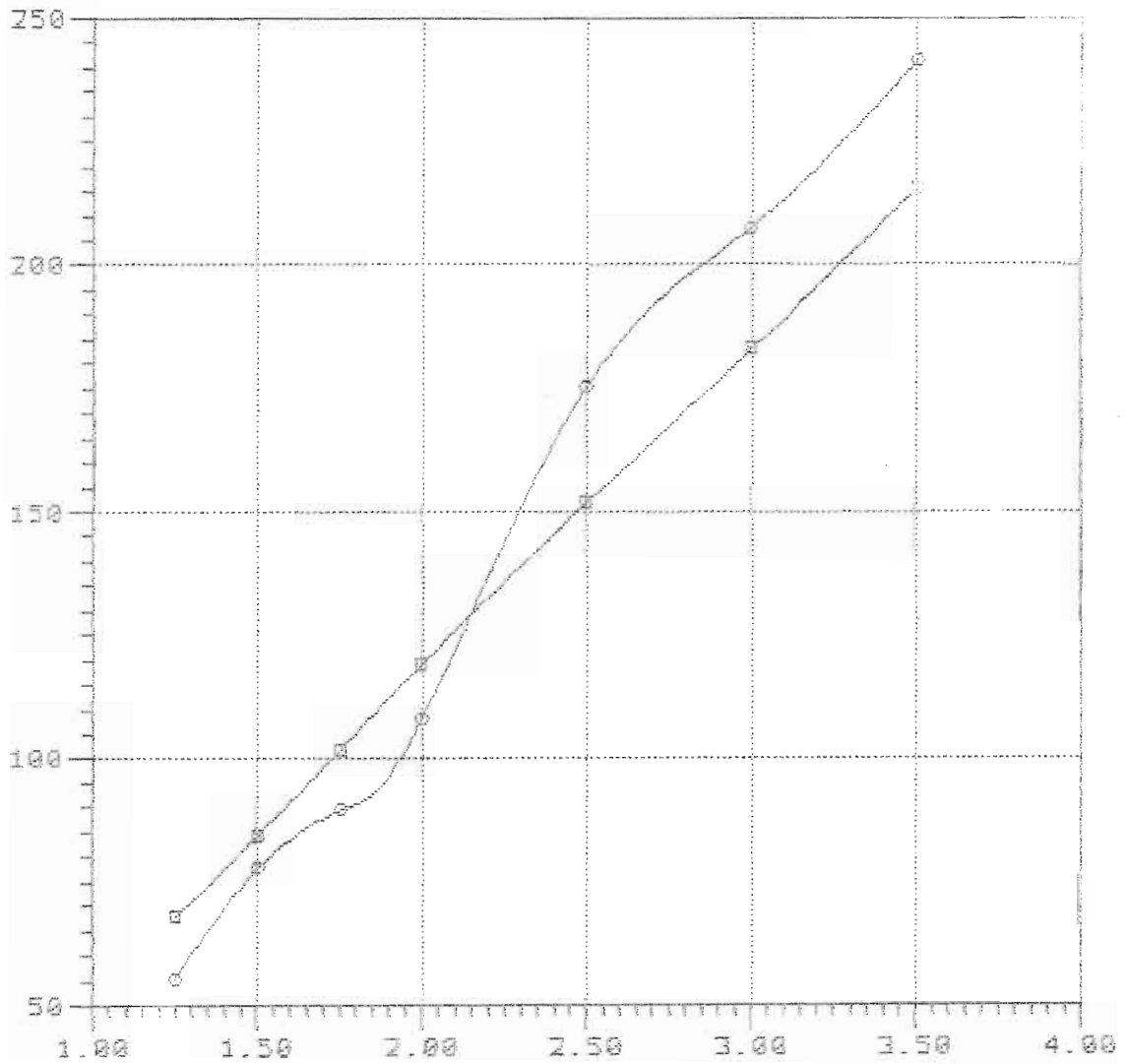
Rbare: Bare-hull resistance (lbs)



—■—

—○— TME-65B 5240 Lpx/Bpx=3.32 Ap/Vol=9.327 Lpx/Ap=4.582 Lcg/Lpx=0.426

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B 5240 Lpx/Bpx=3.32 Rp/Vol=9.327 Lpx/Rp=4.582 Log/Lpx=0.460

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### Bare-hull resistance

File: 9-65-500.mdl

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vs.

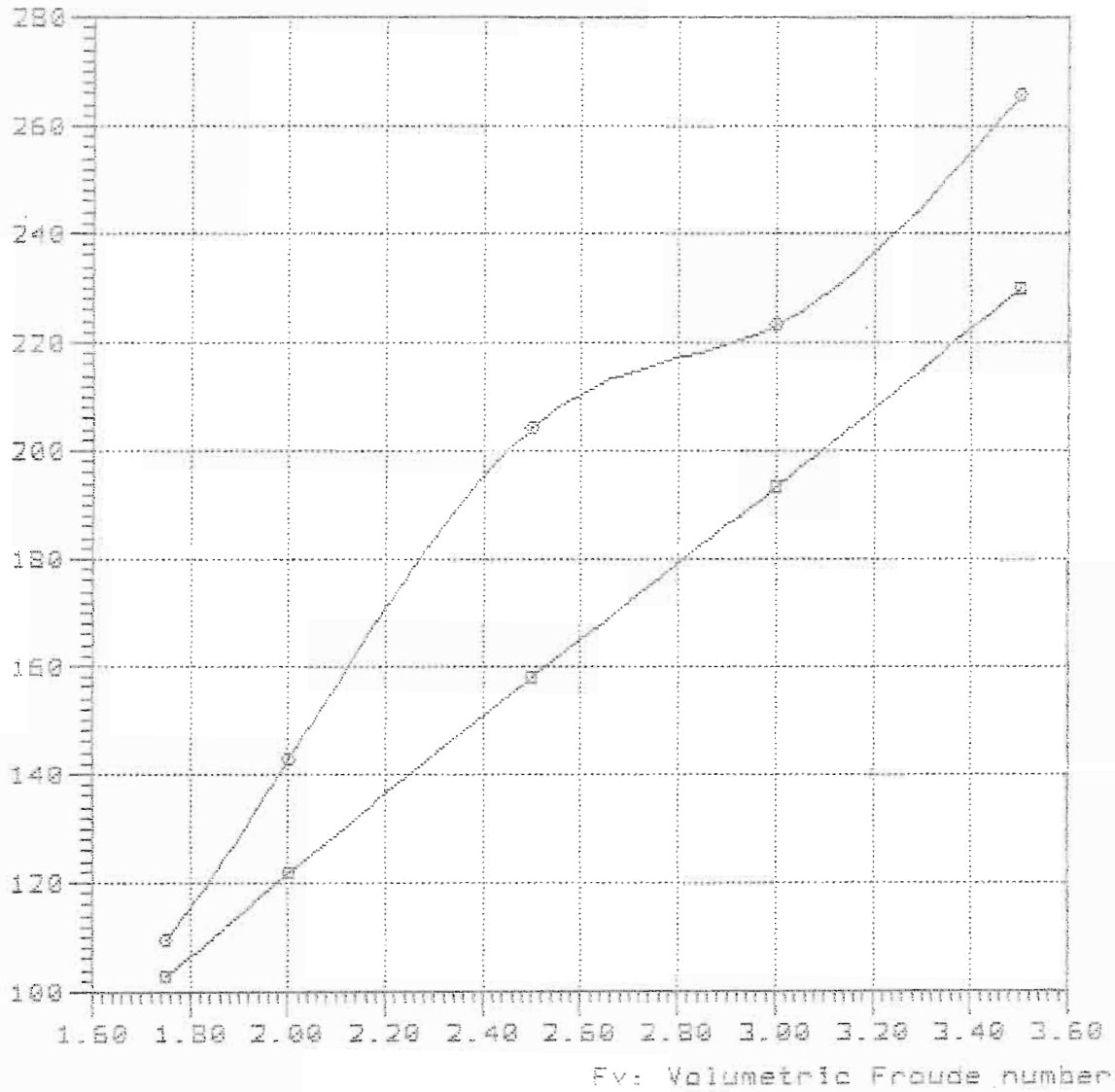
Date: 28 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 13:12

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—●— TMB-65B 5240 Lpx/Bpx=3.32 Ap/Vol=9.327 Lpx/As=4.502 Lcg/Lpx=0.500



Model = 5240  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

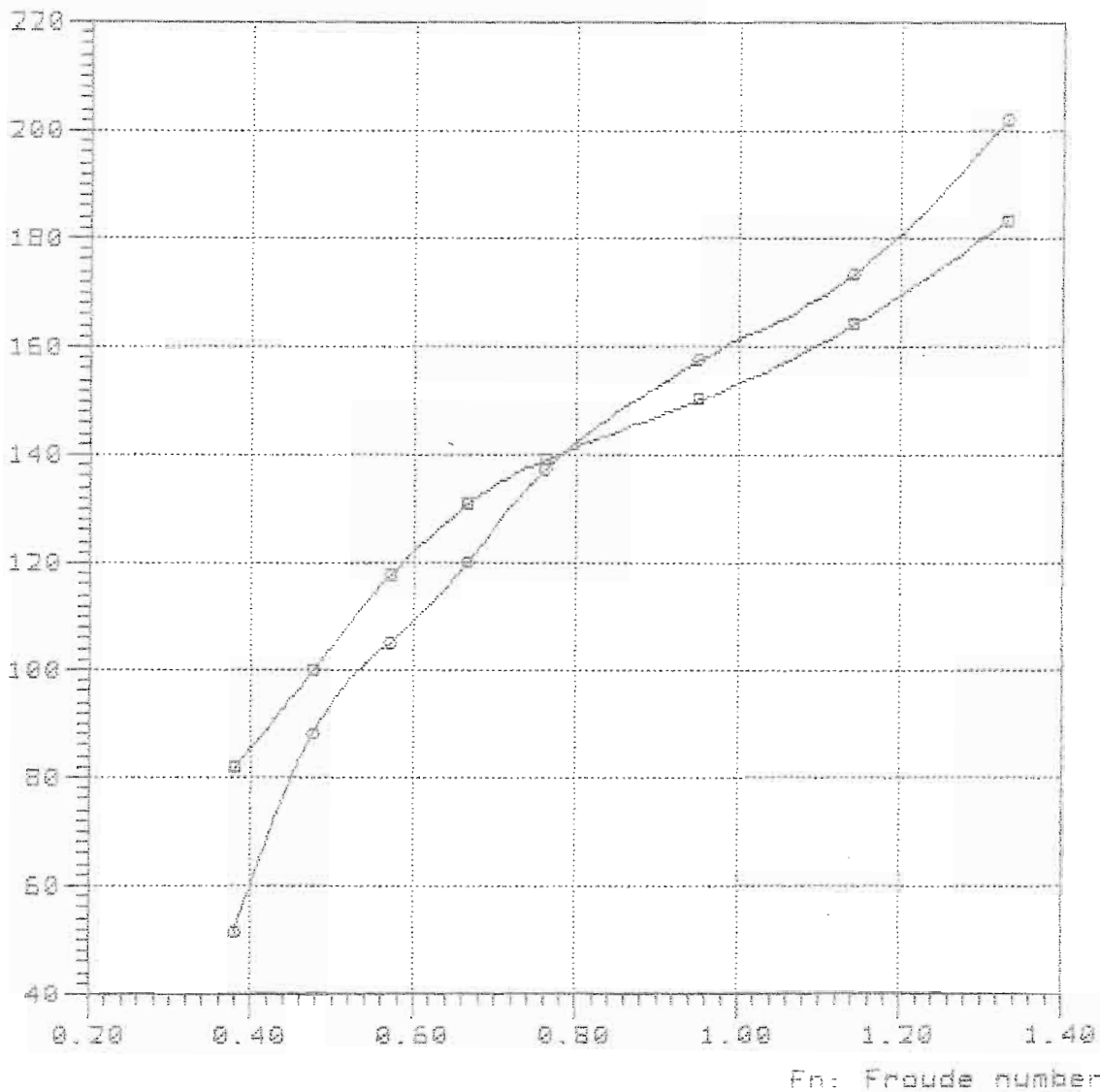
Lpx = 17.500 ft  
Lwl = 17.289 ft  
Bpx = 5.271 ft  
Ap = 68.025 sqft  
Vcg = 1.147 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 10.883

Lpx/Vol = 7.021  
Cvload = 0.107  
Lbload = 0.015

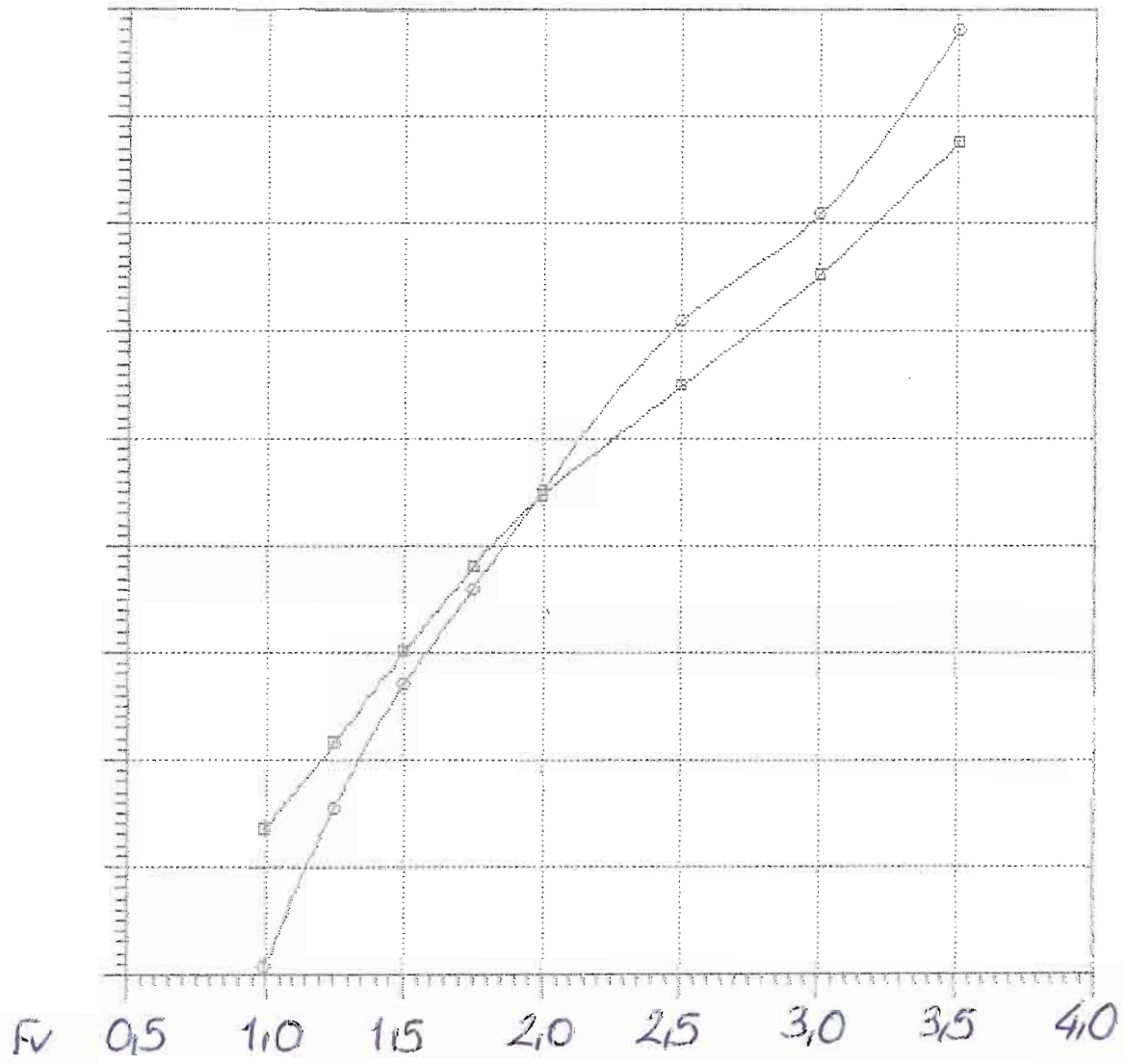
**████████████████████**  
Disp-Lpx = 83,299

Rbare: Bare-hull resistance (lbs)



—■—  
—○— TMB-658 Lpx/Bpx=3.32 Ap/Vol=10.884 Lpx/Rp=4.562 Lcg/Lpx=0.300

11-70-34



—□—  
—○—

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Bare-hull resistance

vs.

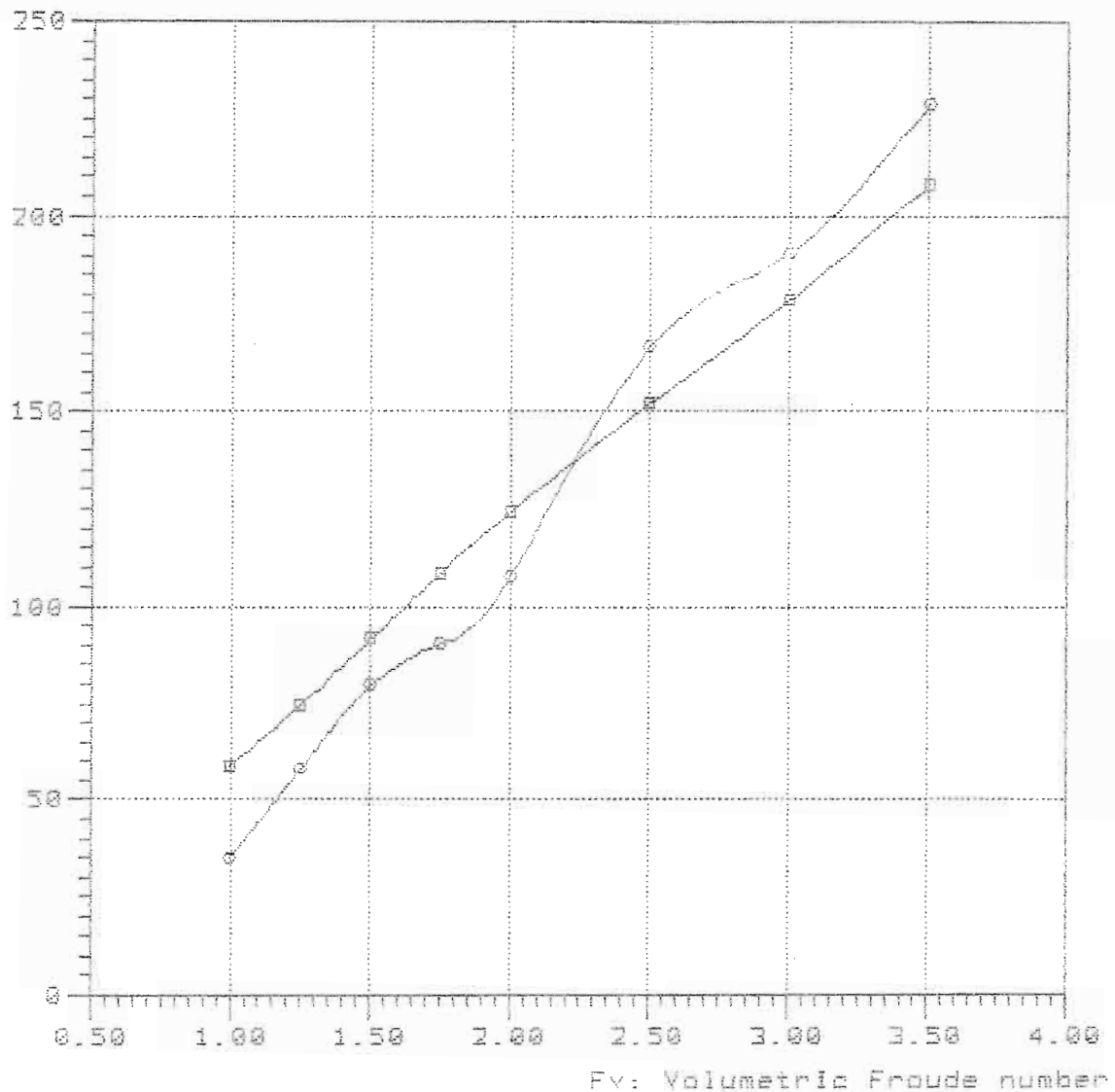
Volumetric Froude number

File: 11-70-38.mdl

Date: 28 Feb 00

Time: 10:37

Rbare: Bare-hull resistance (lbs)

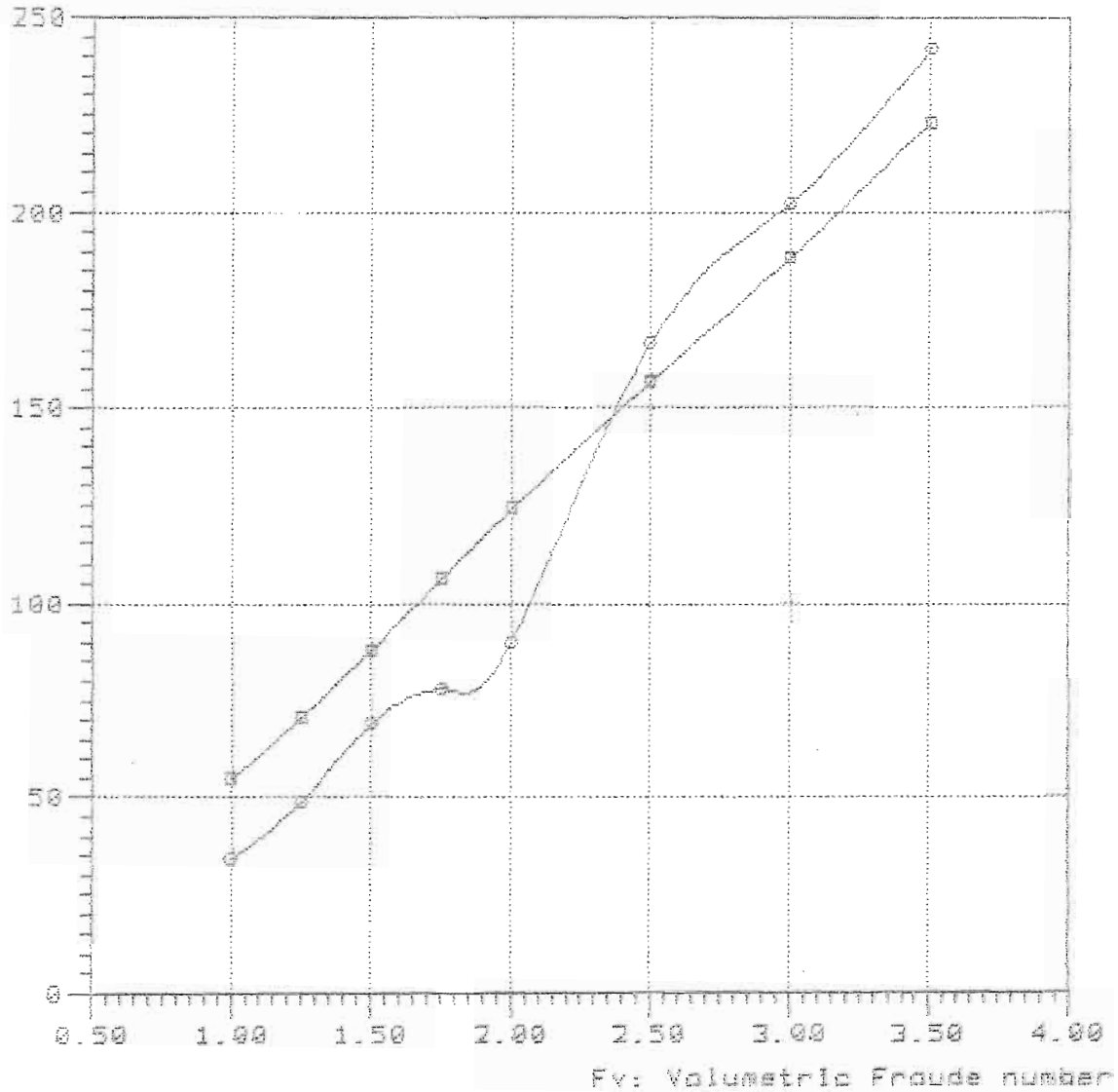


Curve Legend

—■—

—○— TMB-65B Lpx/Bpx=3.32 Ap/Vol=10.684 Lpx/Ap=4.502 Log/Lpx=0.390

Rbare: Bare-hull resistance (lbs)

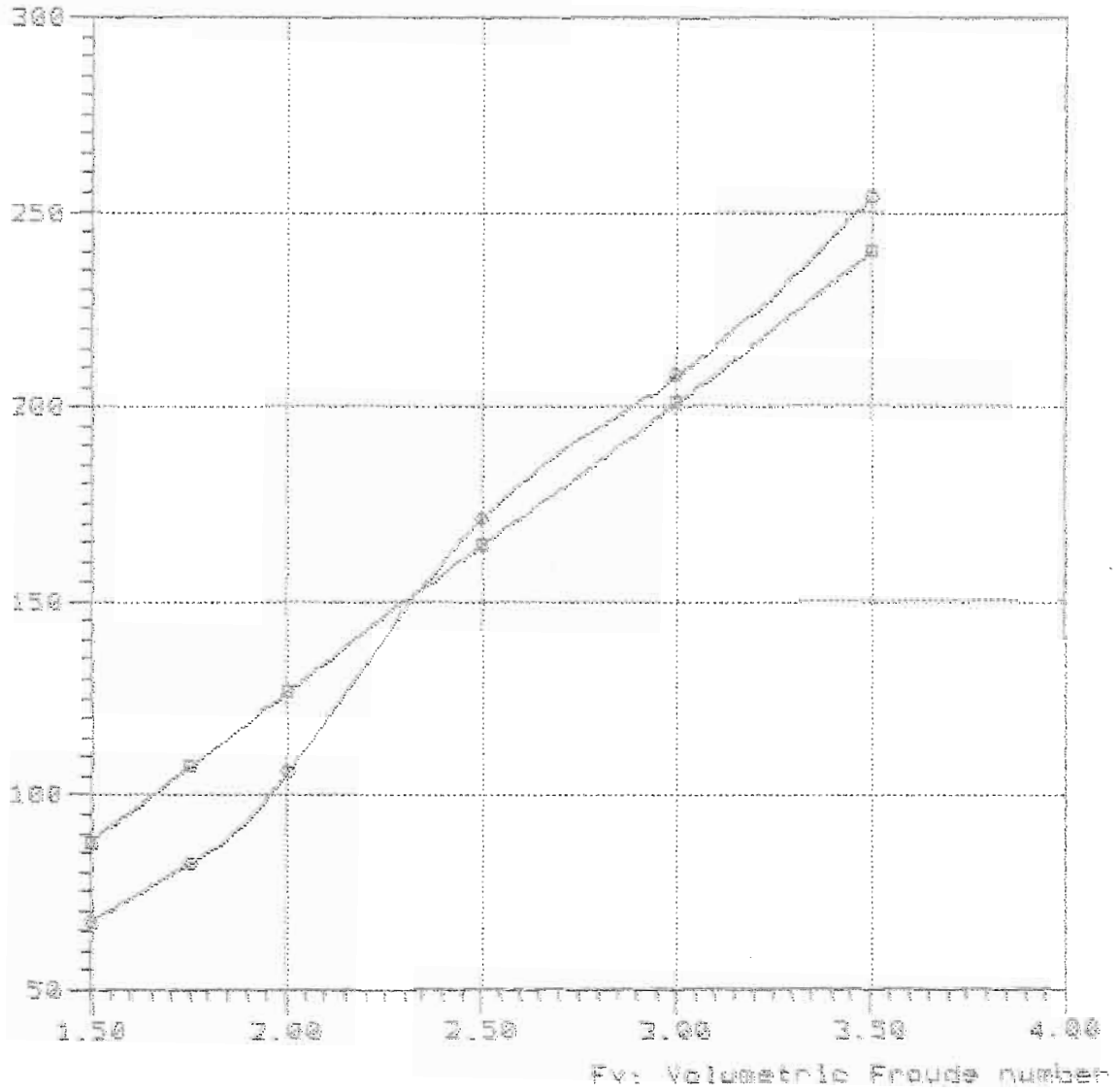


Curve legend

—■—

—●— TMB-65B Lpx/Bpx=3.32 Ap/Vol=10.884 Lpx/Ap=4.562 Lcg/Lpx=0.428

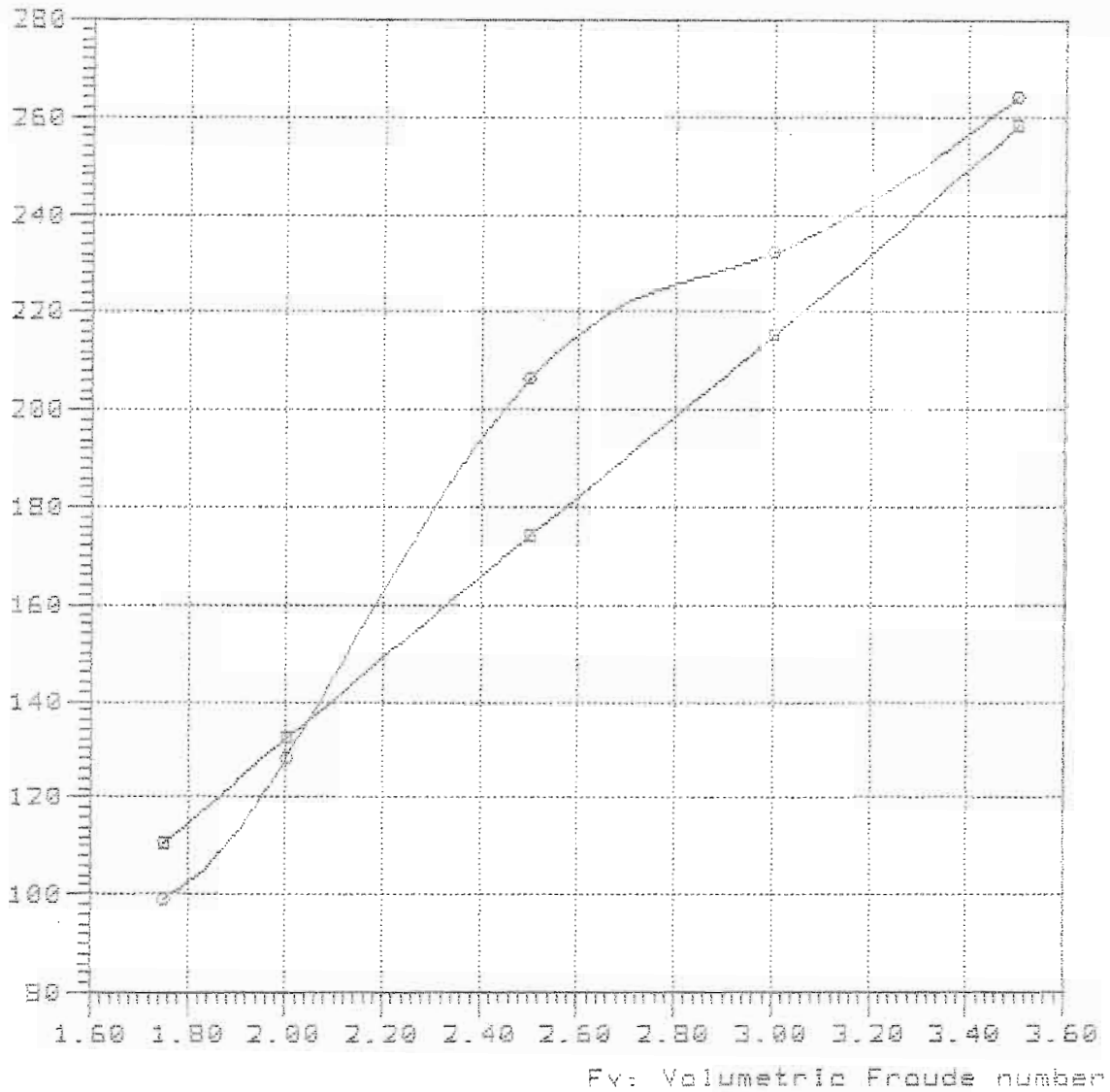
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lox/Rp=3.32 Rp/Vol=10.68 Lox/Rp=4.562 Log/Lox=0.460

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=3.32 Ap/Vol=10.884 Lpx/Ap=4.502 Lcg/Lpx=0.500

Model = 5240  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

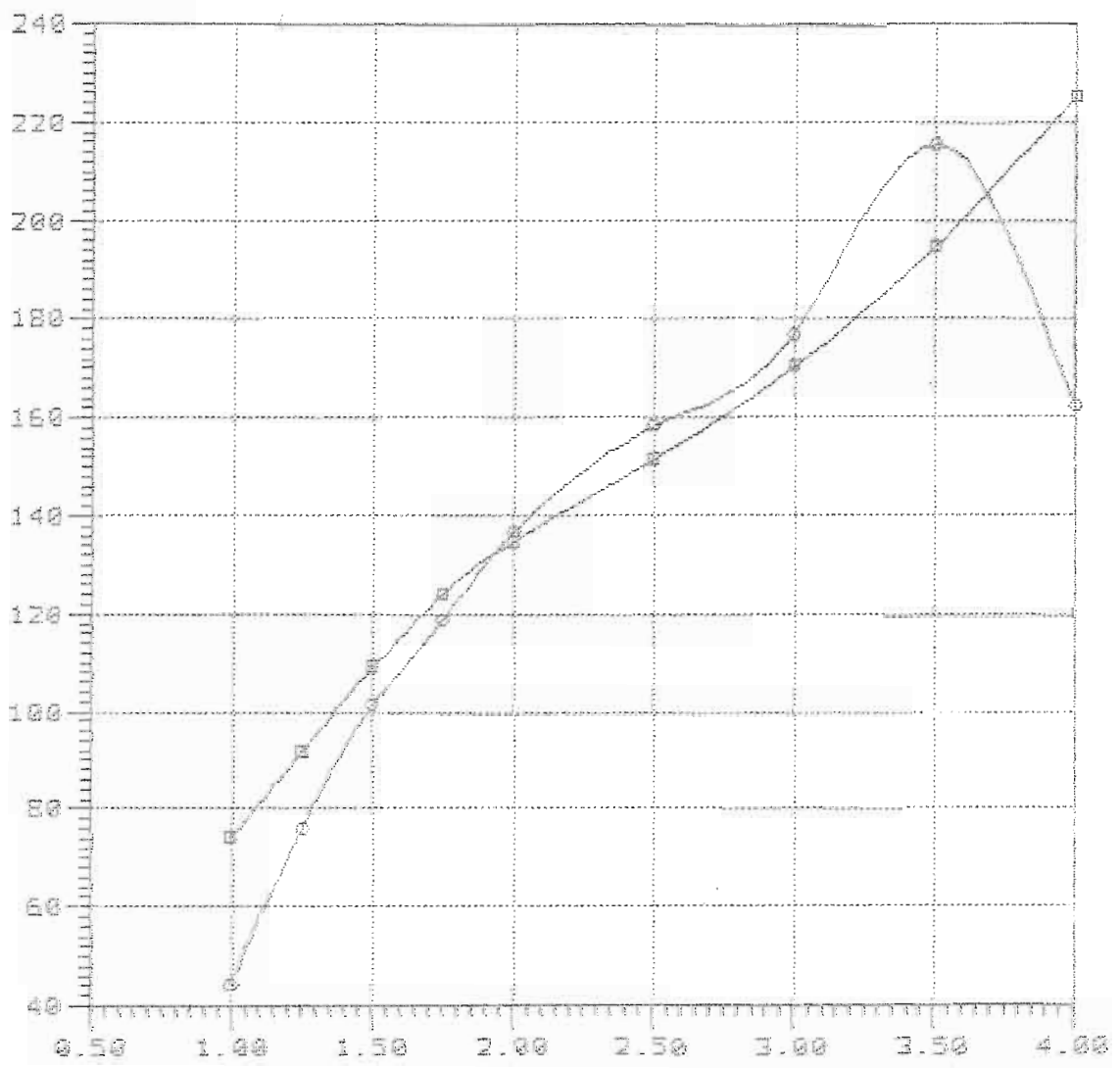
Lpx = 18.700 ft  
Lwl = 18.475 ft  
Bpx = 5.633 ft  
Ap = 77.674 sqft  
Vcg = 1.226 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 12.426  
Lpx/Vol = 7.502  
Cvload = 0.087  
Lbload = 0.012

~~XXXXXXXXXX~~  
Disp-Lpx = 68.270



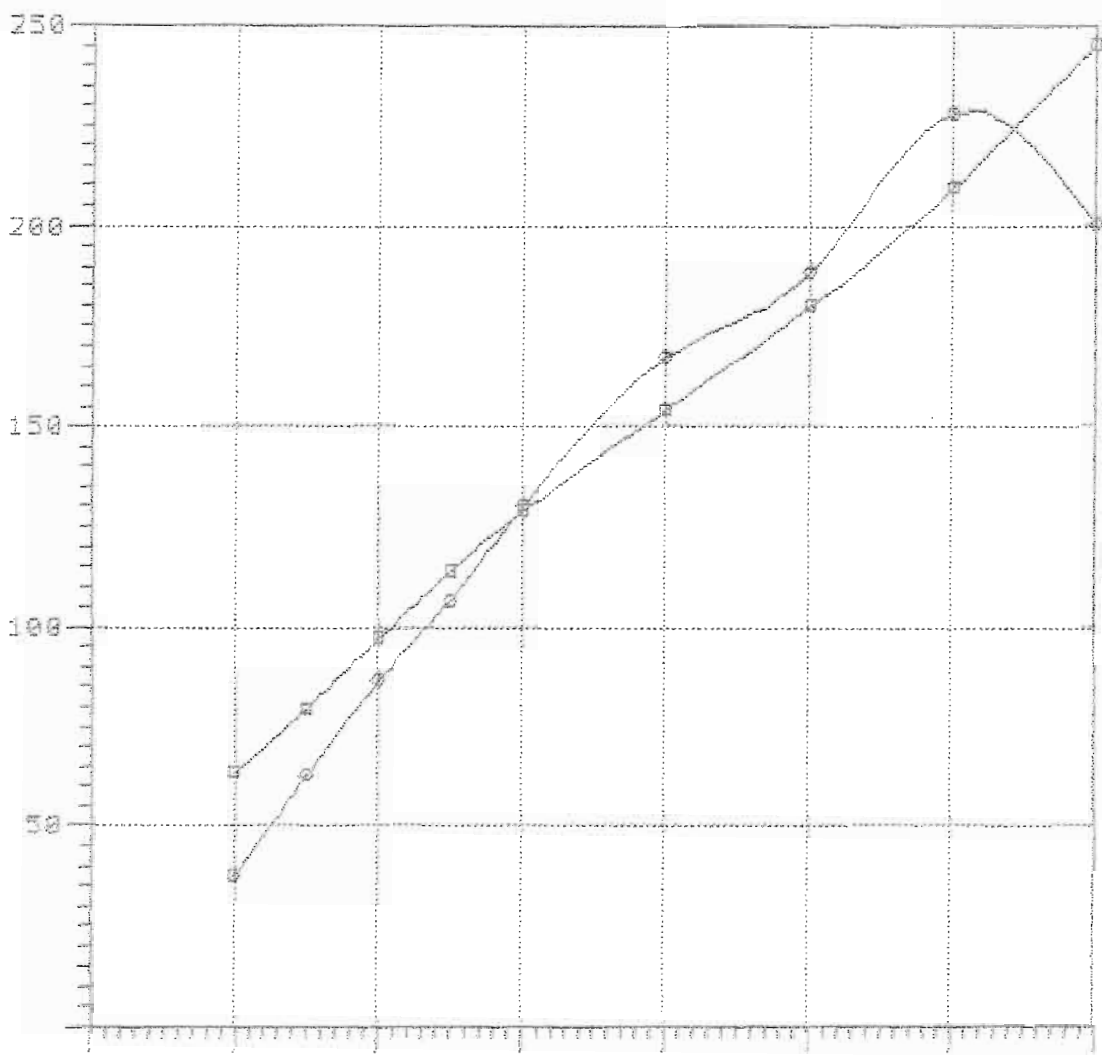
Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

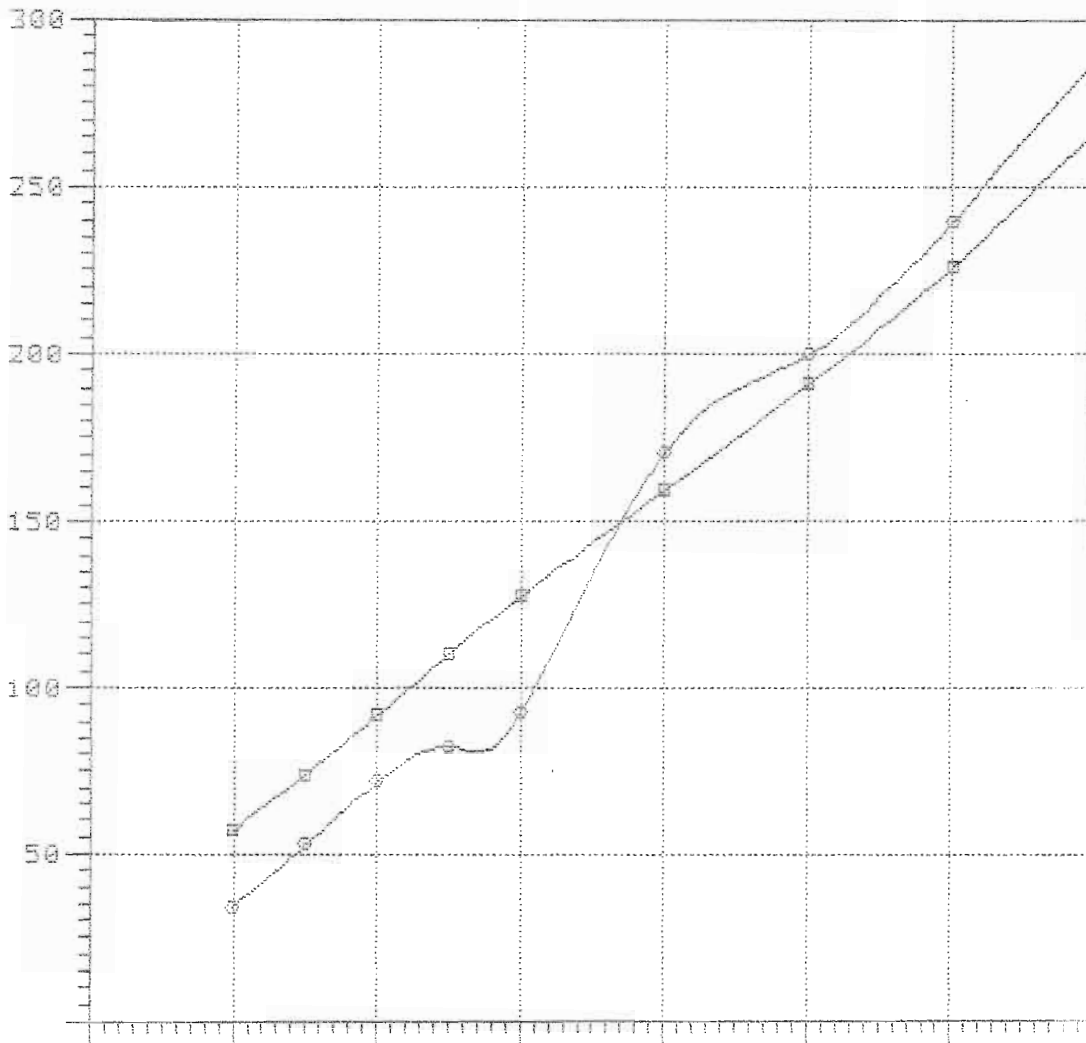
—■—  
—●— TNE-65B Lpx/Bpx=3.32 Ap/Vol=12.42B Lpx/Ap=4.582 Log/Lpx=0.308

Rbare: Bare-hull resistance (lbe)

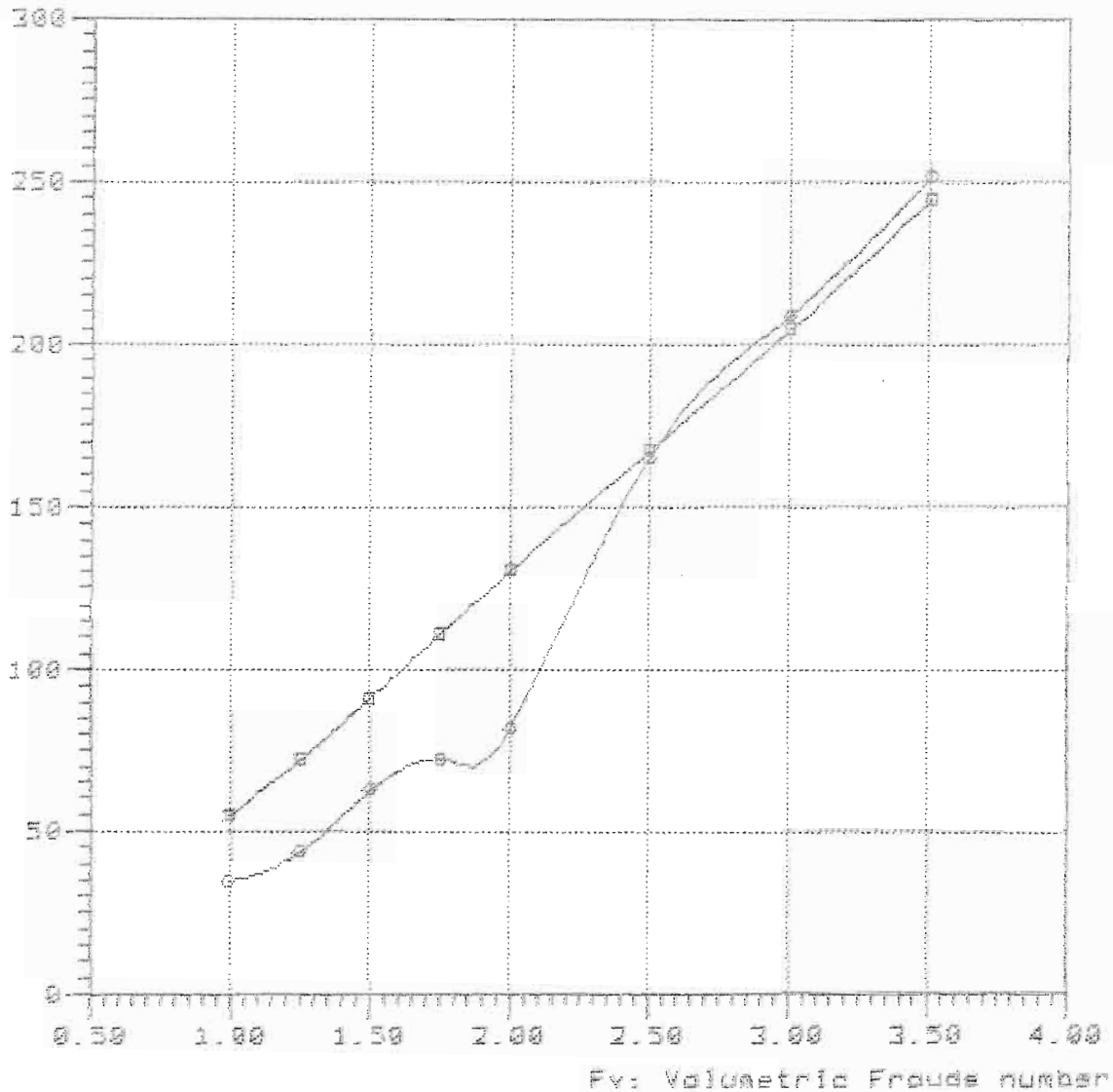


—□—  
—○—

Rbare: Bare-hull resistance (lbs)



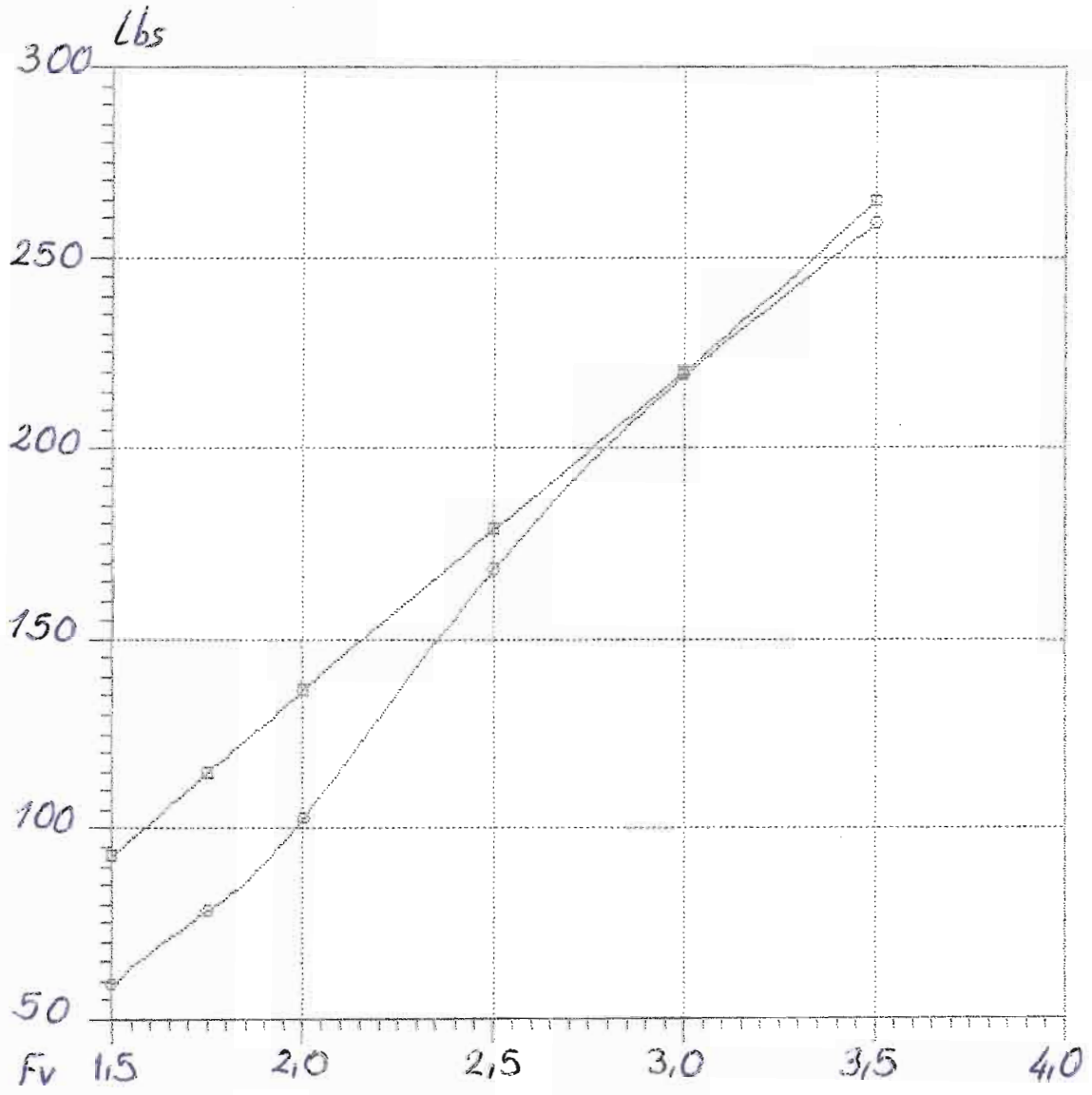
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=3.32 Ap/Vol=12.42B Lpx/As=4.302 Lcg/Lpx=0.426

13-75-460



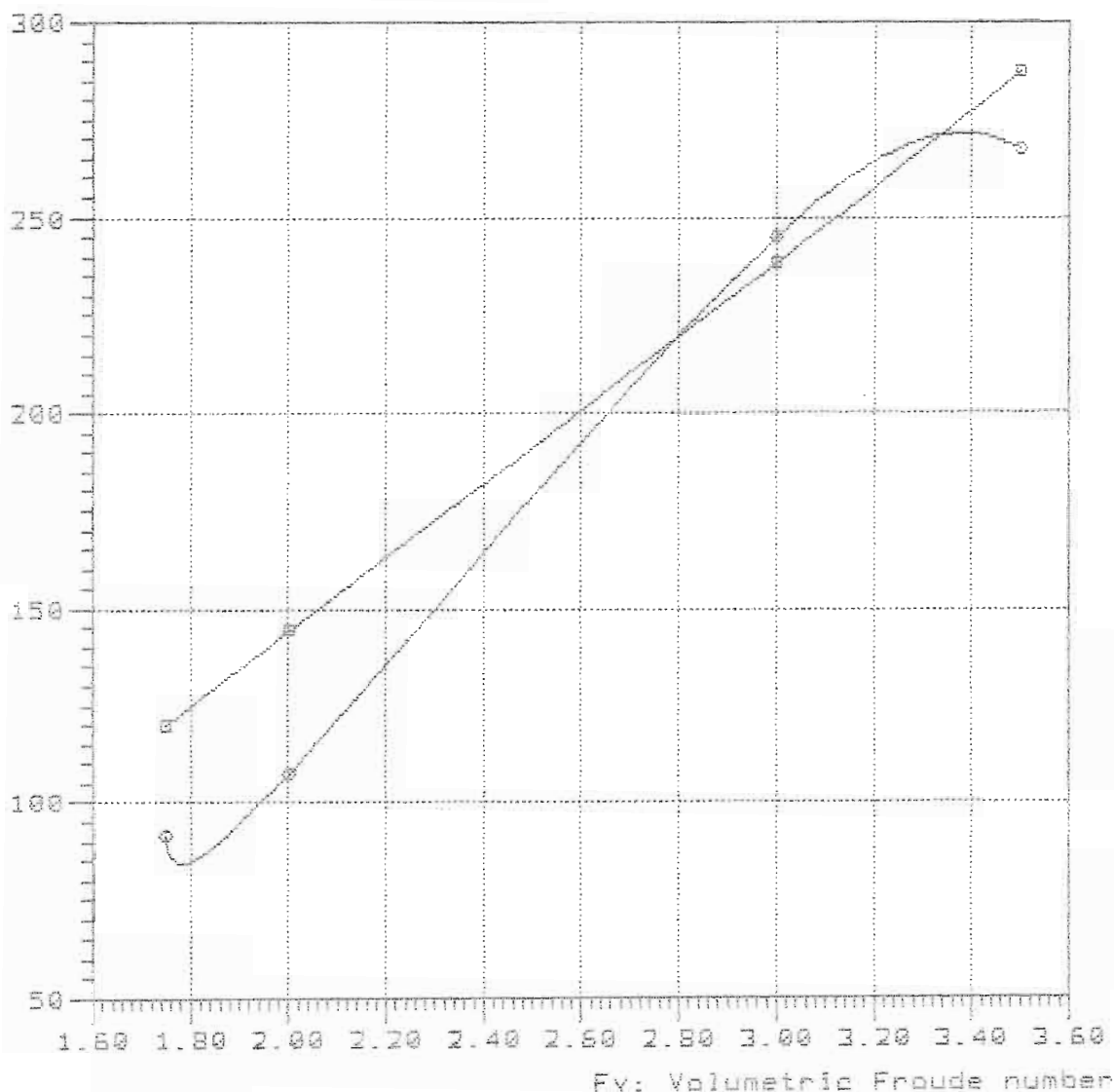
—□—  
—□—

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Bare-hull resistance  
vs.  
Volumetric Froude number

File: 13-75-50.mdl  
Date: 28 Feb 00  
Time: 11:02

Rbare: Bare-hull resistance (lbs)

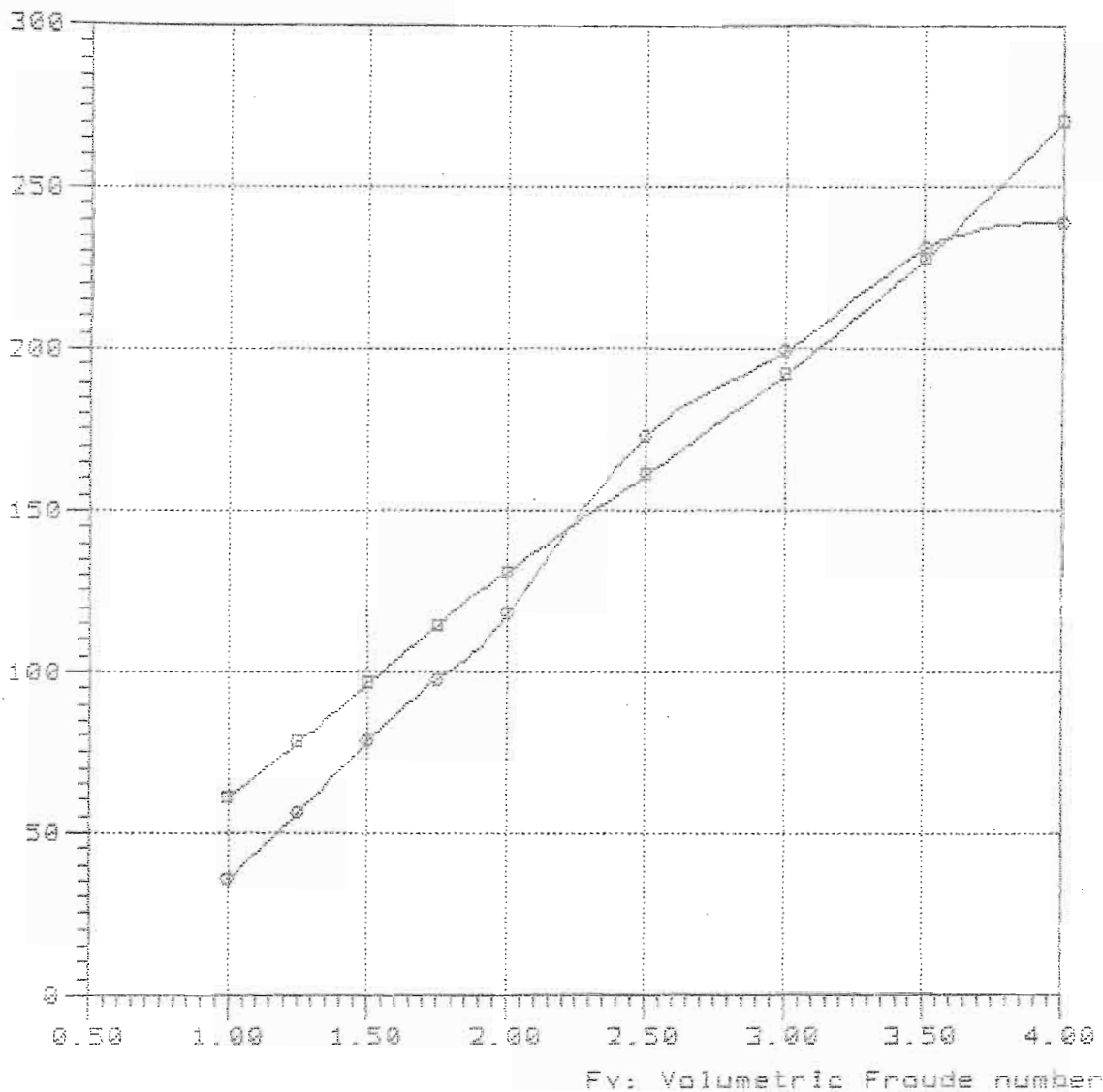


Curve legend

—■—

—○— TMB-65B Lpx/Bpx=3.32 Ap/Vol=12.428 Lpx/Ap=4.502 Log/Lpx=0.508

Rbare: Bare-hull resistance (lba)



—■—  
—●— TMB-658 Lpx/Bpx=3.32 Ap/Vol=14.216 Lpx/Ap=4.502 Log/Lpx=0.340

Model = 5240  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 20.000 ft  
Lwl = 19.759 ft  
Bpx = 6.024 ft  
Ap = 88.849 sqft  
Vcg = 1.311 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle = 4.90 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 14.214  
Lpx/Vol = 8.024  
Cvload = 0.071  
Lbload = 0.010

~~XXXXXXXXXX~~  
Disp-Lpx = 55.804



NavCad(tm) 3.1d

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Bare-hull resistance

vs.

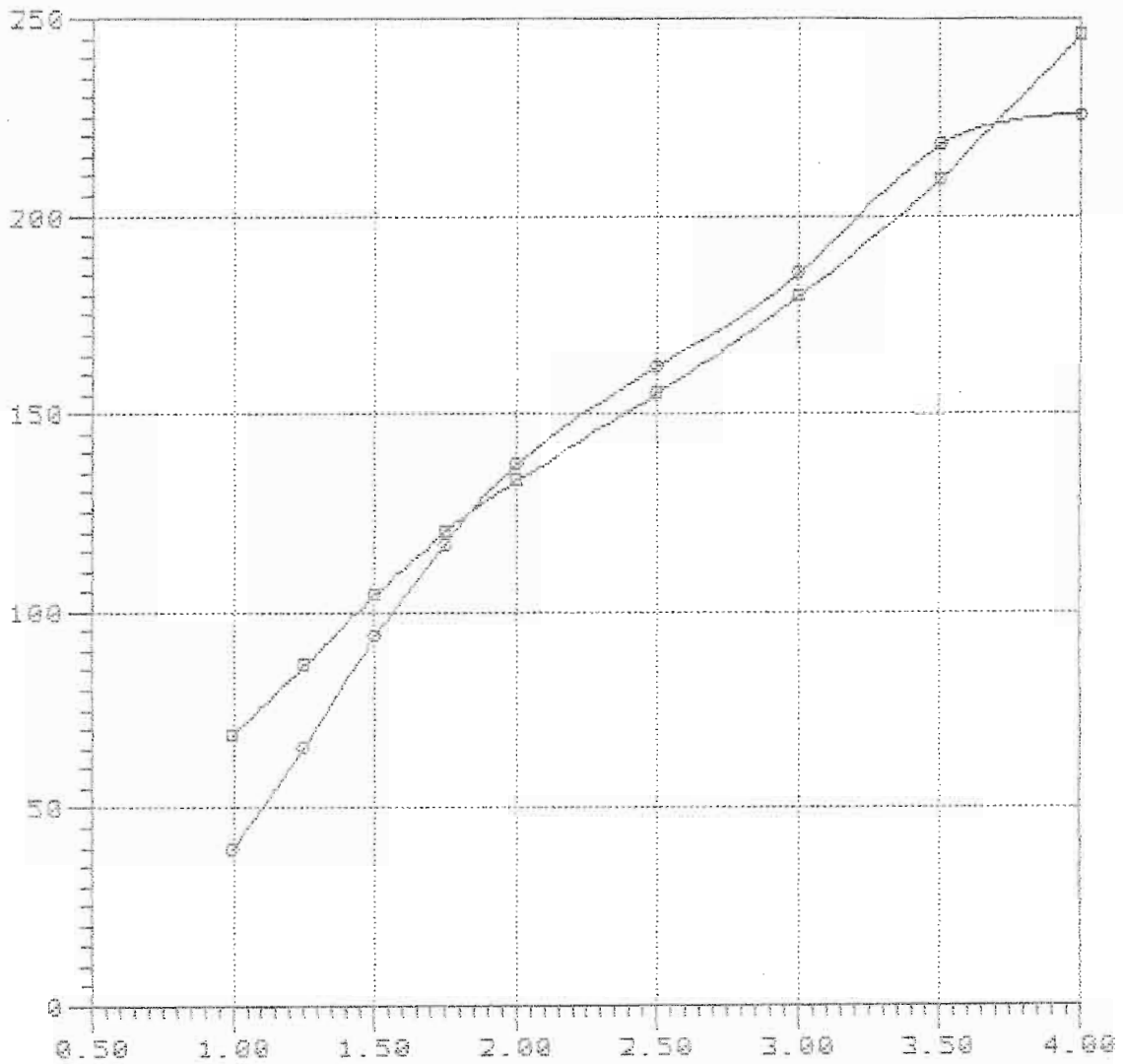
Volumetric Froude number

File: 14-80-30.mdl

Date: 28 Feb 00

Time: 11:07

Rbare: Bare-hull resistance (lbs)



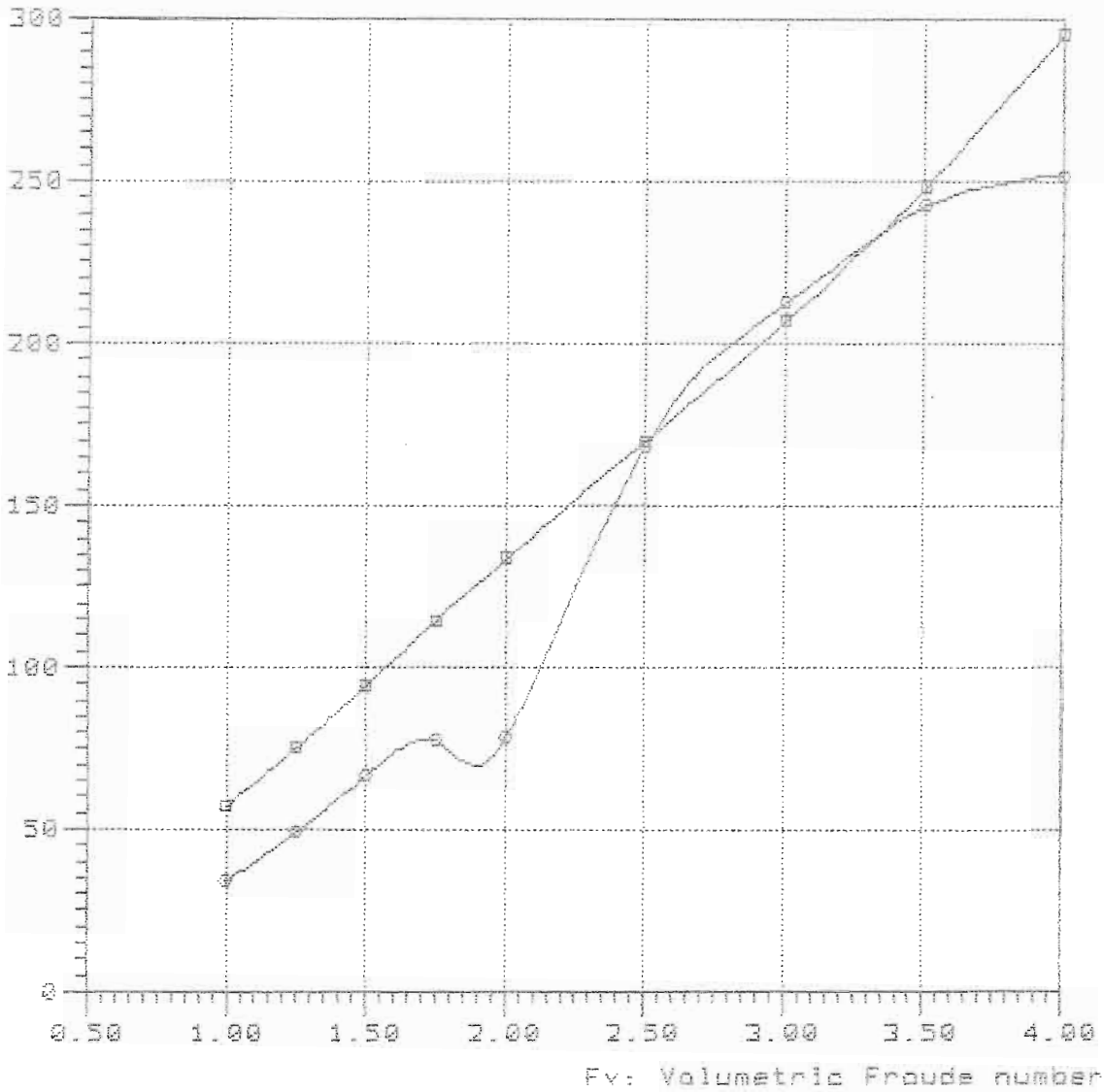
Fv: Volumetric Froude number

Curve legend

—□—

—○— TMB-658 Lpx/Bpx=3.32 Rp/Vol=14.216 Lpx/Rp=4.502 Log/Lpx=0.300

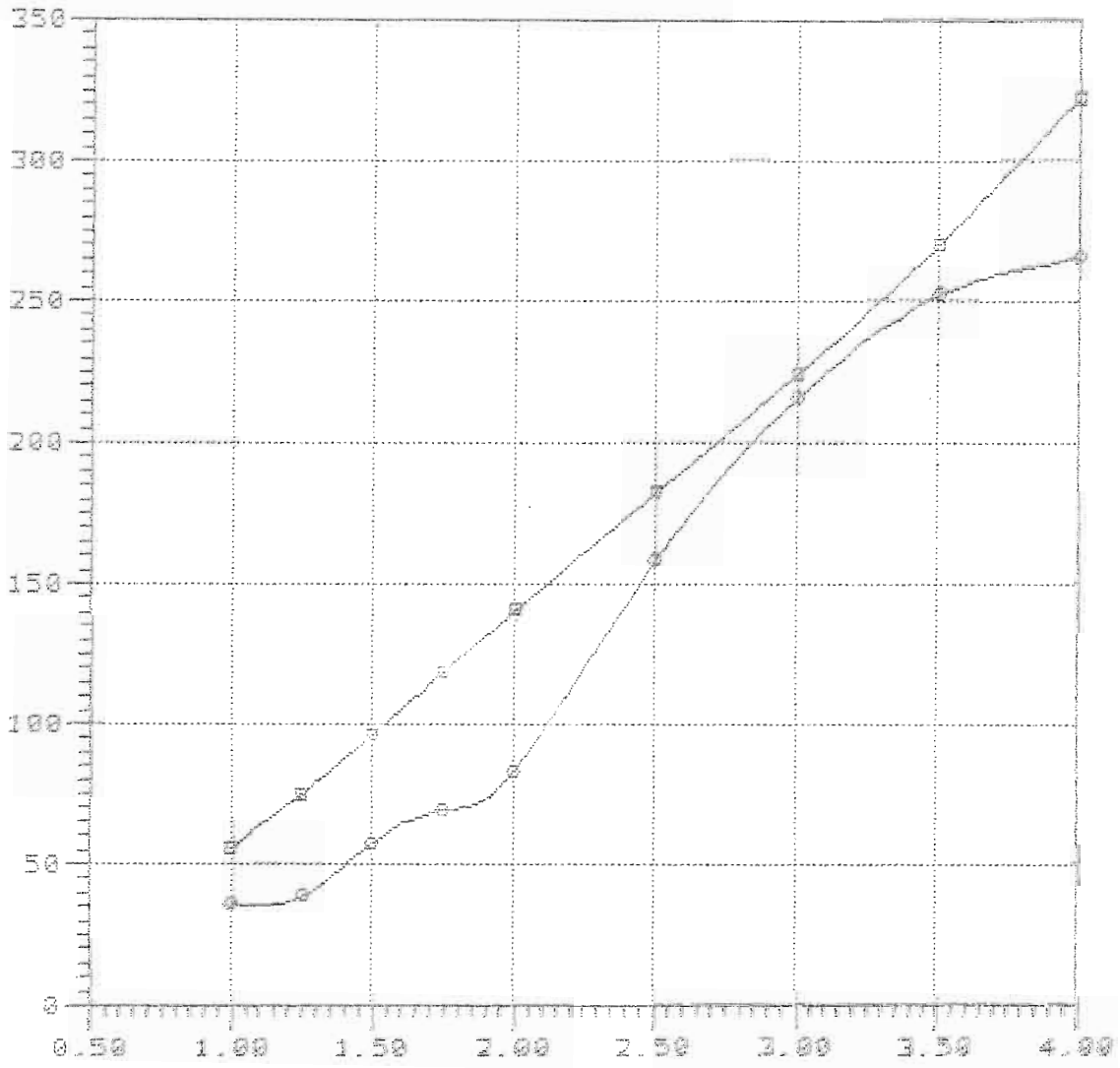
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65B Lpx/Bpx=3.32 Ap/Vol=14.216 Lpx/Ag=4.502 Lcg/Lpx=0.388

Rbare: Bare-hull resistance (lbs)

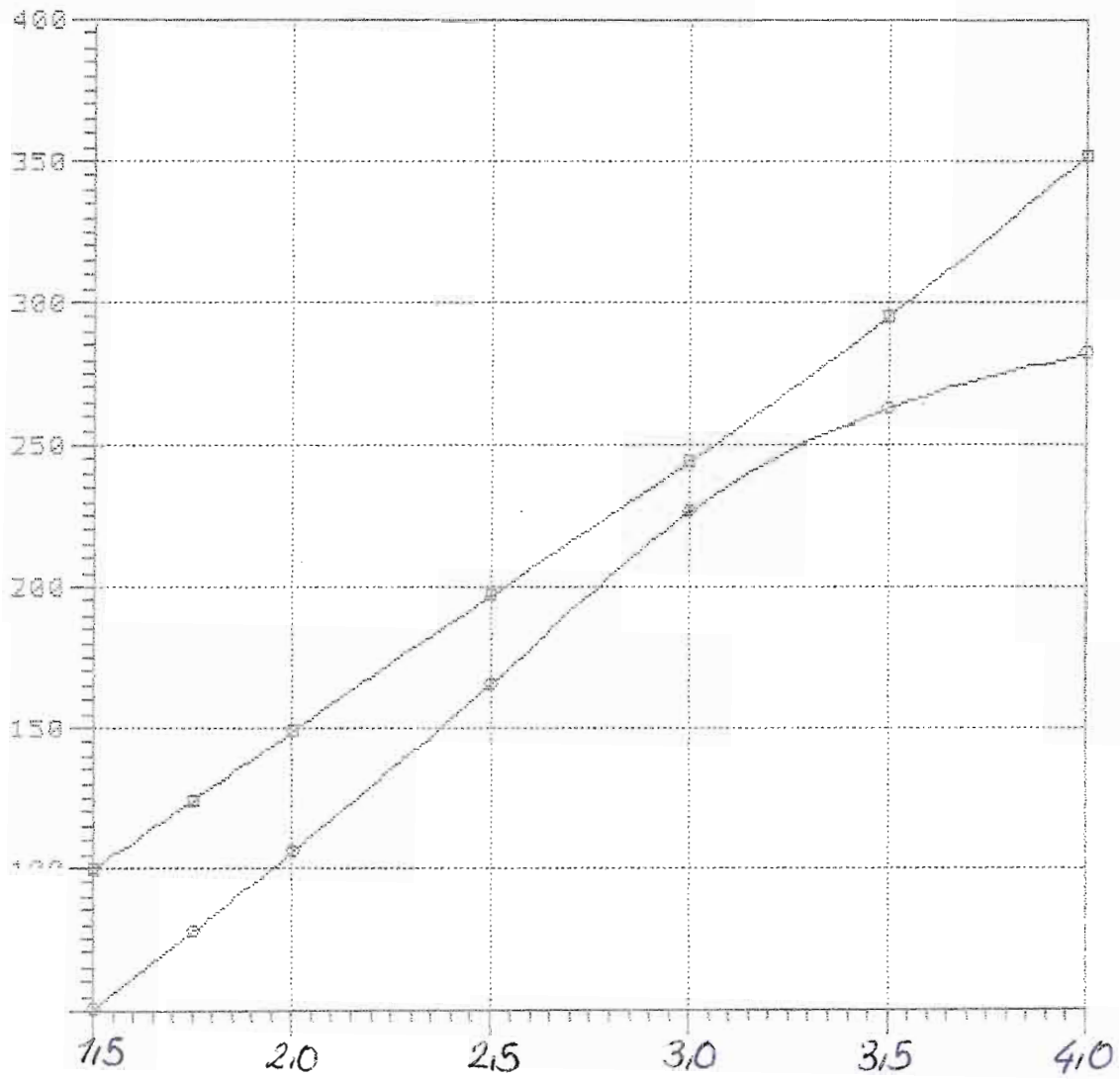


Fv: Volumetric Froude number

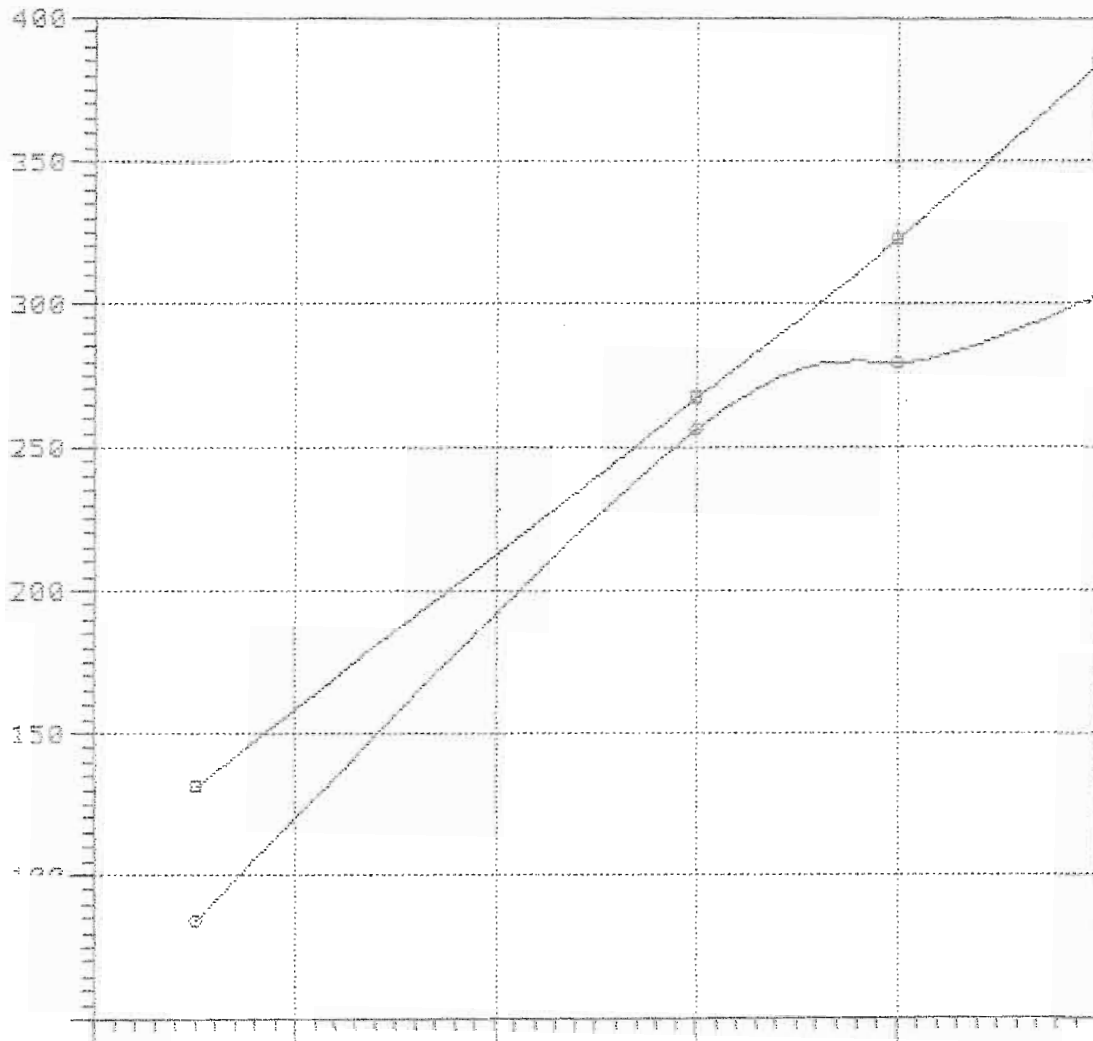
—■—

—○— TMB-53B Lpx/Bpx=3.32 Ap/Vol=14.216 Lpx/As=4.562 Lcg/Lpx=0.429

Rbare: Bare-hull resistance (lbs)



Rbare: Bare-hull resistance (lbs)



—■—  
—●—

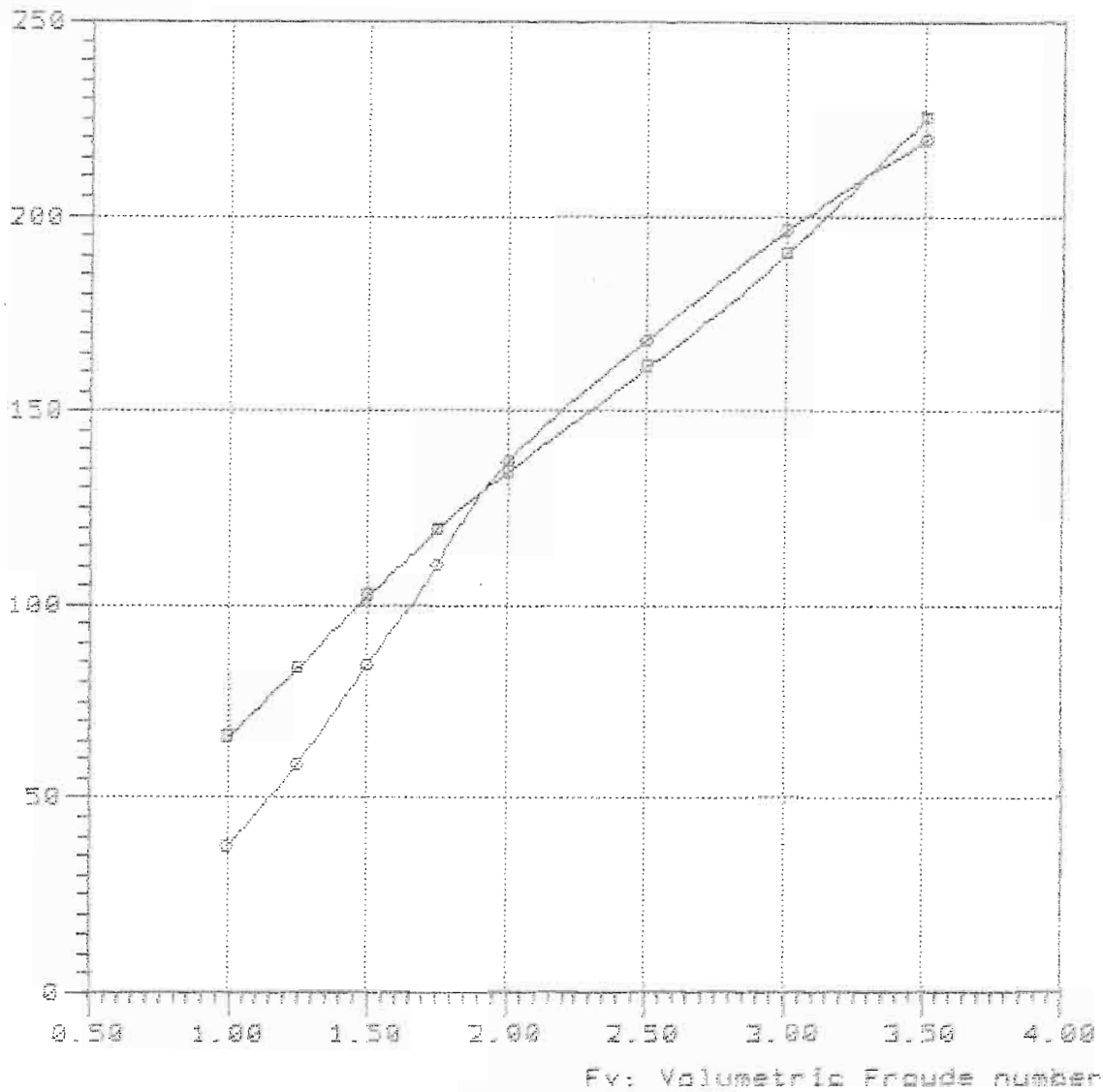
Model = 5240  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 21.200 ft  
Lwl = 20.945 ft  
Bpx = 6.386 ft  
Ap = 99.831 sqft  
Vcg = 1.390 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 15.971  
Lpx/Vol = 8.505  
Cvload = 0.060  
Lbload = 0.008

~~XXXXXXXXXX~~  
Disp-Lpx = 46.854

Rbare: Bare-hull resistance (lbs)

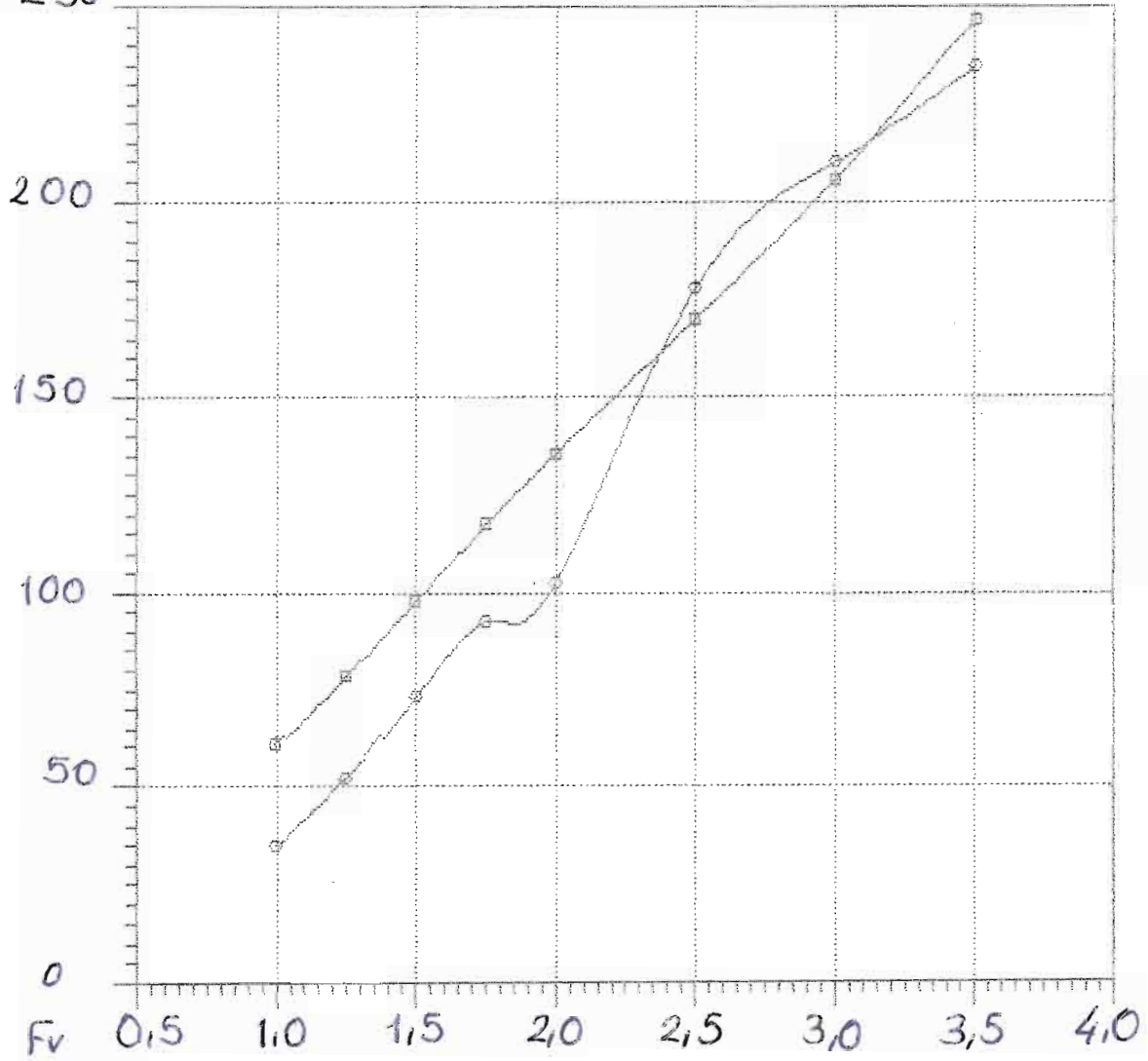


—■—

—○— TMB-658 5240 Lpx/Bpx=3.32 Ap/Va)=15.973 Lpx/Ar=4.592 Log/Lpx=0.360

16-85-340

250 Lbs



—□—  
—○—



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Bare-hull resistance

vs.

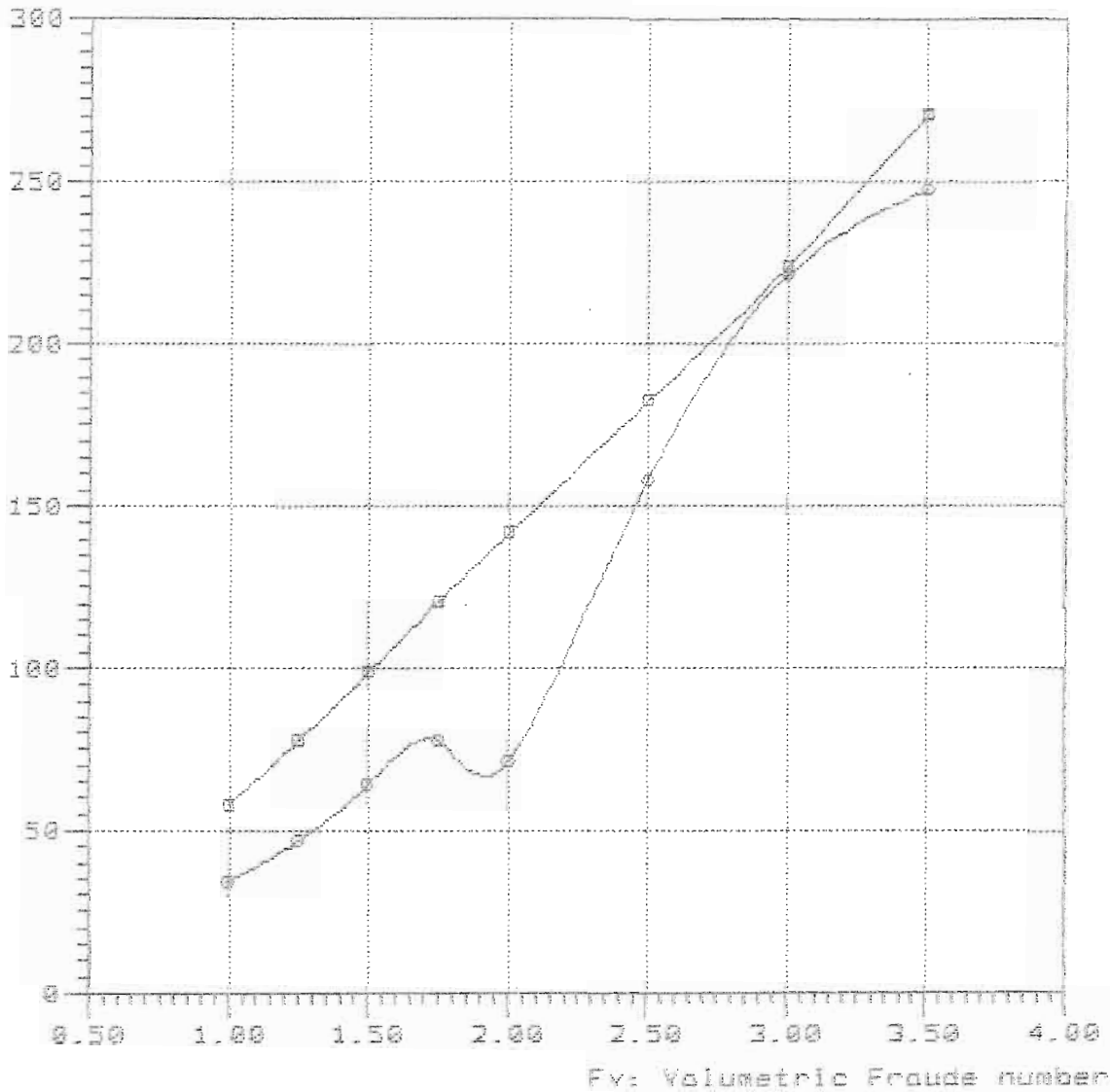
Volumetric Froude number

File: 16-85-38.mdl

Date: 28 Feb 00

Time: 11:33

Rbare: Bare-hull resistance (lbs)

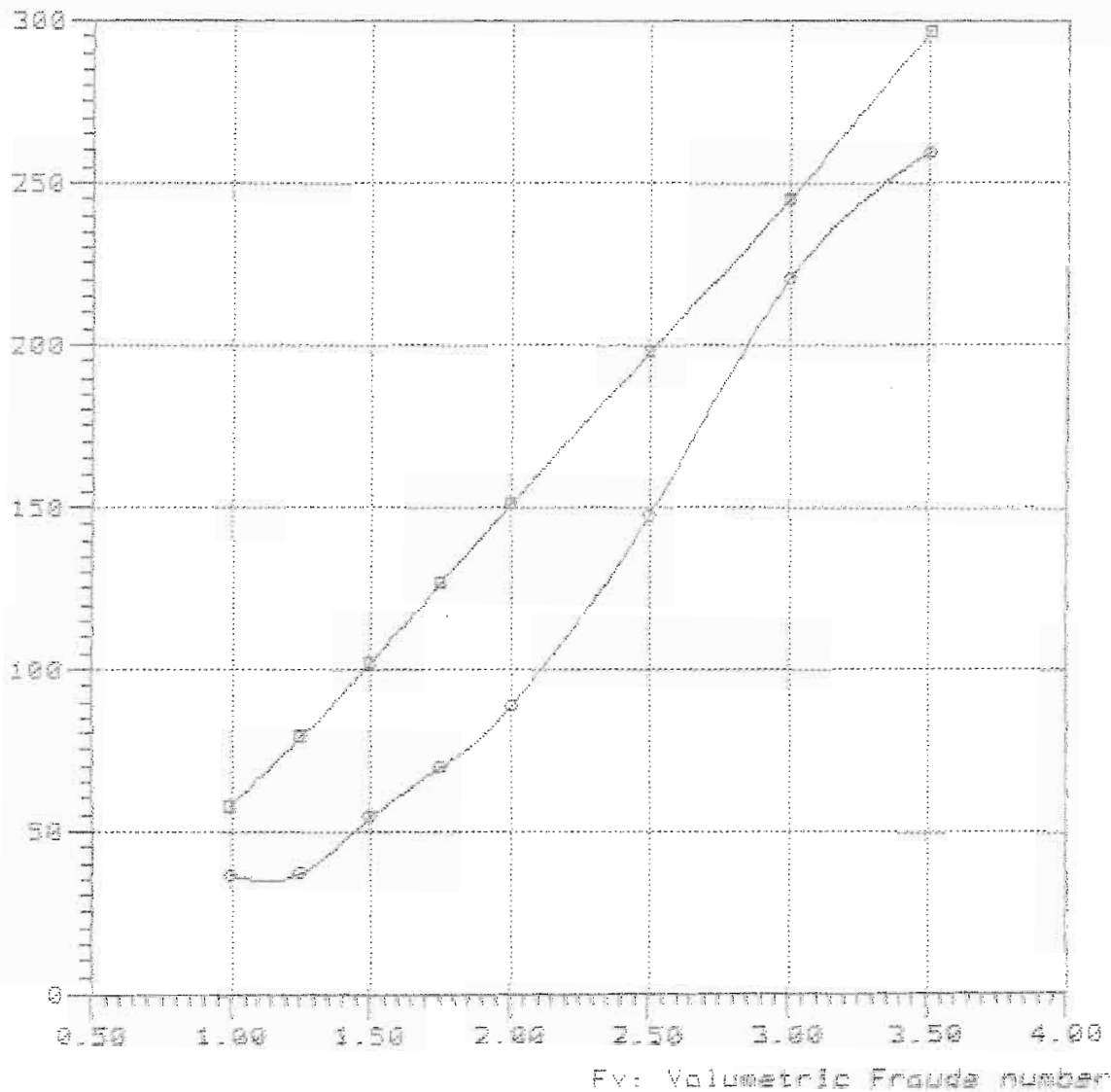


Curve Legend

—□—

—○— TMB-65B 5240 Lpx/Bpx=3.32 Rp/Vol=15.973 Lpx/Rp=4.562 Lcg/Lpx=0.389

Rbare: Bare-hull resistance (lbs)

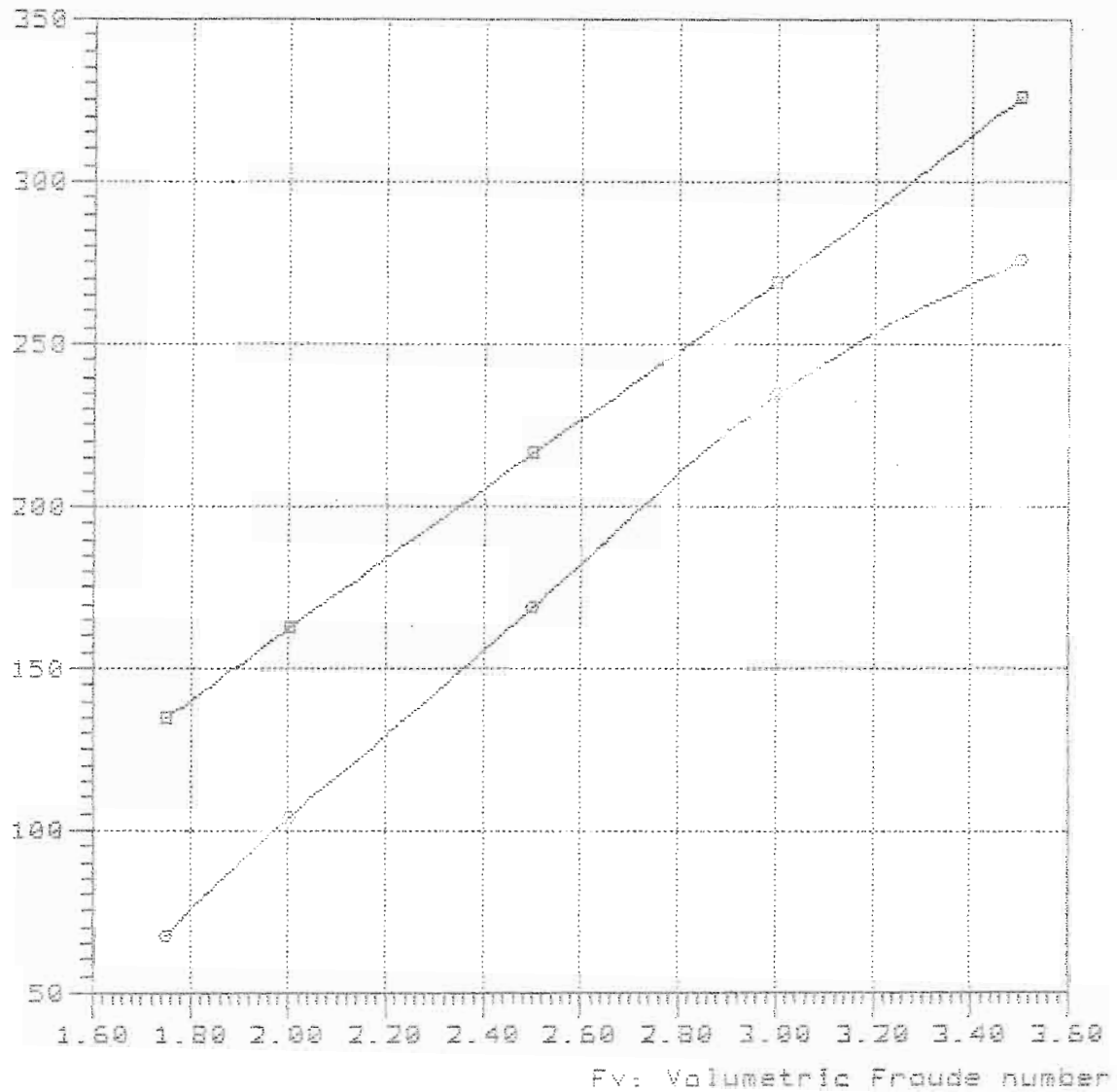


### Curve legend

—■—

—●— THB-65B 5240 Lpx/Bpx=3.32 Ap/Vol=15.973 Lpx/Ap=4.502 Log/Lpx=0.428

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65B 5240 Lpx/Bpx=3.32 Ap/Vol=15.973 Lpx/Ap=4.502 Lcg/Lpx=0.460

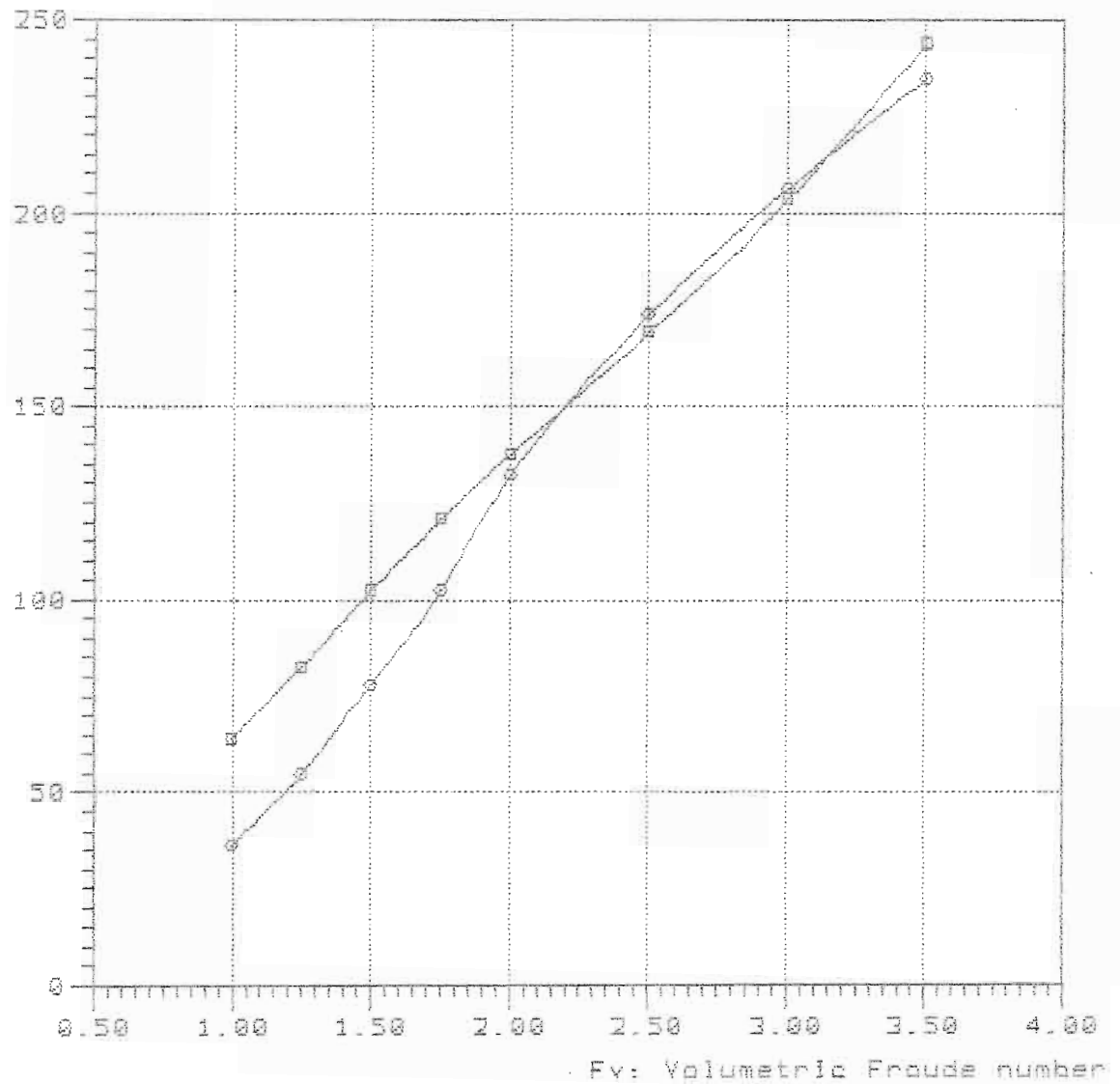
Model = 5240  
Ref = NSRDC  
Friction = ~~A~~ TTC Ca=4e-4

Lpx = 22.500 ft  
Lwl = 22.229 ft  
Bpx = 6.777 ft  
Ap = 112.450 sqft  
Vcg = 1.475 ft  
Disp. = 1000.00 Lb  
Deadrise = 21.20 degree  
Twist Angle= 4.90 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.320  
Lpx/Ap = 4.502  
Ap /Vol = 17.990  
Lpx/Vol = 9.027  
Cvload = 0.050  
Lbload = 0.007

~~XXXXXXXXXXXXXXXXXXXX~~  
Disp-Lpx = 39.193

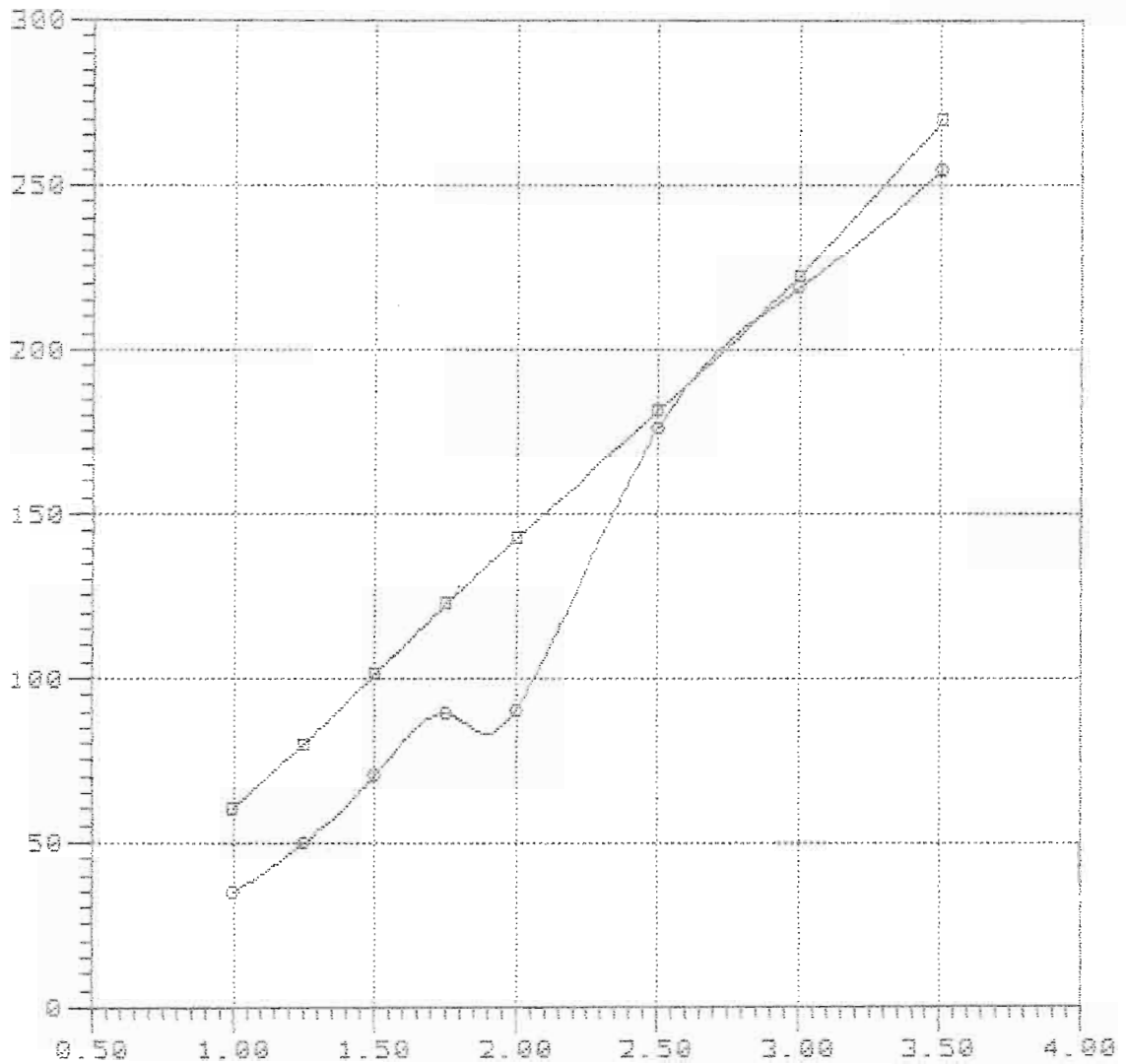
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65B 5240 Lpx/Bpx=3.32 Ap/Vol=17.992 Lpx/Ap=4.502 Lcg/Lpx=0.300

Rbare: Bare-hull resistance (lbs)

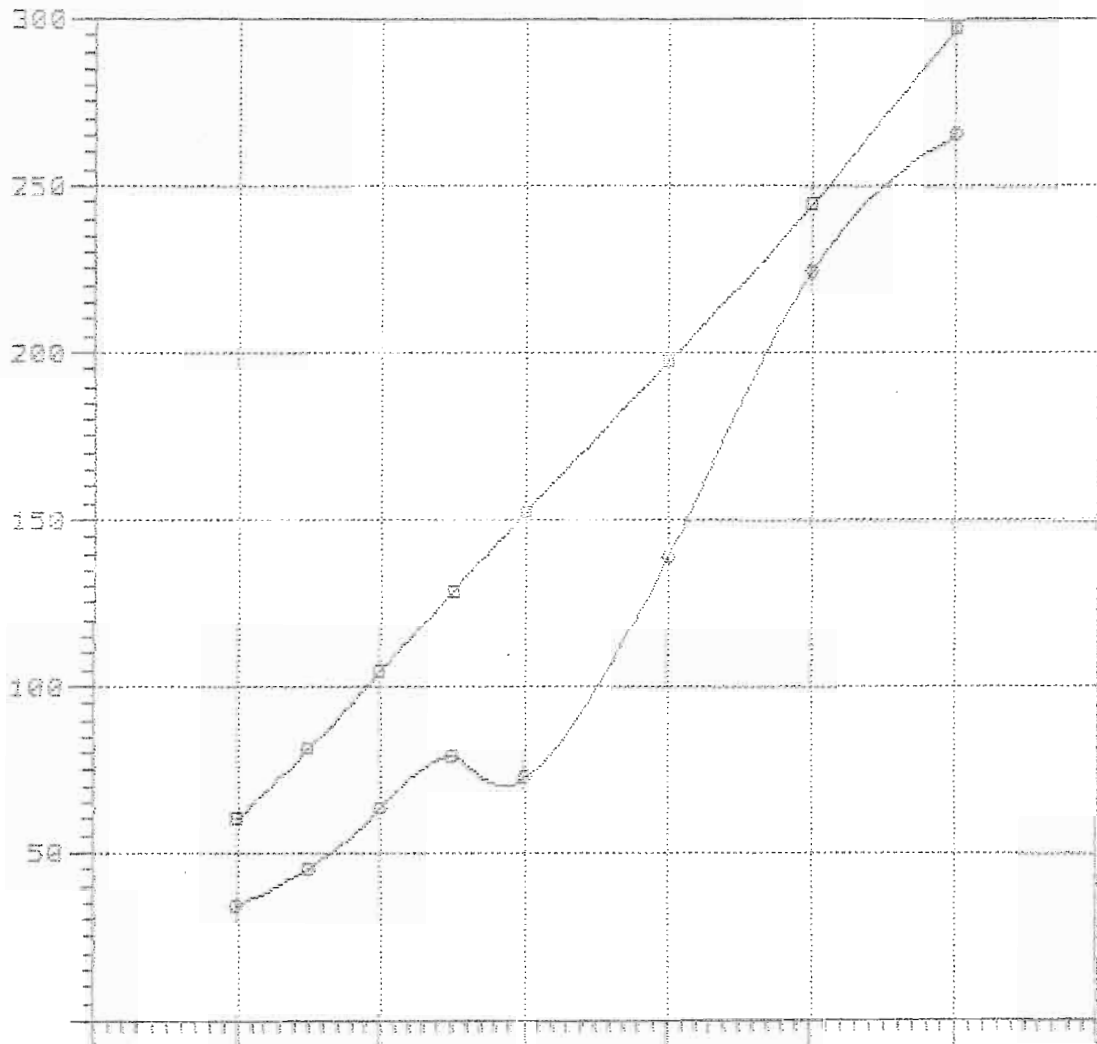


Fv: Volumetric Froude number

—■—

—○— TMS-65E 5240 Lpx/Bpx=3.32 Rp/Vol=17.992 Lpx/Rp=4.562 Log/Lpx=0.340

Rbare: Bare-hull resistance (lbs)



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—○—

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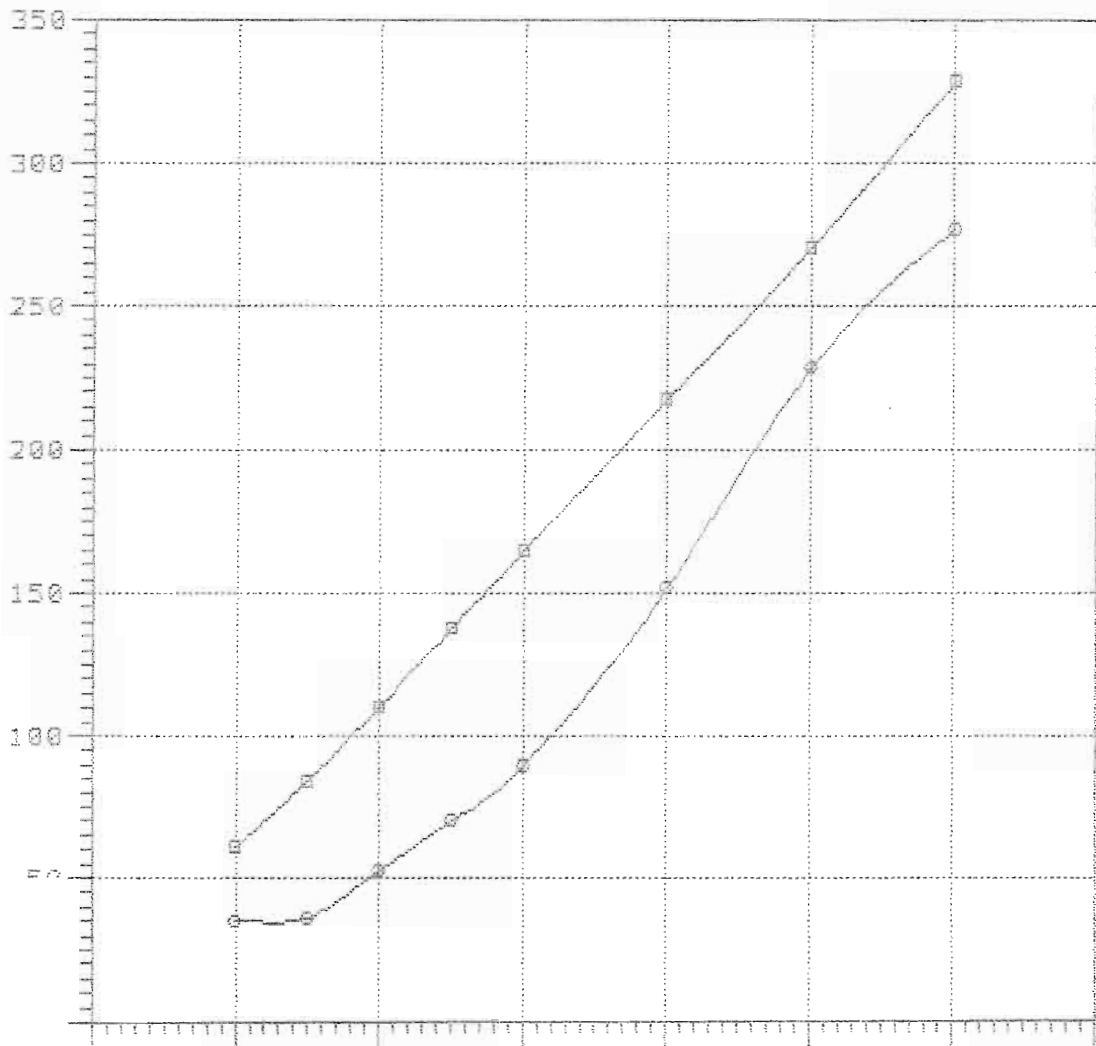
HydraComp, Inc.

File: 18-90-42.mdl

Date: 28 Feb 90

Time: 11:55

Rbare: Bare-hull resistance (lbs)

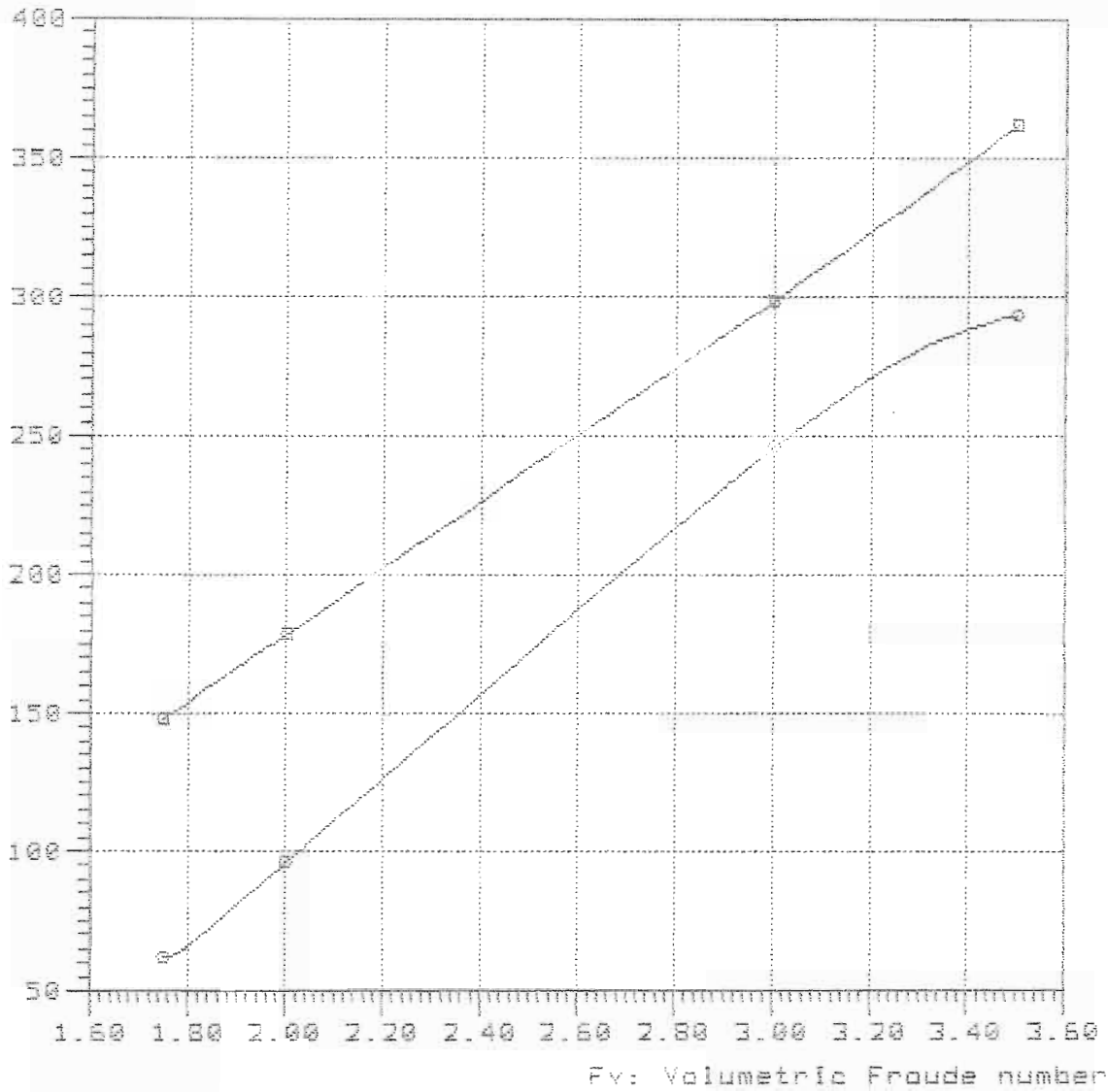


—■—

—○—



Rbare: Bare-hull resistance (lbe)



—■—

—○— TMB-65B 5240 Lpx/Bpx=3.32 Ap/Vol=17.992 Lpx/Ap=4.562 Log/Lpx=0.460

5248

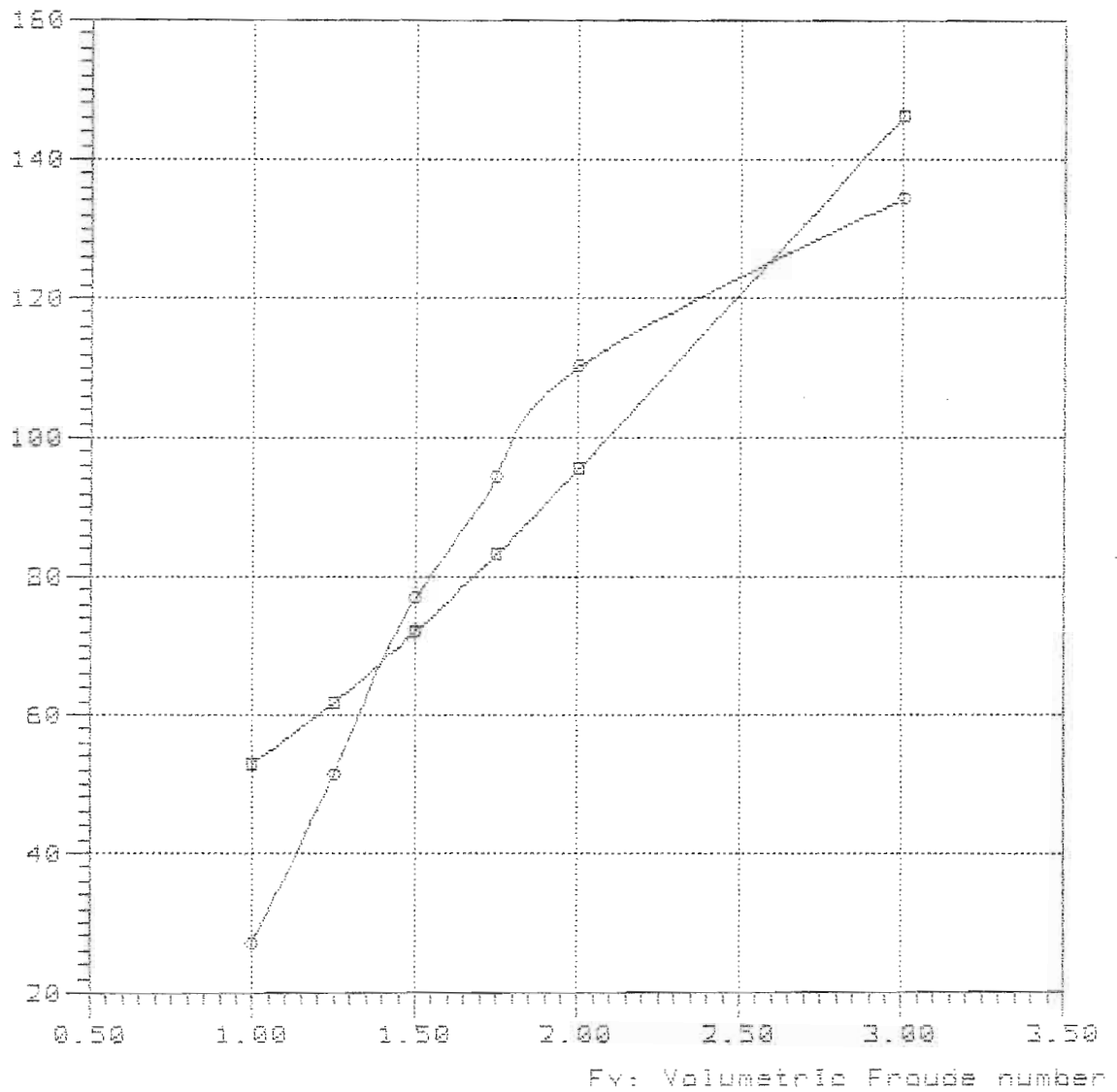
Model = 5248  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 21.200 ft  
Lwl = 21.072 ft  
Bpx = 2.270 ft  
Ap = 34.900 sqft  
Vcg = 0.987 ft  
Disp. = 1000.00 Lb  
Deadrise = 30.40 degree  
Twist Angle= 2.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 in/

Lpx/Bpx = 9.339  
Lpx/Ap = 12.878  
Ap /Vol = 5.583  
Lpx/Vol = 8.505  
Cvload = 1.336  
Lbload = 0.039  
Disp-Lpx = 46.854

**Bu ölçüler dizayn ve bununla ilgili Resimlerin telif hakları ÇEVHERCI DENİZCİLİĞE Aittir. Bu doküman veya bunun bir kısmı üçüncü şahıslara verilemez. Faksir veya kopya edilemez ve her ne maksadla olursa olsun maksadı dışında izinsiz kullanılamaz.**

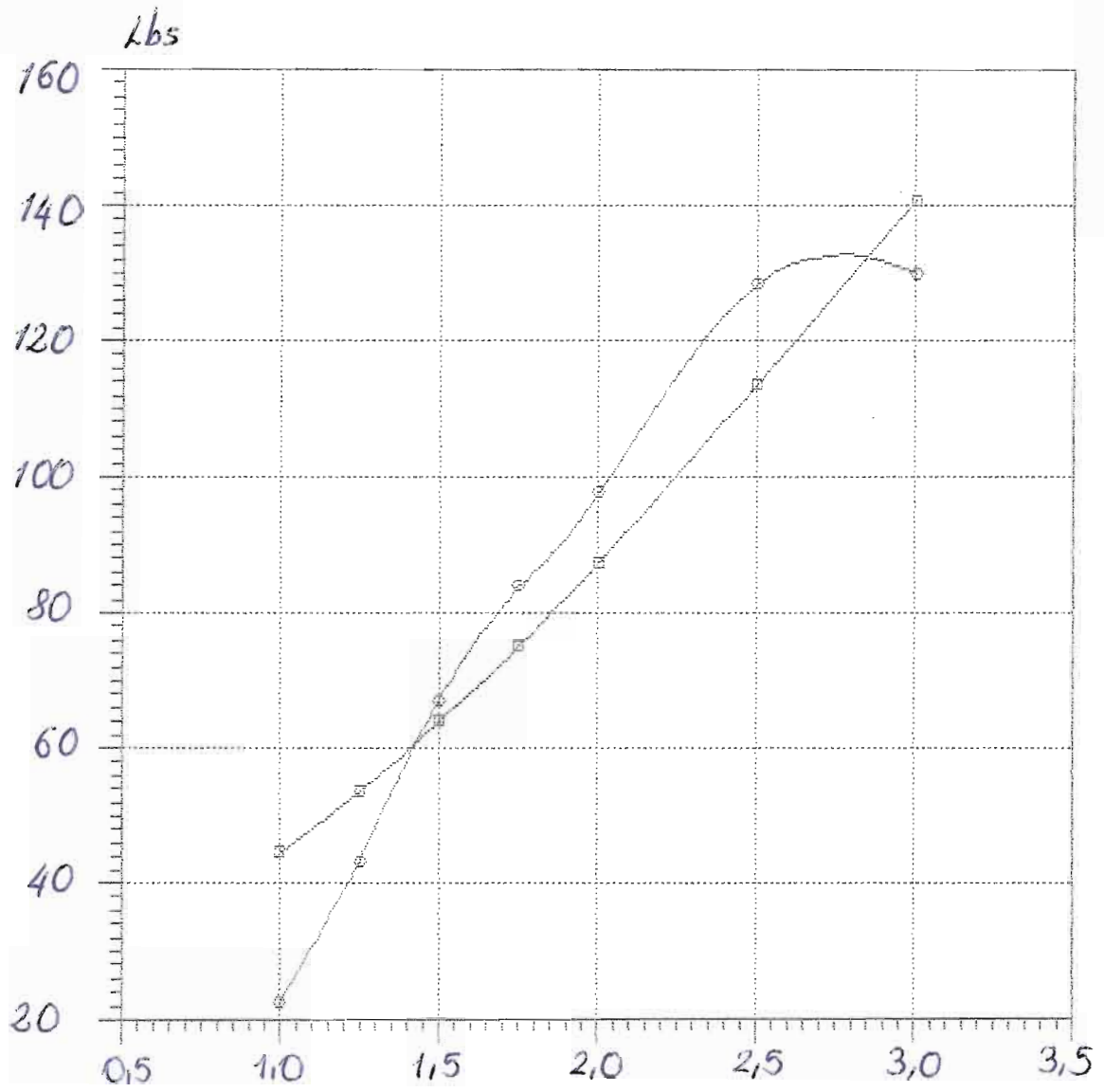
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A Lpx/Bpx=9.34 Ap/Vol=5.584 Lpx/Ap=12.878 Lcg/Lpx=0.326

6-85-340



—□—  
—○—

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### Bare-hull resistance

File: 6-85-400.mdl

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vs.

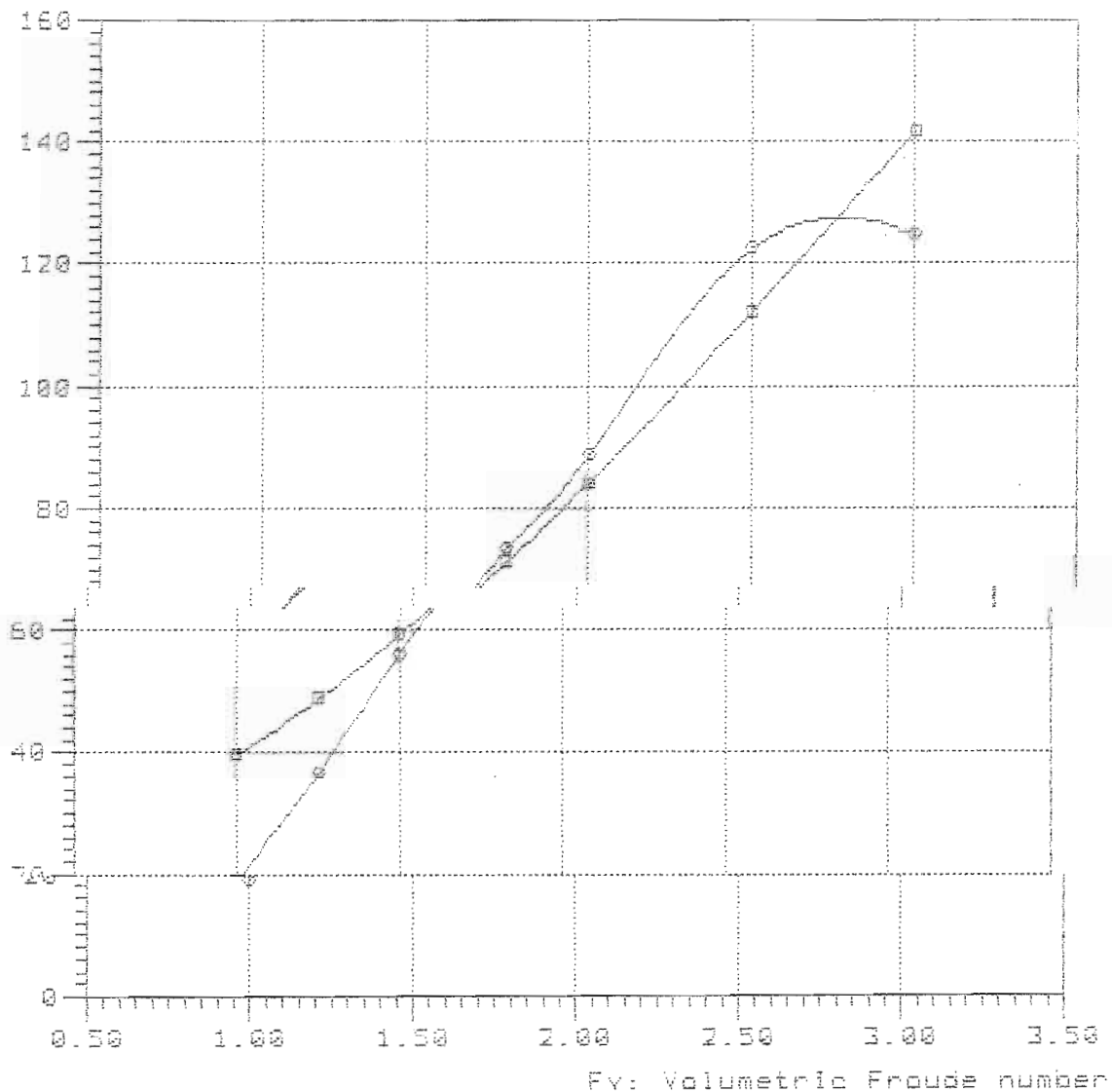
Date: 26 Feb 88

HydroComp, Inc.

### Volumetric Froude number

Time: 13:48

Rbare: Bare-hull resistance (lbs)

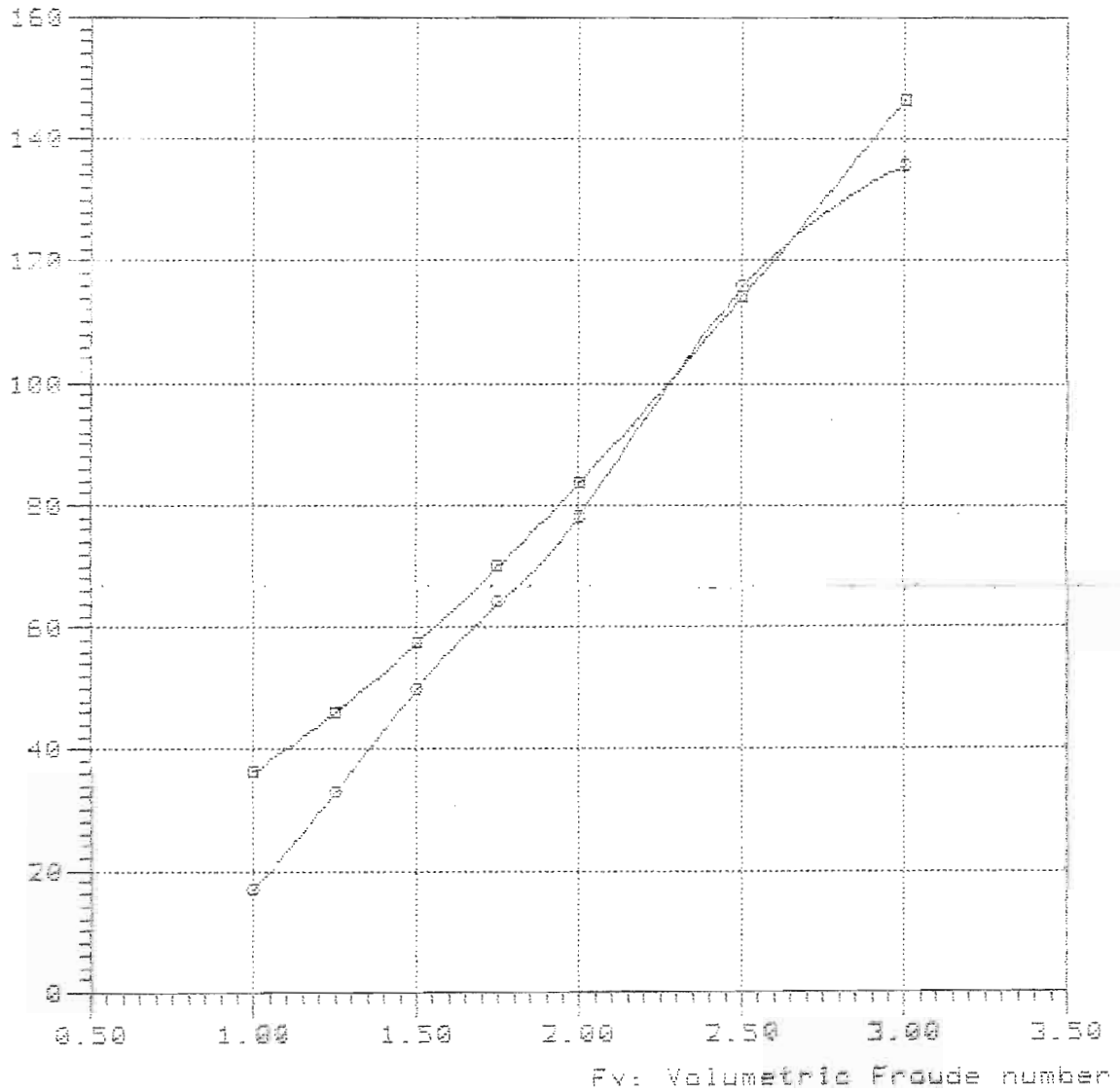


#### Curve legend

—■—

—○— TMB-65A Lpx/Bpx=5.34 Ap/Vol=5.584 Lpx/Ap=12.878 Lcg/Lpx=0.400

Rbare: Bare-hull resistance (lbs)

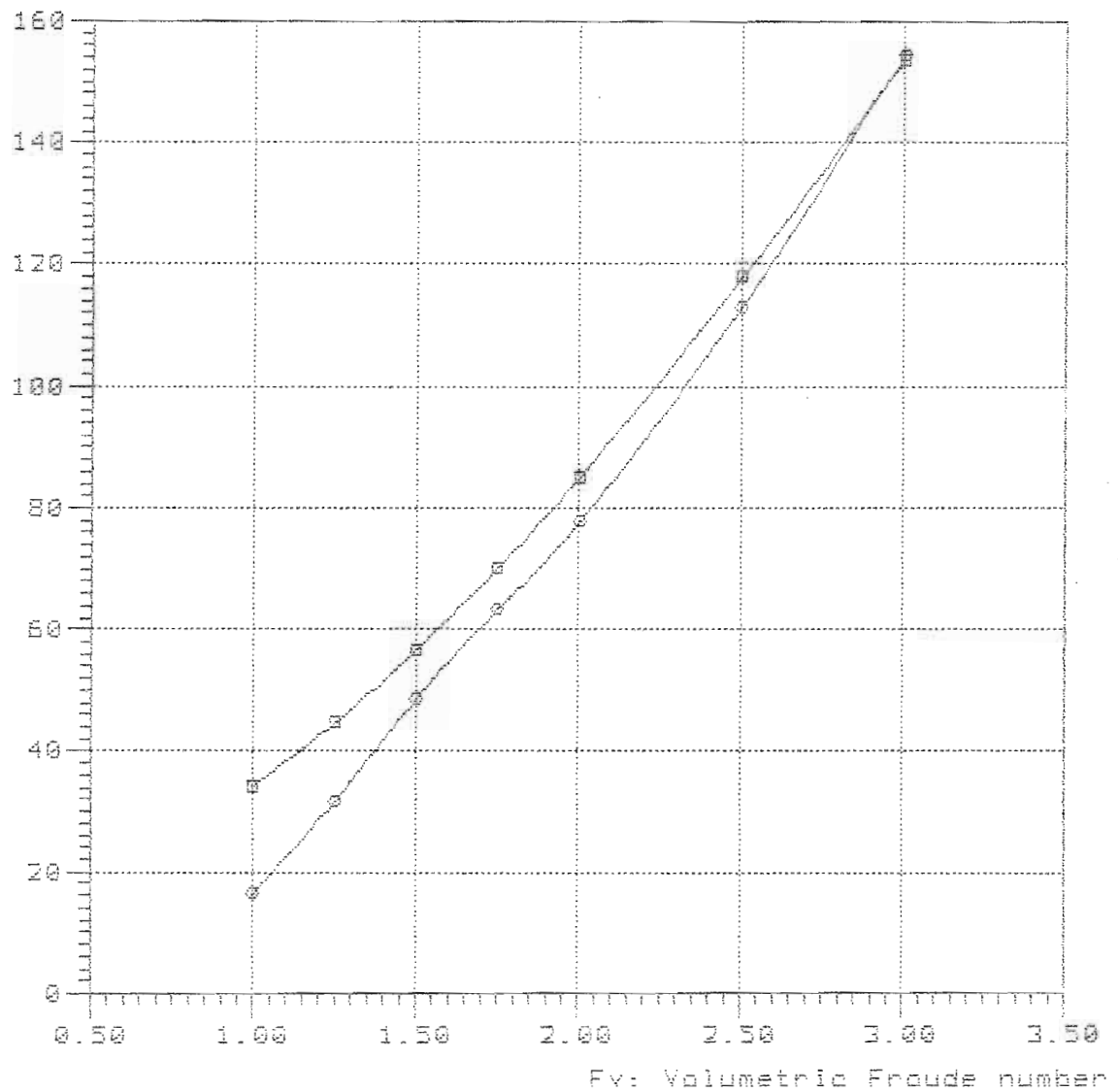


Curve legend

—■—

—○— TNE-65A Lpx/Bpx=9.34 Ap/Vol=5.584 Lpx/Ap=12.878 Log/Lpx=0.440

Rbare: Bare-hull resistance (lbs)

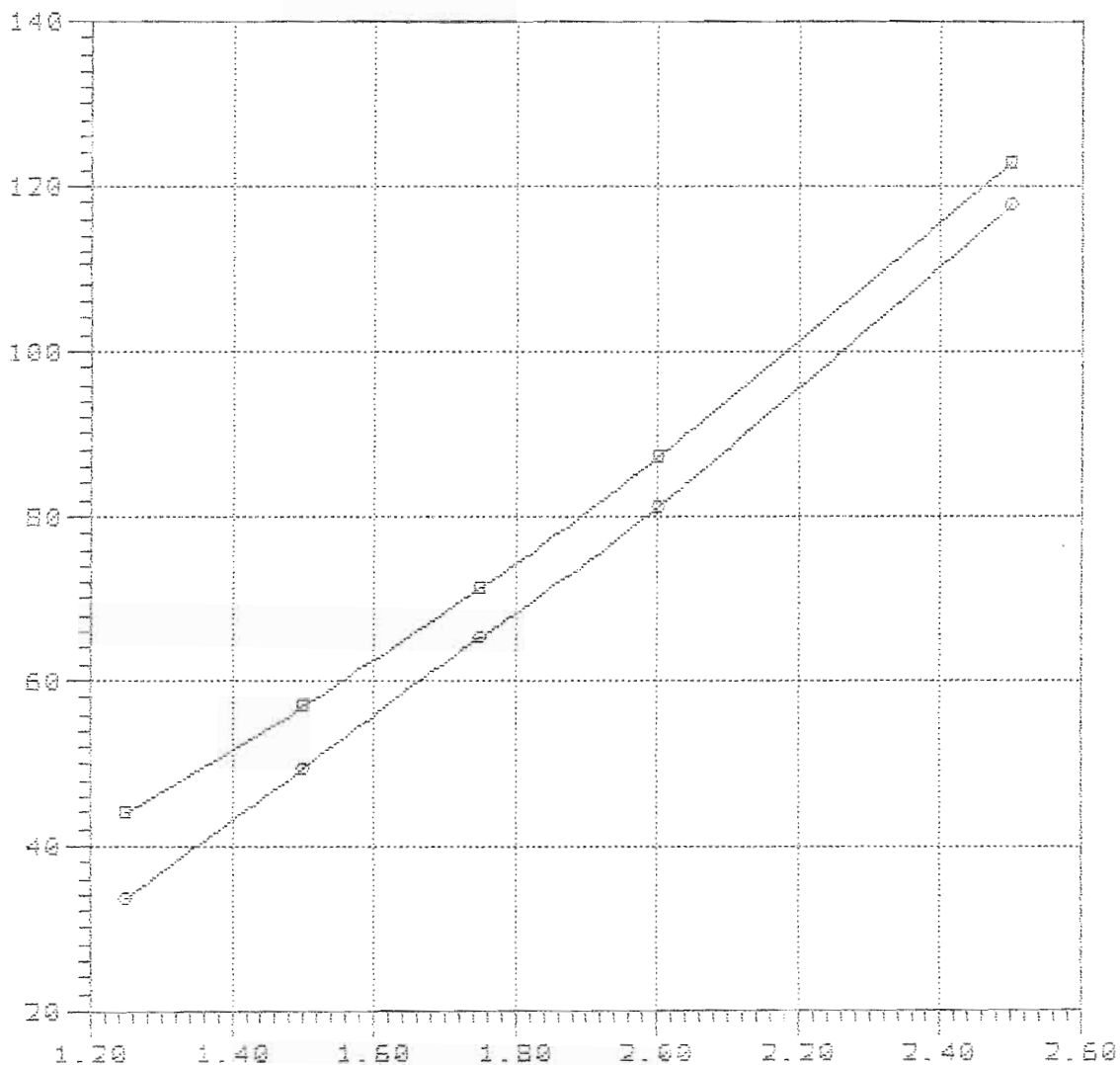


—■—

—○— TMB-65A Lpx/Bpx=9.34 Ap/Vol=5.584 Lpx/Ap=12.878 Lcg/Lpx=0.480



Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—

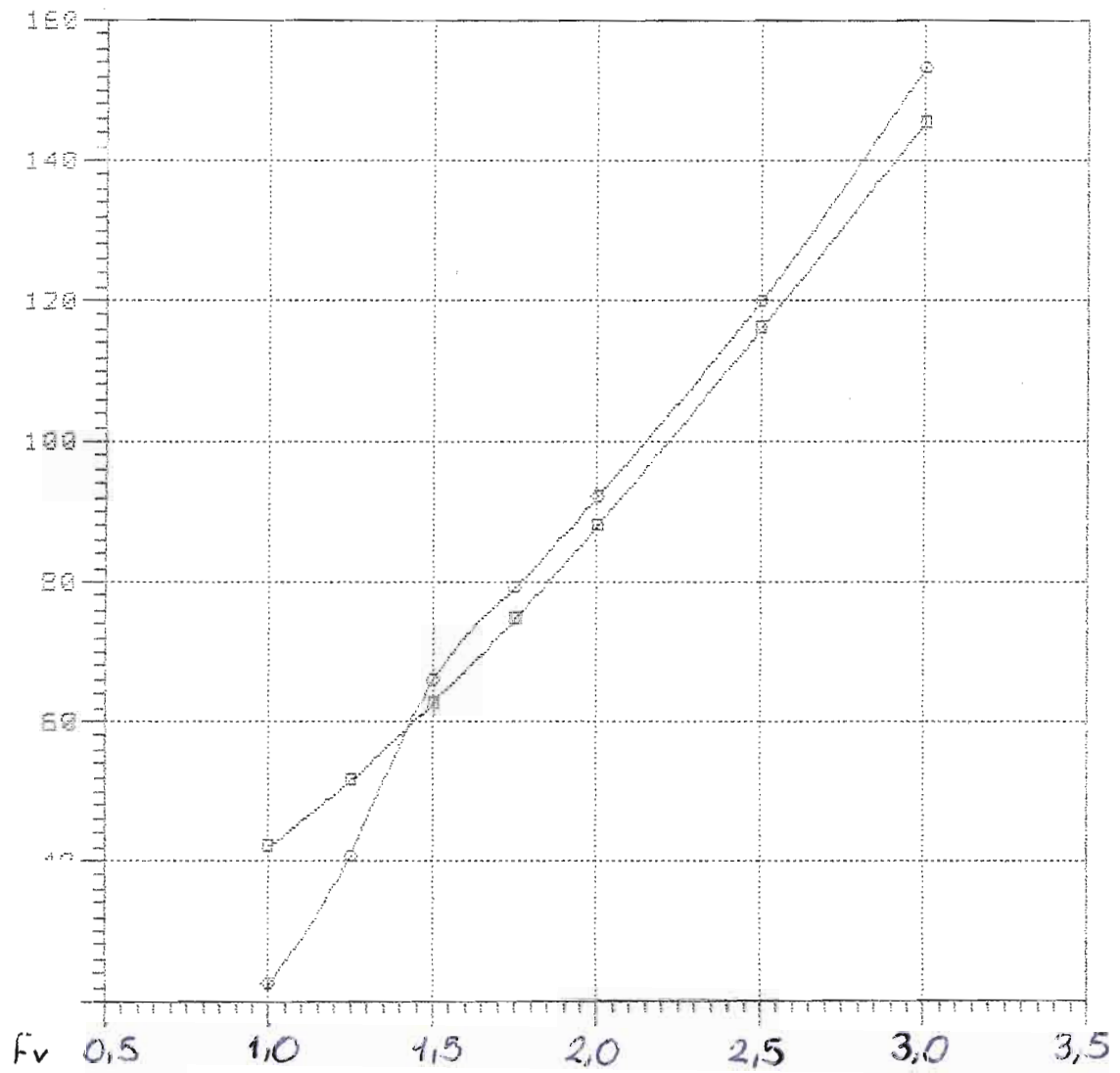
—●— TMB-65R Lpx/Bpx=9.34 Rp/Vol=5.584 Lpx/Rp=12.878 Log/Lpx=0.520

Model = 5248  
Ref = NSRDC  
Friction = ~~A~~ TTC Ca=4e-4

Lpx = 22.500 ft  
Lwl = 22.365 ft  
Bpx = 2.409 ft  
Ap = 39.311 sqft  
Vcg = 1.047 ft  
Disp. = 1000.00 Lb  
Deadrise = 30.40 degree  
Twist Angle = 2.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 in/

Lpx/Bpx = 9.340  
Lpx/Ap = 12.878  
Ap /Vol = 6.289  
Lpx/Vol = 9.027  
Cvload = 1.118  
Lbload = 0.032  
Disp-Lpx = 39.193

Rbare: Bare-hull resistance (lbs)



—□—  
—○—

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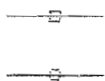
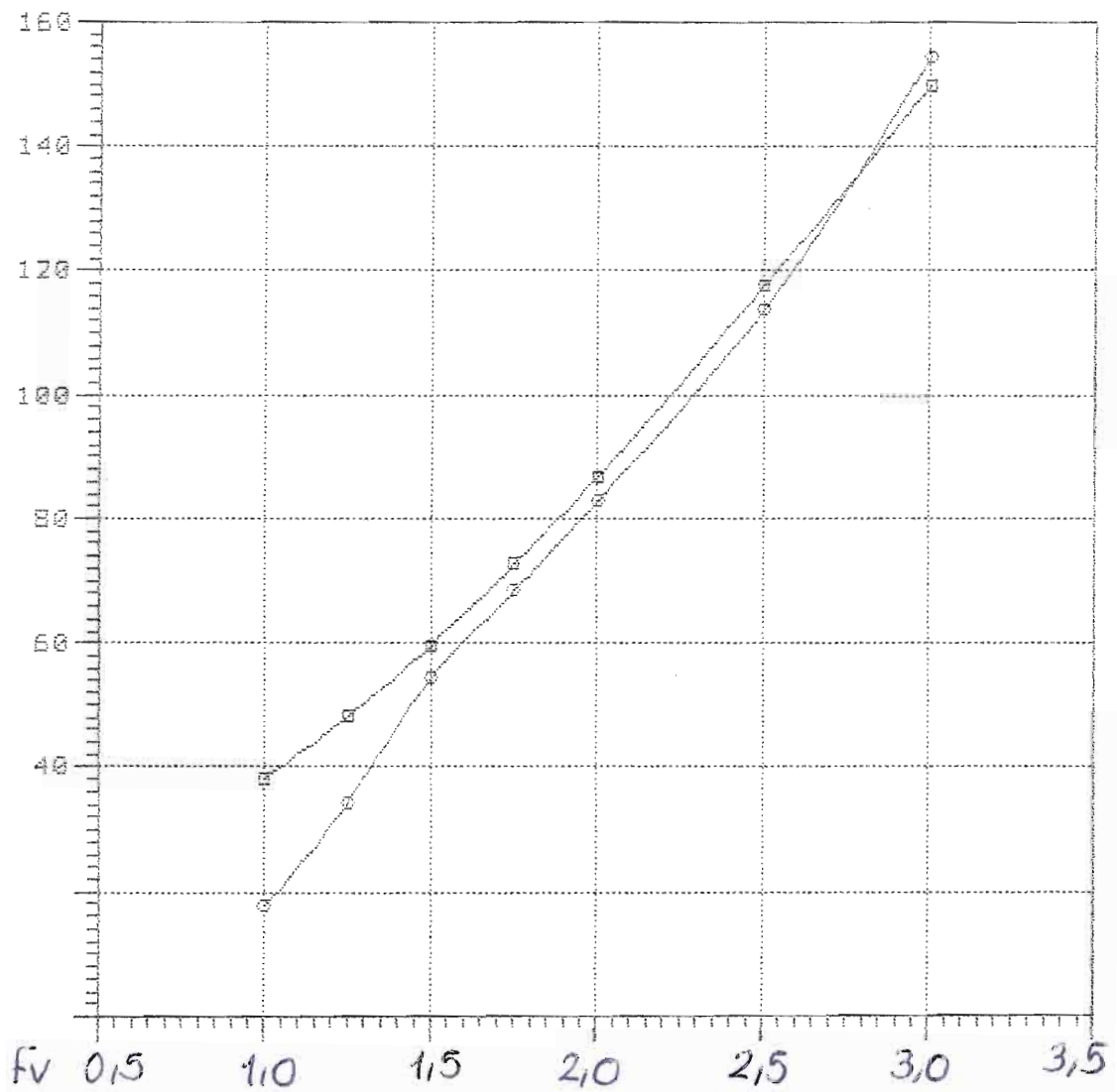
HydroComp, Inc.

File: 6-30-400.mdl

Date: 26 Feb 00

Time: 14:17

Rbare: Bare-hull resistance (lbs)



NavCad(tm) 3.1d

### Bare-hull resistance

File: E-90-440.mdl

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vs.

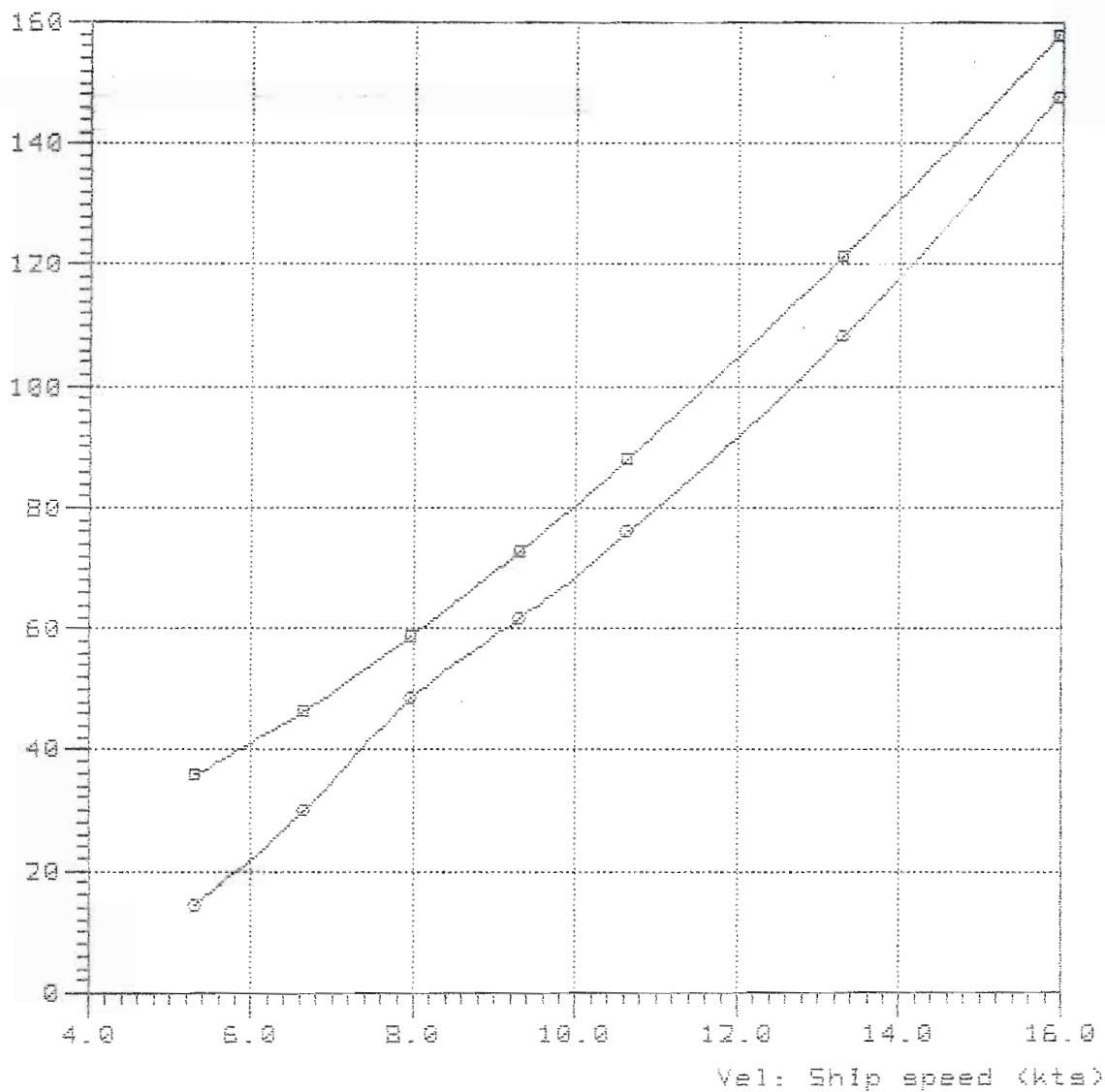
Date: 26 Feb 00

HydroComp, Inc.

### Ship speed

Time: 14:15

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

—○—

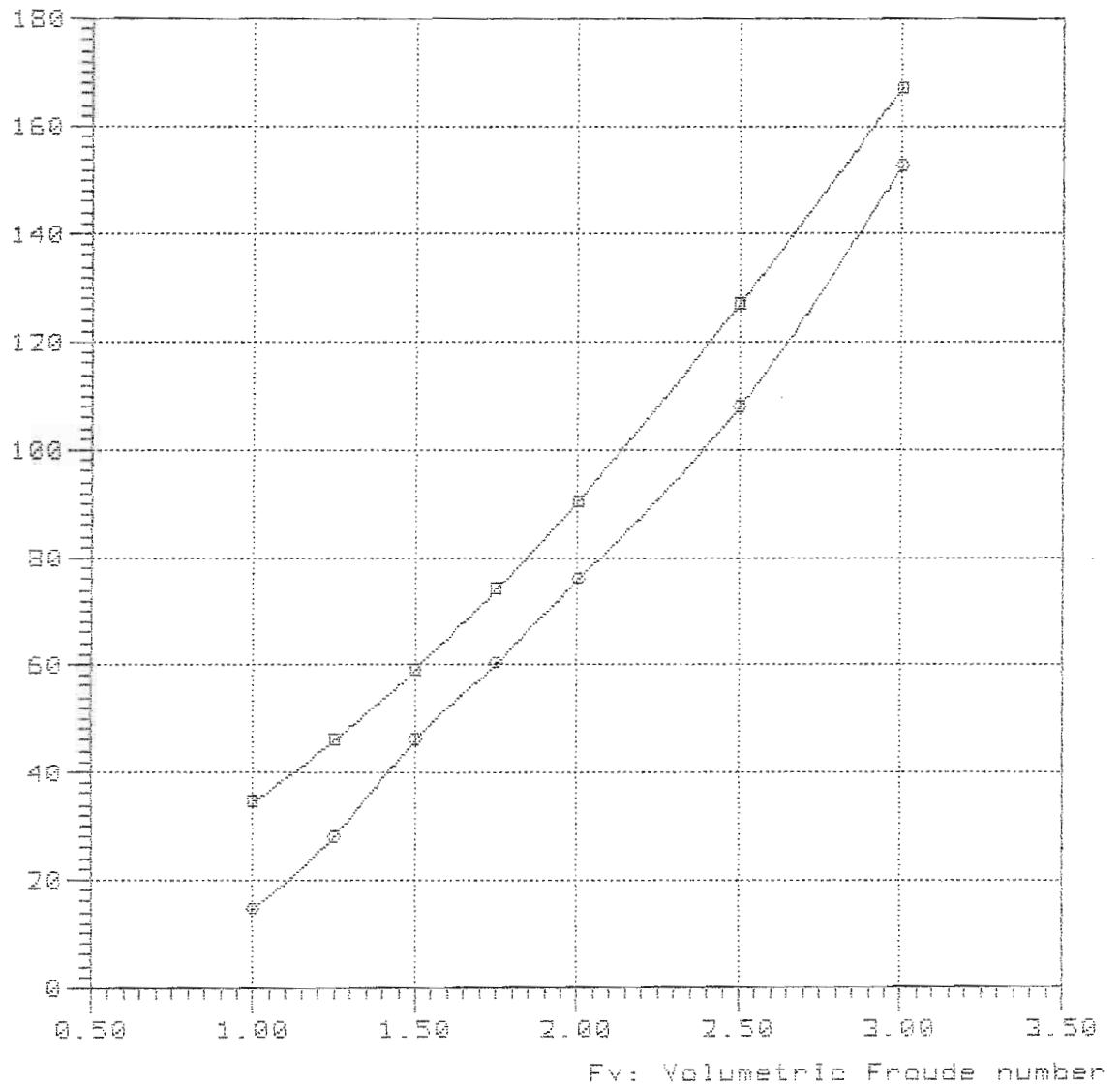
TMB-65A 5248 Lpx/Bpx=9.34 Ap/Vol=6.290 Lpx/Ap=12.878 Log/Lpx=0.440

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

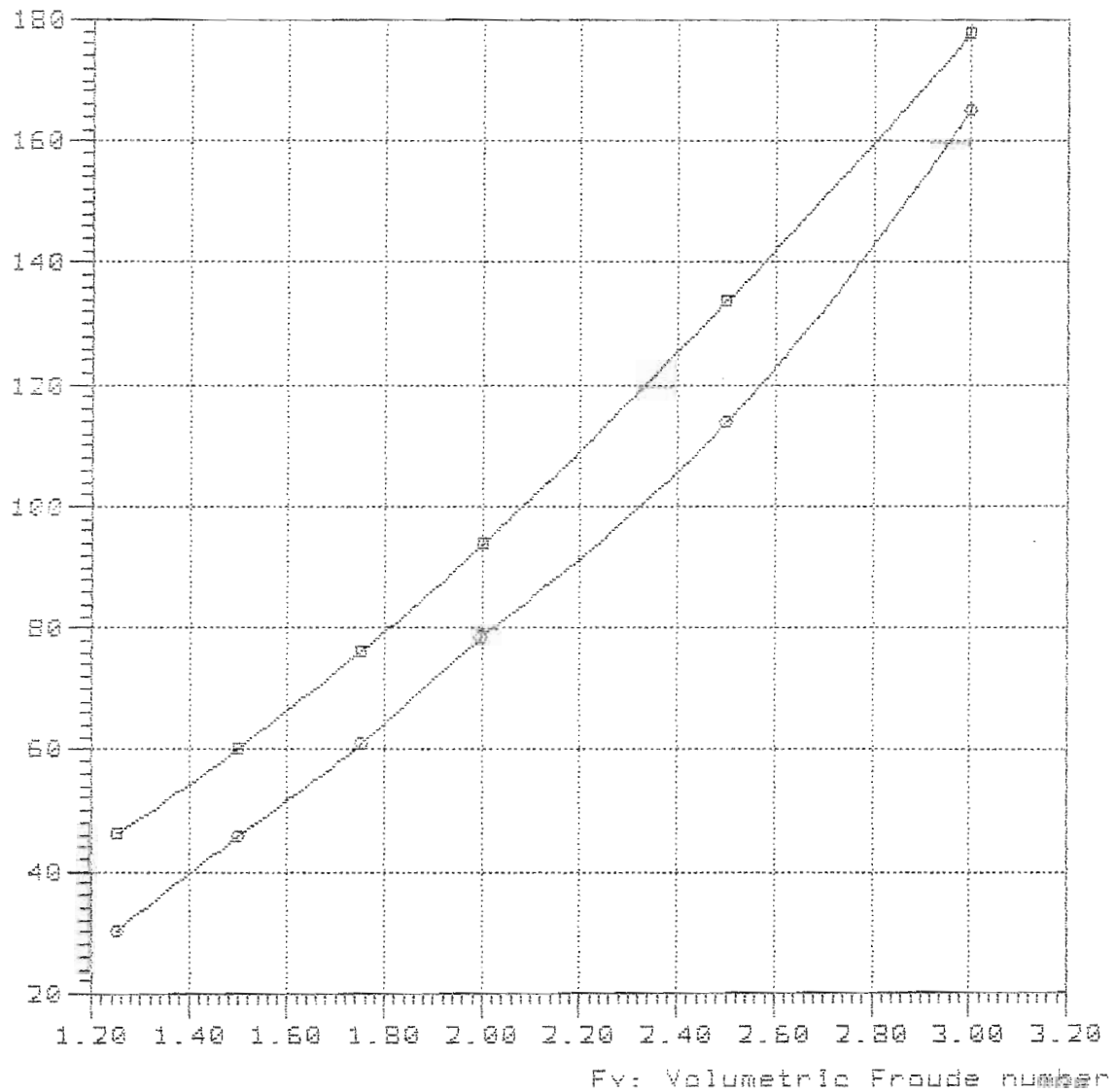
—●— TMB-65A 5248 Lpx/Bpx=9.34 Ap/Vol=6.290 Lpx/As=12.878 Log/Lpx=0.480

NavCad(tm) 3.1d  
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Bare-hull resistance  
vs.  
Volumetric Froude number

File: E-90-520.mdl  
Date: 26 Feb 00  
Time: 14:21

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—○— TMB-65A 5248 Lpx/Bpx=9.34 Ap/Vol=6.290 Lpx/Ap=12.878 Log/Lpx=0.520

Model = 5248  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 23.700 ft  
Lwl = 23.557 ft  
Bpx = 2.538 ft  
Ap = 43.616 sqft  
Vcg = 1.103 ft  
Disp. = 1000.00 Lb

Deadrise = 30.40 degree  
Twist Angle= 2.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 in/

Lpx/Bpx = 9.338  
Lpx/Ap = 12.878  
Ap /Vol = 6.978  
Lpx/Vol = 9.508  
Cvload = 0.956  
Lbload = 0.028  
Disp-Lpx = 33.536



NavCad(tm) 3.1d

### Bare-hull resistance

File: 7-95-320.mdl

(c) Copyright 1995

vs.

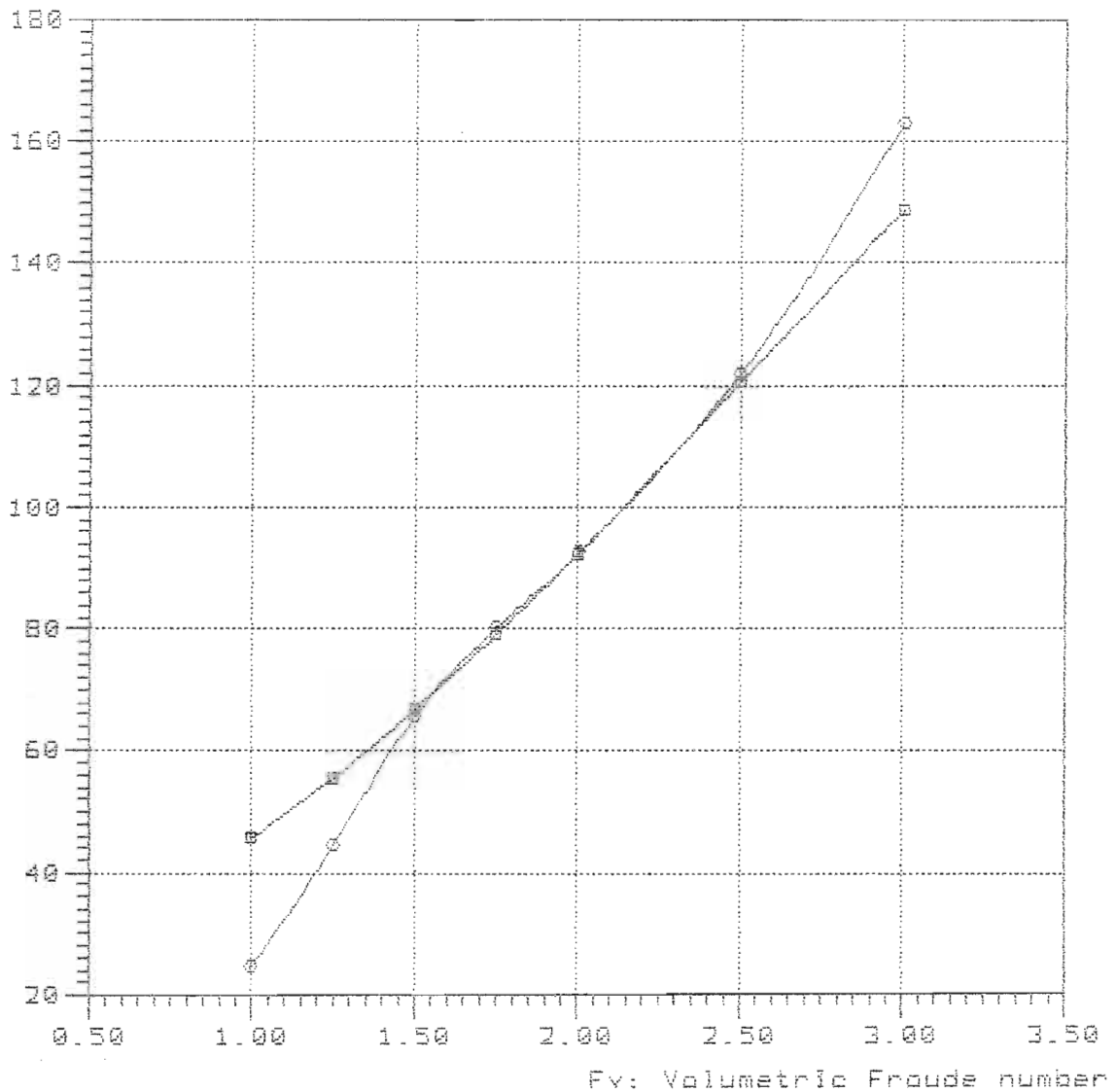
Date: 26 Feb 00

HydraComp, Inc.

### Volumetric Froude number

Time: 14:23

Rbare: Bare-hull resistance (lbs)

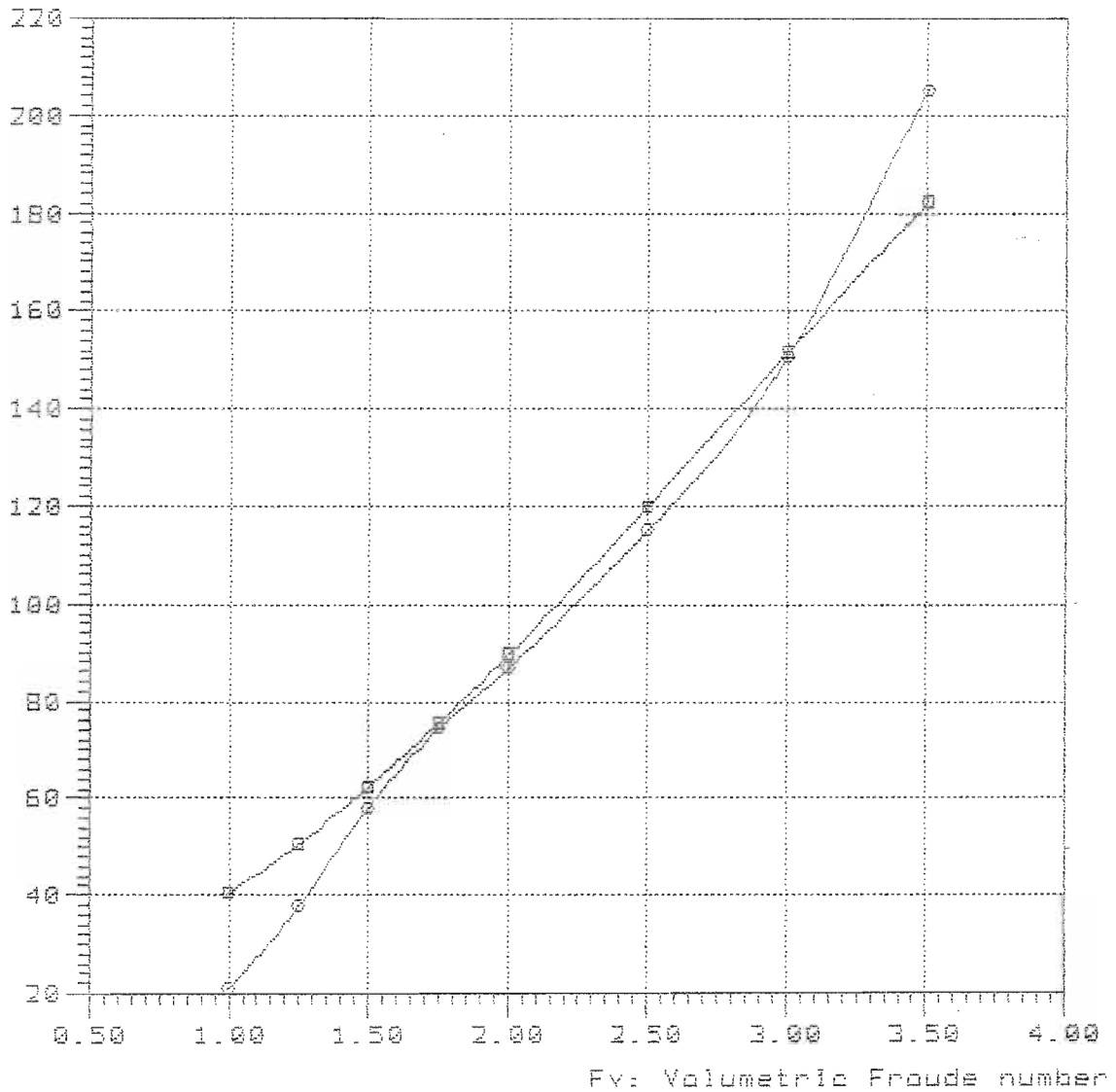


#### Curve legend

—■—

—○— TMB-65A 5248 Lpx/Bpx=9.34 Ap/Vol=6.978 Lpx/Ap=12.878 Lcg/Lpx=0.320

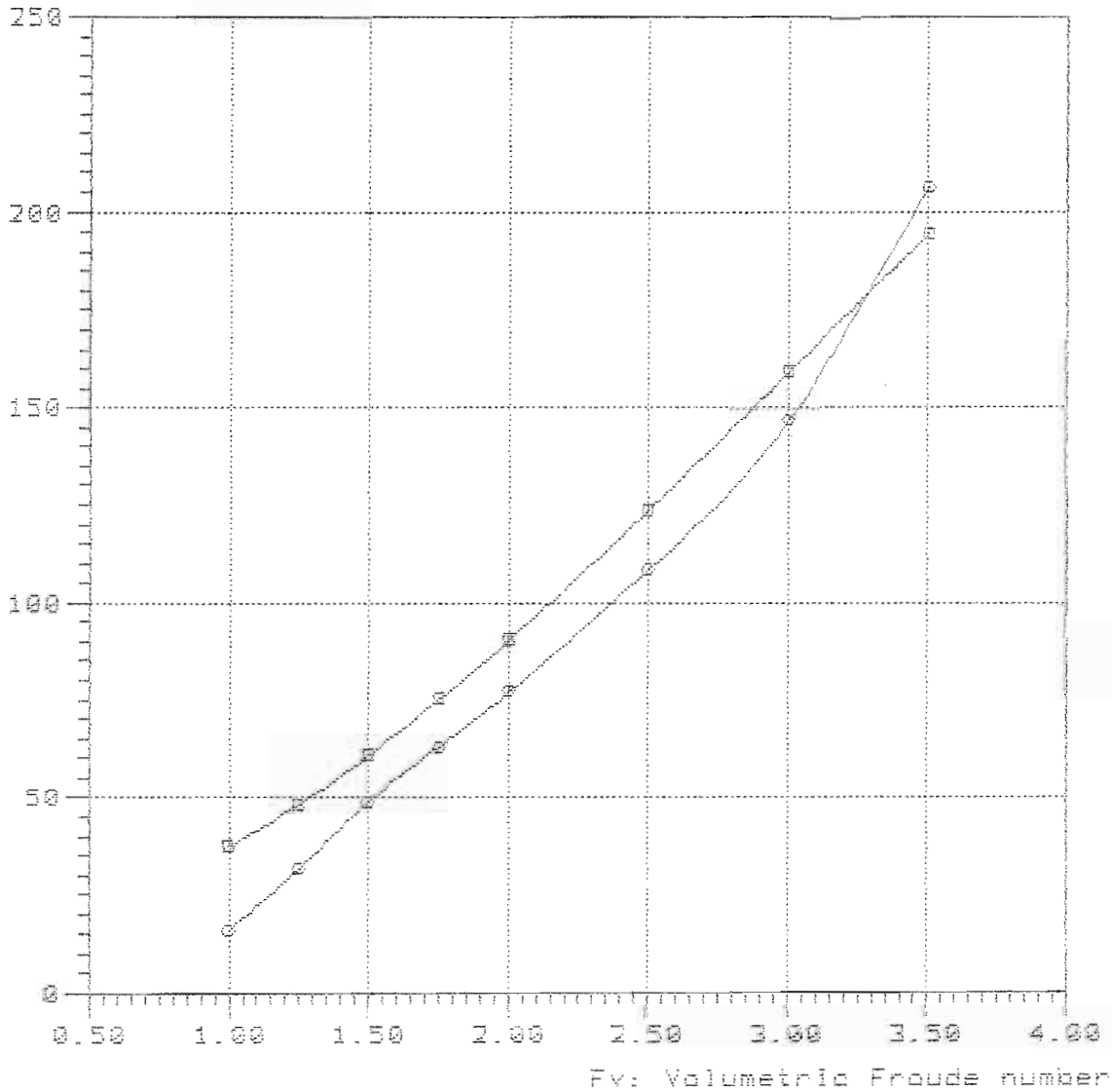
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65R 5248 Lpx/Bpx=9.34 Ap/Vol=6.9790 Lpx/Ap=12.878 Log/Lpx=0.360

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65A 524B Lpx/Bpx=9.34 Rp/Vol=6.9750 Lpx/Rp=12.878 Lcg/Lpx=0.400

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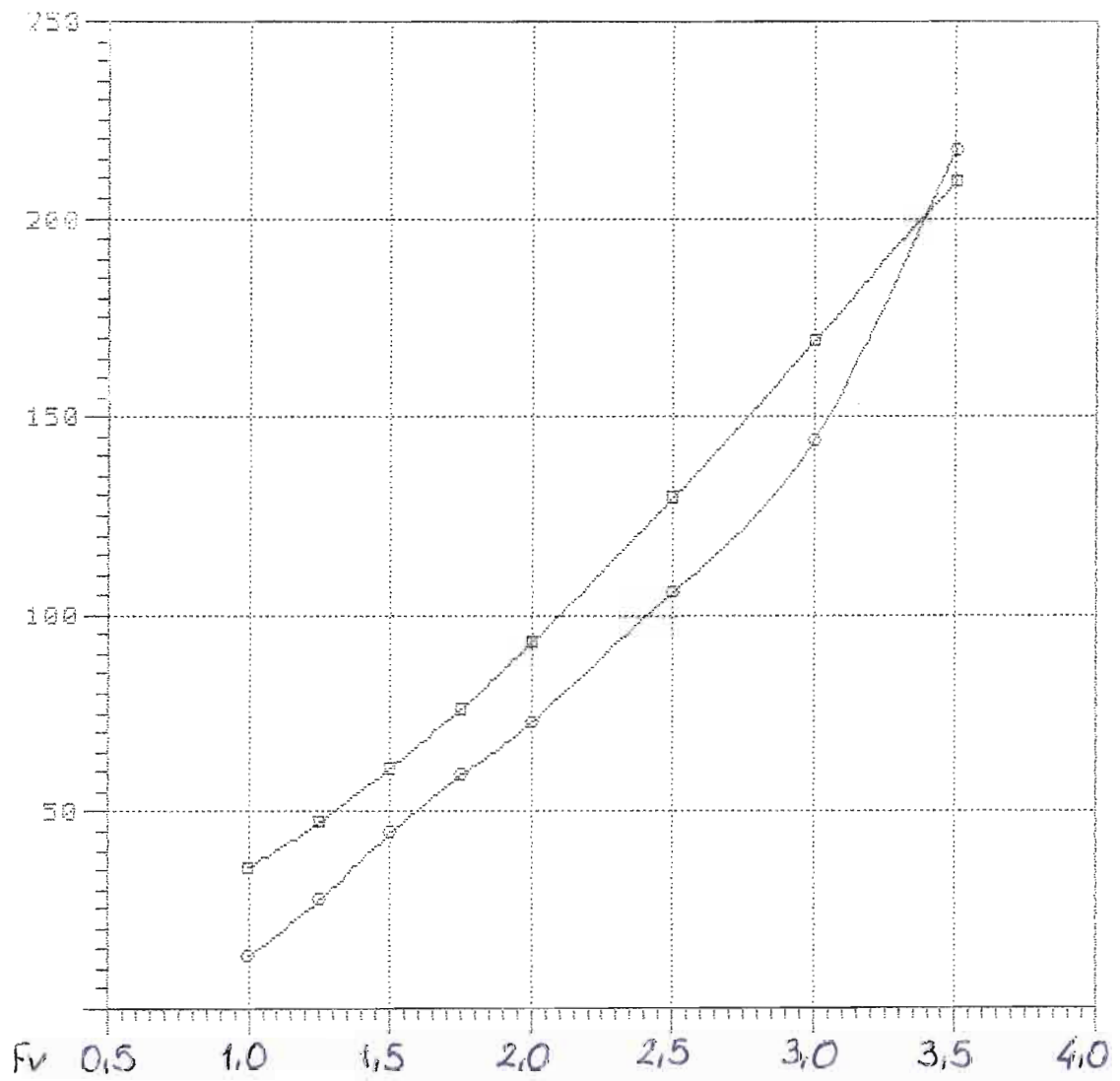
HydroComp, Inc.

File: 7-95-440.mdl

Date: 26 Feb 00

Time: 14:30

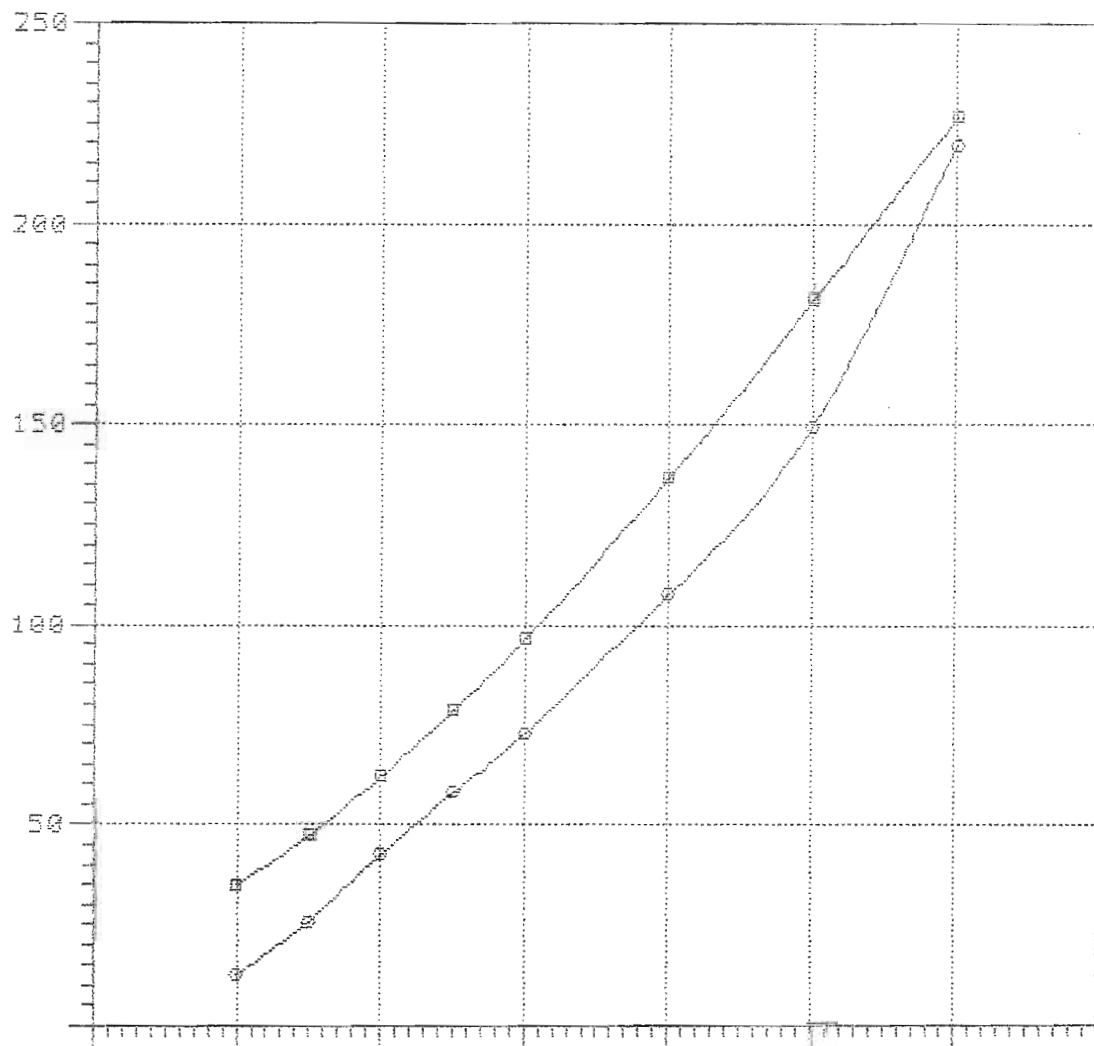
Rbare: Bare-hull resistance (lbs)



—■—

—○—

Rbare: Bare-hull resistance (lbs)



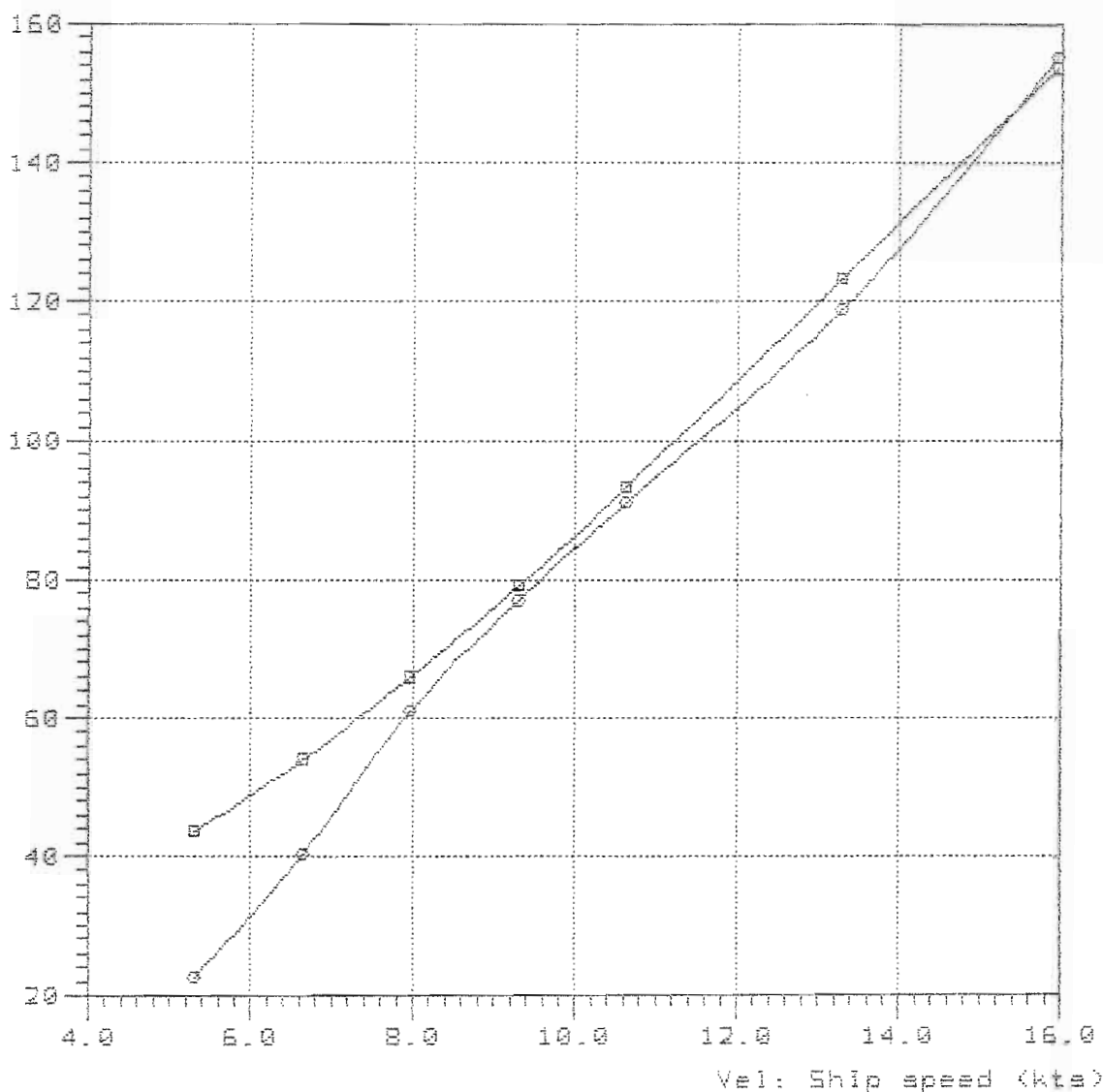
—□—  
—○—

Model = 5248  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 25.000 ft  
Lwl = 24.849 ft  
Bpx = 2.677 ft  
Ap = 48.532 sqft  
Vcg = 1.170 ft  
Disp. = 1000.00 Lb  
Deadrise = 30.40 degree  
Twist Angle= 2.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 in

Lpx/Bpx = 9.339  
Lpx/Ap = 12.878  
Ap /Vol = 7.764  
Lpx/Vol = 10.030  
Cvload = 0.815  
Lbload = 0.024  
Disp-Lpx = 28.571

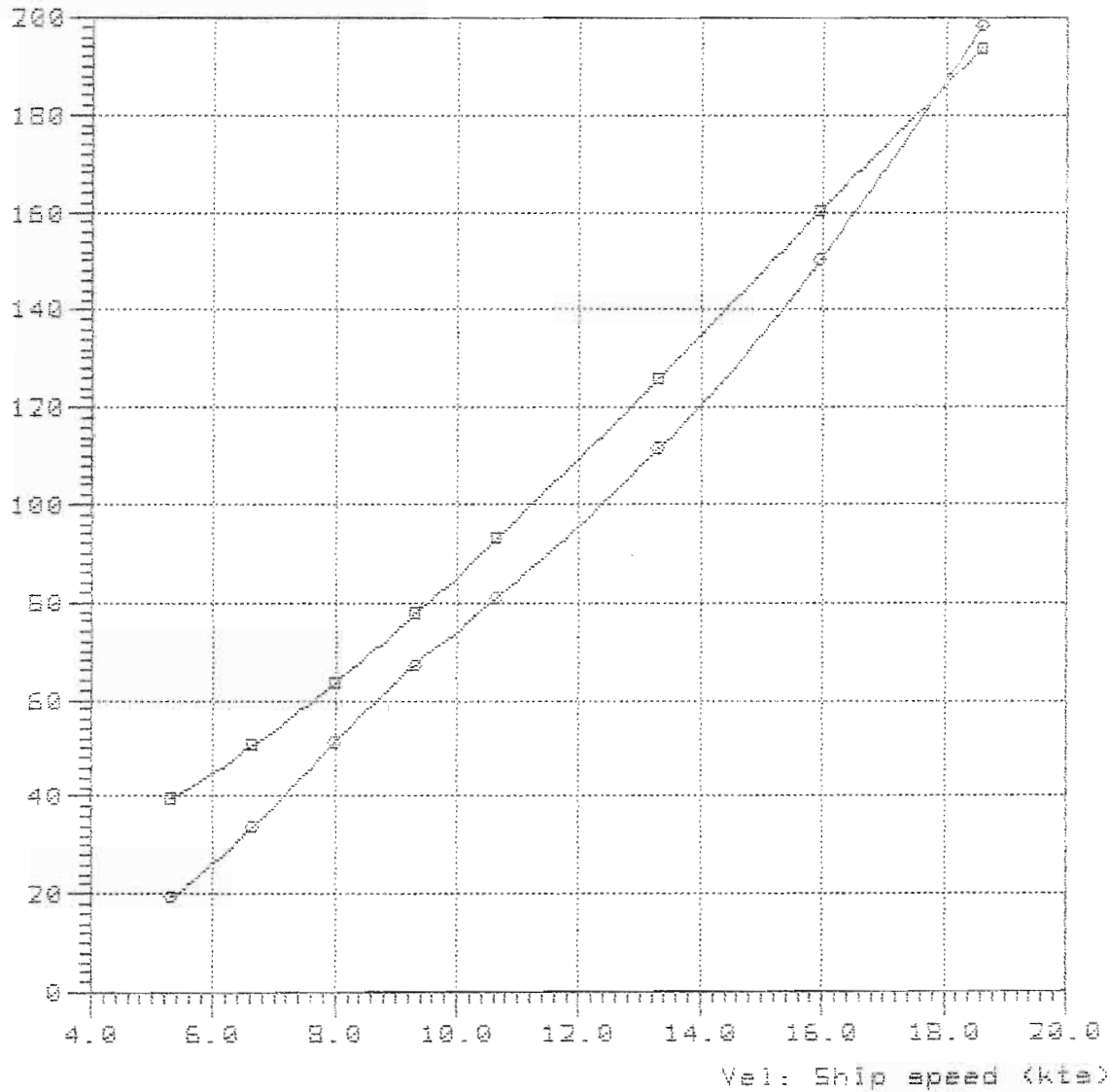
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65A 5248 Lpx/Bpx=9.34 Ap/Vol=7.765 Lpx/Ap=12.878 Lcg/Lpx=0.320

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A 5248 Lpx/Bpx=9.34 Ap/Vel=7.763 Lpx/Ap=12.873 Log/Lpx=0.360



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### Bare-hull resistance

File: 8-10-40.mdl

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vs.

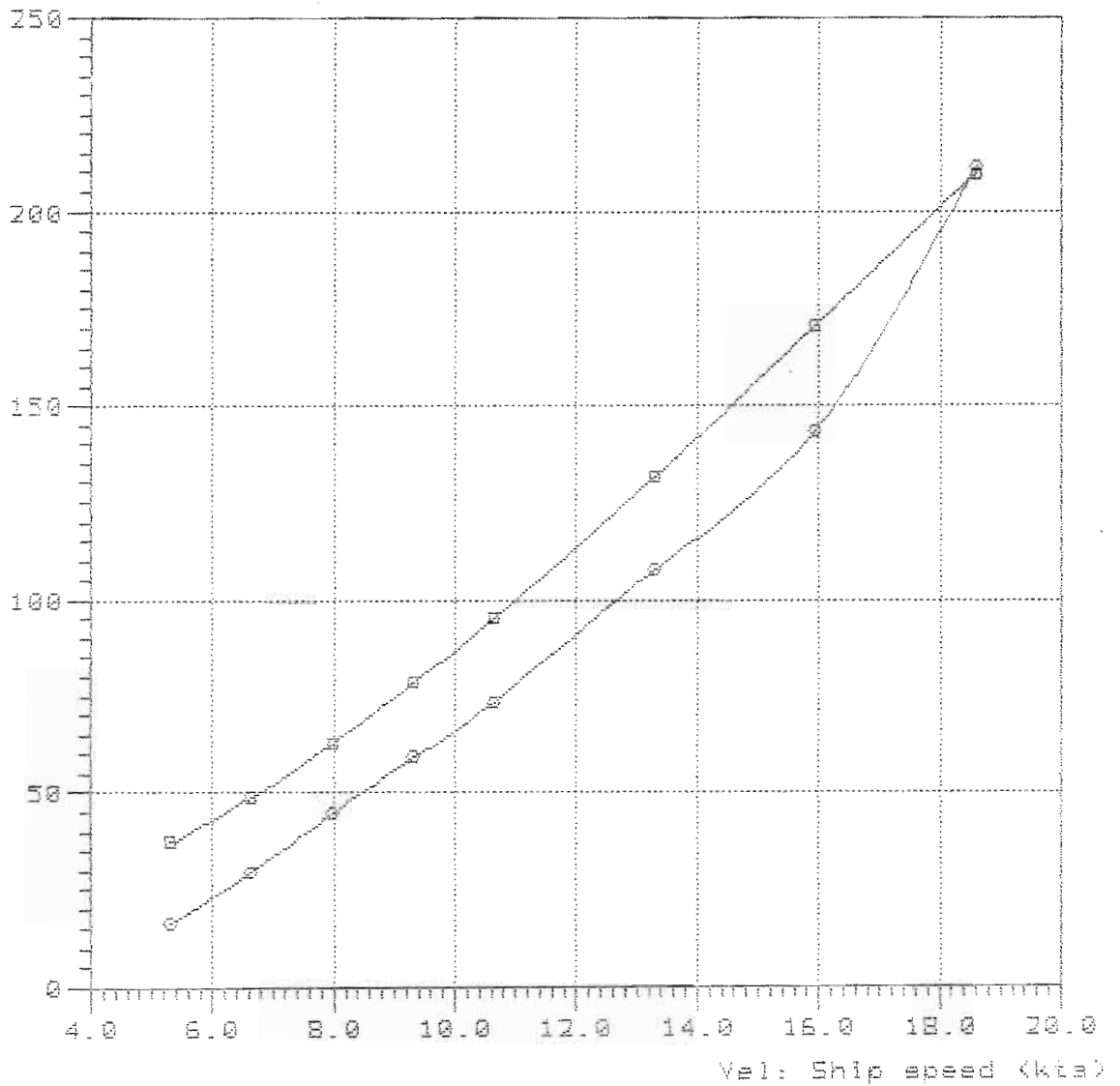
Date: 26 Feb 00

HydroComp, Inc.

### Ship speed

Time: 14:43

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—■—

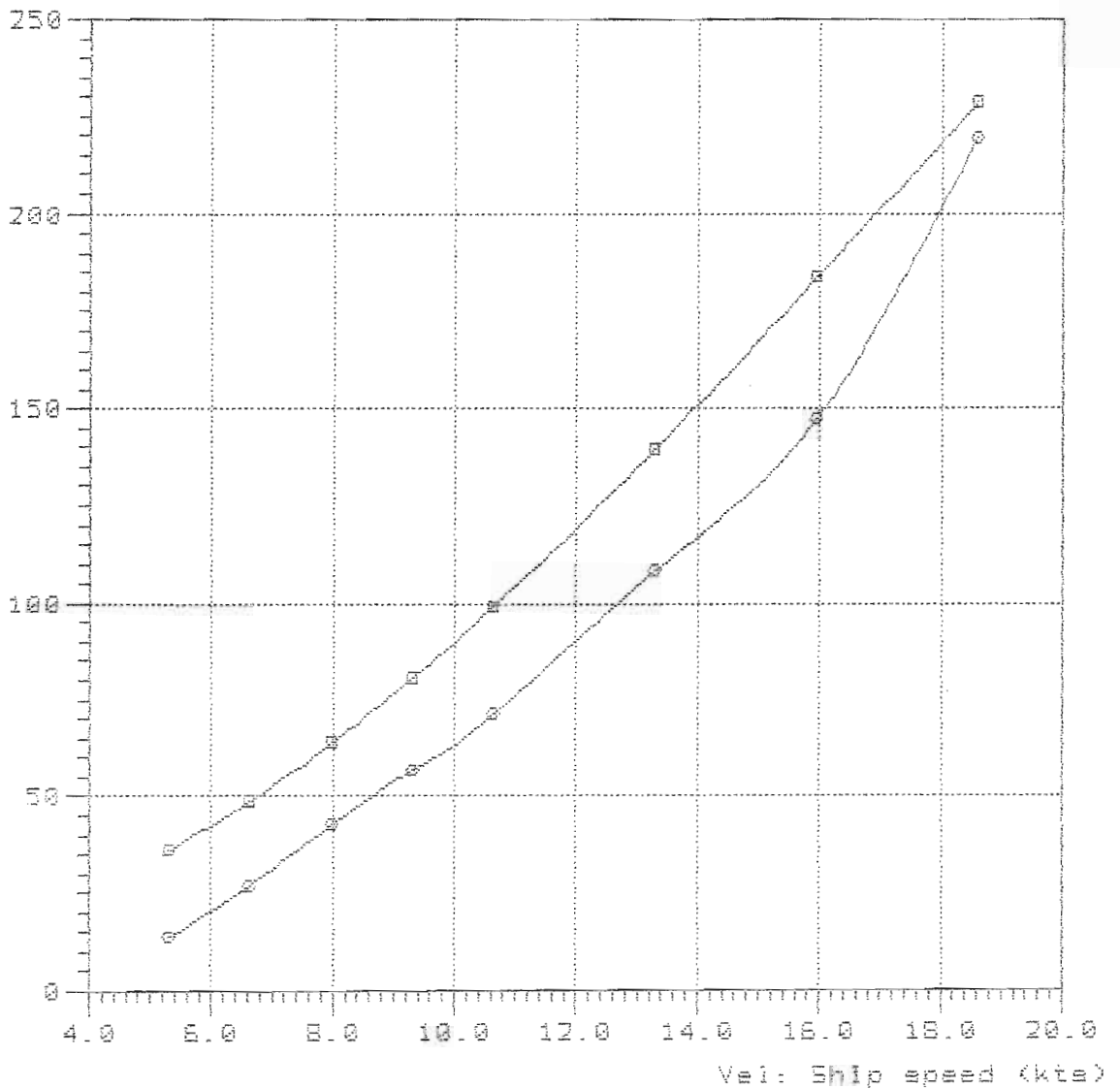
—○— TMB-65A 5248 Lpx/Bpx=9.34 Ap/Vol=7.765 Lpx/Ap=12.879 Log/Lpx=0.400

### Bare-hull resistance

vs.

### Ship speed

Rbare: Bare-hull resistance (lbs)

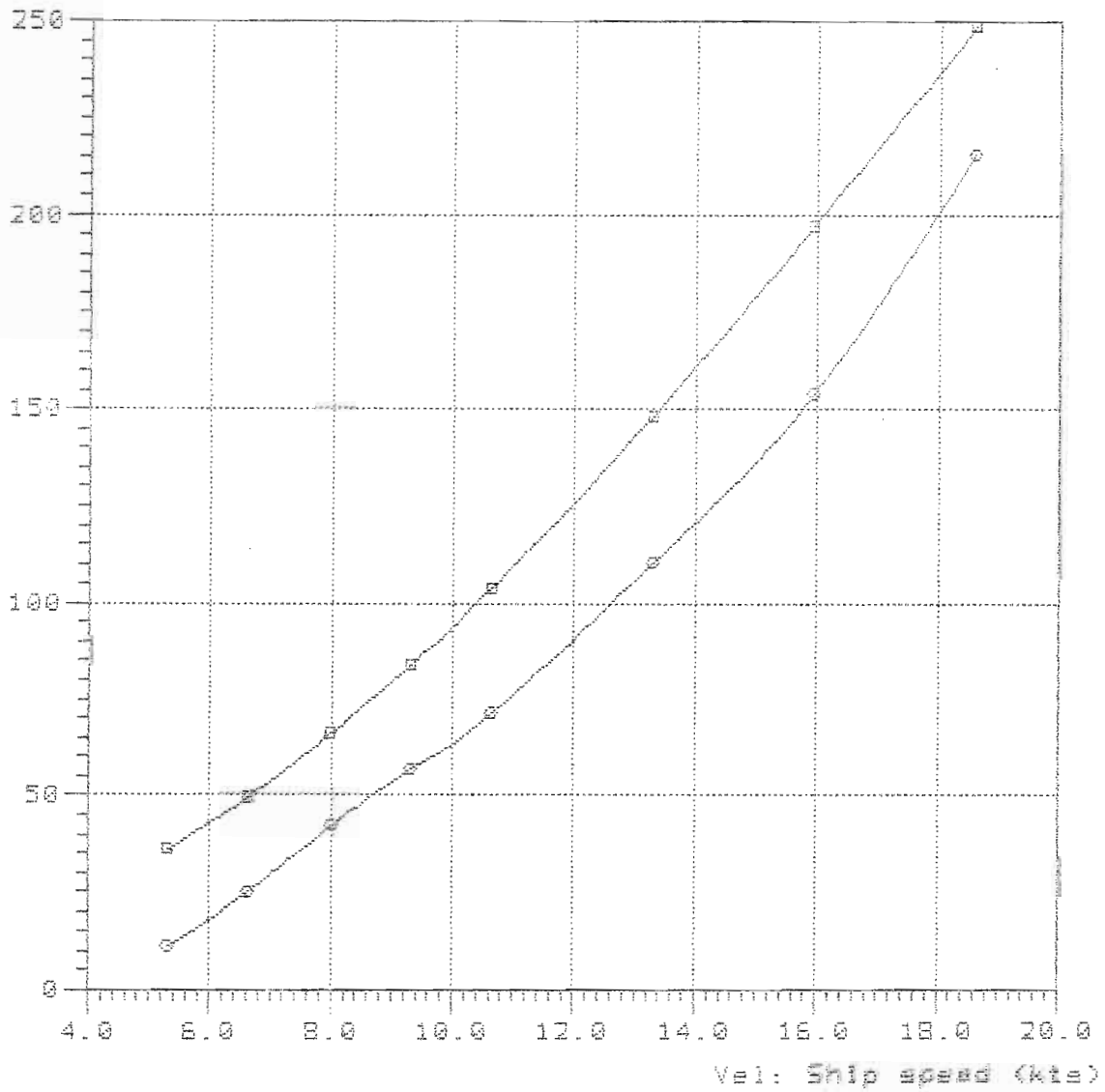


#### Curve legend

—■—

—●— TMB-65A 524B Lpx/Bpx=9.34 Rp/Vol=7.765 Lpx/Rp=12.878 Log/Lpx=0.440

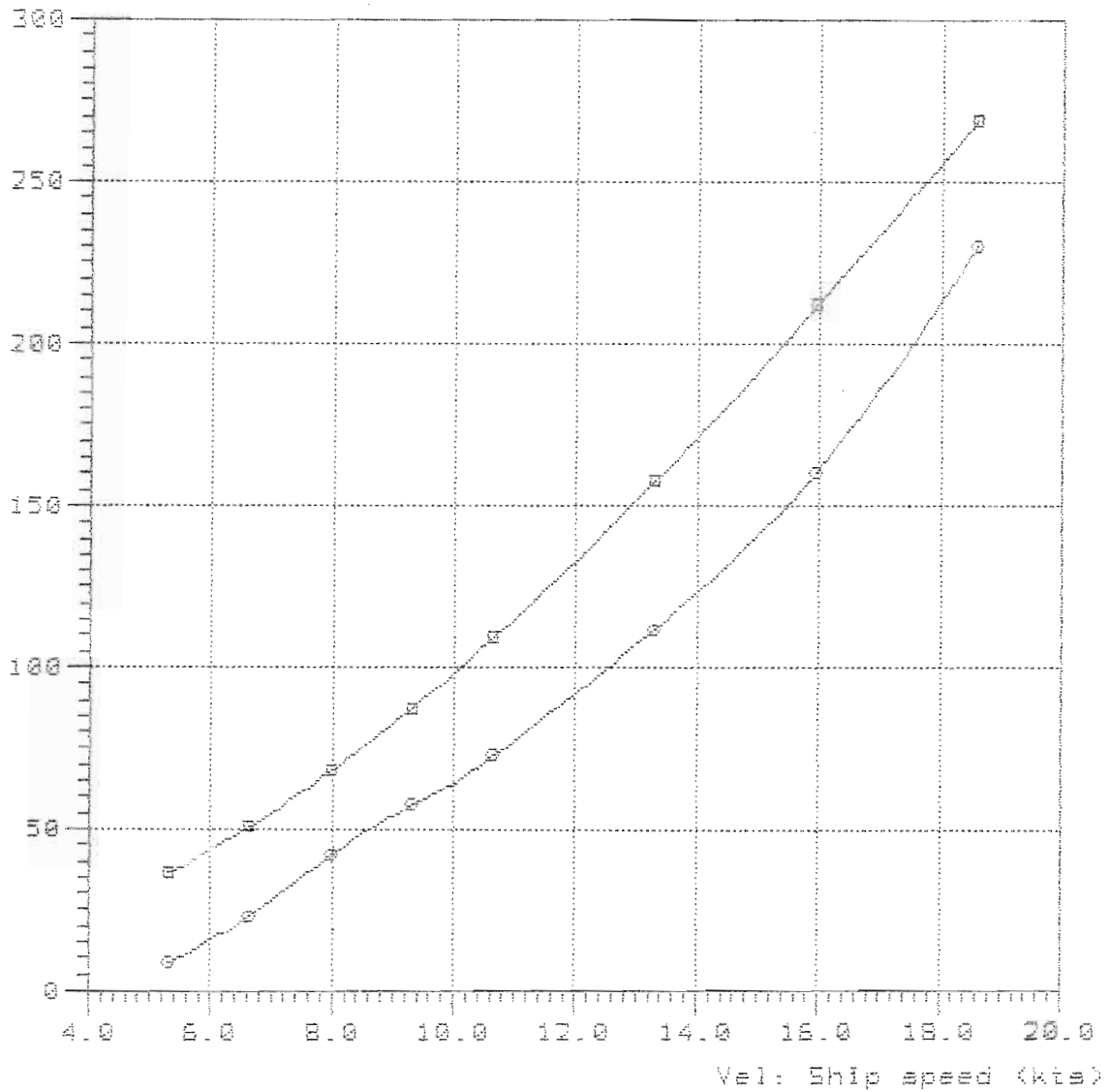
Rbare: Bare-hull resistance (lba)



—■—

—○— TMB-65A 524E Lpx/Bpx=9.34 Ap/Vol=7.765 Lpx/Rp=12.878 Lcg/Lpx=0.488

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A 5248 Lpx/Bpx=9.34 Ap/Val=7.765 Lpx/Ap=12.878 Log/Lpx=0.520

5249

Model = 5249  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 16.200 ft  
Lwl = 16.103 ft  
Bpx = 3.476 ft  
Ap = 40.758 sqft  
Vcg = 0.754 ft  
Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle= 1.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 4.661  
Lpx/Ap = 6.439  
Ap /Vol = 6.521  
Lpx/Vol = 6.499  
Cvload = 0.372  
Lbload = 0.031  
Disp-Lpx = 105.004

Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCI DENİZCİLİĞE Aittir  
Bu doküman veya bunun bir kısmı  
üçüncü şahıslara verilemez, taksir  
veya kopya edilemez ve her ne maks-  
adla olursa olsun maksadı dışında  
izinsiz kullanılamaz.

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

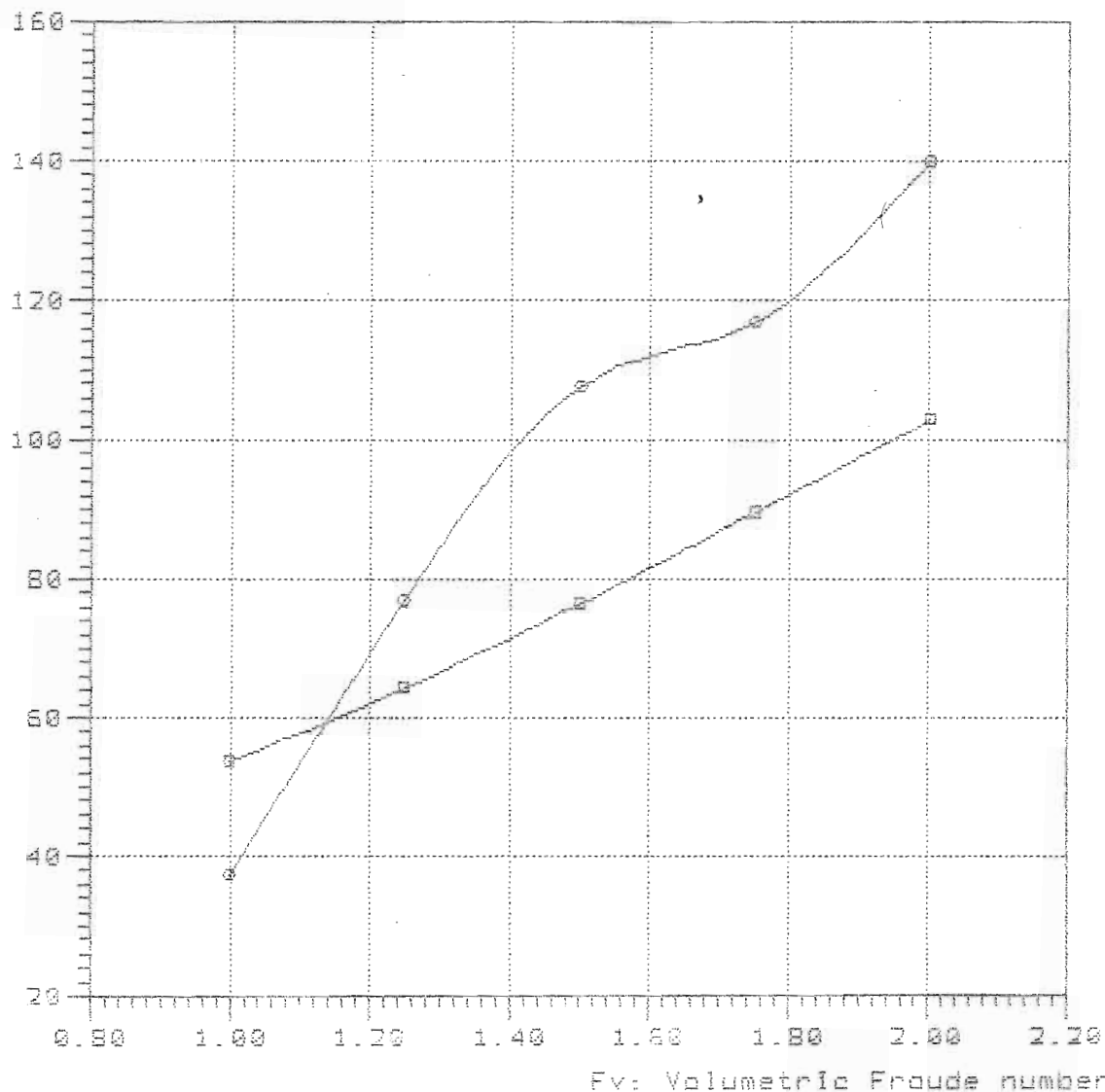
### Volumetric Froude number

File: 7-65-400.mdl

Date: 26 Feb 00

Time: 12:08

Rbare: Bare-hull resistance (lbs)

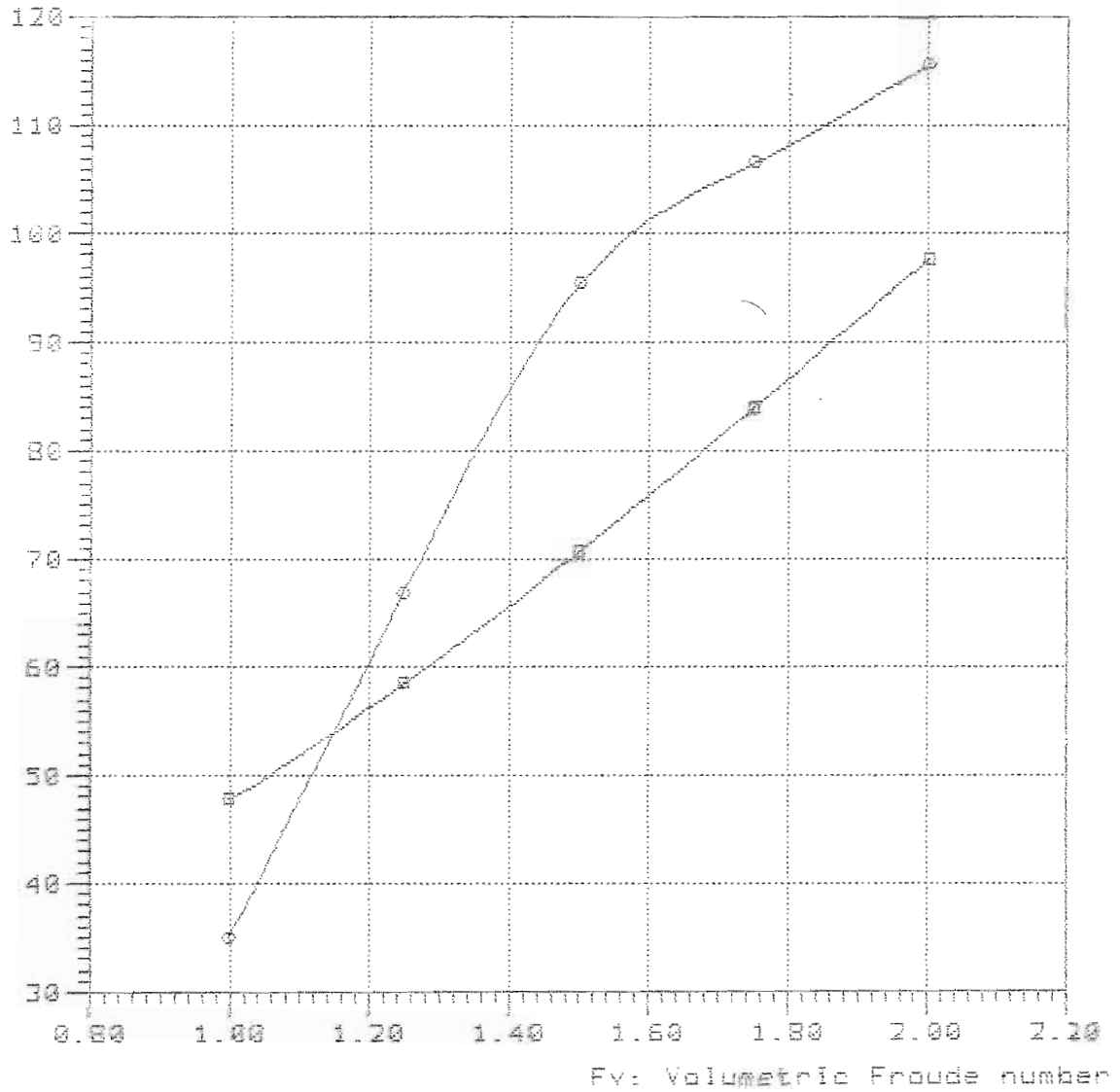


#### Curve legend

—□—

—○— TMB-65A 3249 Lpx/Bpx=4.66 Ap/Vol=6.521 Lpx/Vol=6.50 Lpx/Ap=6.439 Log/Lpx=0.4

Rbare: Bare-hull resistance (lbs)



—■—  
—○— TMB-65R 5249 Lpx/Spx=4.66 Ap/Vol=6.521 Lpx/Vol=6.50 Lpx/Ap=6.439 Log/Lpx=0.4



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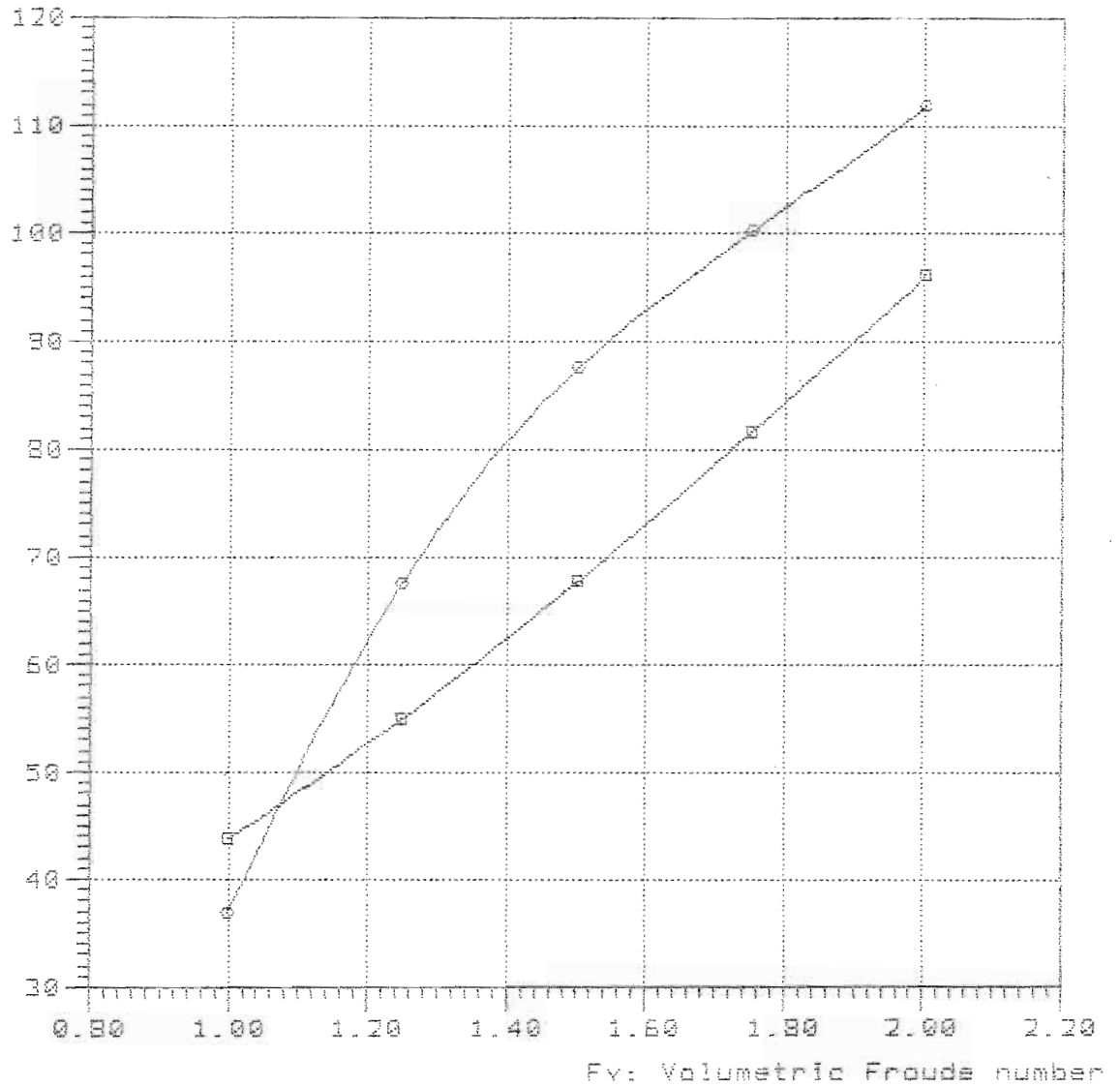
HydroComp, Inc.

File: 7-65-480.mdi

Date: 26 Feb 00

Time: 12:17

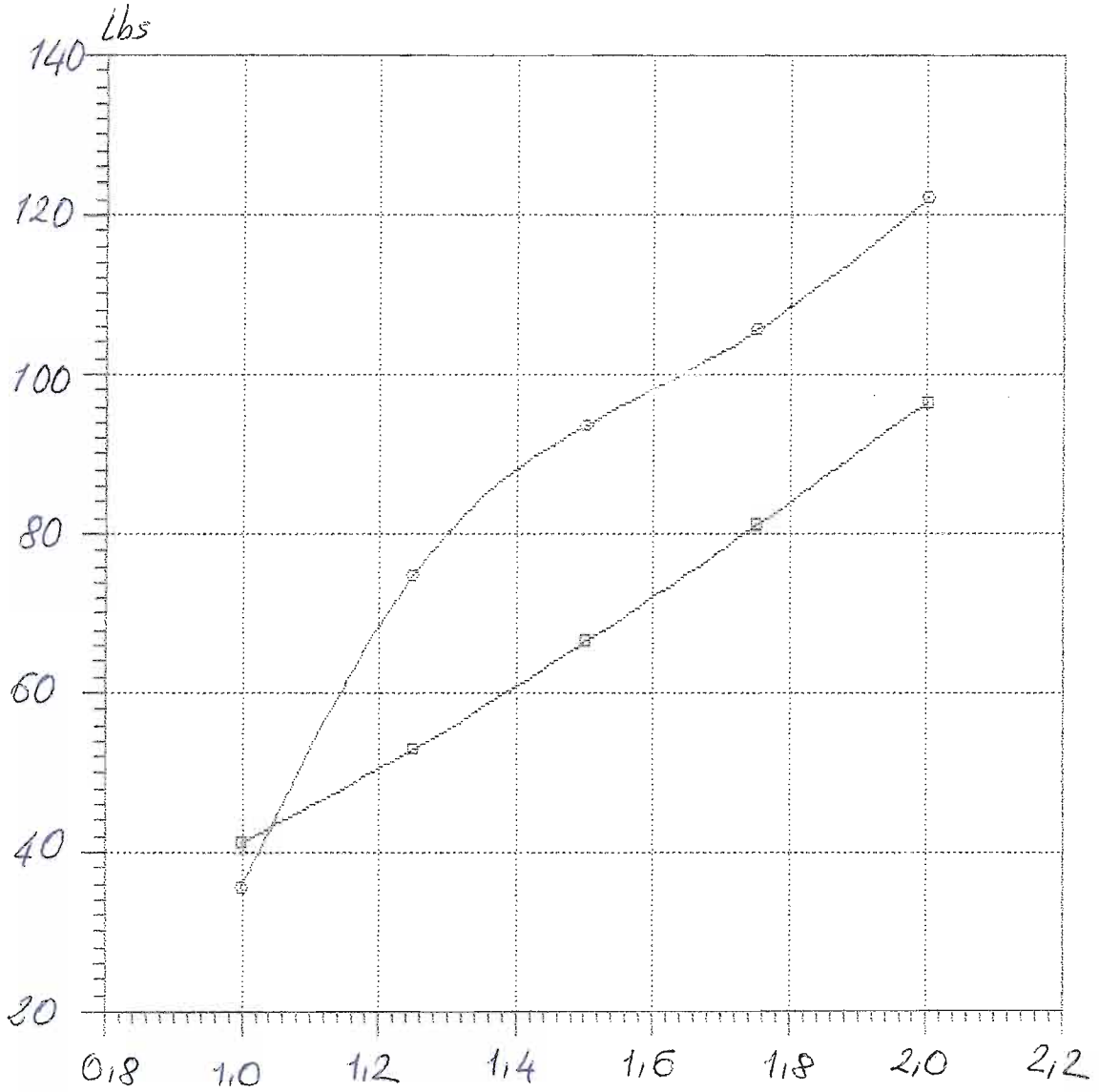
Rbare: Bare-hull resistance (lbe)



—□—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=6.521 Lpx/Vol=6.50 Lpx/Ap=6.439 Log/Lpx=0.4

7-65-520



—○—  
—□—

Model = 5249  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 17.500 ft  
Lwl = 17.395 ft  
Bpx = 3.755 ft  
Ap = 47.562 sqft  
Vcg = 0.815 ft  
Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle= 1.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.660  
Lpx/Ap = 6.439  
Ap /Vol = 7.609  
Lpx/Vol = 7.021  
Cvload = 0.295  
Lpload = 0.024  
Disp-Lpx = 83.299

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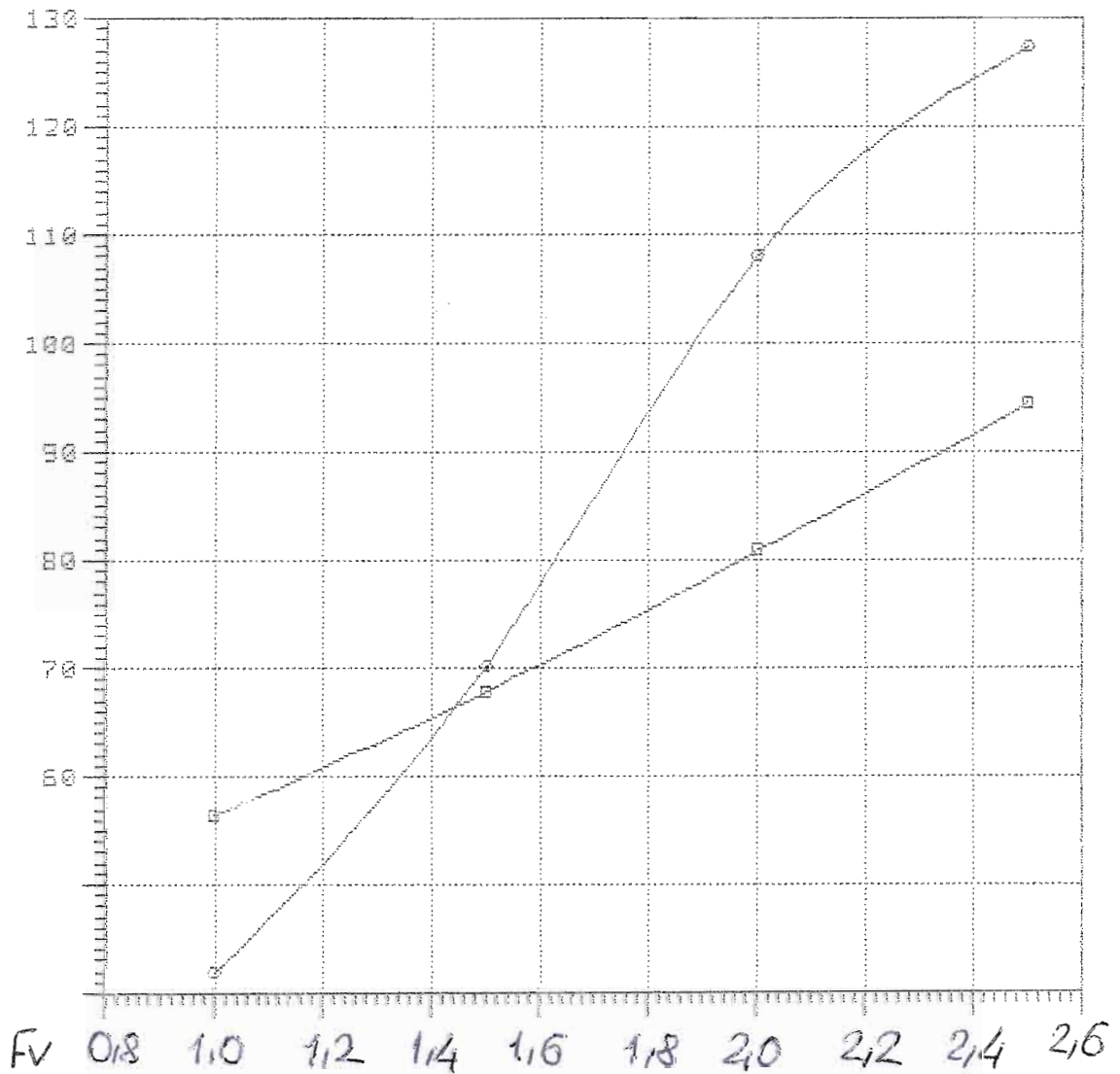
HydroComp, Inc.

File: B-70-350.mcl

Date: 26 Feb 00

Time: 12:19

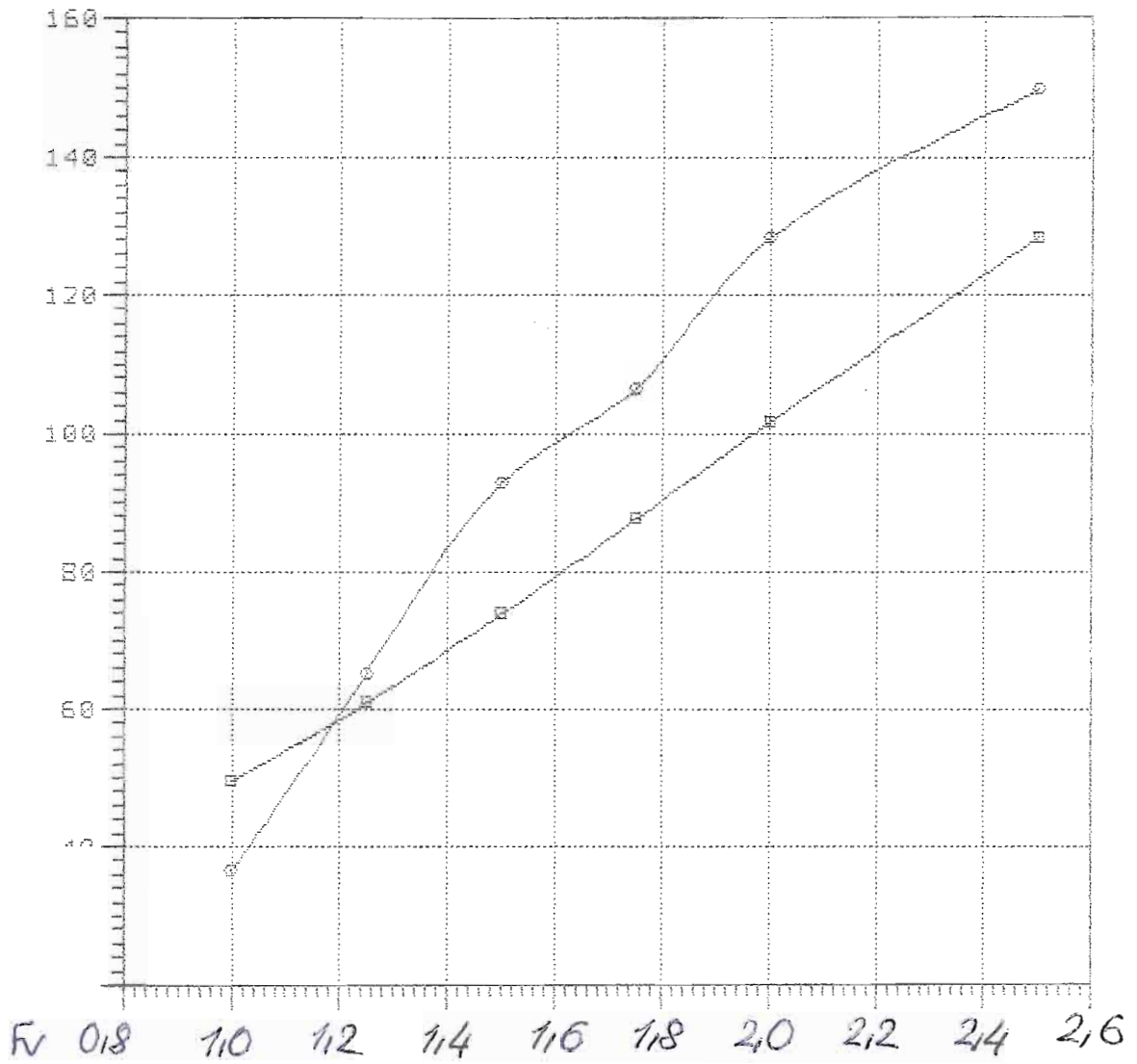
Rbare: Bare-hull resistance (lbs)



—■—

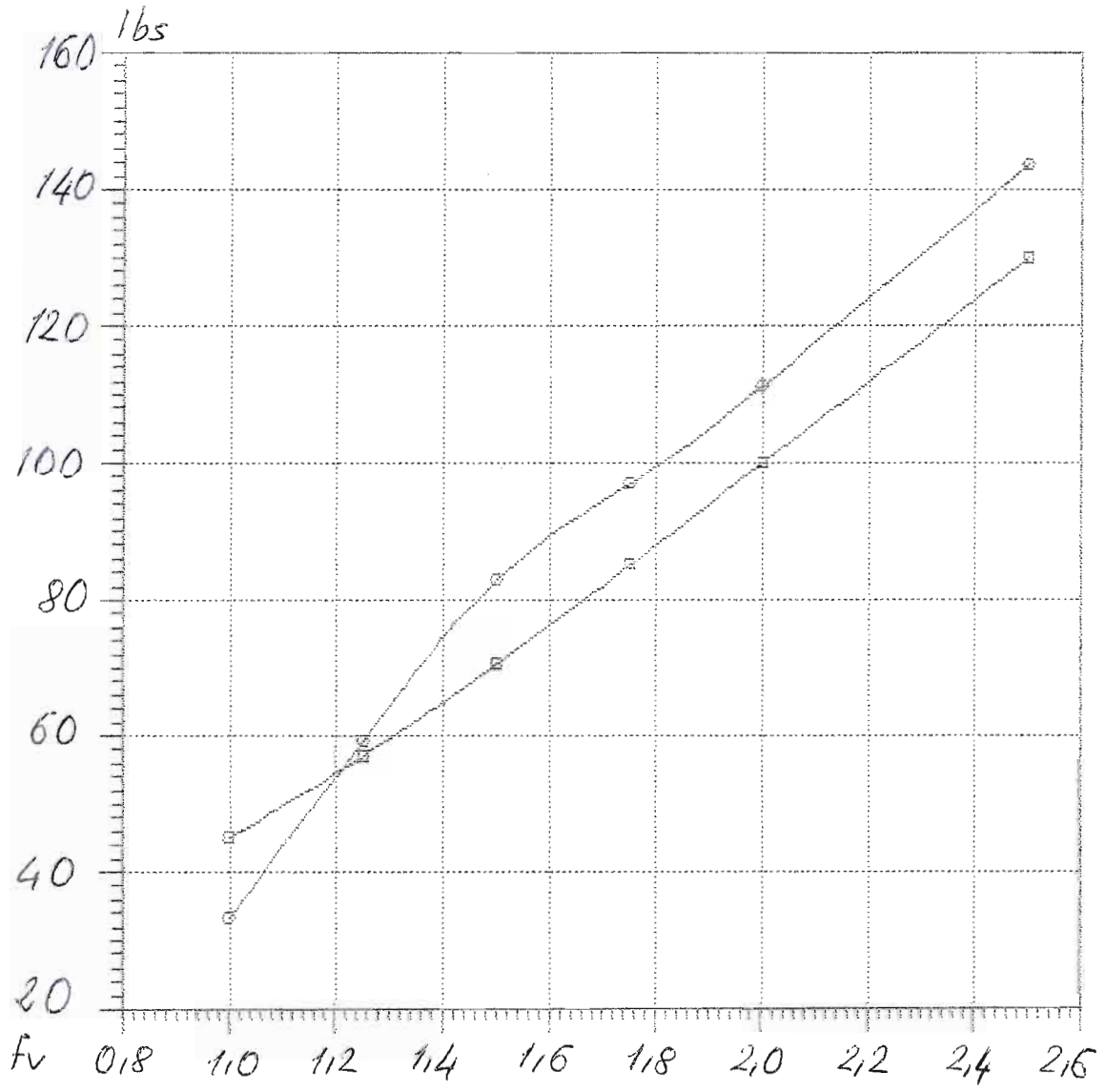
—○—

Rbare: Bare-hull resistance (lbs)



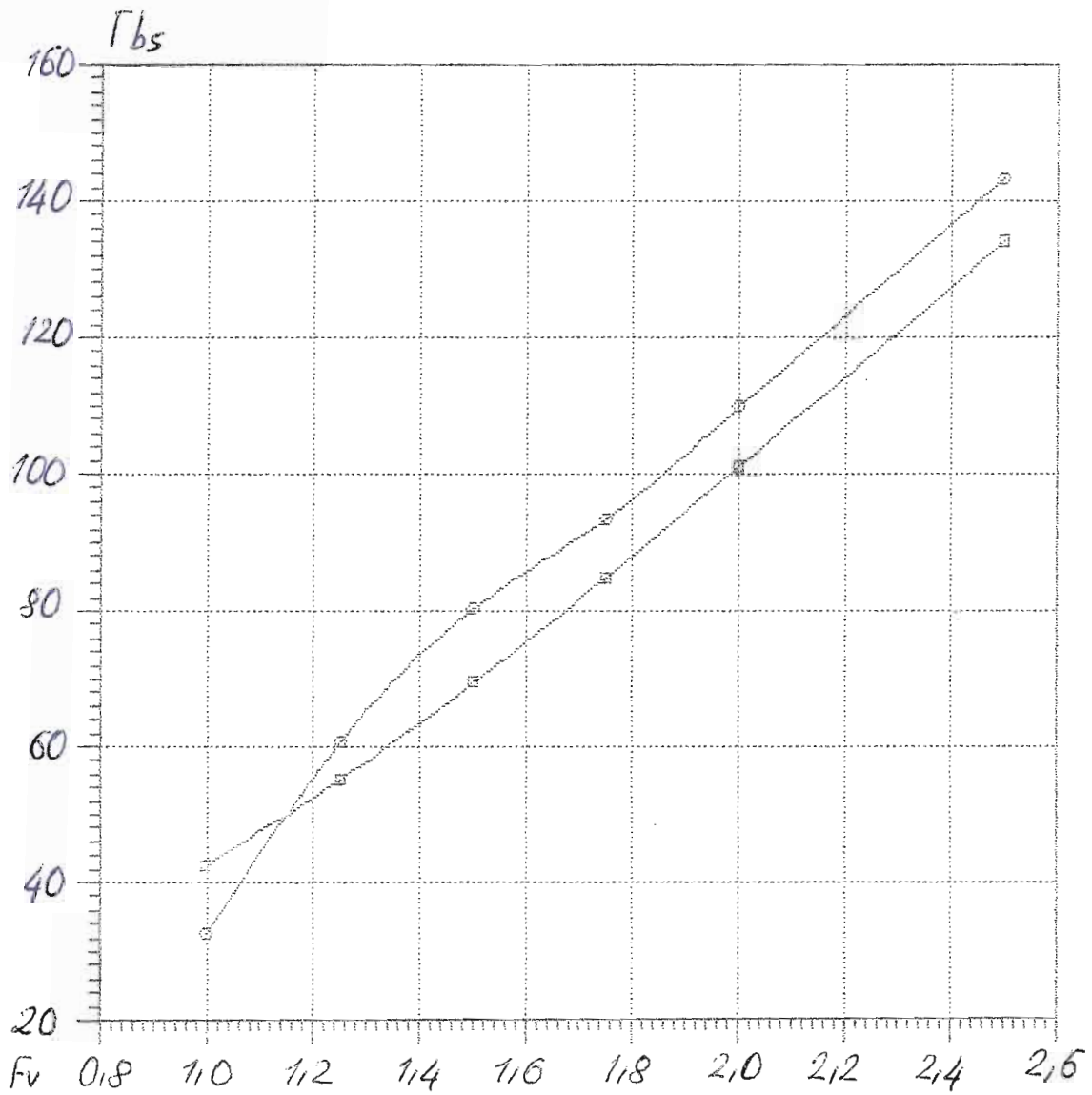
—■—  
—○—

8-70-440



—□—  
—○—

8-70-480



—□—

—○—

NavCad(tm) 3.1d

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Bare-hull resistance

vs.

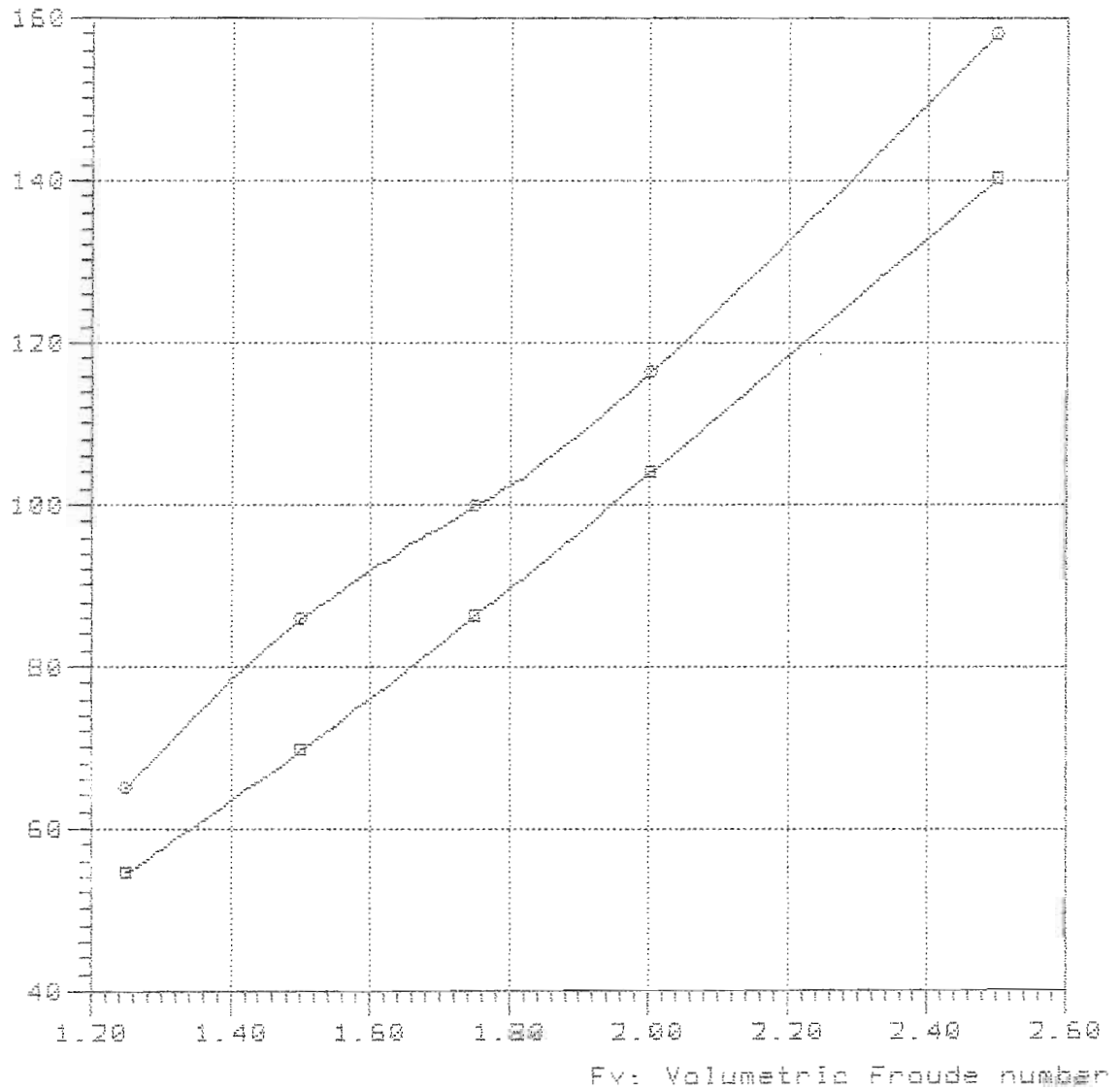
Volumetric Froude number

File: B-70-520.mdl

Date: 26 Feb 00

Time: 12:47

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=7.610 Lpx/Vol=7.00 Lpx/Rp=6.439 Log/Lpx=0.5



Model = 5249  
Ref = NSRDC  
Friction = ~~R~~TTC Ca=4e-4

Lpx = 18.700 ft  
Lwl = 18.588 ft  
Bpx = 4.013 ft  
Ap = 54.308 sqft  
Vcg = 0.871 ft  
Disp. = 1000.00 Lb

Deadrise = 16.30 degree  
Twist Angle= 1.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 4.660  
Lpx/Ap = 6.439  
Ap /Vol = 8.688  
Lpx/Vol = 7.502  
Cvload = 0.242  
Lbload = 0.020  
Disp-Lpx = 68.270

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Bare-hull resistance

vs.

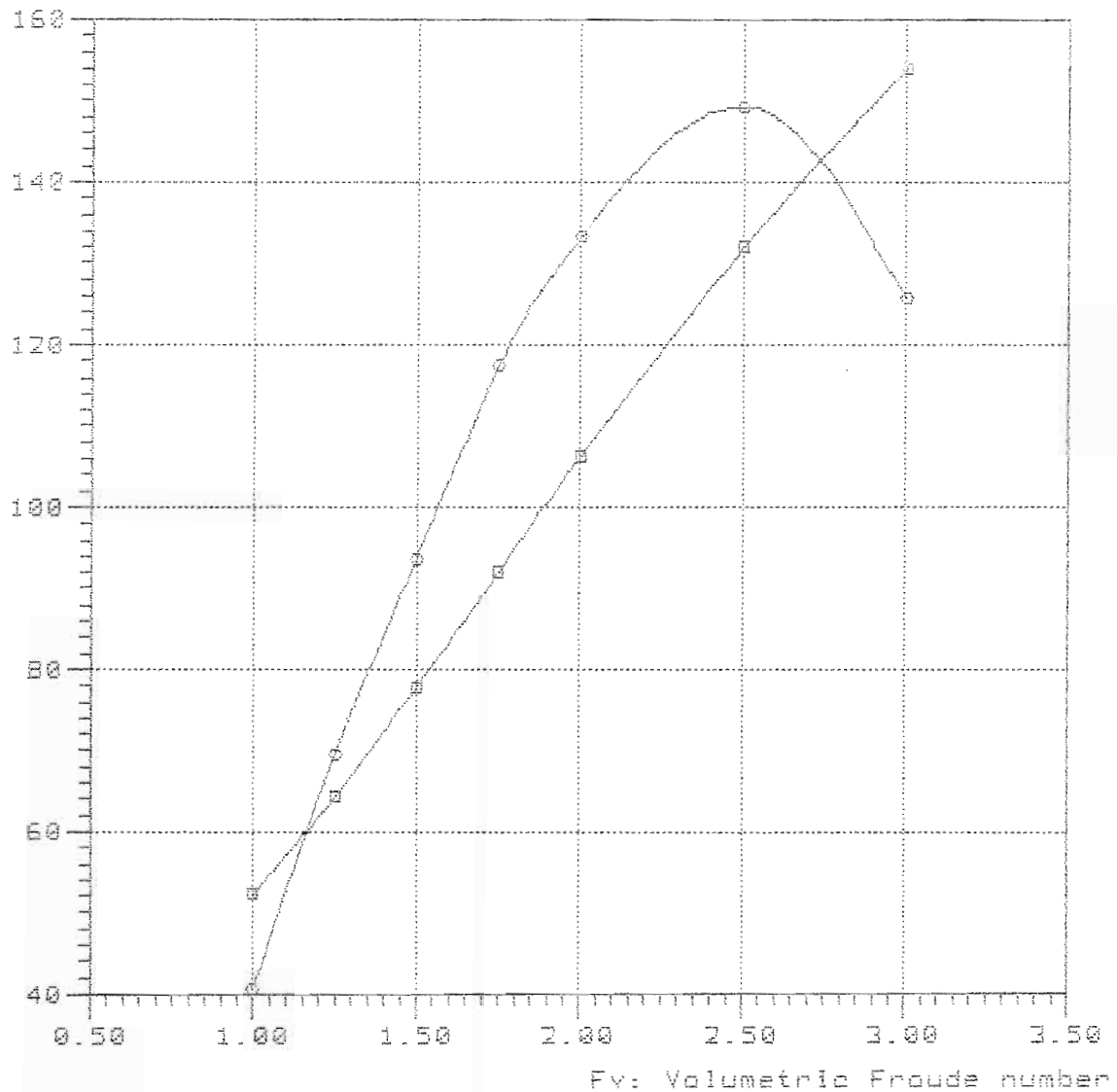
Volumetric Froude number

File: 9-75-360.md

Date: 26 Feb 00

Time: 12:48

Rbare: Bare-hull resistance (lbs)

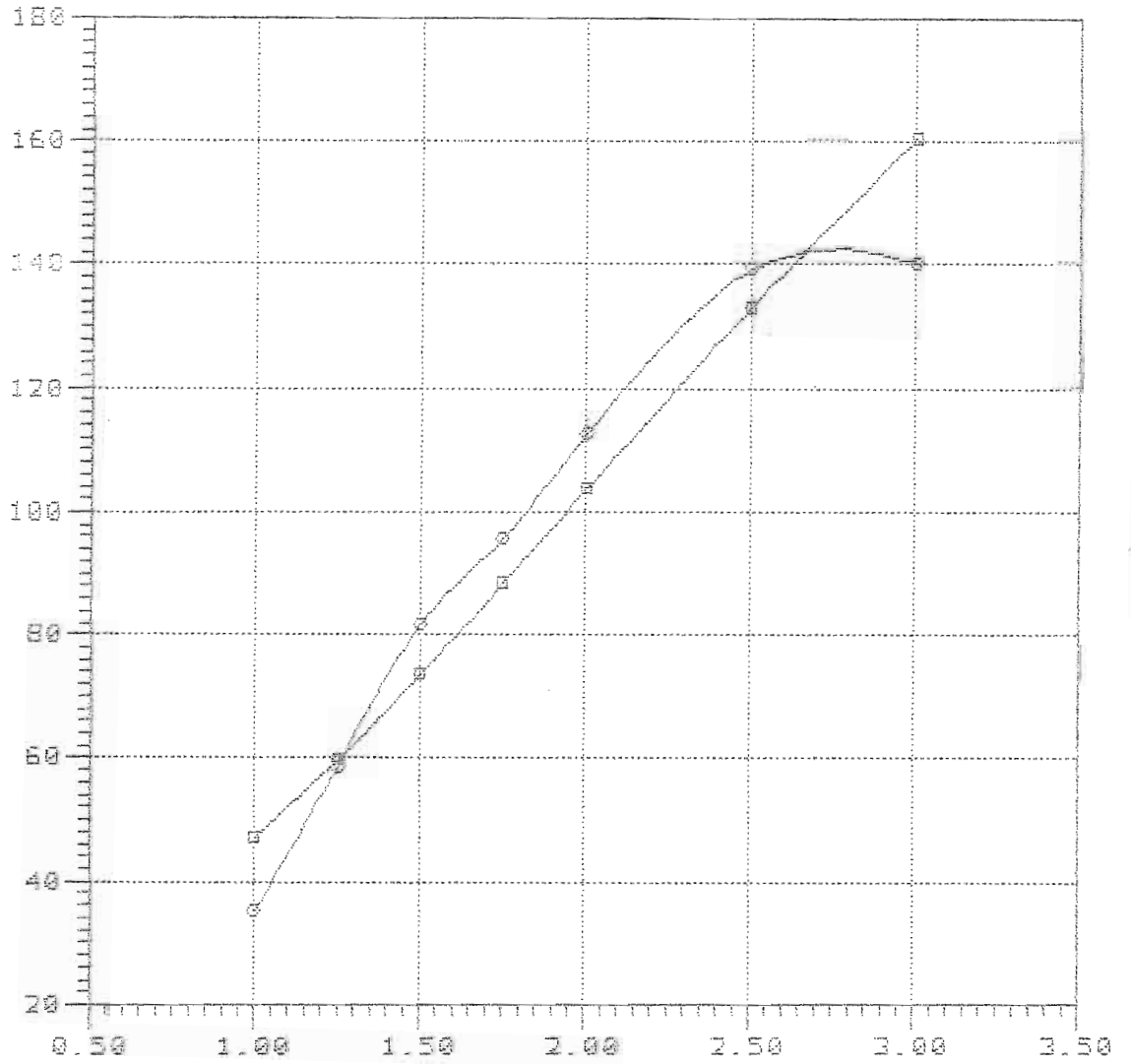


Curve legend

—■—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=8.689 Lpx/Vol=7.50 Lpx/Ap=6.439 Log/Lpx=0.3

Rbare: Bare-hull resistance (lbs)

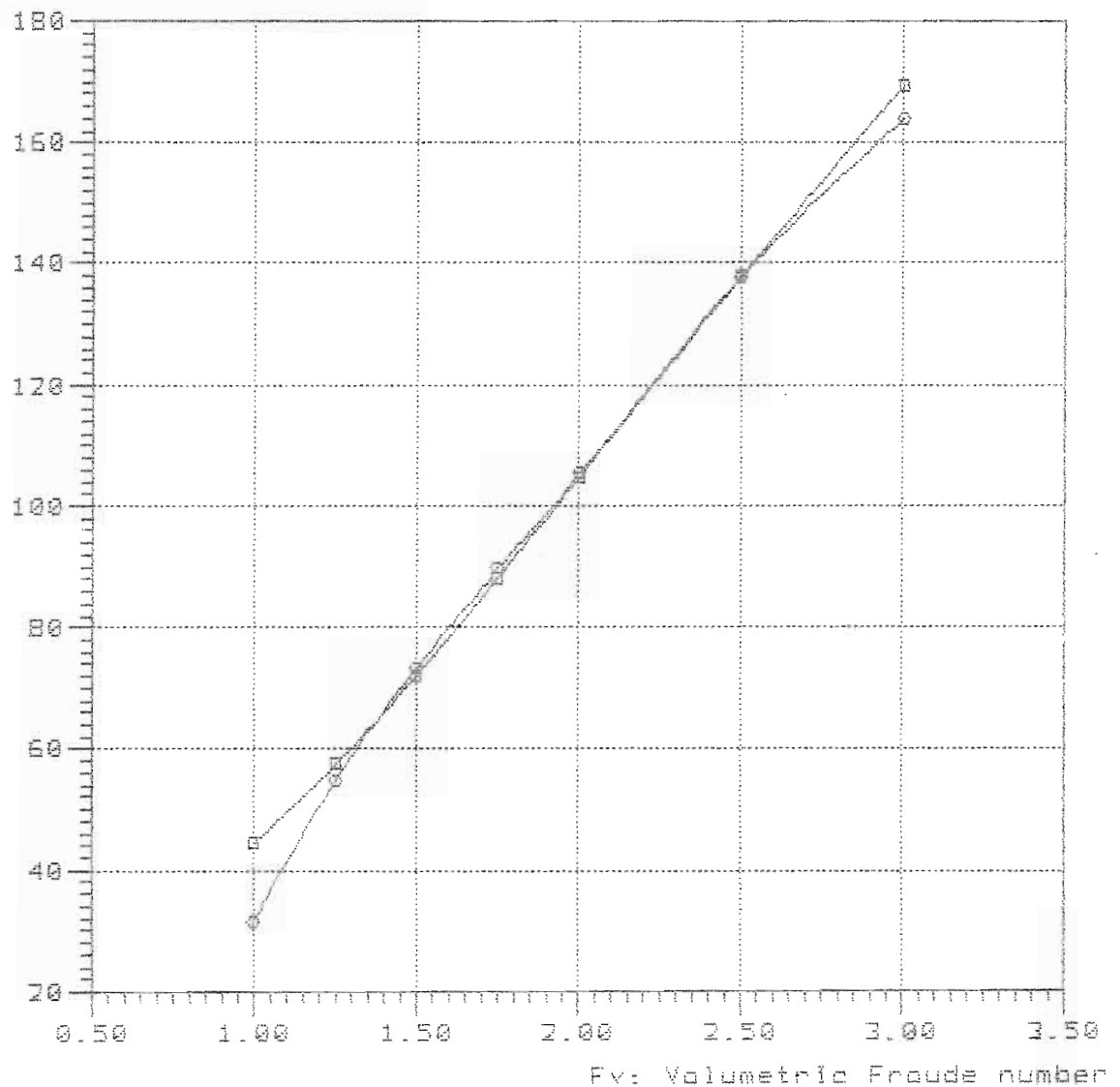


Fv: Volumetric Froude number

—□—

—○— TRB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=8.689 Lpx/Vol=7.50 Lpx/Ap=6.433 Log/Lpx=0.4

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=8.689 Lpx/Vol=7.50 Lpx/Ap=6.435 Log/Lpx=0.4

NavCad(tm) 3.1d

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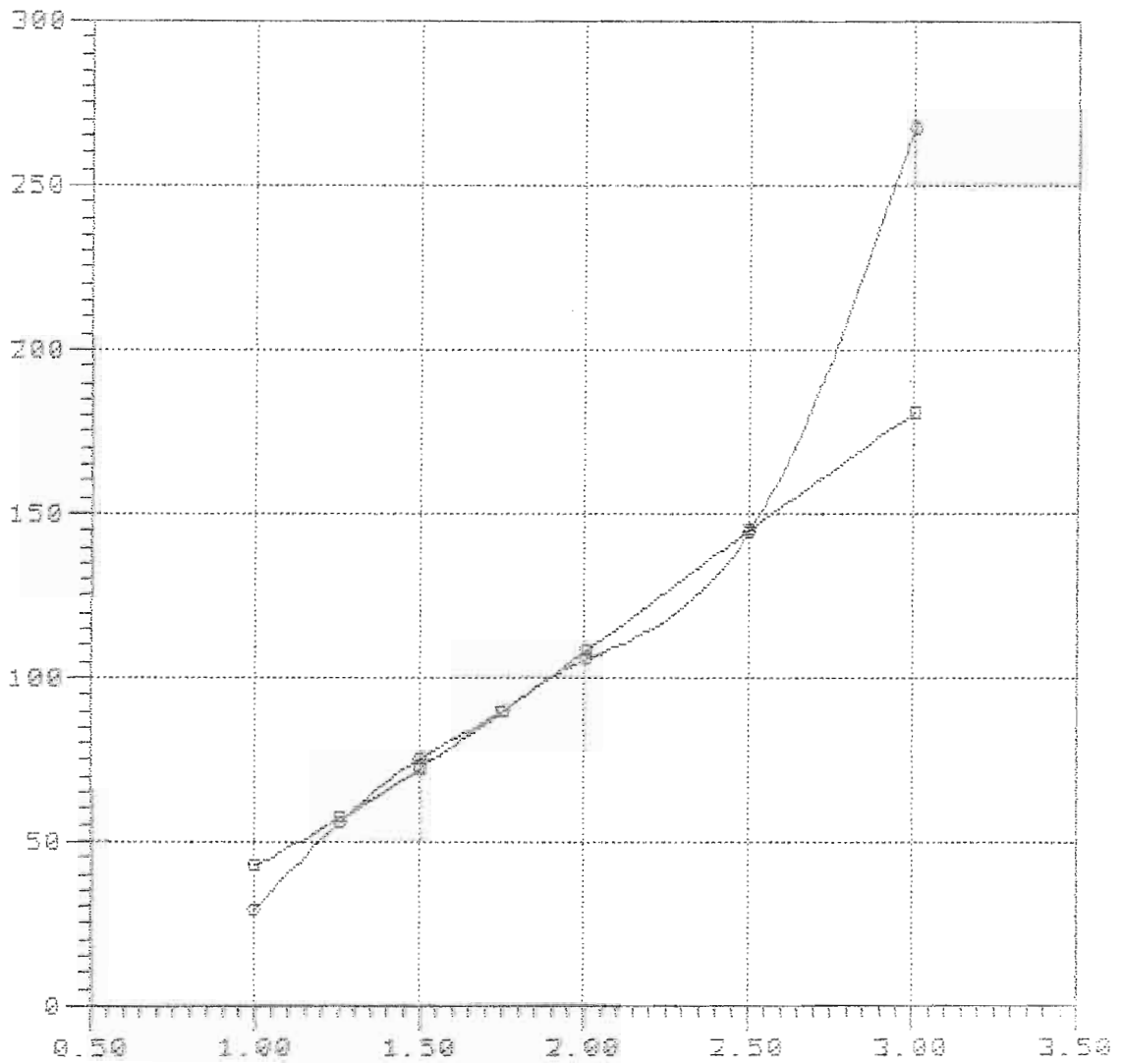
HydroComp, Inc.

File: 9-75-490.mdl

Date: 26 Feb 98

Time: 12:59

Rbare: Bare-hull resistance (lbs)

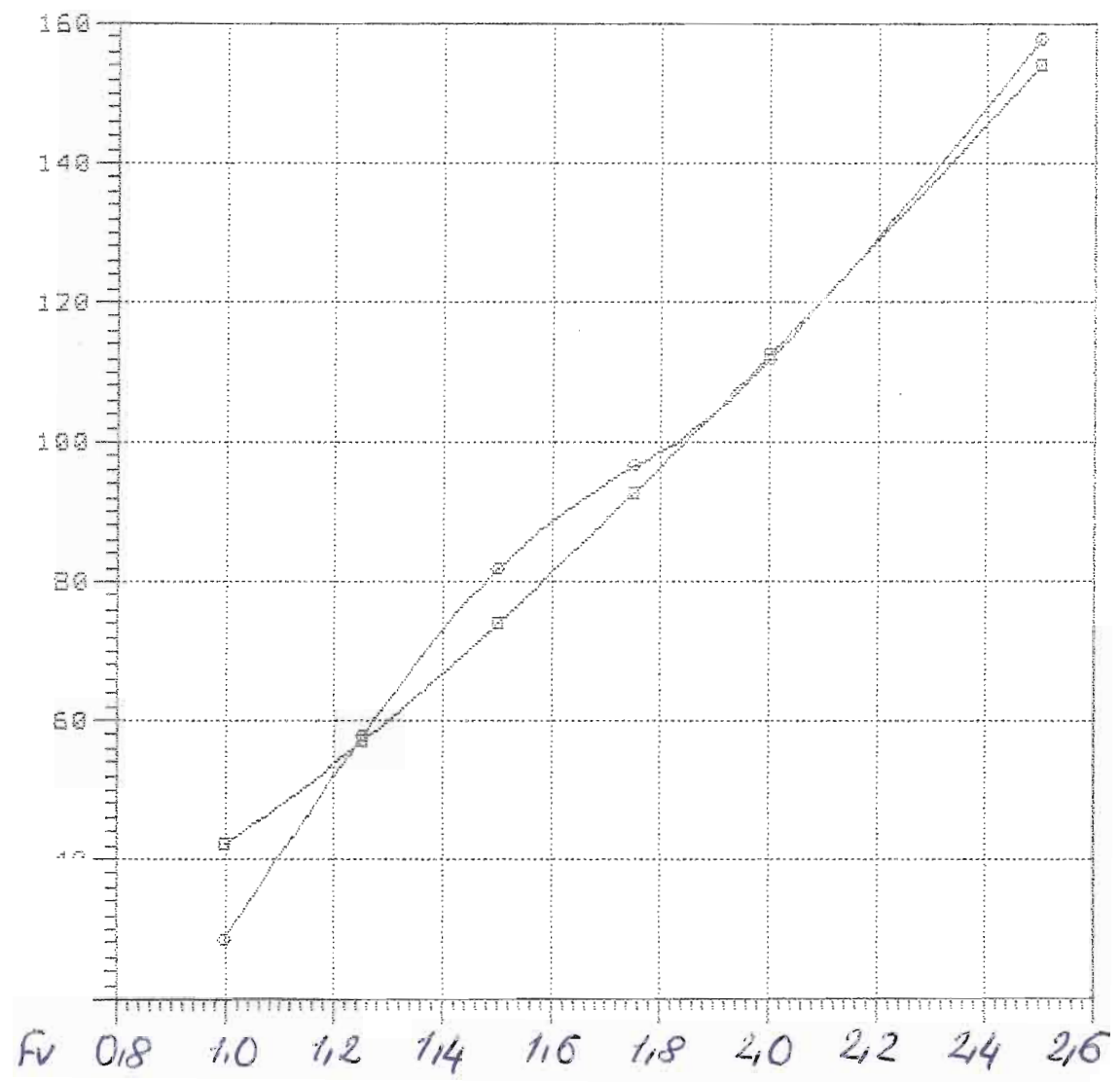


Fv: Volumetric Froude number

—■—

—○— TMB-68A 3249 Lpx/Bpx=4.65 Ap/Vol=6.685 Lpx/Vol=7.50 Lpx/Ap=6.439 Log/Lpx=0.4

Rbare: Bare-hull resistance (lbs)



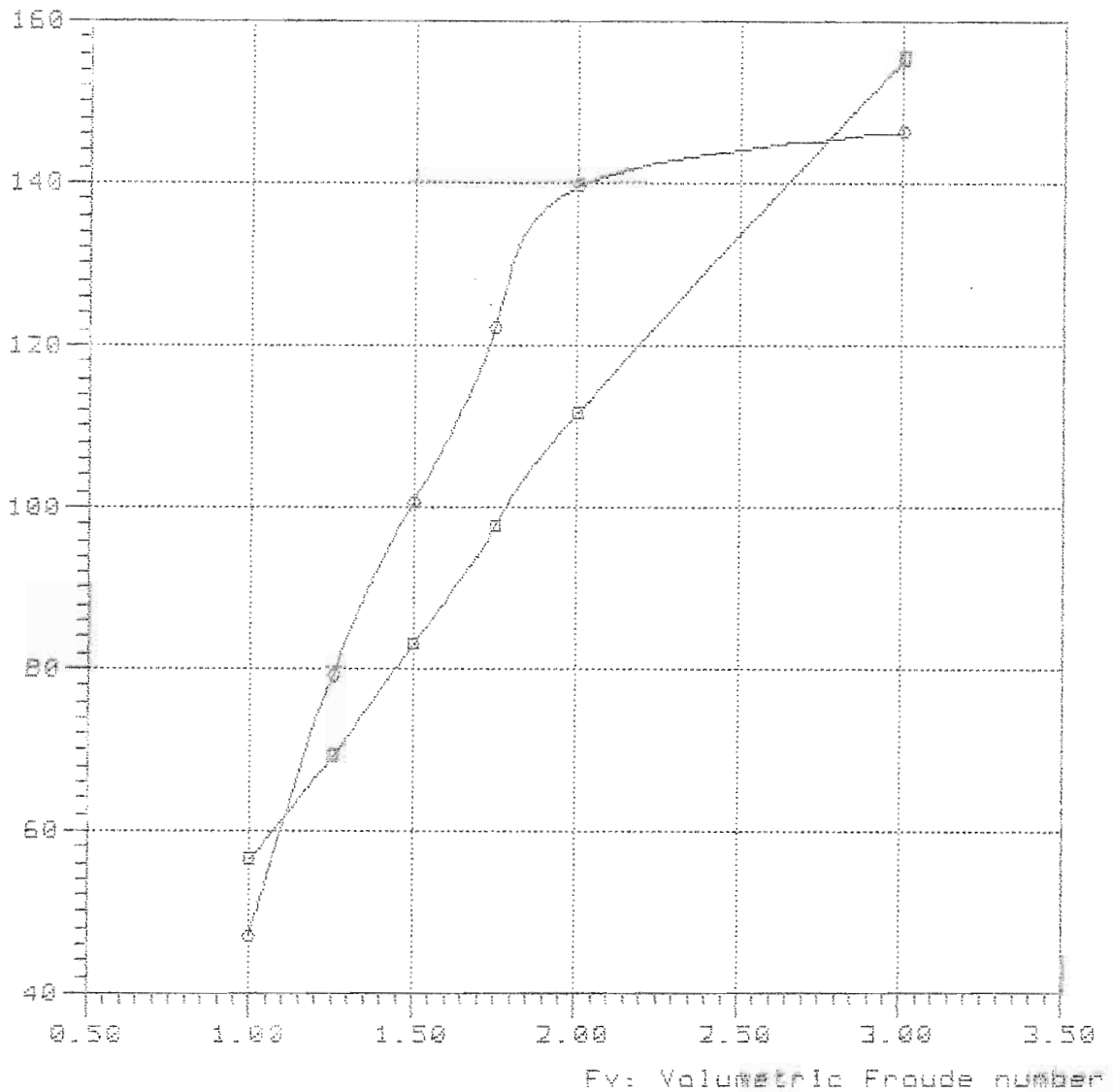
—□—  
—○—

Model = 5249  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 20.000 ft  
Lwl = 19.880 ft  
Bpx = 4.292 ft  
Ap = 62.121 sqft  
Vcg = 0.931 ft  
Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle= 1.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 4.660  
Lpx/Ap = 6.439  
Ap /Vol = 9.938  
Lpx/Vol = 8.024  
Cvload = 0.198  
Lbload = 0.016  
Disp-Lpx = 55.804

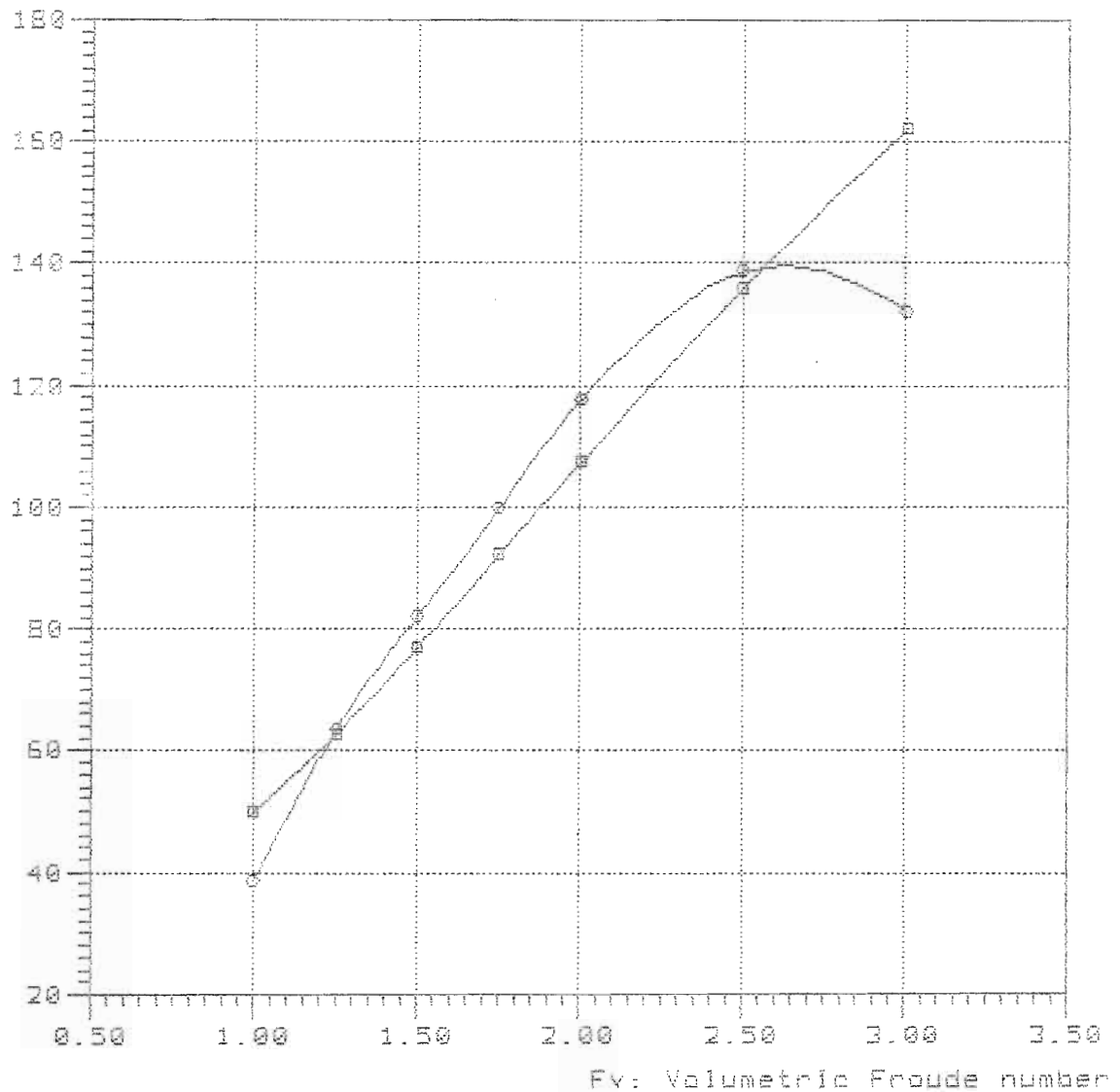
Rbare: Bare-hull resistance (lbs)



—○— TMB-65R 5249 Lpx/Bpx=4.66 Ap/Vol=9.935 Lpx/Vol=8.00 Lpx/Ap=6.439 Log/Lpx=0.3



Rbare: Bare-hull resistance (lbs)



—○—  
—□— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=9.939 Lpx/Vol=8.00 Lpx/Ap=6.439 Log/Lpx=0.3

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Bare-hull resistance

vs.

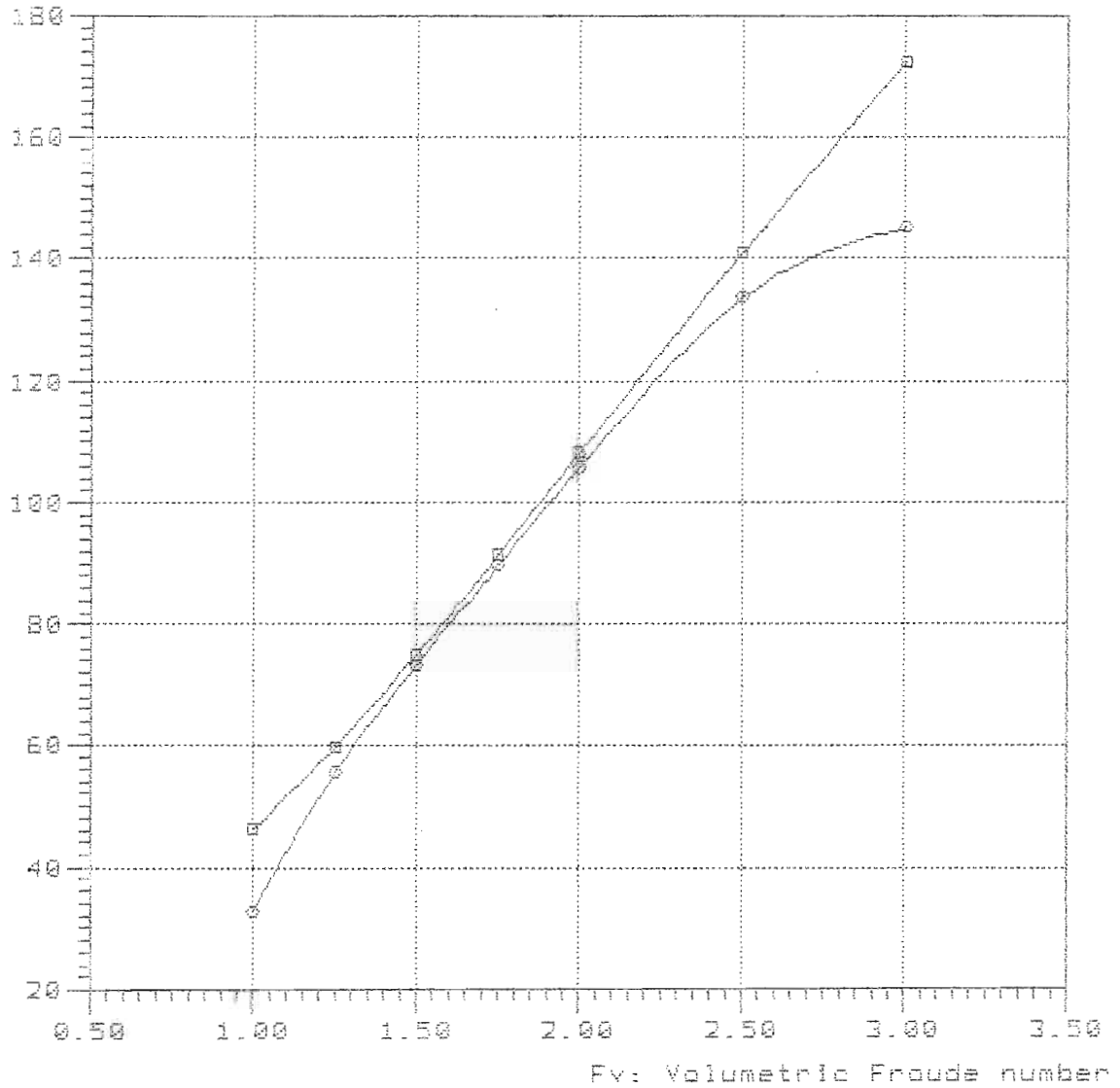
Volumetric Froude number

File: 10-80-40.mdi

Date: 26 Feb 00

Time: 10:28

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

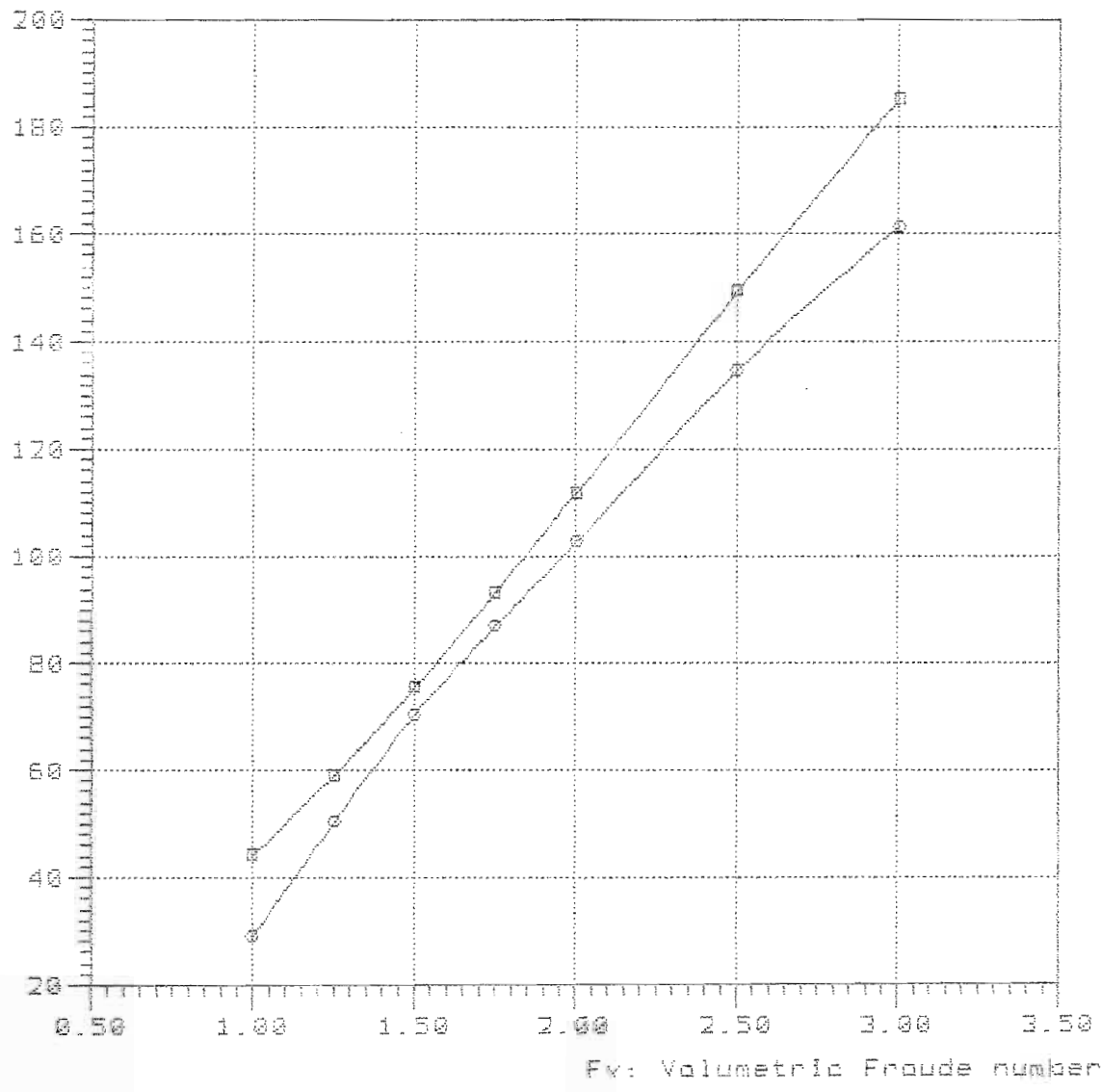
—●— TMB-65R 5249 Lpx/Rpx=4.66 Ap/Vol=9.939 Lpx/Vol=8.00 Lpx/As=6.438 Log/Lpx=0.4

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Bare-hull resistance  
vs.  
Volumetric Froude number

File: 10-80-44.mdl  
Date: 26 Feb 88  
Time: 10:25

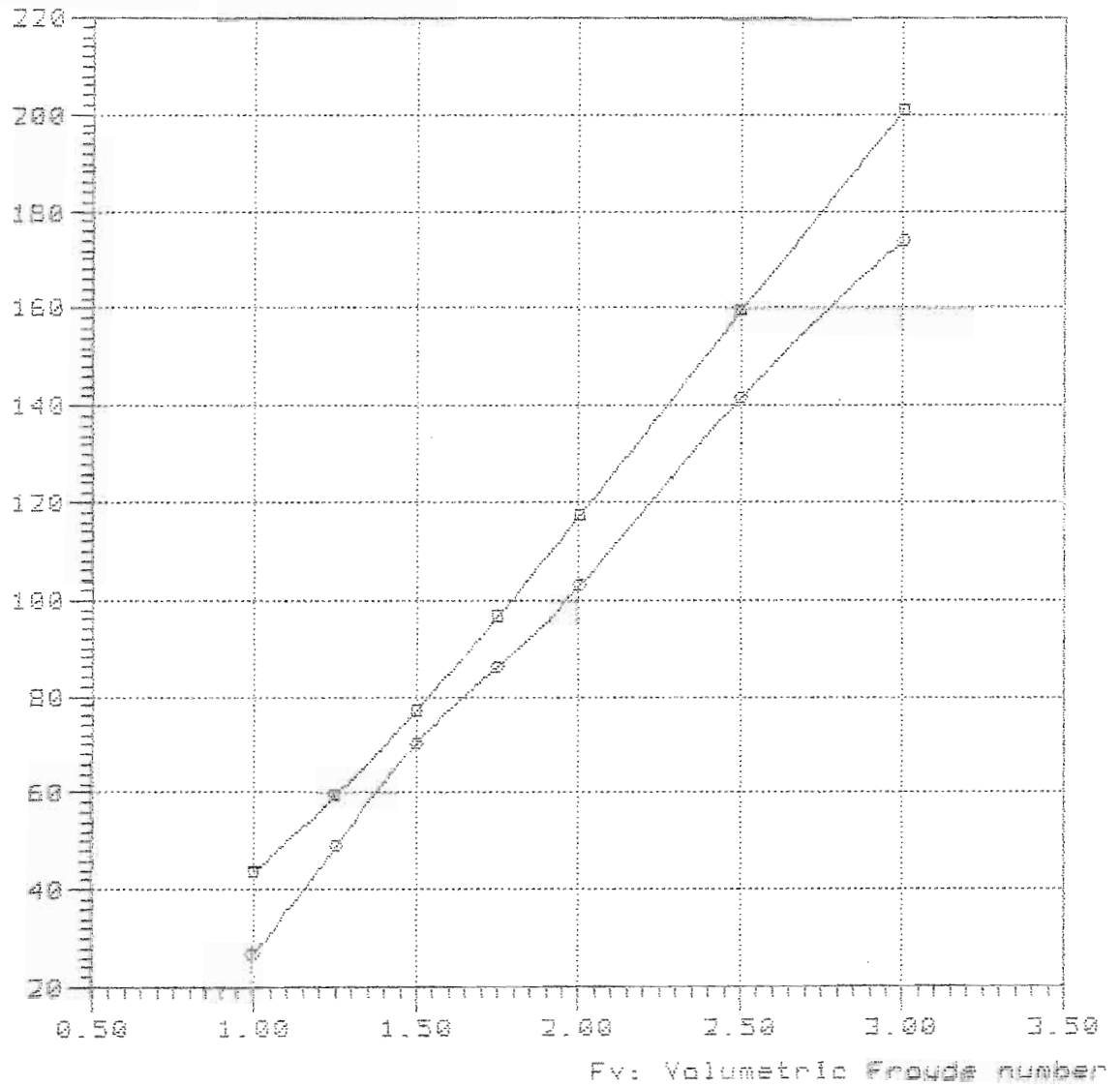
Rbare: Bare-hull resistance (lbs)



Curve legend

- 
- TMS-65R 5249 Lpx/Bpx=4.66 Ap/Vol=9.539 Lpx/Vol=8.00 Lpx/Ap=6.435 Log/Lpx=0.4

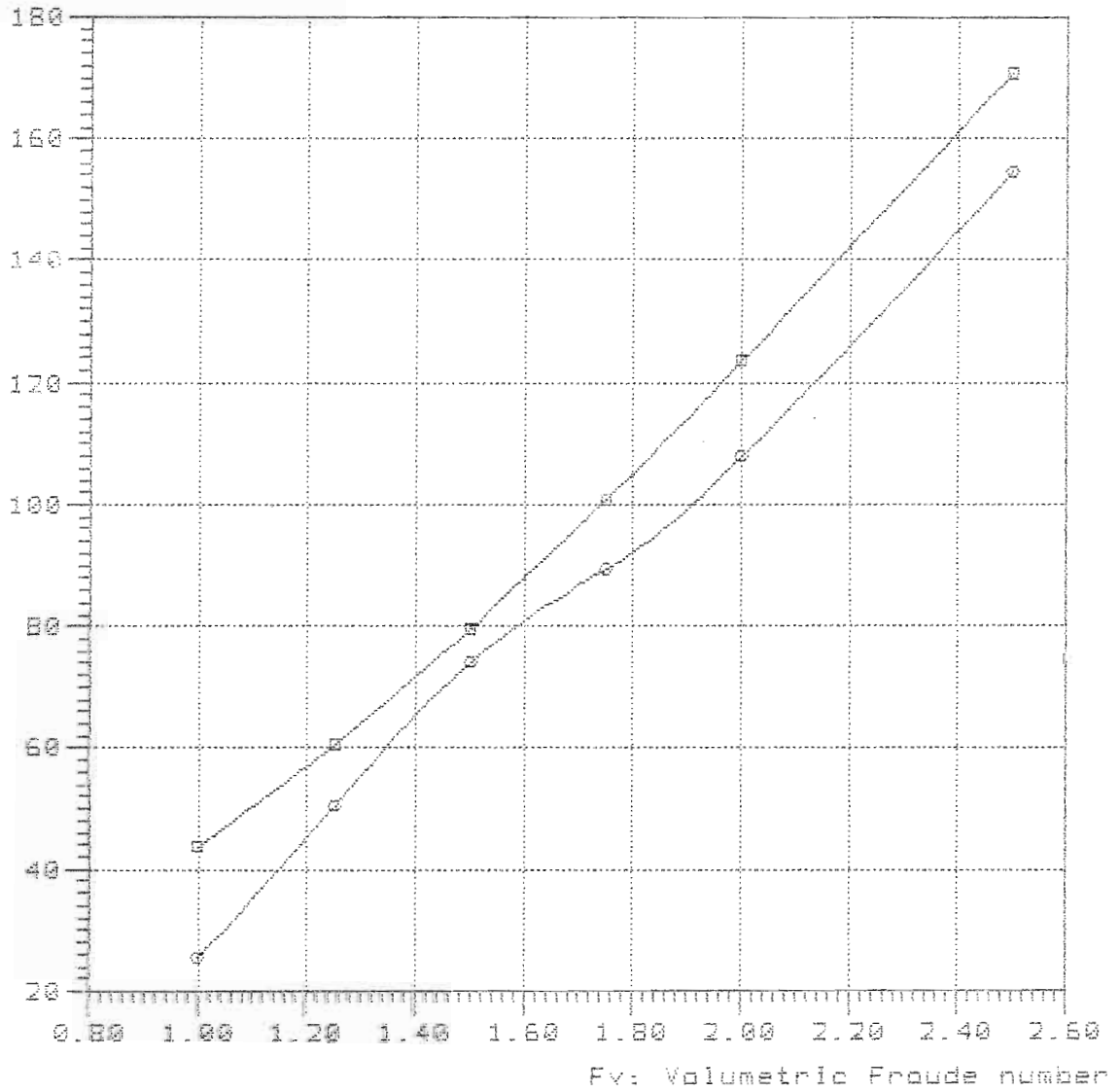
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-55R 5249 Lpx/Bpx=4.66 Ap/Vol=9.939 Lpx/Vol=8.00 Lpx/Ap=6.439 Log/Lpx=0.4

Rbare: Bare-hull resistance (lbs)



—■—

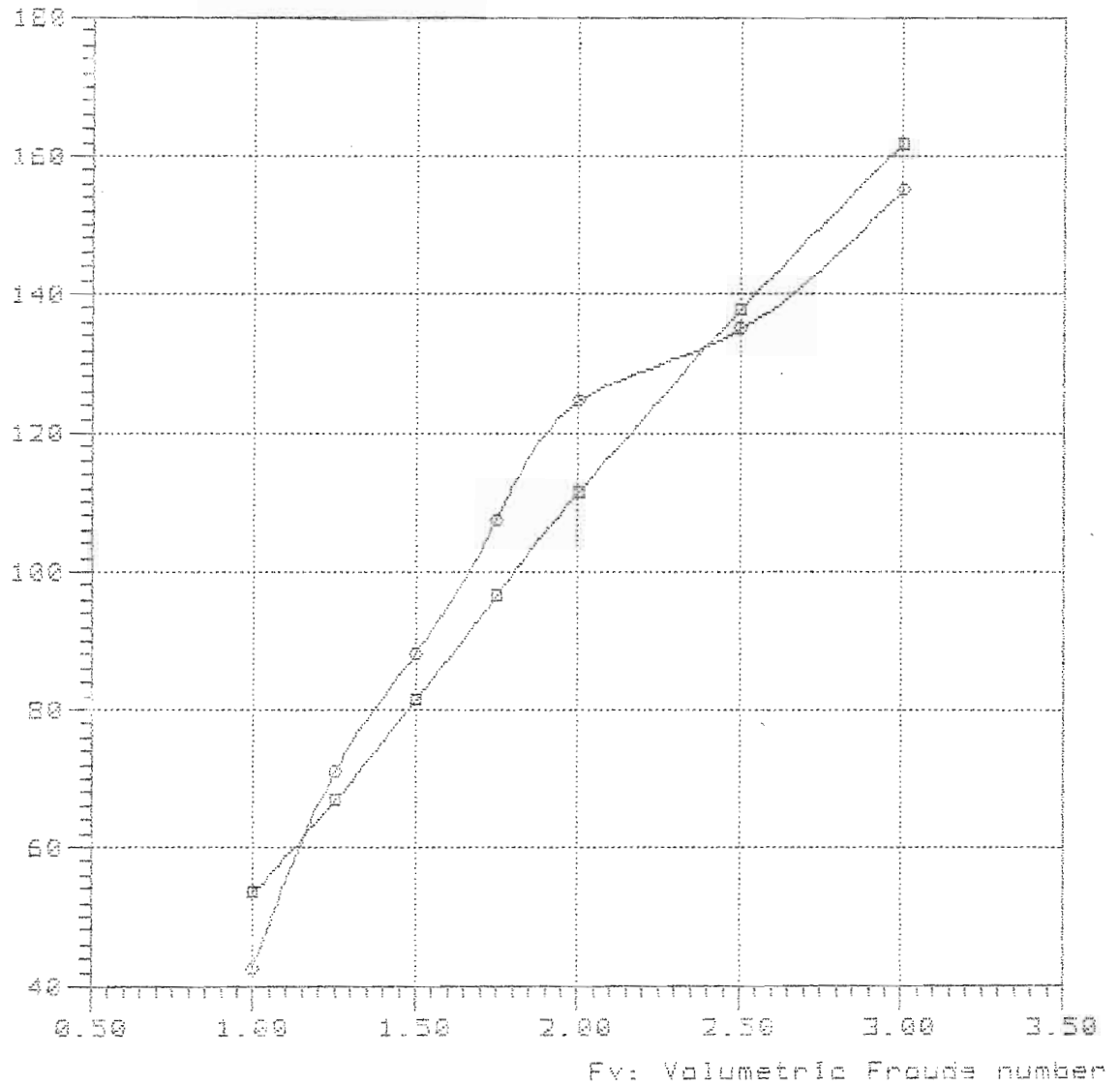
—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=9.939 Lpx/Vol=8.00 Lpx/Ap=6.439 Lcg/Lpx=0.5

Model = 5249  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 21.200 ft  
Lwl = 21.073 ft  
Bpx = 4.549 ft  
Ap = 69.800 sqft  
Vcg = 0.987 ft  
Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle = 1.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 4.660  
Lpx/Ap = 6.439  
Ap /Vol = 11.167  
Lpx/Vol = 8.505  
Cvload = 0.166  
Lbload = 0.014  
Disp-Lpx = 46.854

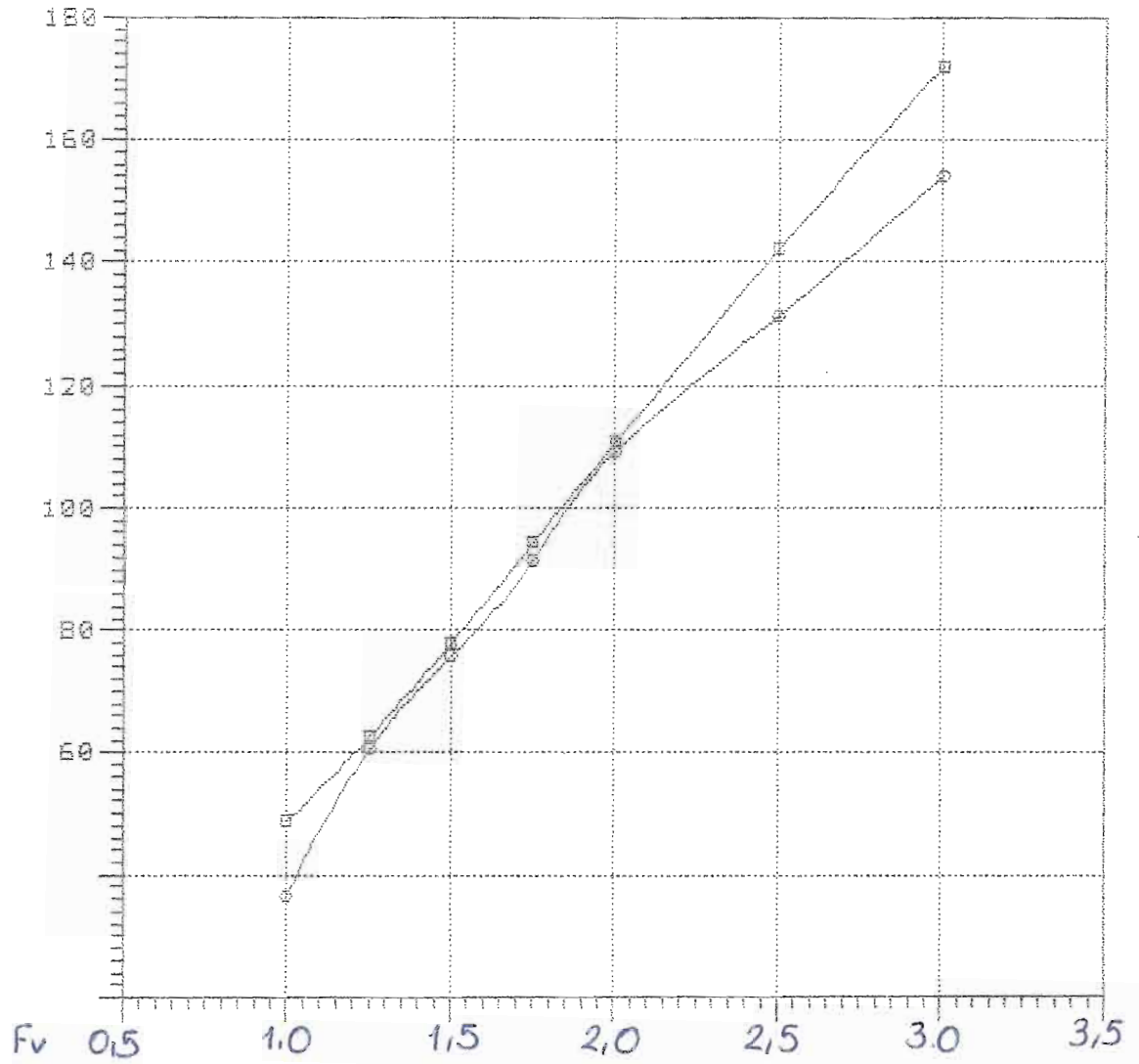
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=11.168 Lpx/Vol=8.5 Lpx/Ap=6.439 Log/Lpx=0.3

Rbare: Bare-hull resistance (lba)

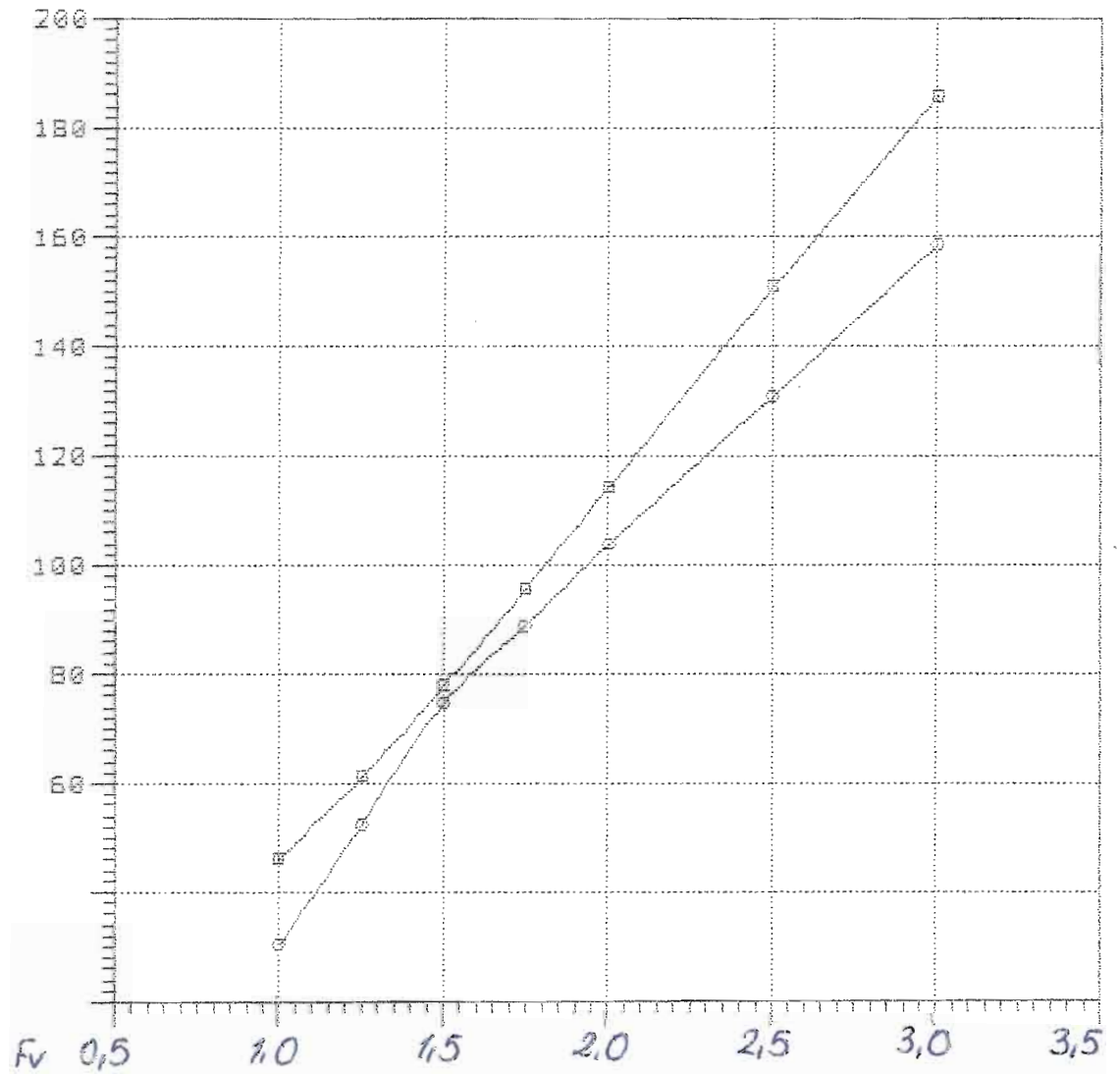


—■—

—○—



Rbare: Bare-hull resistance (lbs)



—■—

—○—

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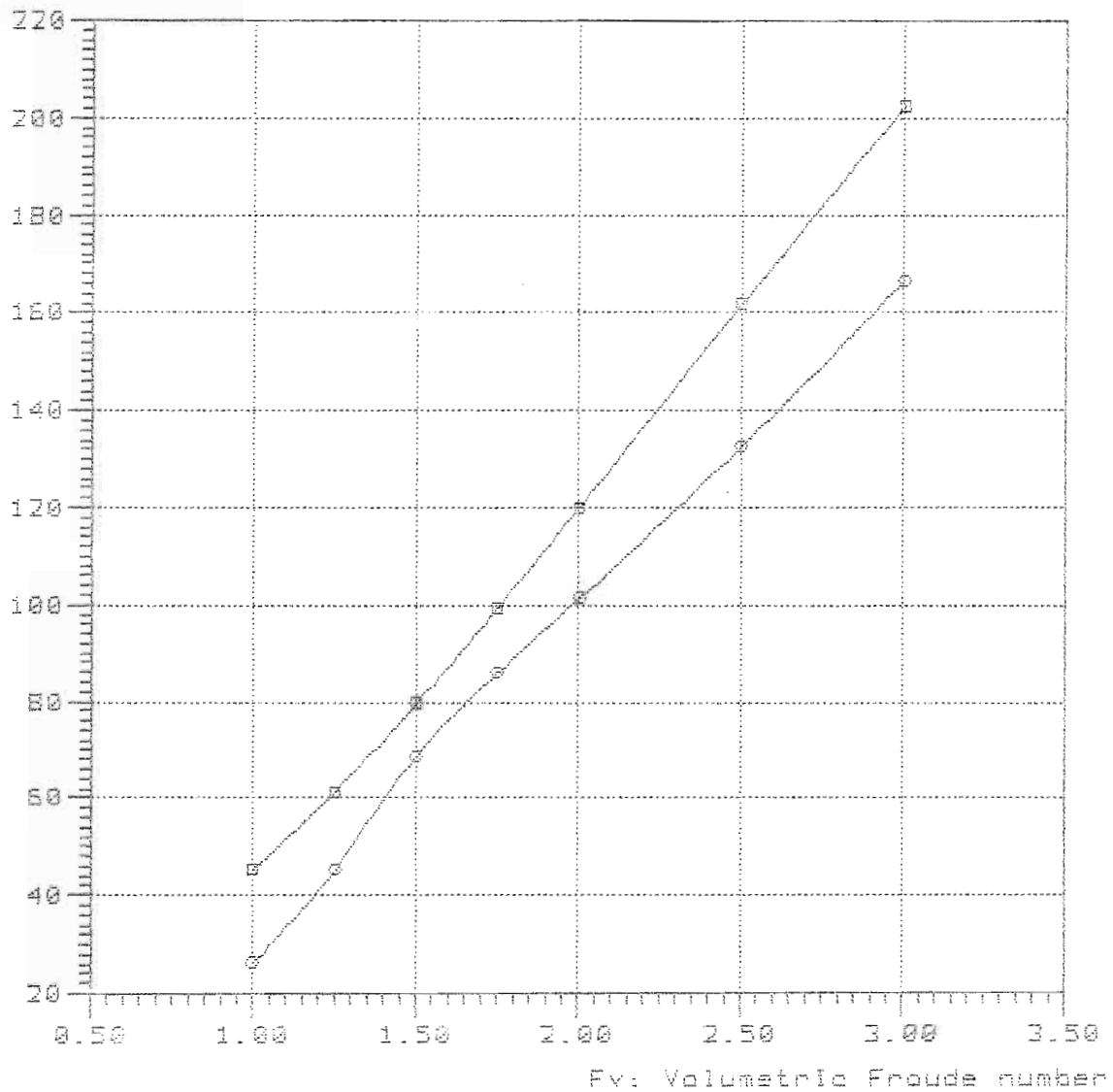
HydroComp, Inc.

File: 11-85-44.mdl

Date: 26 Feb 00

Time: 11:01

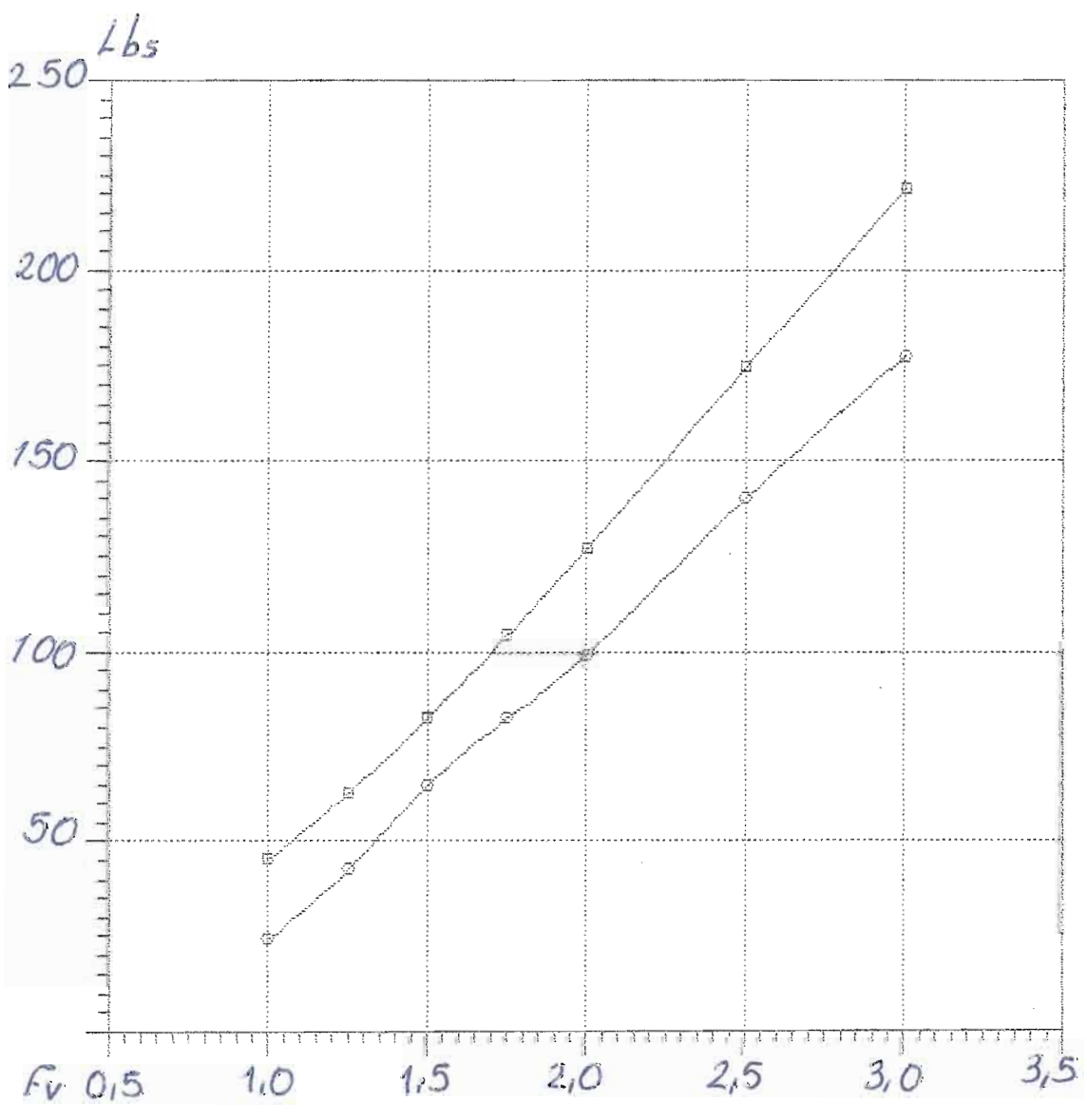
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=11.168 Lpx/Vol=8.5 Lpx/Ap=6.439 Log/Lpx=0.4

11-85-48



—□—  
—○—

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Bare-hull resistance

vs.

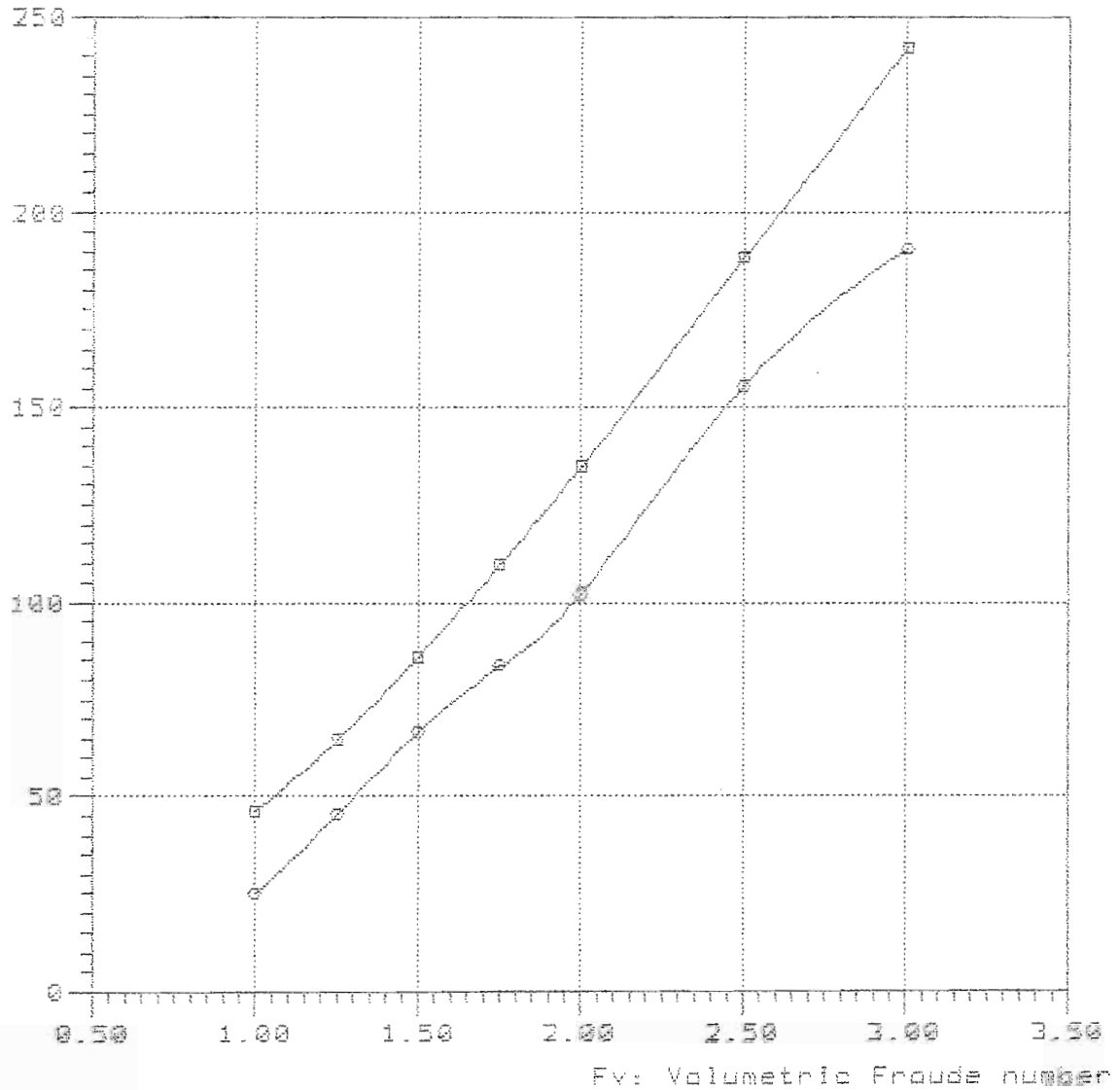
Volumetric Froude number

File: 11-85-52.mdl

Date: 26 Feb 00

Time: 11:05

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—●—

TMB-65A 5249 Lpx/Δpx=4.66 Ap/Vol=11.168 Lpx/Vol=8.5 Lpx/Δp=6.439 Log/Lpx=0.5

Model = 5249  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 22.500 ft  
Lwl = 22.365 ft  
Bpx = 5.901 ft  
Ap = 78.622 sqft  
Vcg = 1.047 ft  
Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle= 1.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 3.813  
Lpx/Ap = 6.439  
Ap /Vol = 12.578  
Lpx/Vol = 9.027  
Cvload = 0.076  
Lbload = 0.008  
Disp-Lpx = 39.193

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### Bare-hull resistance

vs.

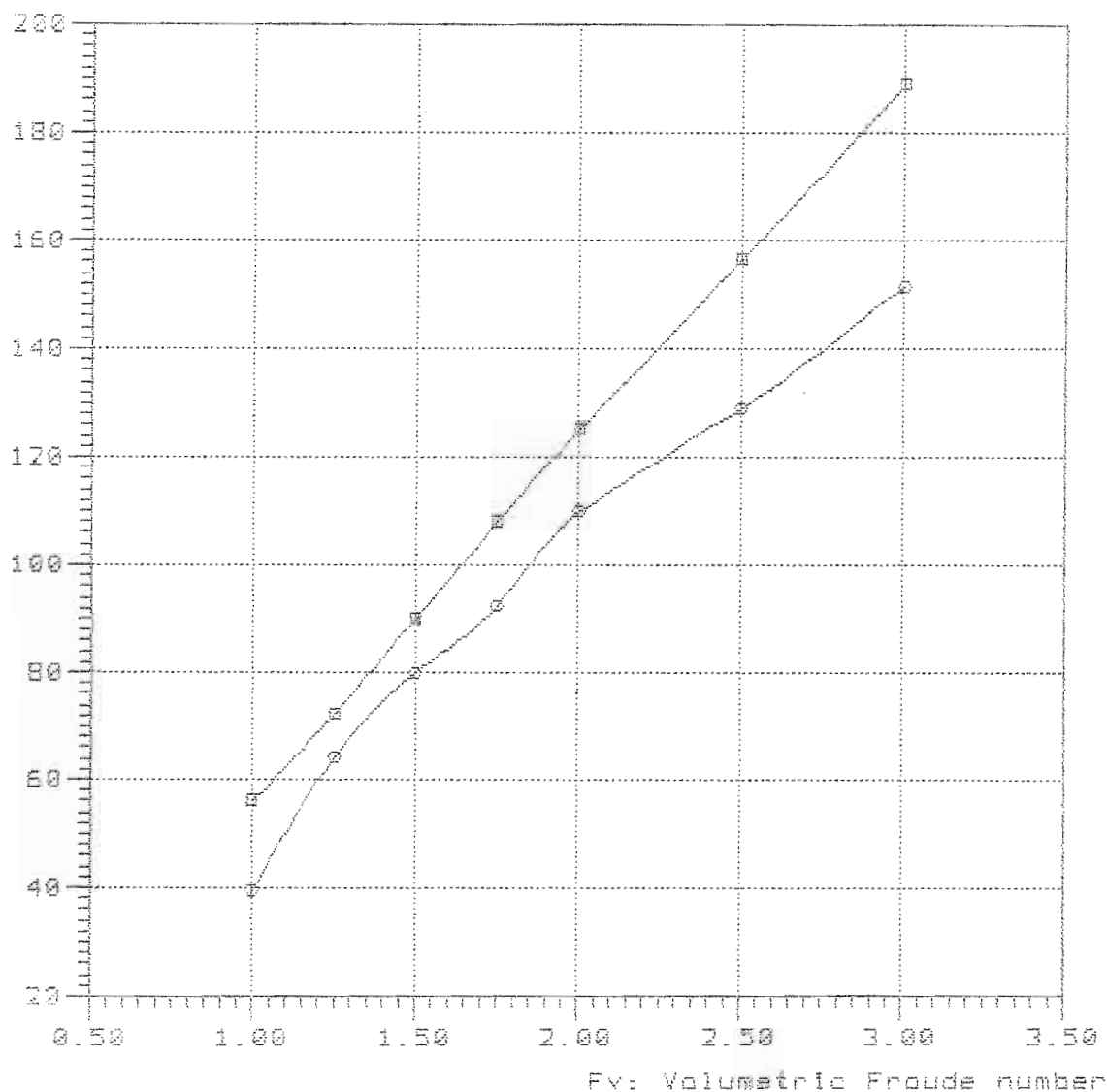
### Volumetric Froude number

File: 13-90-32.mdl

Date: 26 Feb 00

Time: 11:06

Rbare: Bare-hull resistance (lbs)

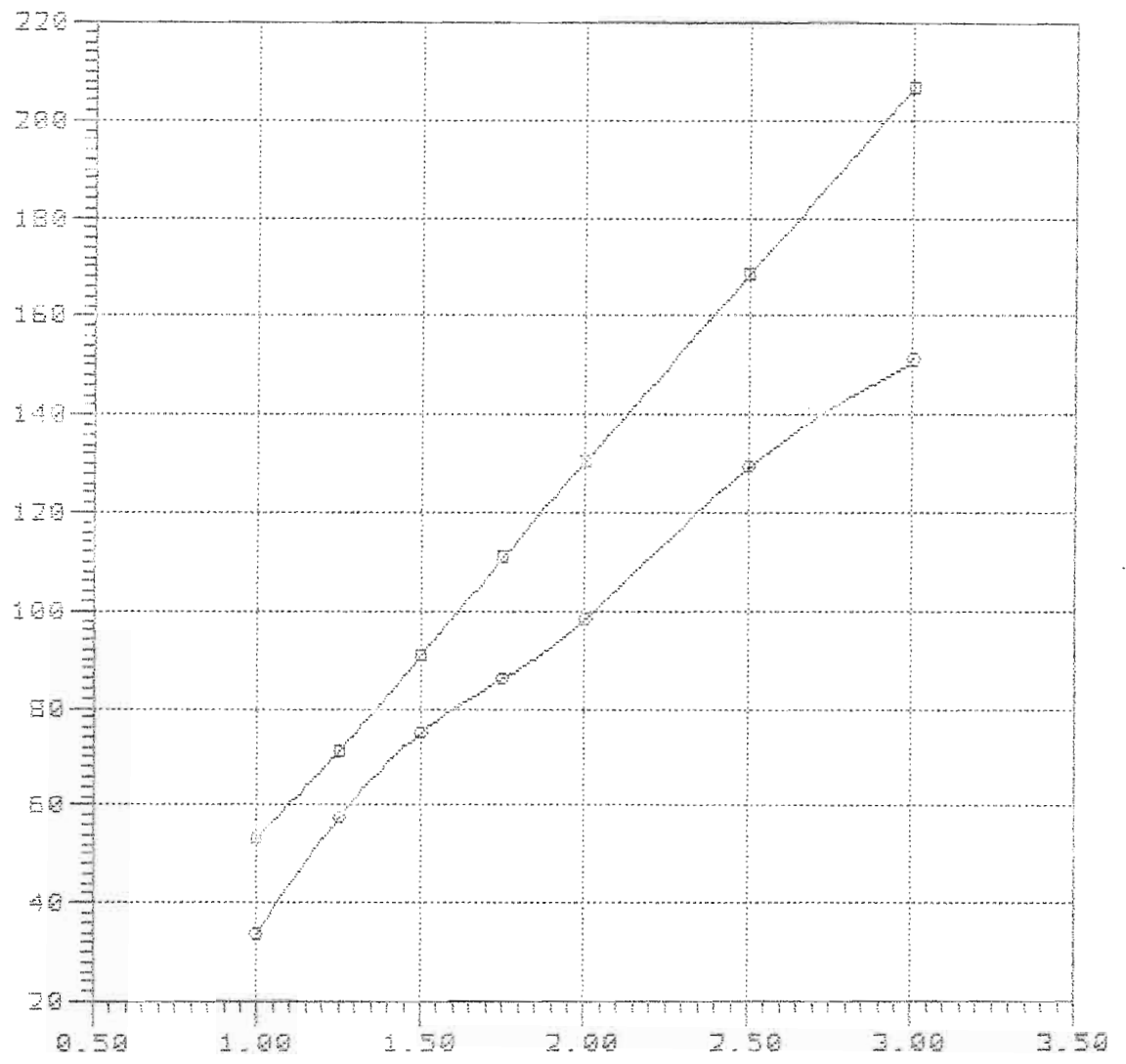


#### Curve legend

—■—

—○— TMB-65R 5249 Lpx/Bpx=4.66 Ap/Val=12.579 Lpx/Val=9.0 Lpx/Ap=6.439 Log/Lpx=0.3

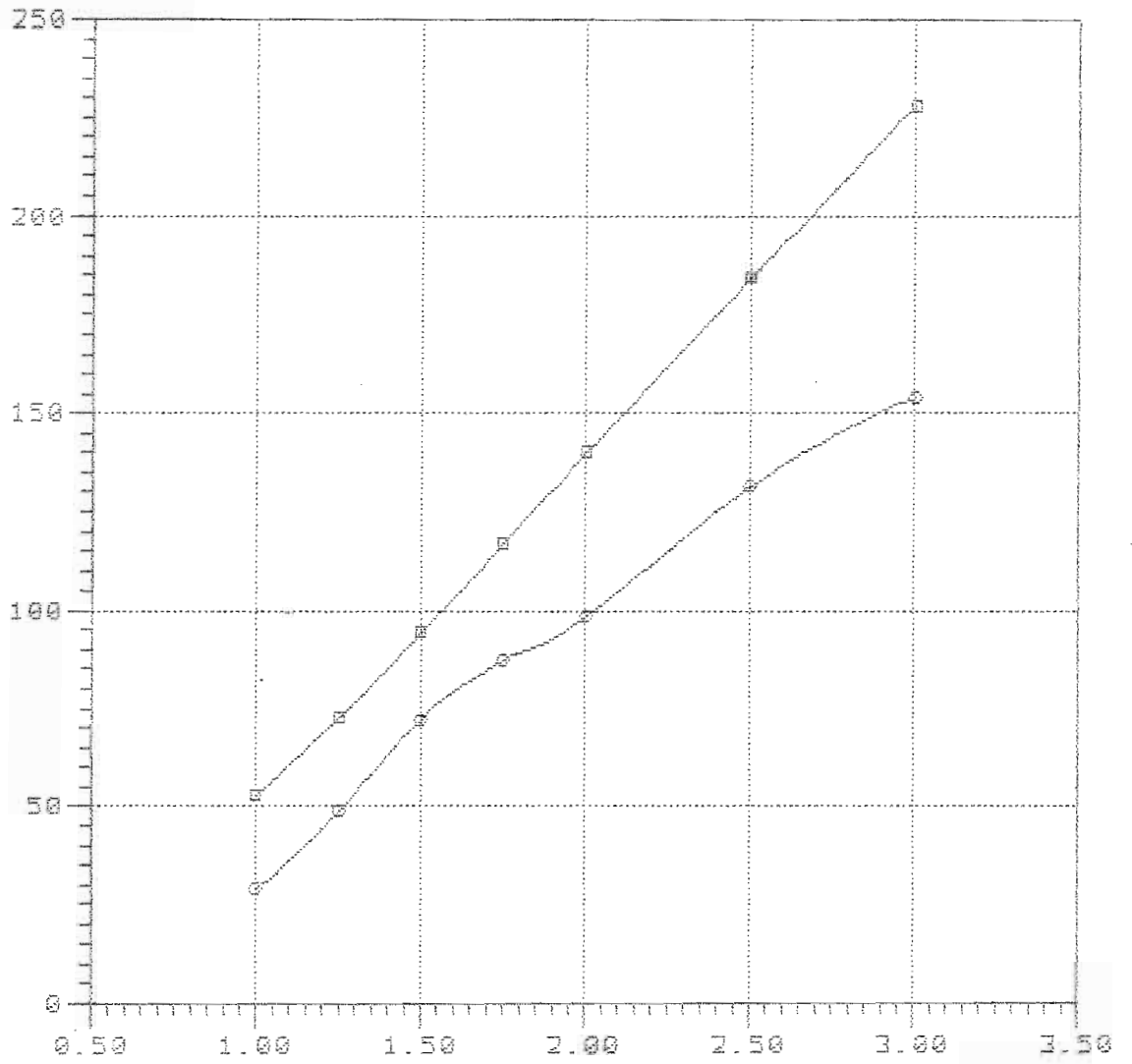
Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—  
—○— TMB-65R 5249 Lpx/Bpx=4.66 Rp/Val=12.579 Lpx/Val=9.0 Lpx/Rp=6.439 Log/Lpx=0.3

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=12.579 Lpx/Vol=9.0 Lpx/Ap=6.439 Log/Lpx=0.4



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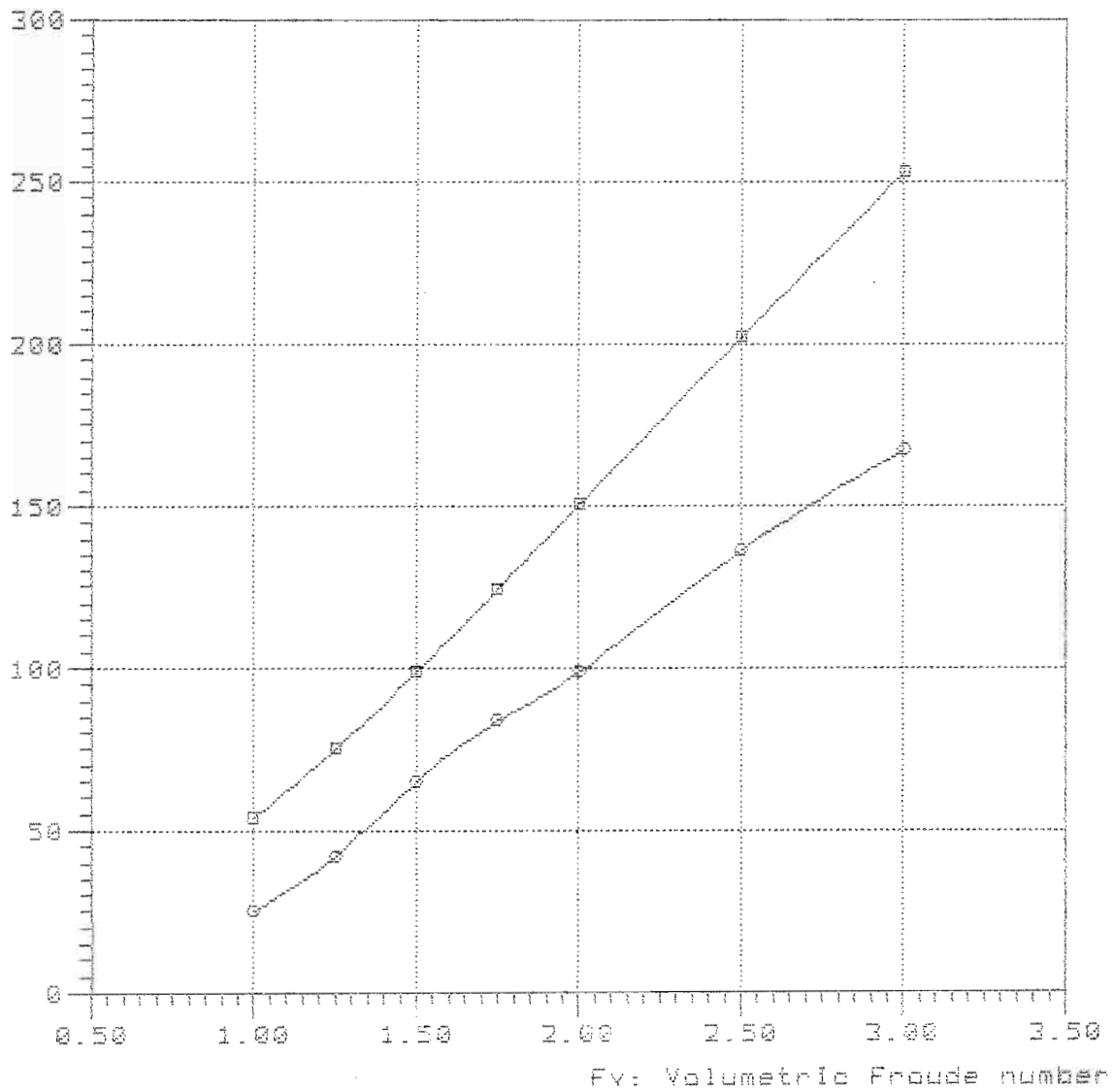
HydroComp, Inc.

File: 13-90-44.mdl

Date: 26 Feb 88

Time: 11:20

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=12.579 Lpx/Vol=9.0 Lpx/Ap=6.439 Log/Lpx=6.4

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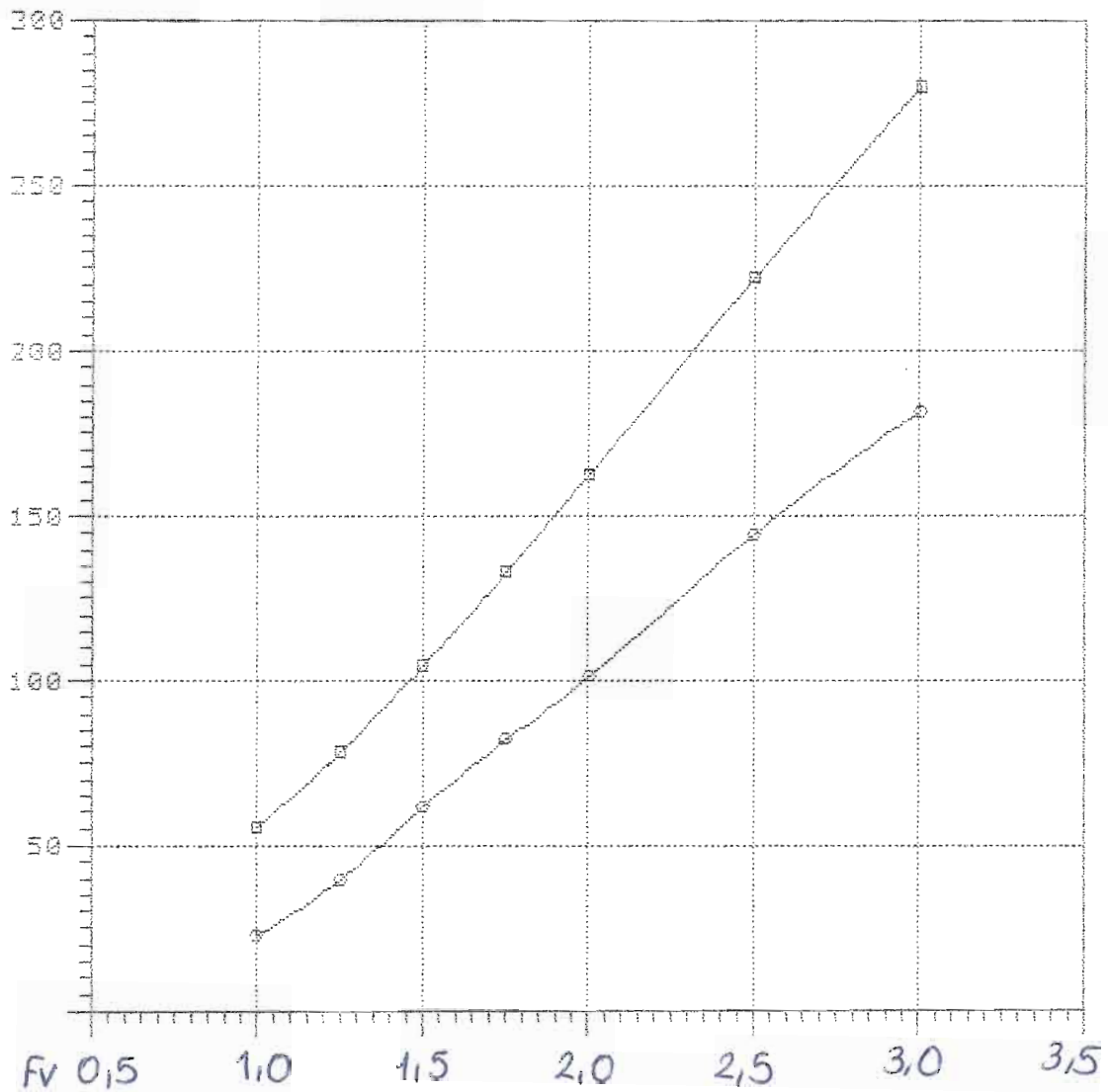
HydroComp, Inc.

File: 13-98-48.mdl

Date: 26 Feb 00

Time: 11:29

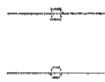
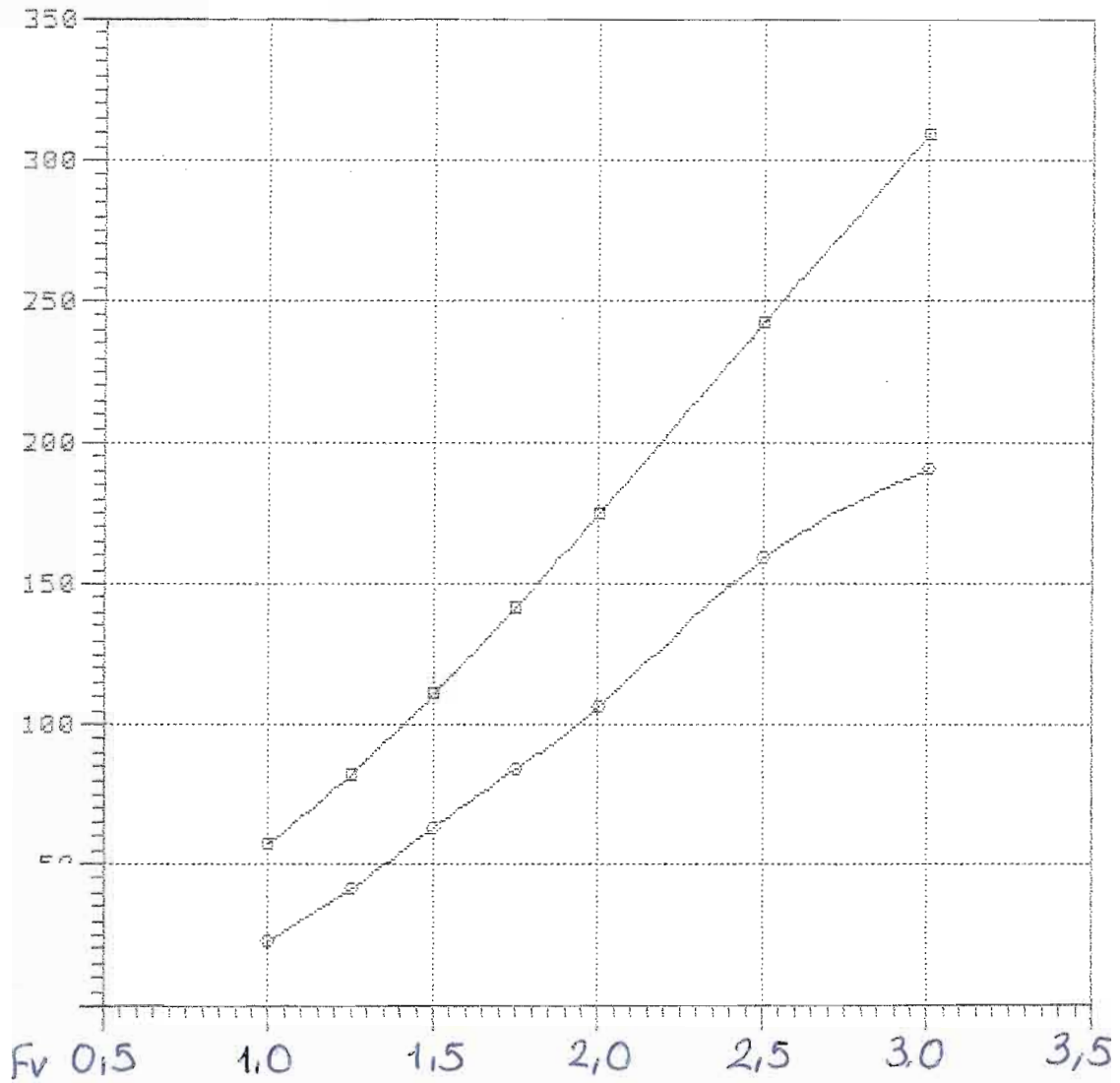
Rbare: Bare-hull resistance (lbs)



—□—

—○—

Rbare: Bare-hull resistance (lba)



Model = 5249  
Ref = NSRDC  
Friction = ~~A~~ TTC Ca=4e-4

Lpx = 23.700 ft  
Lwl = 23.558 ft  
Bpx = 5.086 ft  
Ap = 87.232 sqft  
Vcg = 1.103 ft  
Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle= 1.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 4.660  
Lpx/Ap = 6.439  
Ap /Vol = 13.955  
Lpx/Vol = 9.508  
Cvload = 0.119  
Lbload = 0.010  
Disp-Lpx = 33.536

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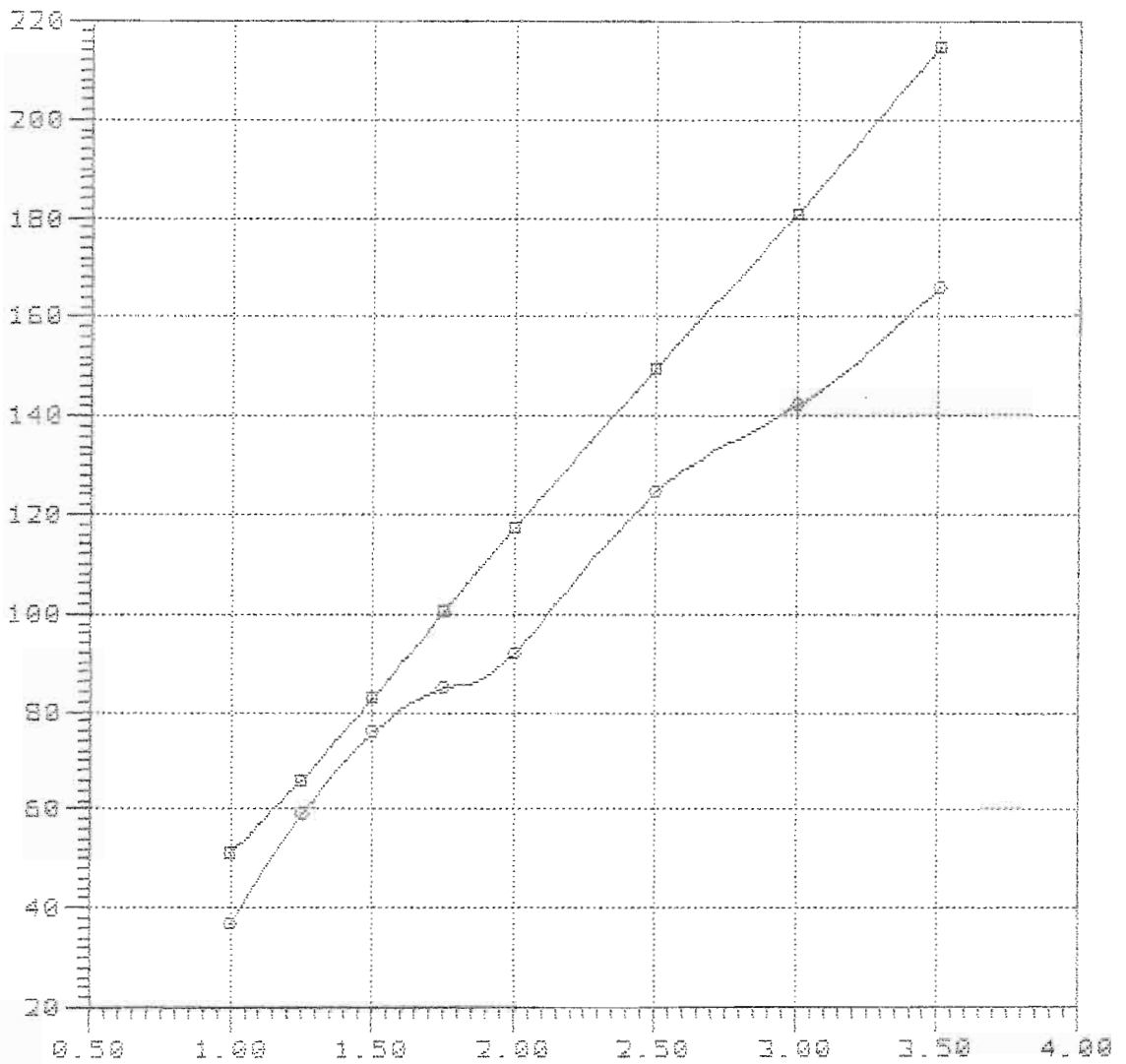
HydroComp, Inc.

File: 14-95-32.mdl

Date: 26 Feb 00

Time: 11:34

Rbare: Bare-hull resistance (lbs)

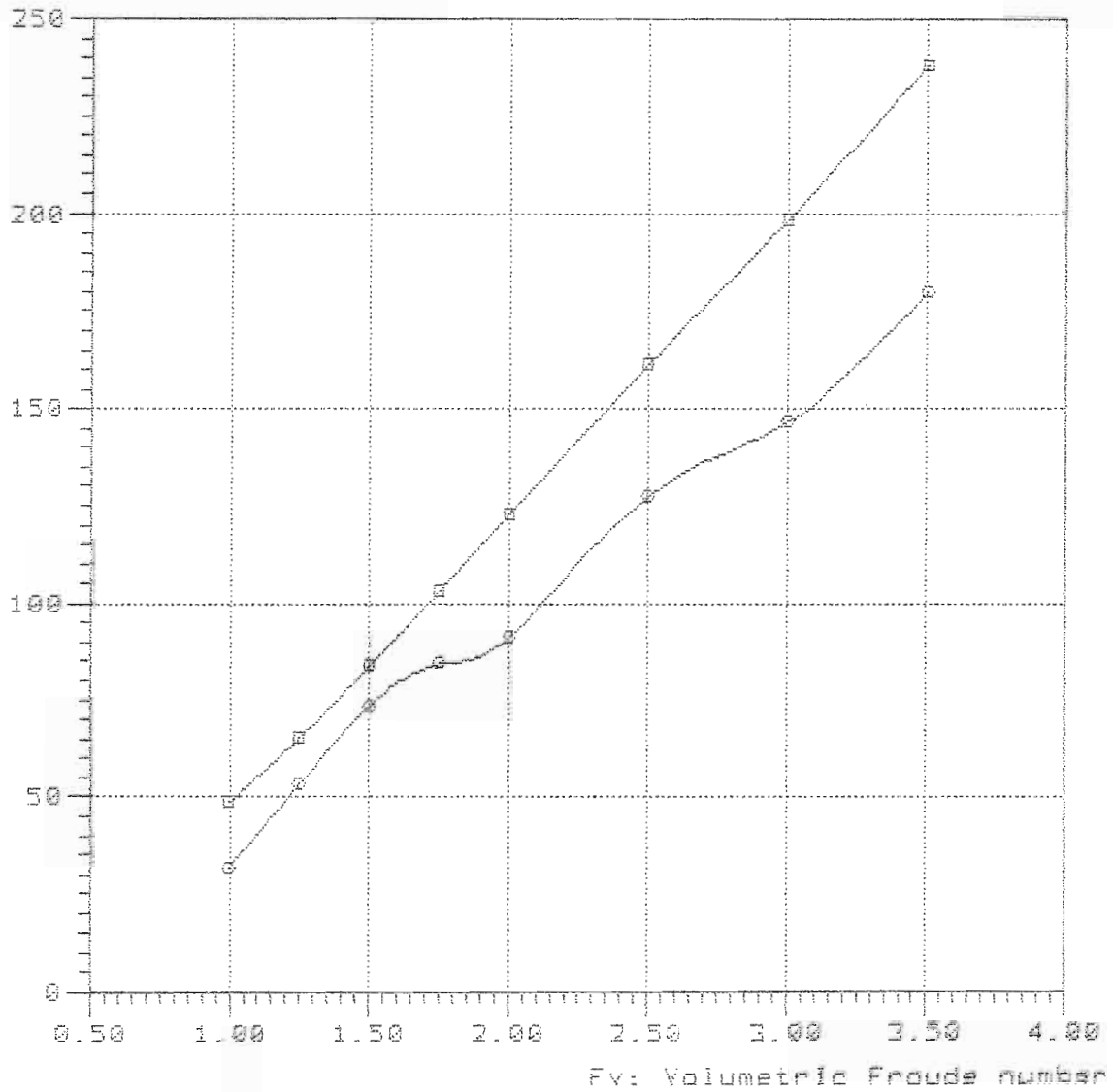


Fv: Volumetric Froude number

—■—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=13.957 Lpx/Vol=9.5 Lpx/Ap=6.439 Log/Lpx=0.3

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—●— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=13.957 Lpx/Vol=9.5 Lpx/Ap=6.439 Log/Lpx=0.3

NavCad(tm) 3.1d

### Bare-hull resistance

File: 14-95-48.mdl

(c) Copyright 1995

vs.

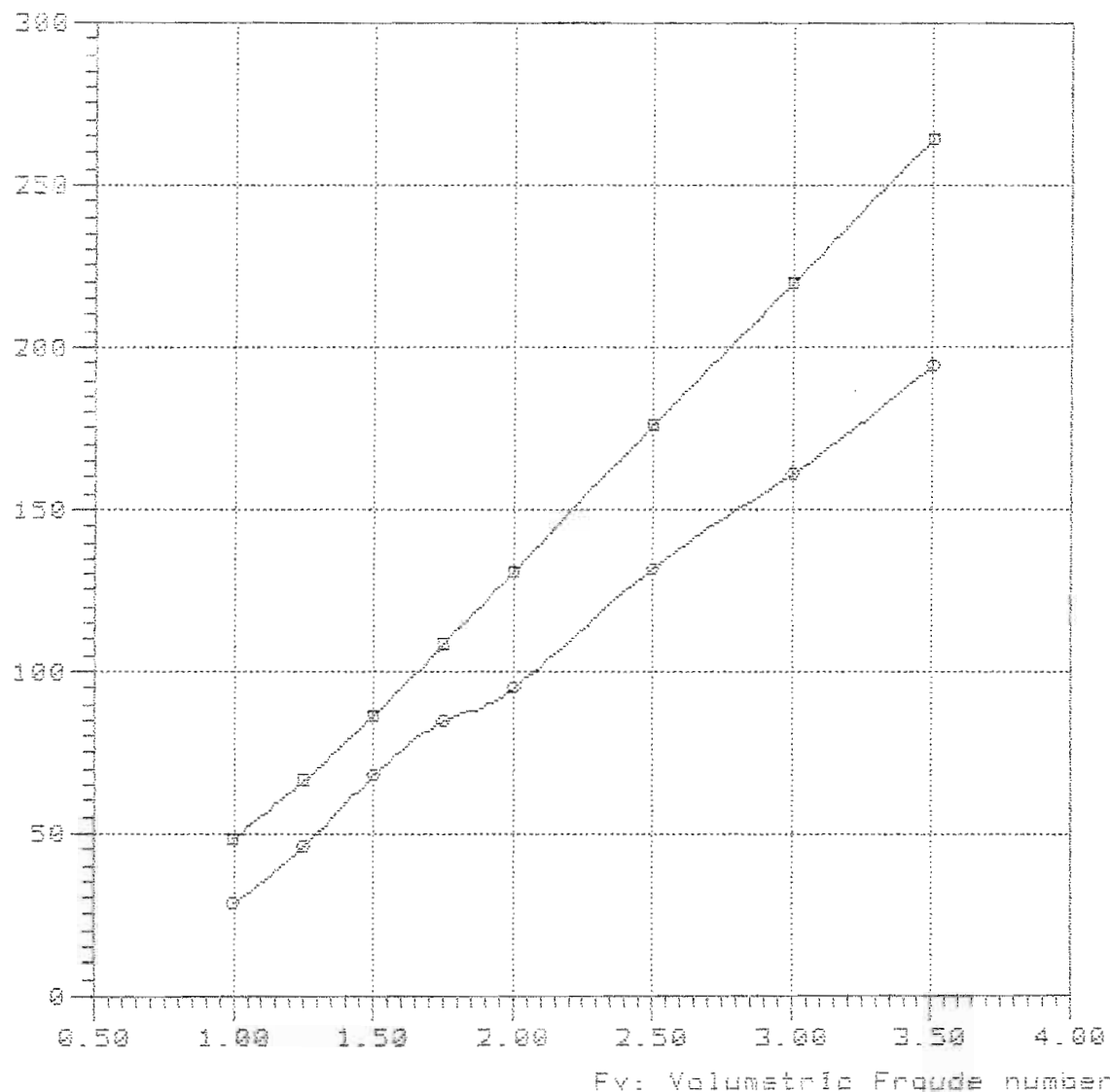
Date: 26 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 11:48

Rbare: Bare-hull resistance (lba)



#### Curve legend

—■—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=13.957 Lpx/Vol=9.5 Lpx/Ap=6.439 Log/Lpx=0.4

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

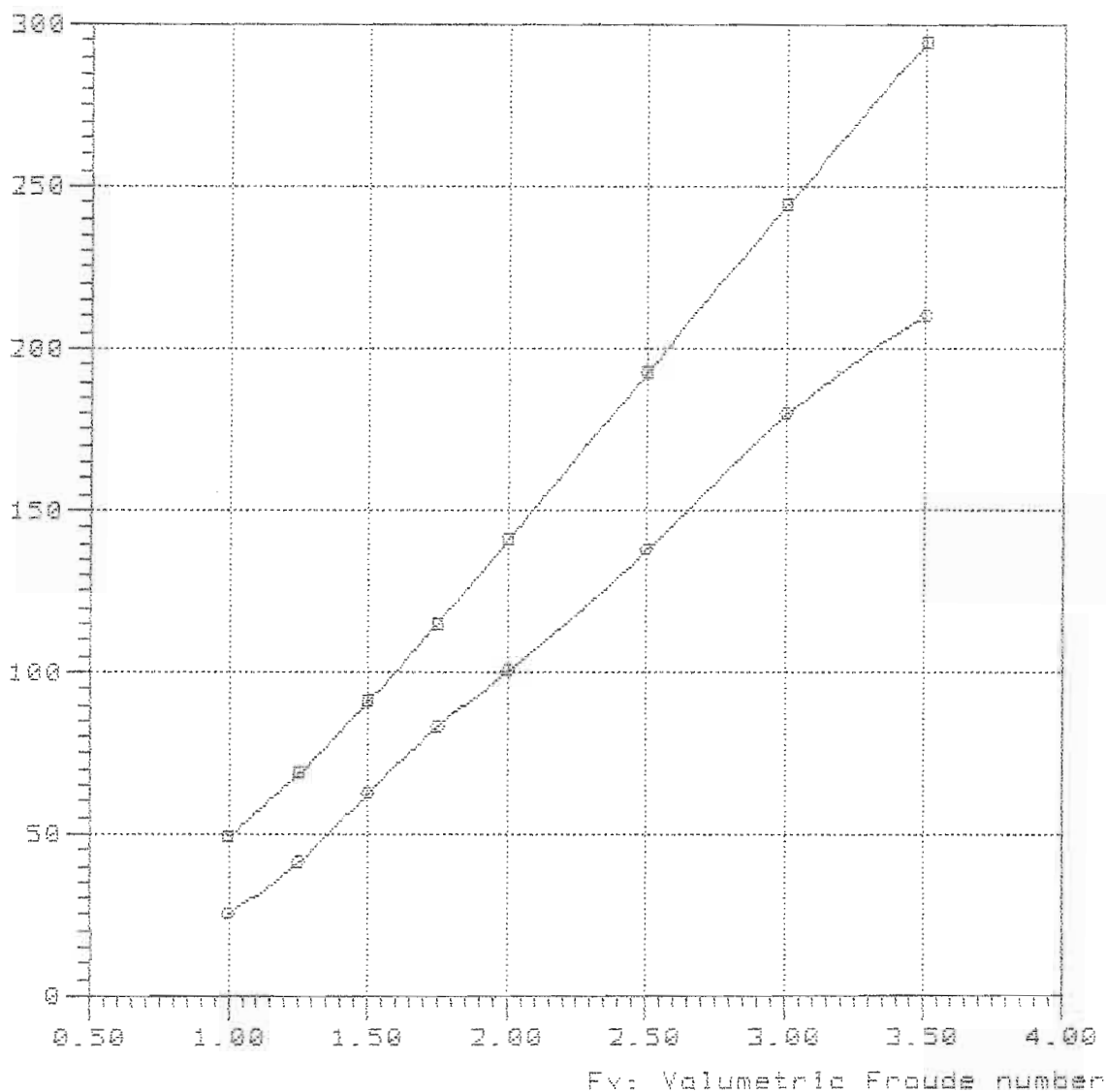
### Volumetric Froude number

File: 14-95-44.mdl

Date: 26 Feb 00

Time: 11:43

Rbare: Bare-hull resistance (lbs)



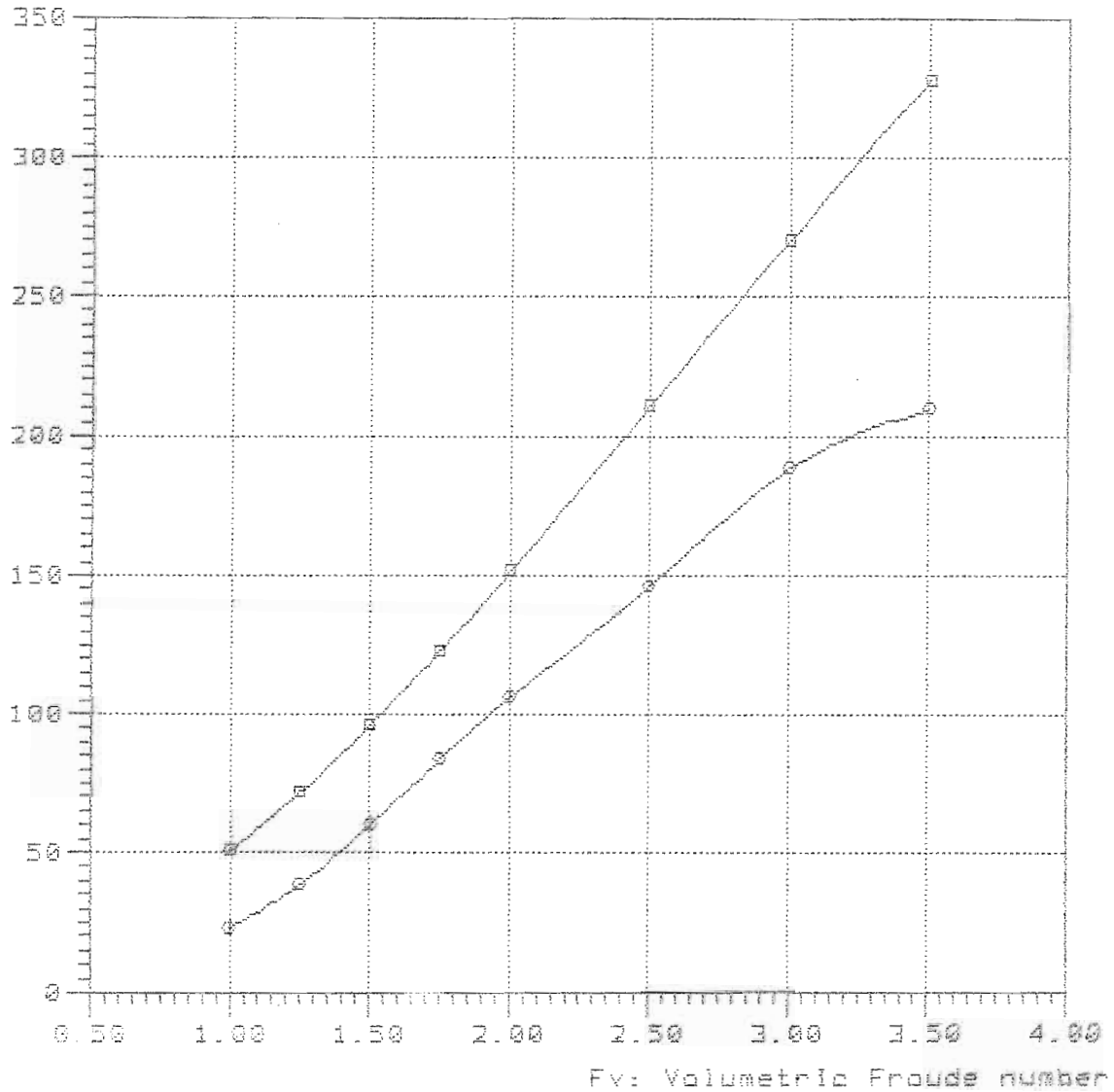
#### Curve legend

—■—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=13.957 Lpx/Vol=9.5 Lpx/Ap=6.439 Log/Lpx=0.4



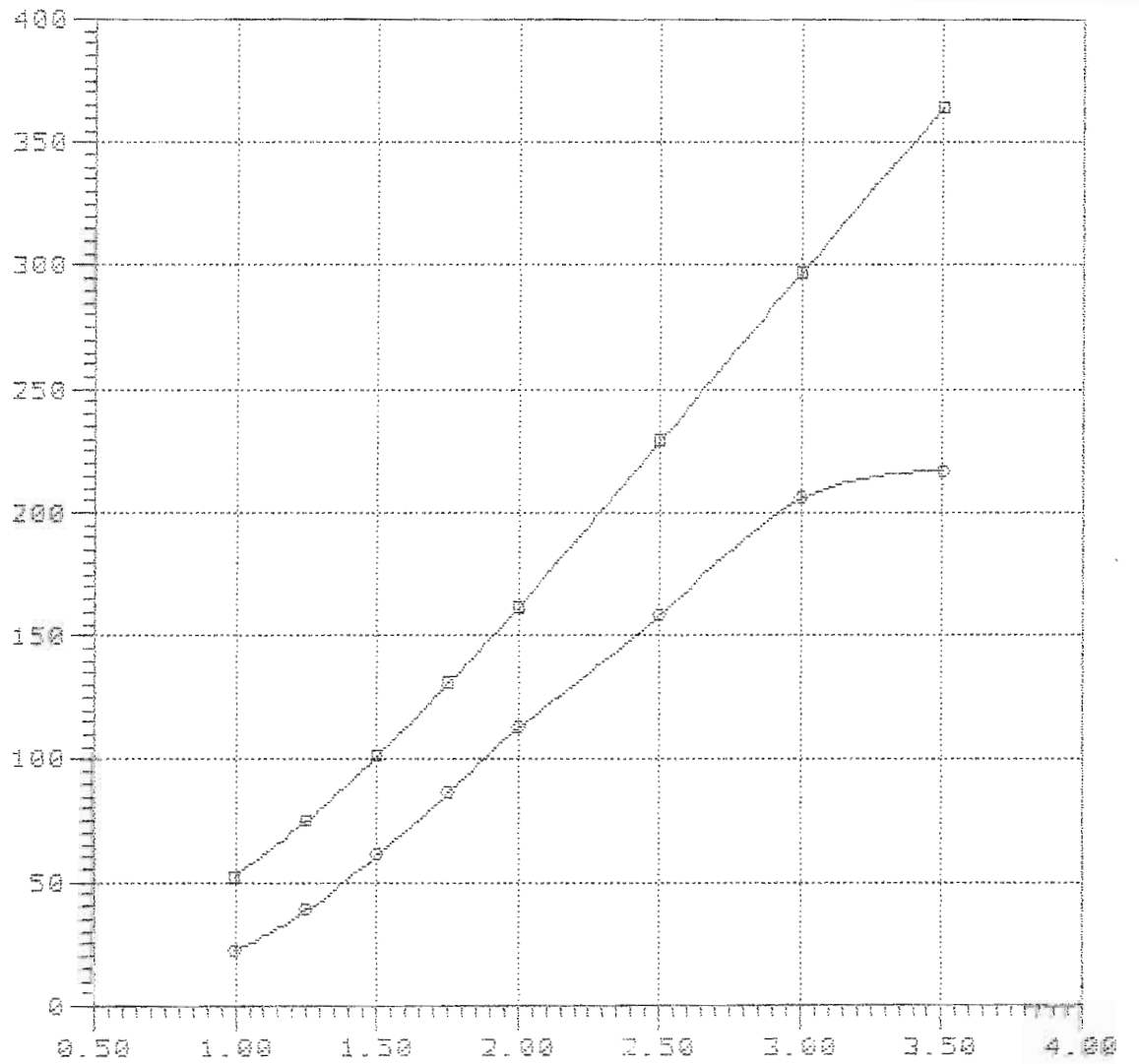
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=13.957 Lpx/Vol=9.5 Lpx/Ap=6.439 Log/Lpx=0.4

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—

—●— TMB-65A 5249 Lpx/Sp=4.66 Ap/Vol=13.957 Lpx/Vol=9.5 Lpx/Sp=6.439 Log/Lpx=0.5

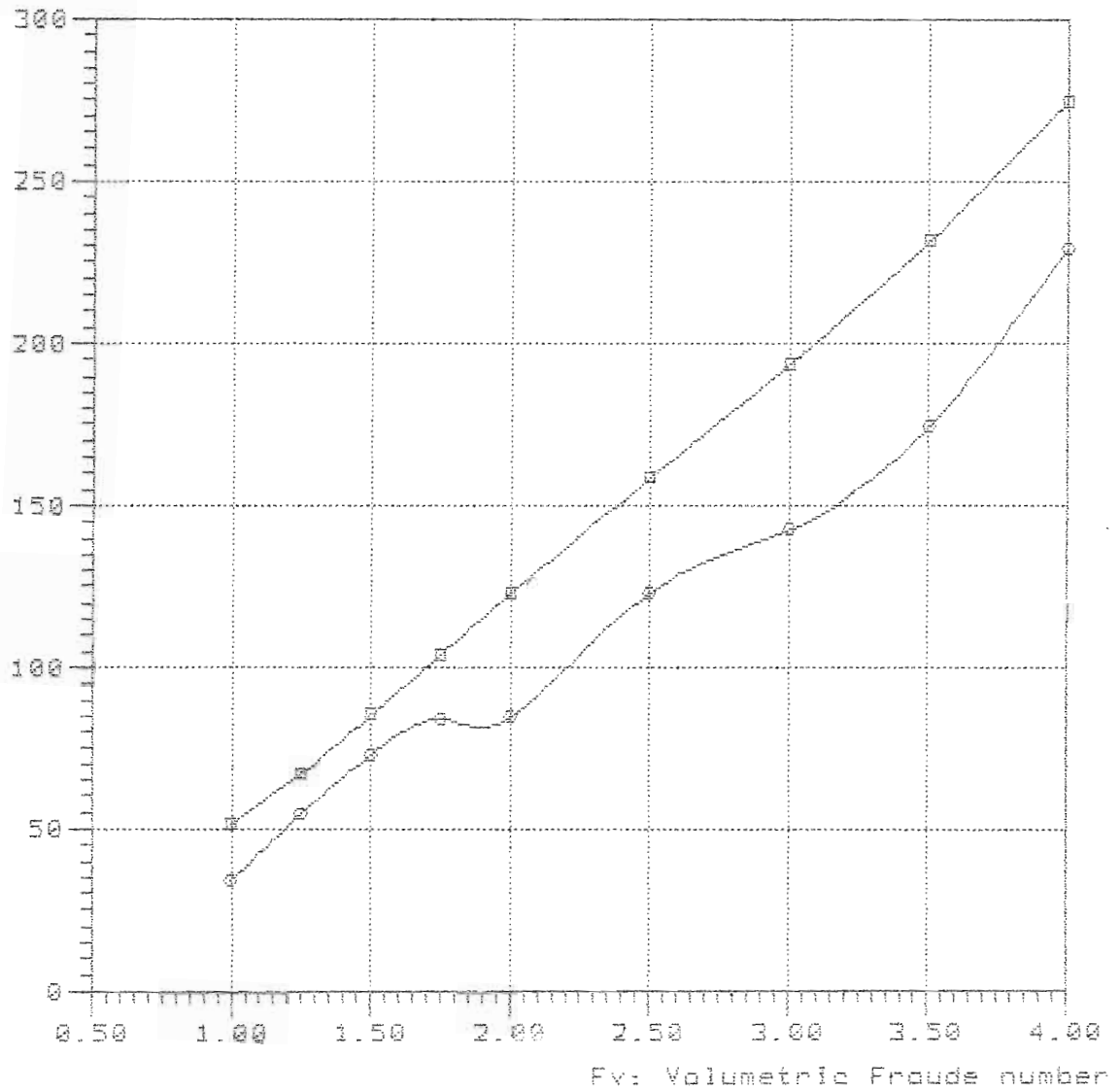
Model = 5249  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 25.000 ft  
Lwl = 24.850 ft  
Bpx = 5.365 ft  
Ap = 97.065 sqft  
Vcg = 1.164 ft  
Disp. = 1000.00 Lb

Deadrise = 16.30 degree  
Twist Angle= 1.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inç

Lpx/Bpx = 4.660  
Lpx/Ap = 6.439  
Ap /Vol = 15.529  
Lpx/Vol = 10.030  
Cvload = 0.101  
Lbload = 0.008  
Disp-Lpx = 28.571

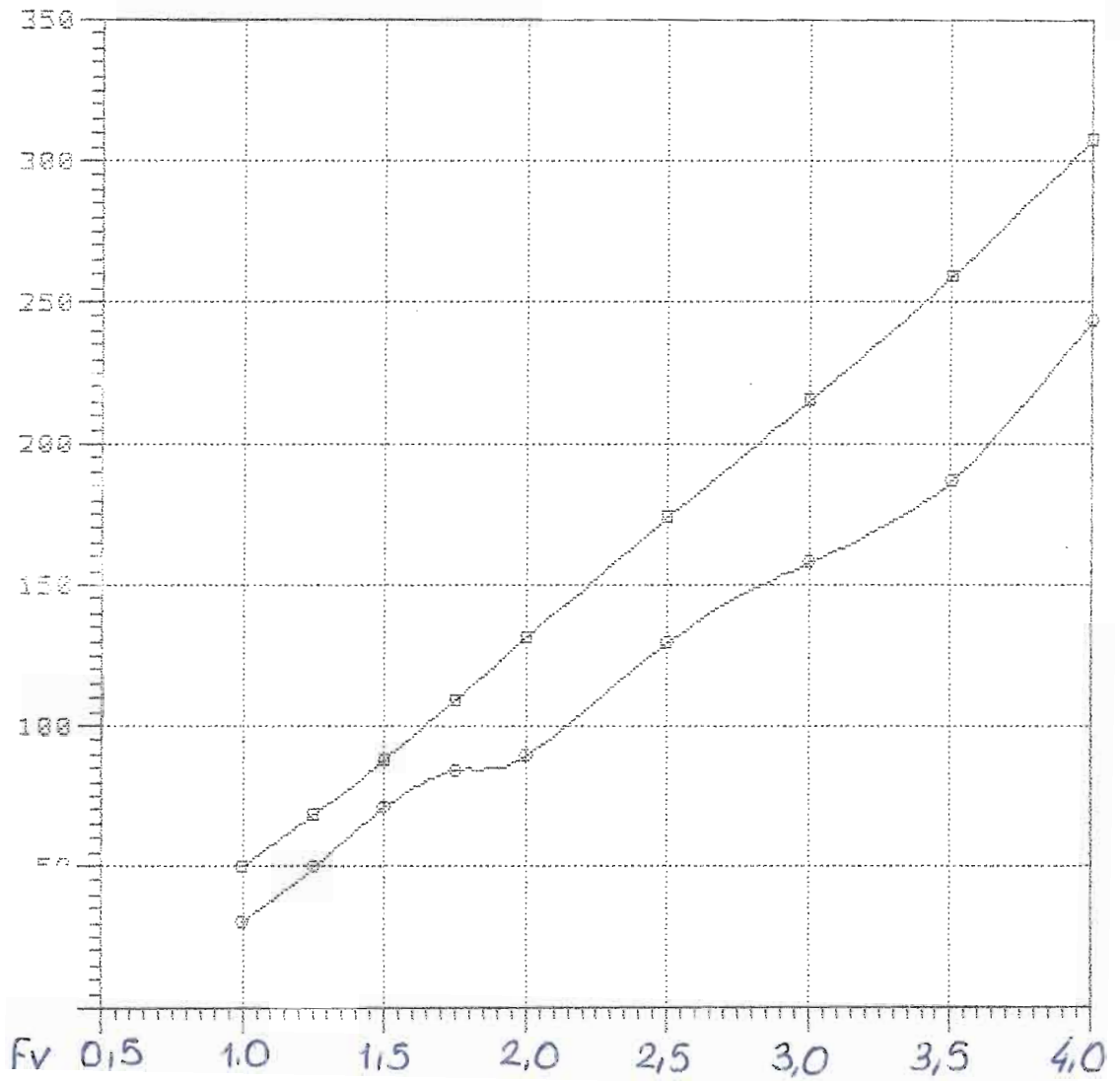
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=15.530 Lpx/Vol=10 Lpx/Ap=6.439 Log/Lpx=0.32

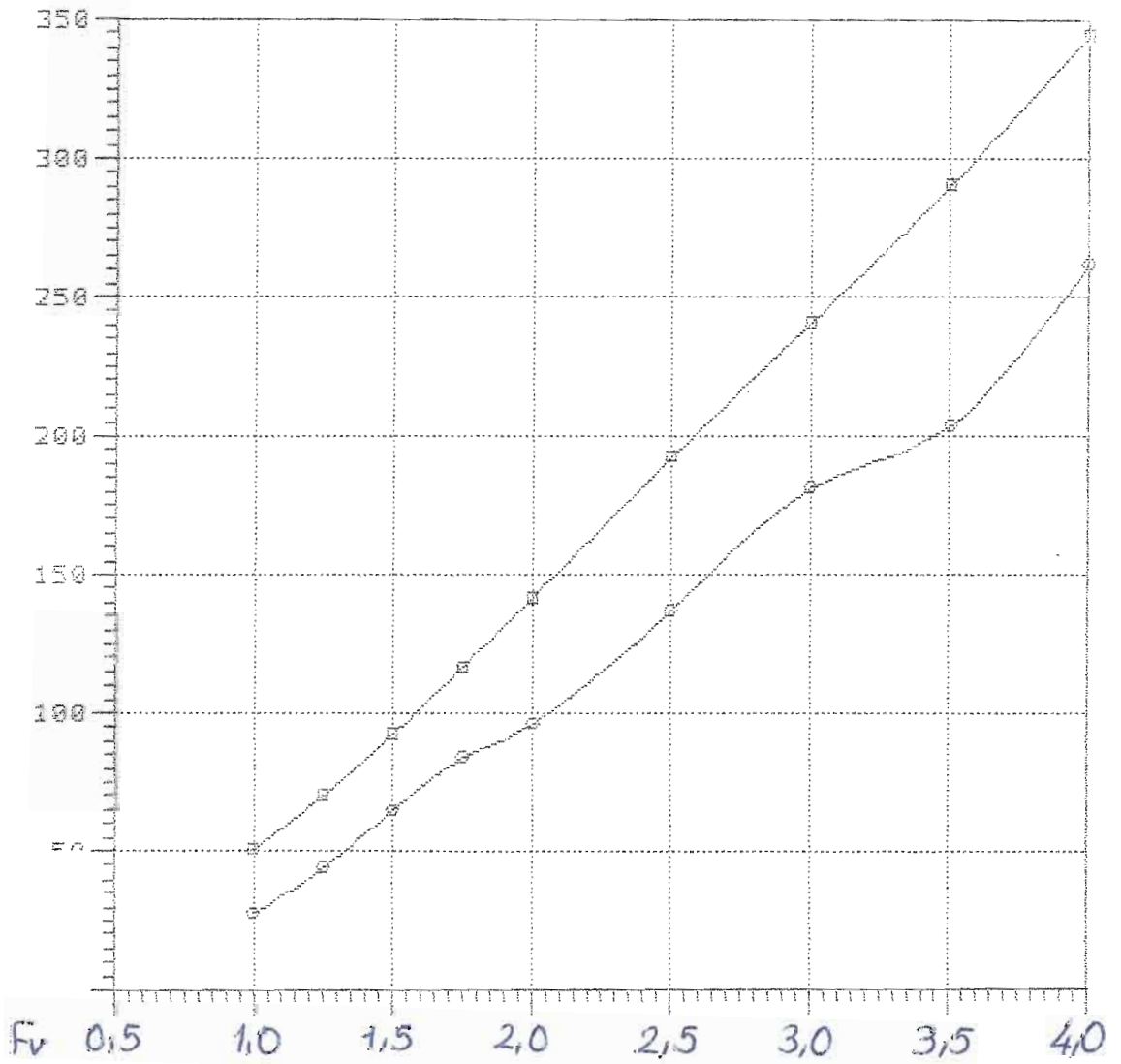
Rbare: Bare-hull resistance (lbs)



—■—

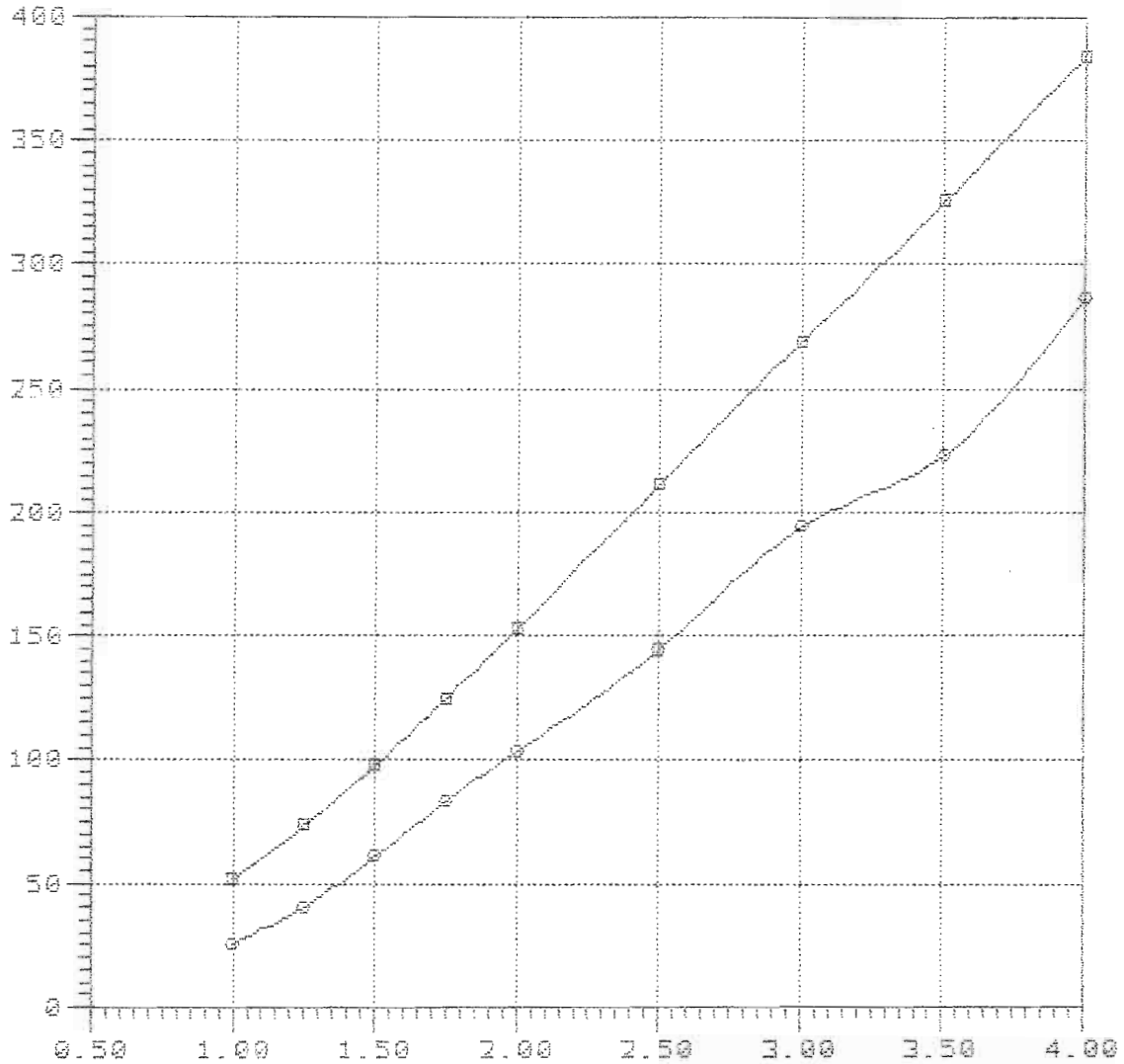
—○—

Rbare: Bare-hull resistance (lbs)



— □ —  
— ○ —

Rbare: Bare-hull resistance (lbs)



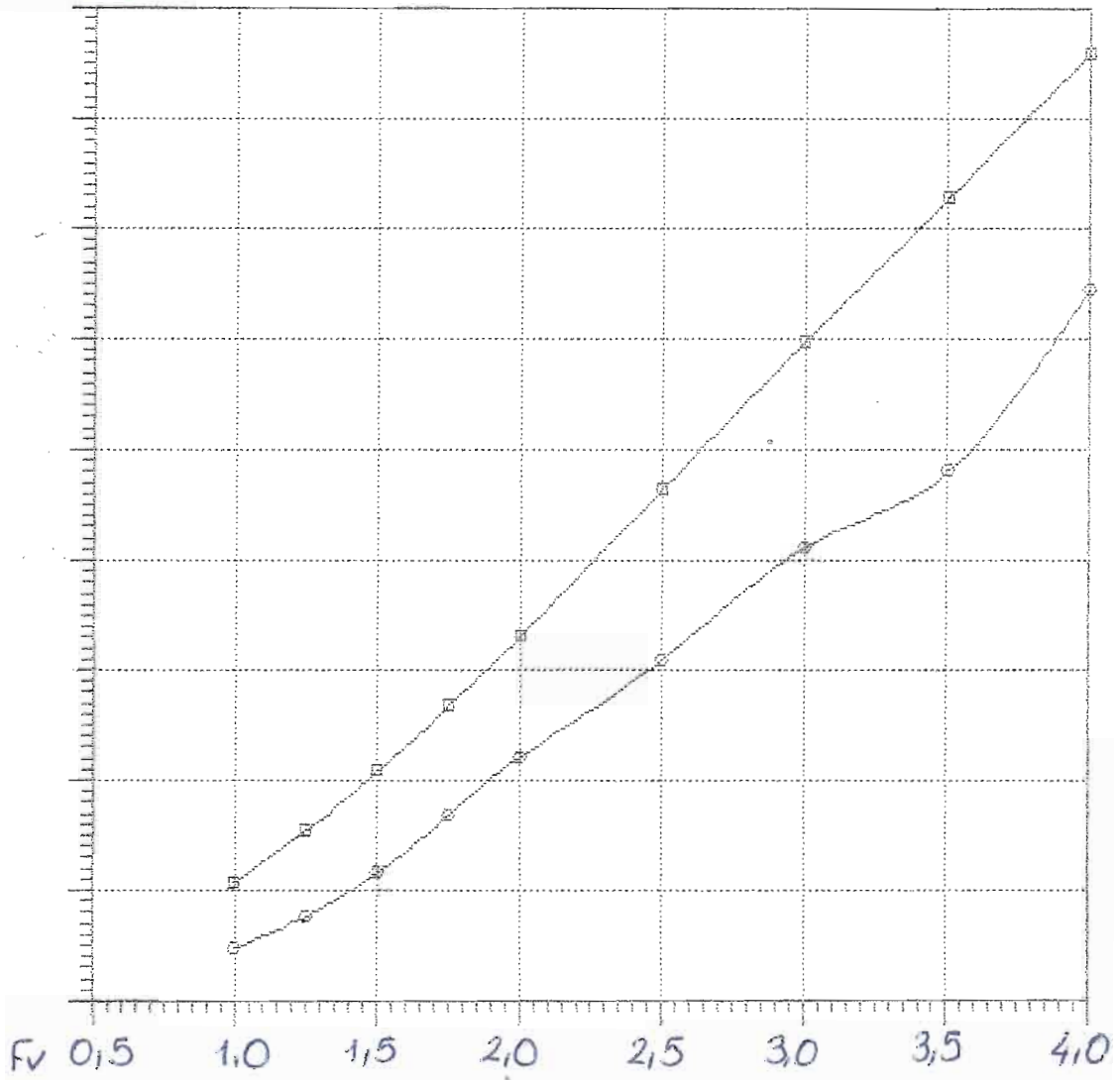
Fv: Volumetric Froude number

—■—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=15.530 Lpx/Vol=10 Lpx/Ap=6.439 Log/Lpx=0.44

16-10-48

$\epsilon_{bs}$



— □ —

— ○ —



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### Bare-hull resistance

File: 16-10-52.mdl

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vs.

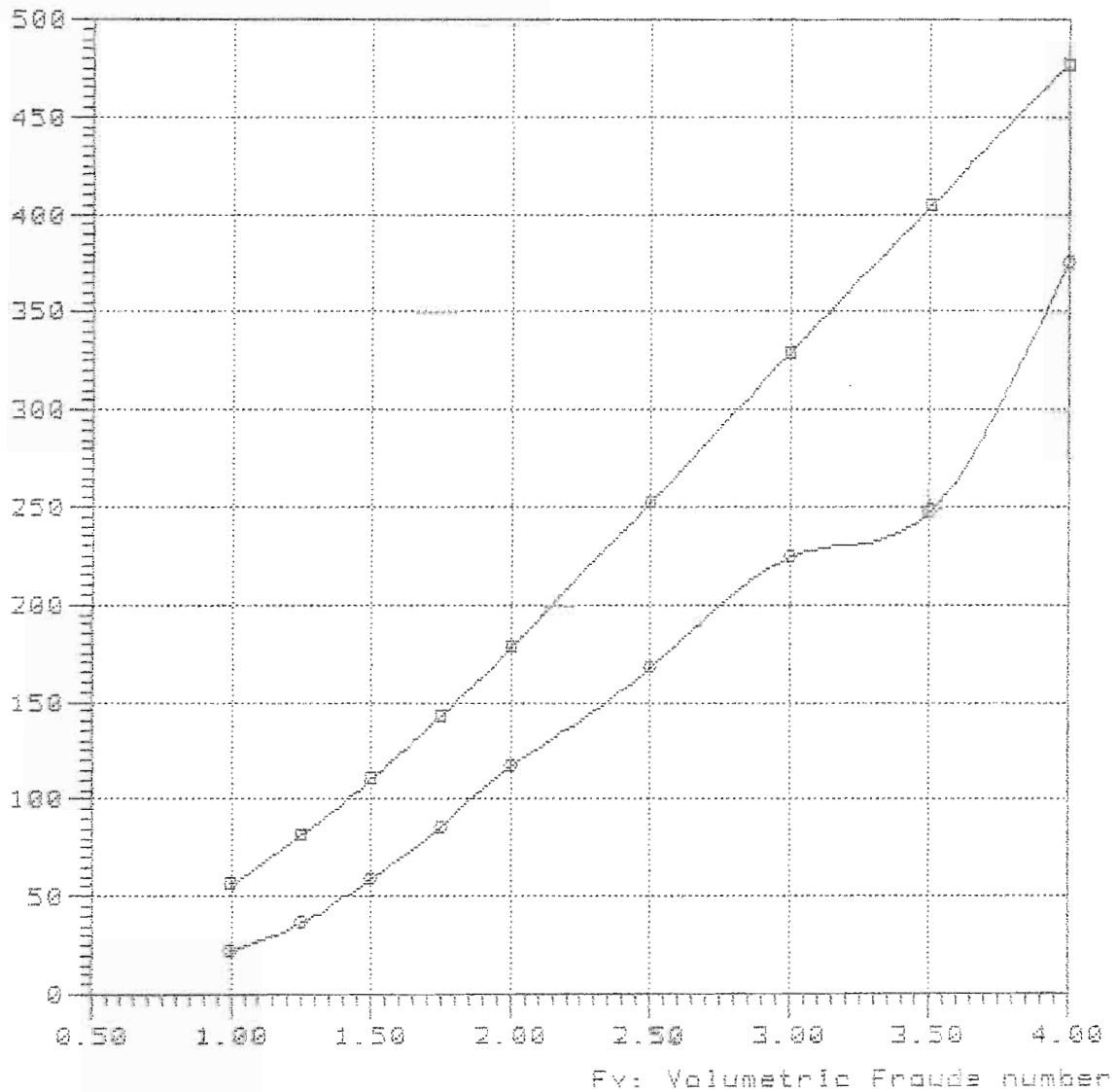
Date: 26 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 12:05

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-65A 5249 Lpx/Bpx=4.66 Ap/Vol=15.530 Lpx/Vol=10 Lpx/Ap=6.439 Log/Lpx=0.52

5250

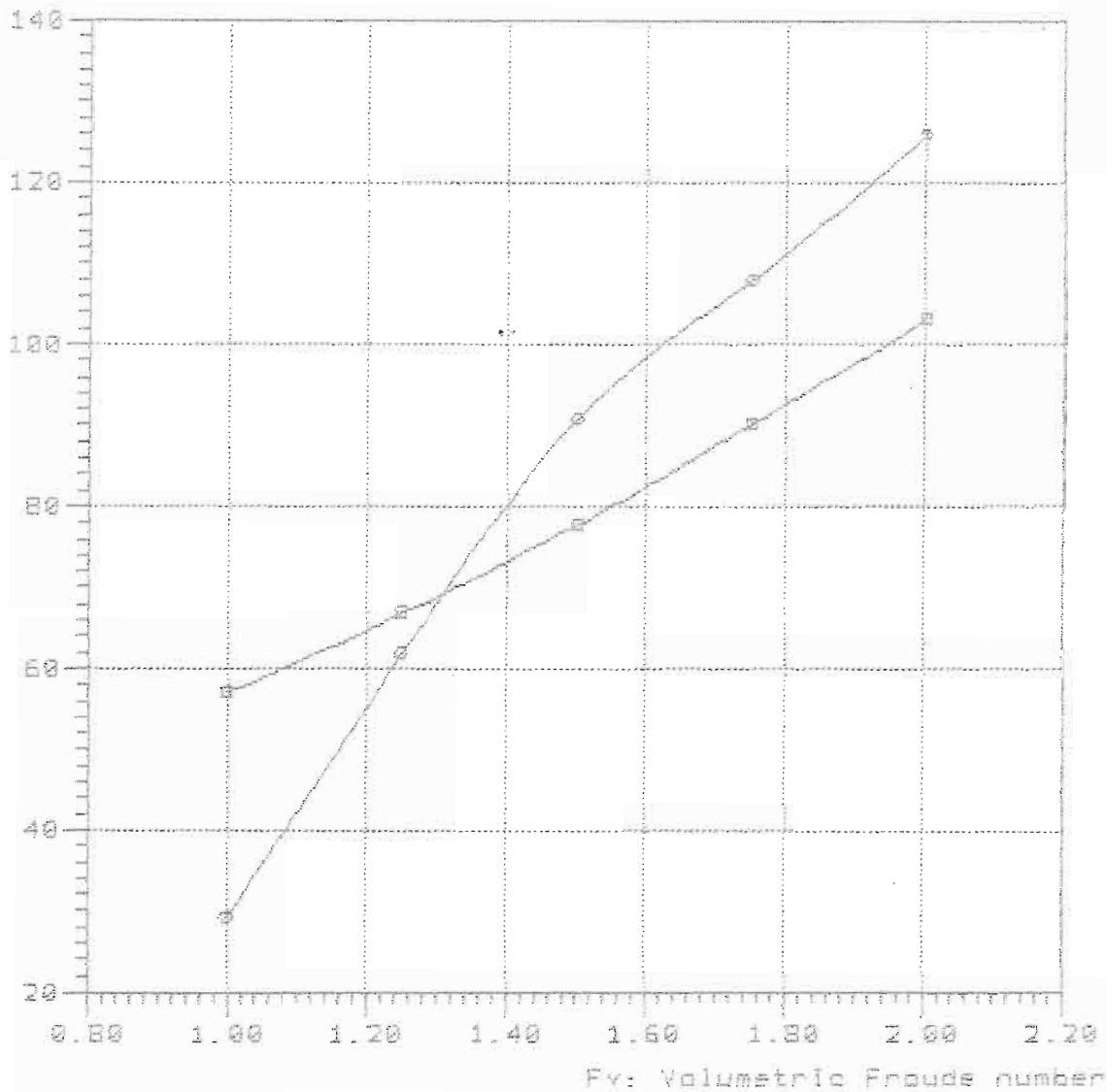
Model = 5250  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 16.200 ft  
Lwl = 16.102 ft  
Bpx = 2.455 ft  
Ap = 28.827 sqft  
Vcg = 1.069 ft  
Disp. = 1000.00 Lb  
Deadrise = 30.40 degree  
Twist Angle = 2.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 6.599  
Lpx/Ap = 9.104  
Ap /Vol = 4.612  
Lpx/Vol = 6.499  
Cvload = 1.056  
Lbload = 0.051  
Disp-Lpx = 105.004

**Bu ölçüler dizayn ve bununla ilgili Resimlerin telif hakları ÇEMBERCİ DENİZCİLİĞE Aittir. Bu döküman veya bunun her kısmı üçüncü şahıslara verilemez. İzinsiz veya kopya edilemez ve her ne maksatla olursa olsun maksadı dışında izinsiz kullanılamaz.**

Rbare: Bare-hull resistance (lbs)

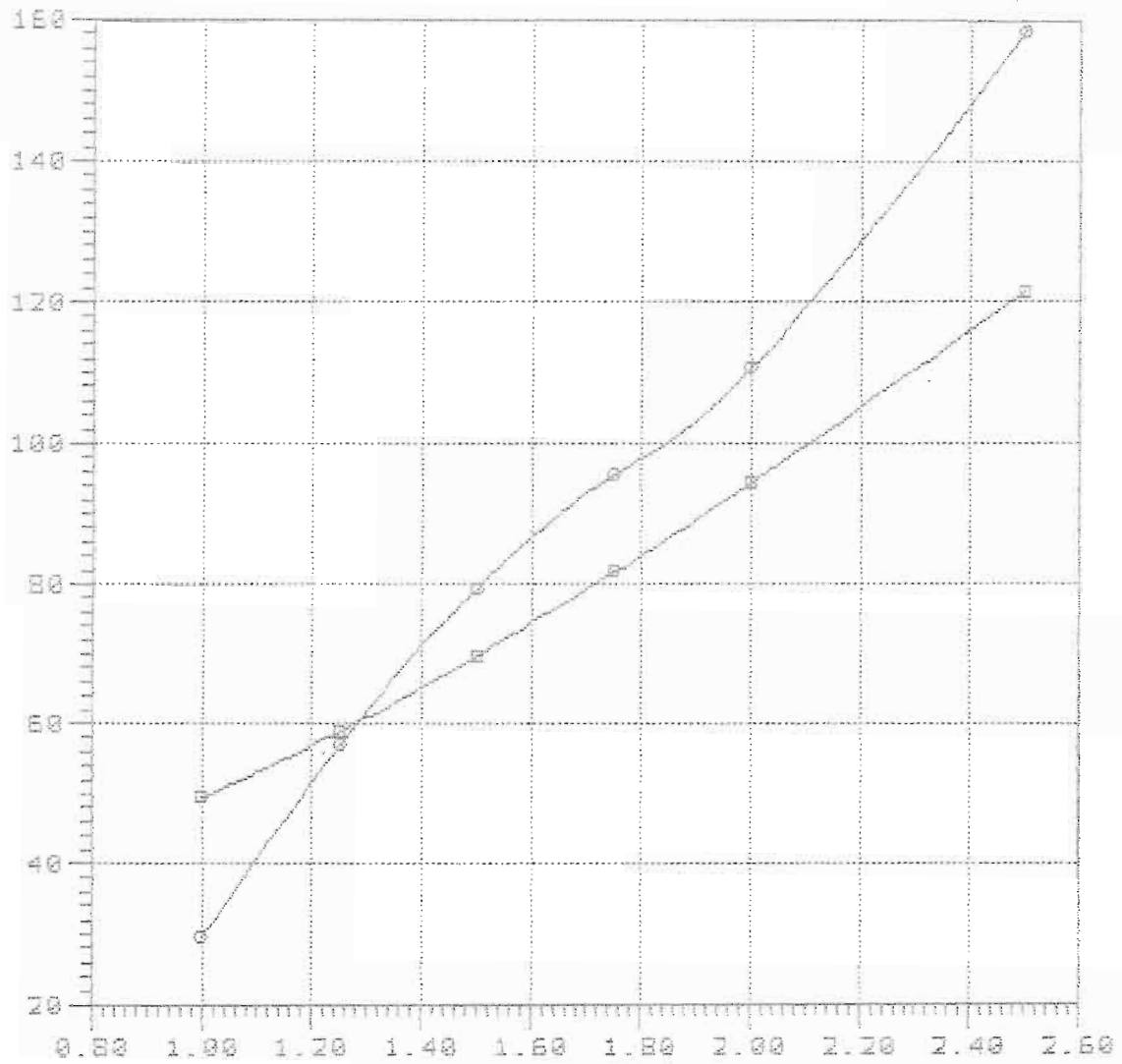


Curve legend

—■—

—○— TMB-65A 5250 Lpx/Bpx=6.6 Rp/Vol=4.617 Lpx/Vol=6.50 Lpx/Rp=9.194 Log/Lpx=8.40

Rbare: Bare-hull resistance (lbs)

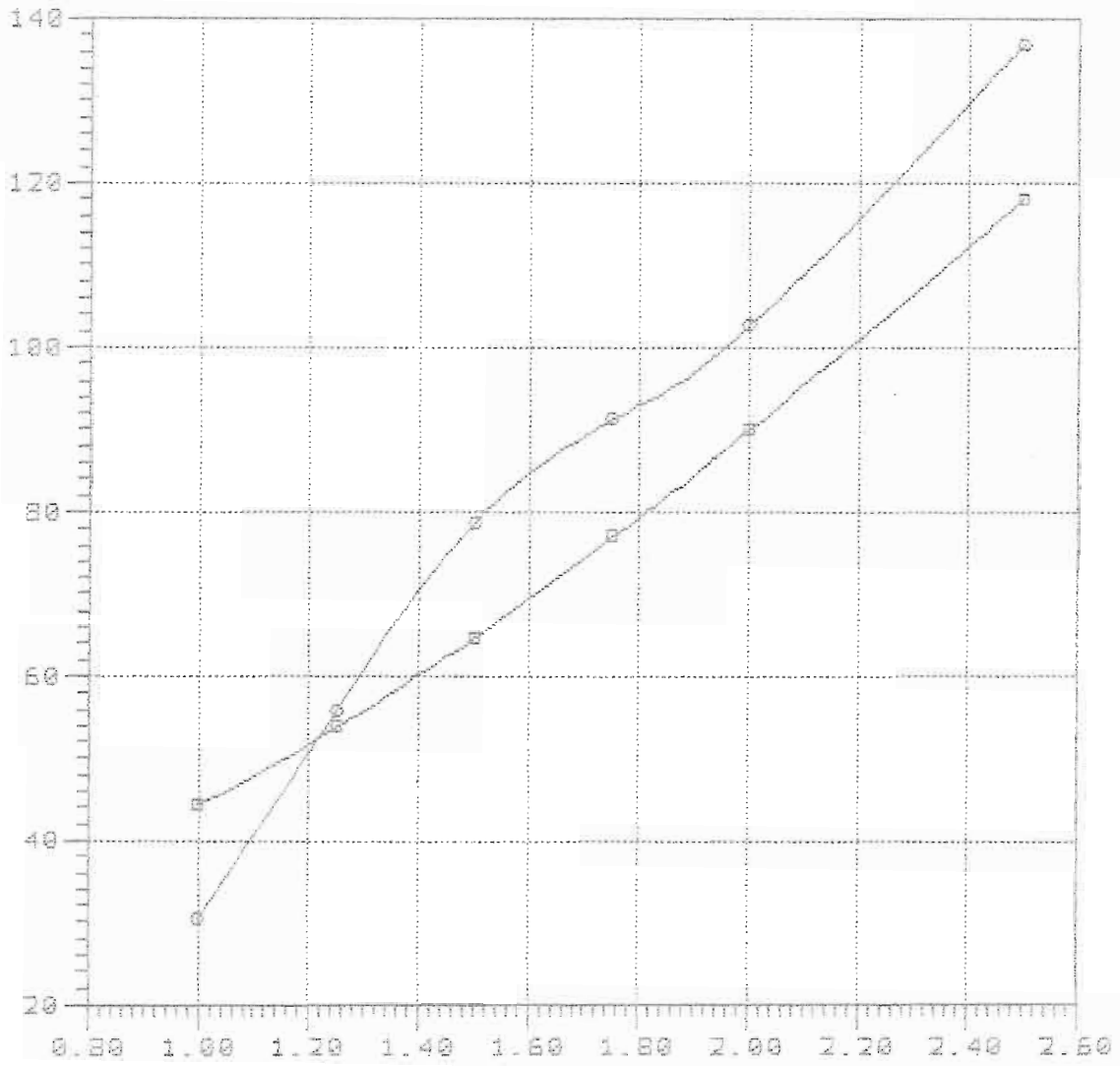


Fv: Volumetric Froude number

—■—

—○— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=4.612 Lpx/Vol=6.50 Lpx/Sp=9.104 Log/Lpx=0.44

Rbare: Bare-hull resistance (lba)

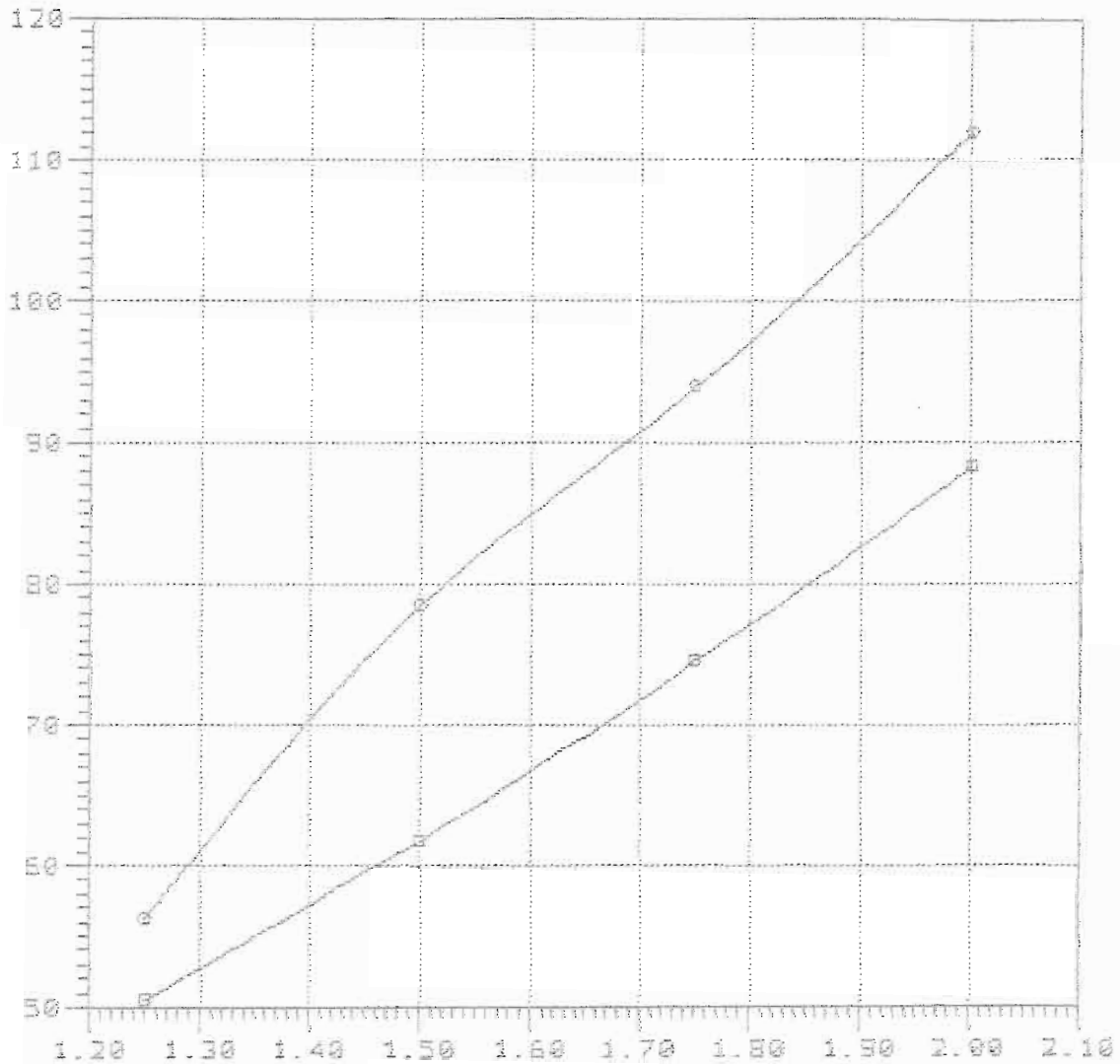


Fv: Volumetric Froude number

—■—

—●— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=4.612 Lpx/Vol=6.50 Lpx/Ap=9.104 Lcg/Lpx=0.48

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—□—

—○— TMS-65R 5250 Lpx/Box=6.6 Ap/Vol=4.612 Lpx/Vol=6.58 Lpx/Sp=9.104 Log/Lpx=0.52

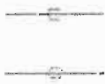
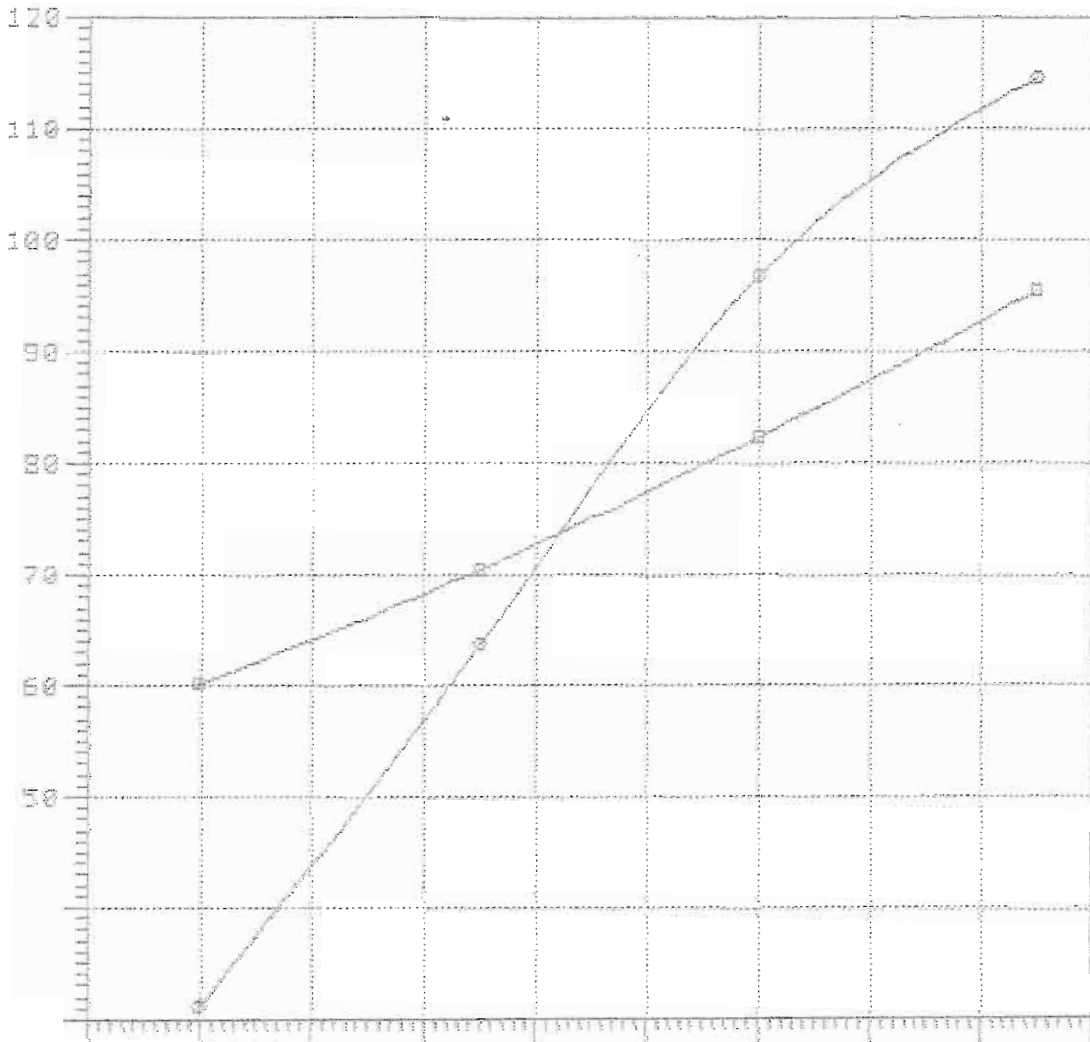
Model = 5250  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 17.500 ft  
Lwl = 17.395 ft  
Bpx = 2.652 ft  
Ap = 33.639 sqft  
Vcg = 1.154 ft  
Disp. = 1000.00 Lb  
Deadrise = 30.40 degree  
Twist Angle= 2.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

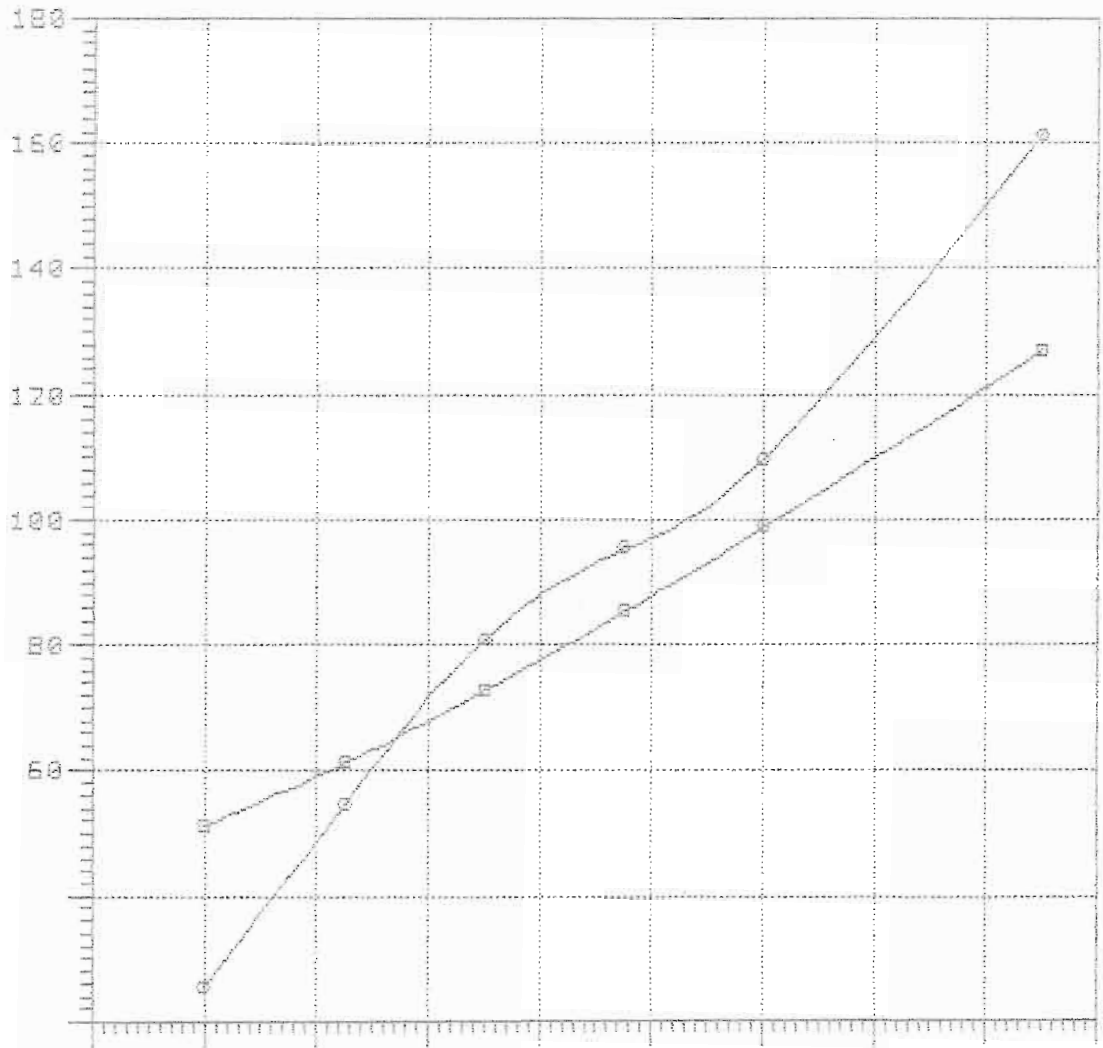
Lpx/Bpx = 6.599  
Lpx/Ap = 9.104  
Ap /Vol = 5.382  
Lpx/Vol = 7.021  
Cvload = 0.838  
Lbload = 0.040  
Disp-Lpx = 83.299



Rbare: Bare-hull resistance (lbs)



Rbare: Bare-hull resistance (lbs)



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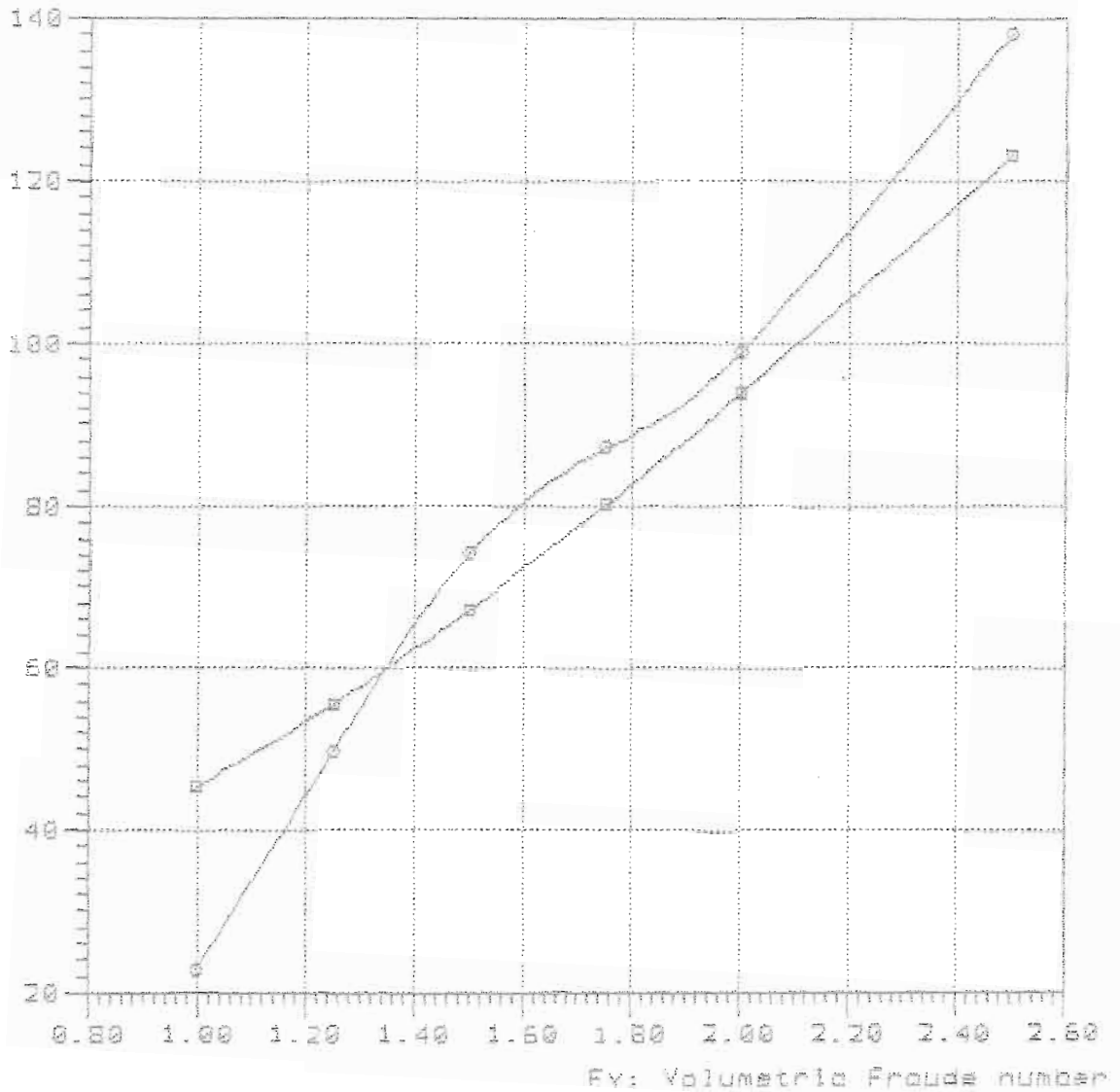
HydroComp, Inc.

File: 6-78-448.mdl

Date: 1 Mar 00

Time: 10:18

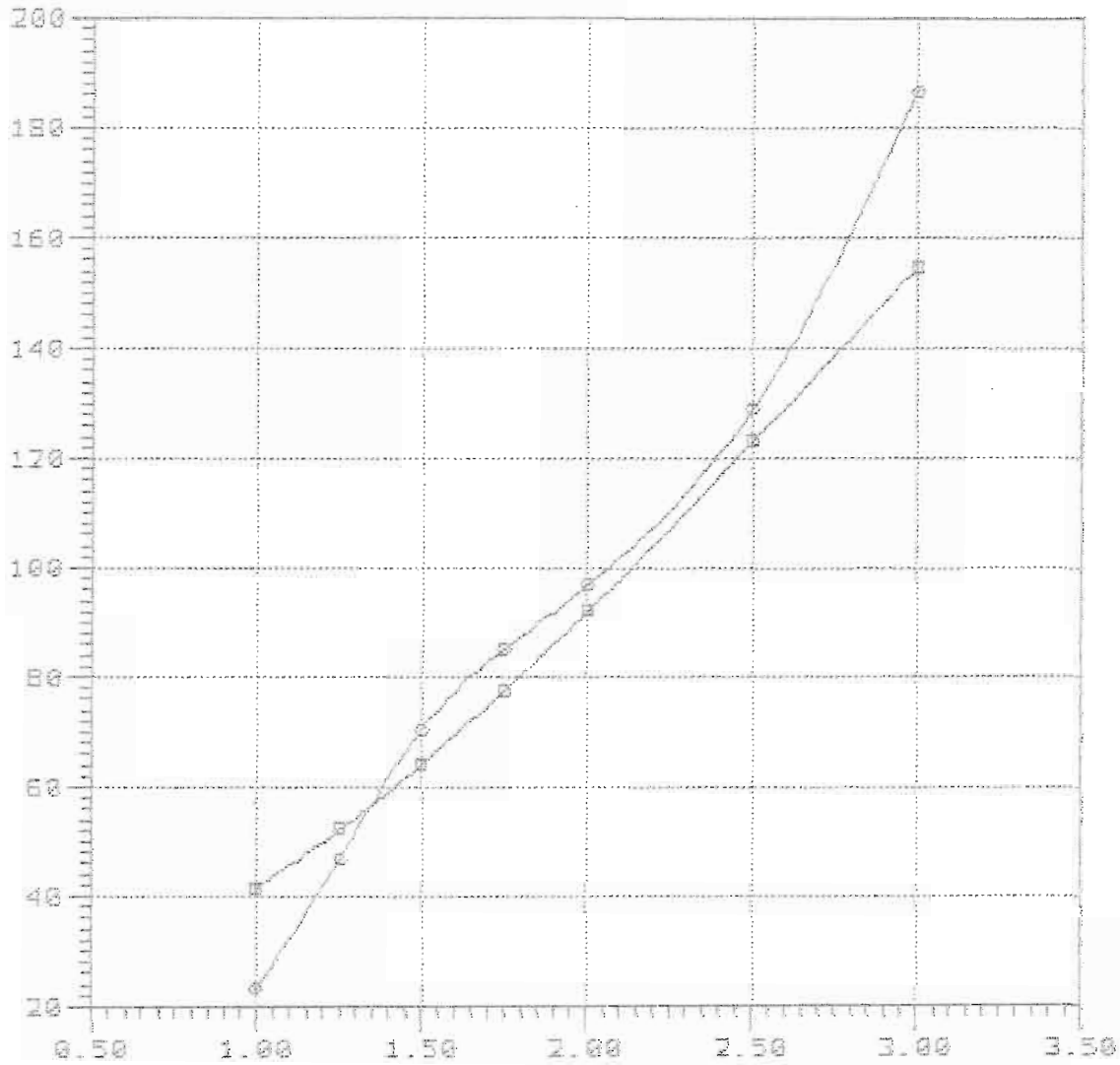
Rbare: Bare-hull resistance (lbf)



—■—

—●— TMB-65A 5250 Lpx/Epw=6.6 Rp/Vol=5.382 Lpx/Vol=7.00 Lpx/Rp=5.104 Log/Lpx=0.44

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

Curve legend

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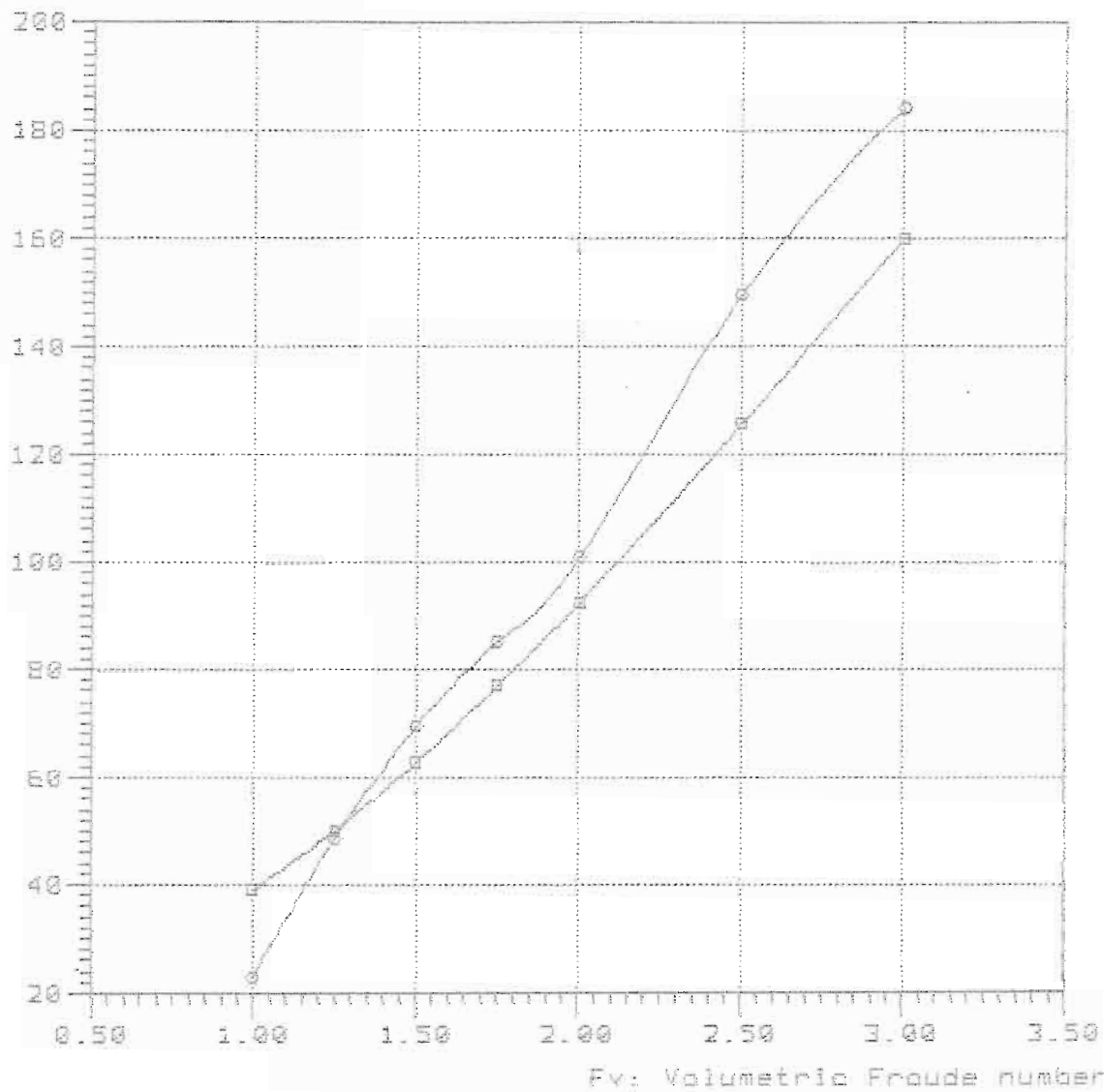
—●— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=5.382 Lpx/Vol=7.00 Lpx/Sp=9.184 Log/Lpx=0.48

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Bare-hull resistance  
vs.  
Volumetric Froude number

File: 6-70-520.mdl  
Date: 1 Mar 88  
Time: 10:22

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—●— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=5.382 Lpx/Vol=7.88 Lpx/Ag=9.164 Lcg/Lpx=0.52

Model = 5250  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 18.700 ft  
Lwl = 18.587 ft  
Bpx = 4.013 ft  
Ap = 38.411 sqft  
Vcg = 1.234 ft  
Disp. = 1000.00 Lb

Deadrise = 30.40 degree  
Twist Angle= 2.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

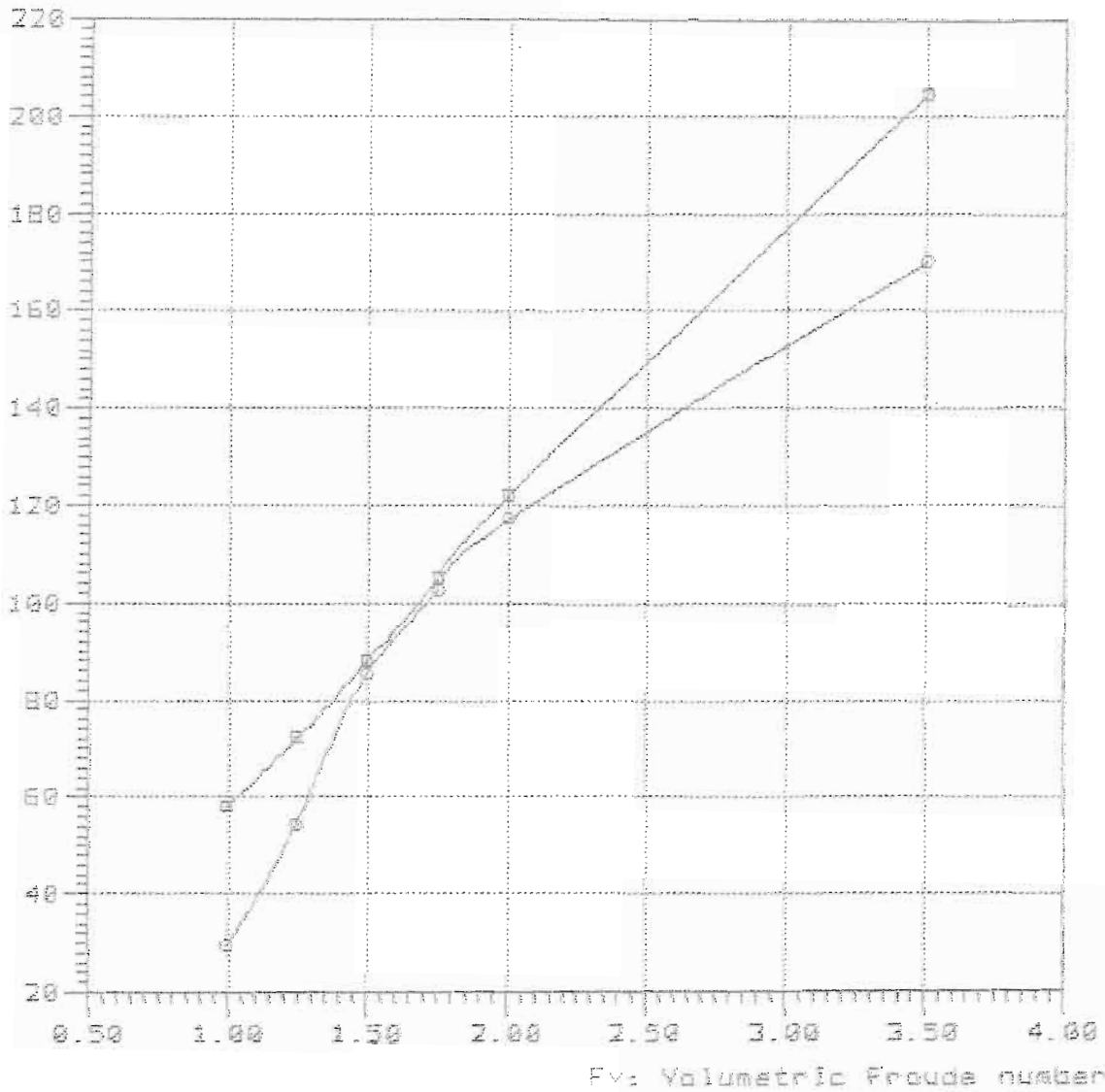
Lpx/Bpx = 4.660  
Lpx/Ap = 9.104  
Ap /Vol = 6.145  
Lpx/Vol = 7.502  
Cvload = 0.242  
Lbload = 0.020  
Disp-Lpx = 68.270

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)

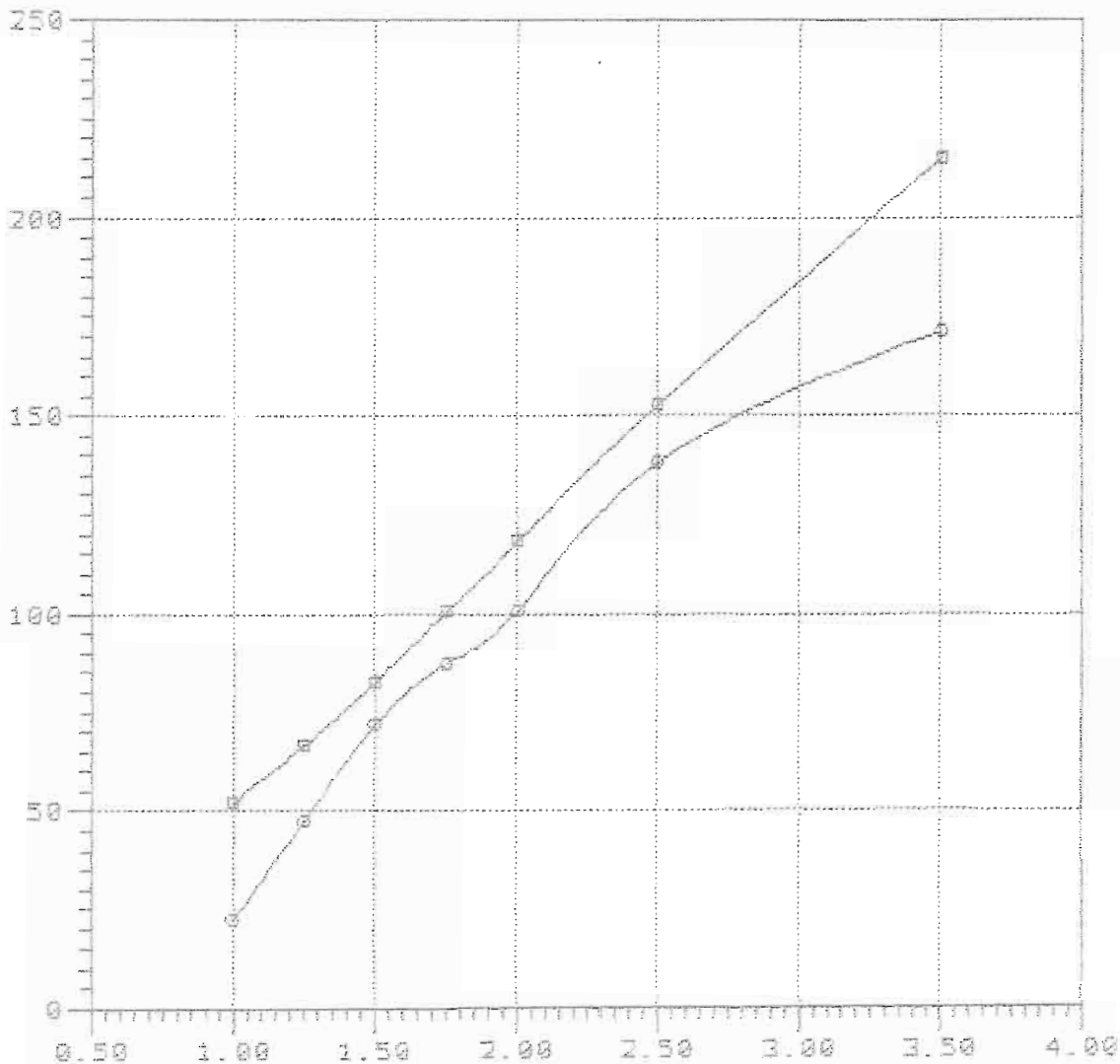


#### Curve legend

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—●— THB-65A 5250 Lpx/Rpx=6.6 Ap/Vol=6.145 Lpx/Vol=7.50 Lpx/Rp=9.104 Lcg/Lpx=0.36

Rbare: Bare-hull resistance (lba)



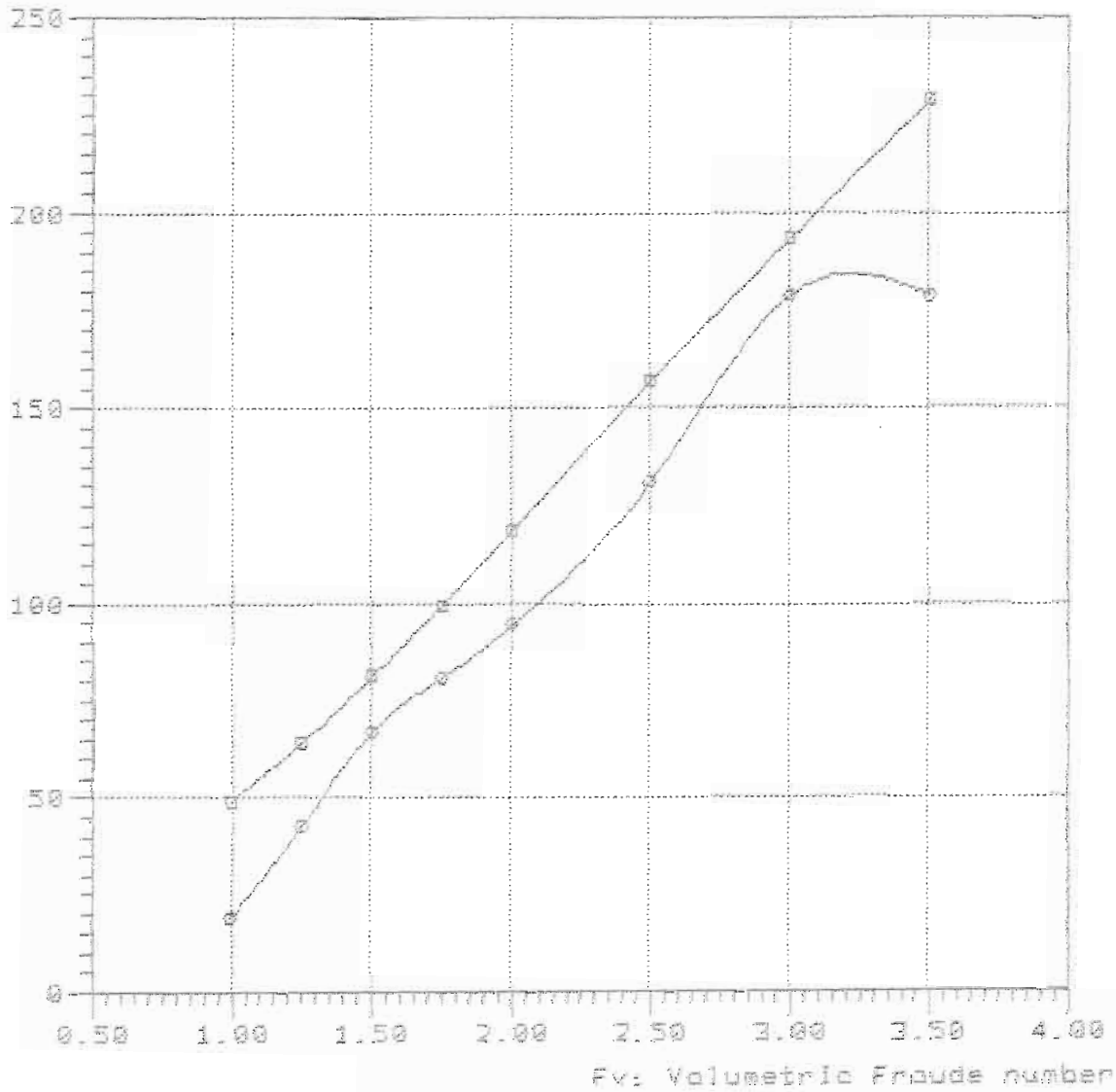
Fv: Volumetric Froude number

—■—

—●— TMB-65A 5250 Lpx/Bpx=5.6 Ap/Vol=6.146 Lpx/Vol=7.58 Lpx/Ap=9.104 Log/Lpx=0.40



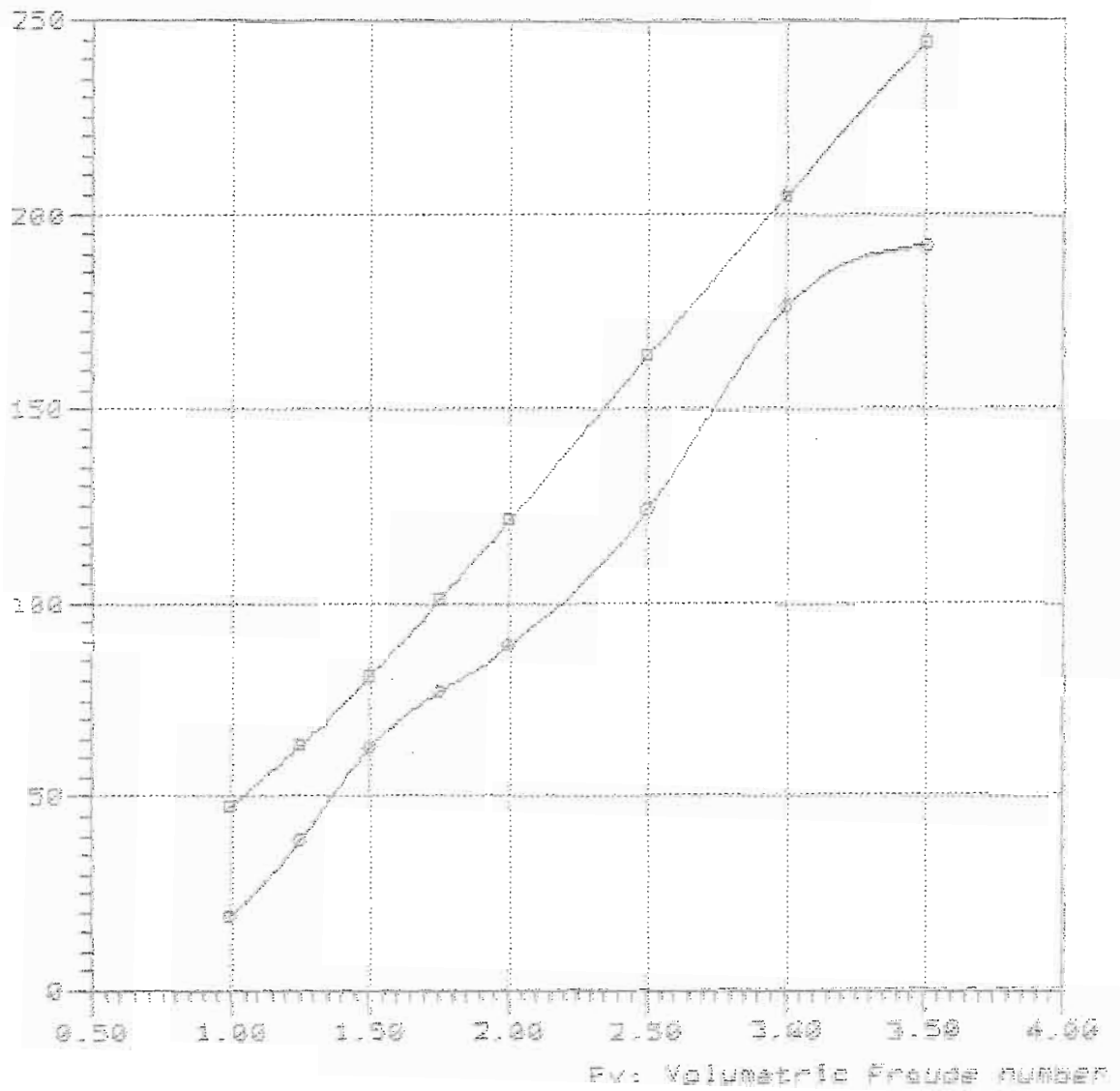
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-650 5250 Lpx/Epw=6.6 Rp/Vol=6.146 Lpx/Vol=7.50 Lpx/Rp=9.104 Log/Lpx=8.44

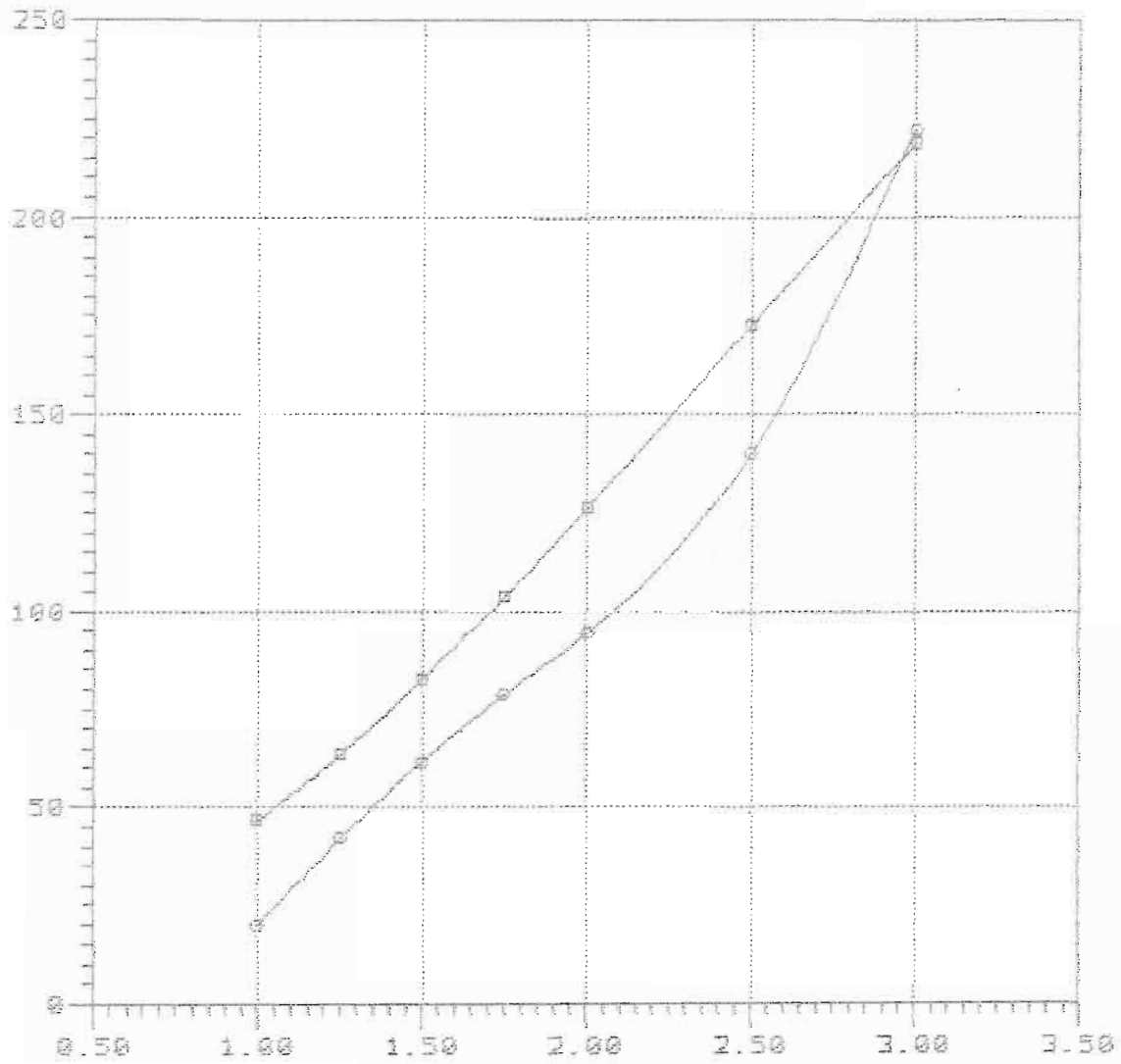
Rbare: Bare-hull resistance (lbs)



—□—

—○— THE-65A 5250 Lpx/Bpx=6.5 Ap/Vol=6.146 Lpx/Vol=7.58 Lpx/Ap=9.164 Log/Lpx=9.48

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—

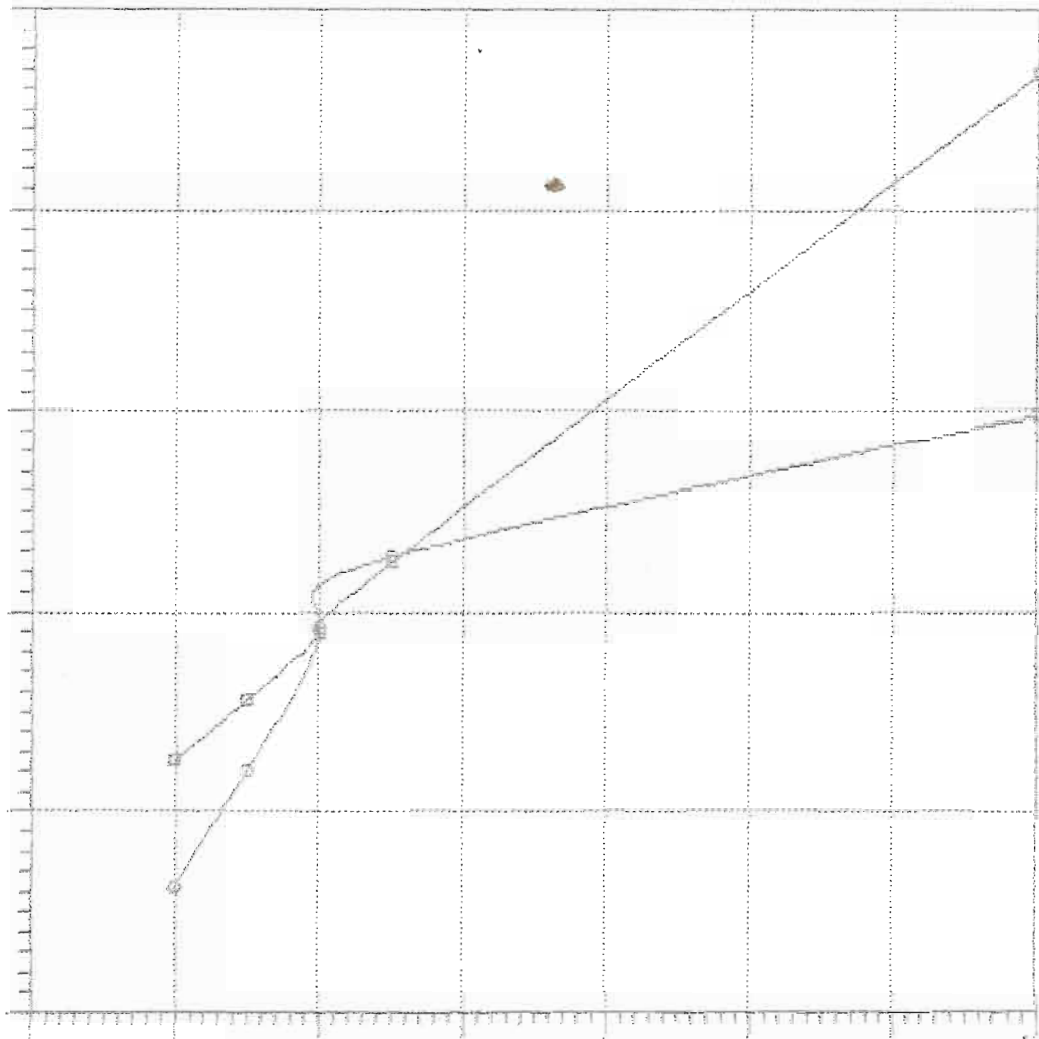
—●— TMB-65R 5250 Lpx/Bpx=6.6 Rp/Vol=6.145 Lpx/Vol=7.58 Lpx/Rp=9.104 Log/Lpx=0.52

Model = 5250  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 20.000 ft  
Lwl = 19.880 ft  
Bpx = 4.292 ft  
Ap = 43.937 sqft  
Vcg = 1.319 ft  
Disp. = 1000.00 Lb  
Deadrise = 30.40 degree  
Twist Angle = 2.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.660  
Lpx/Ap = 9.104  
Ap /Vol = 7.029  
Lpx/Vol = 8.024  
Cvload = 0.198  
Lbload = 0.016  
Disp-Lpx = 55.804

7-80-340



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### Bare-hull resistance

File: 7-88-360.mdl

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vs.

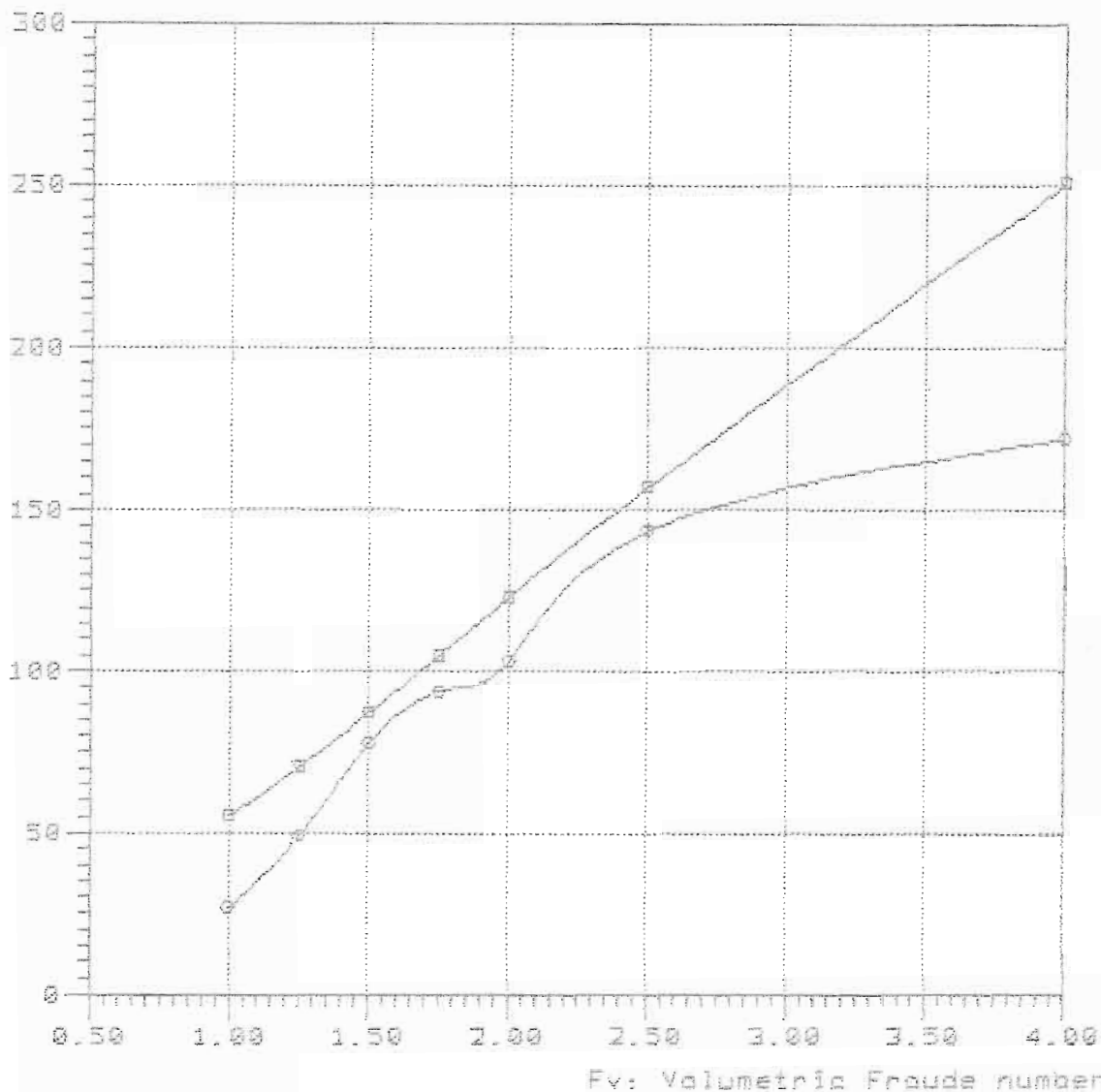
Date: 1 Mar 88

HydroComp, Inc.

### Volumetric Froude number

Time: 10:42

Rbare: Bare-hull resistance (lbs)

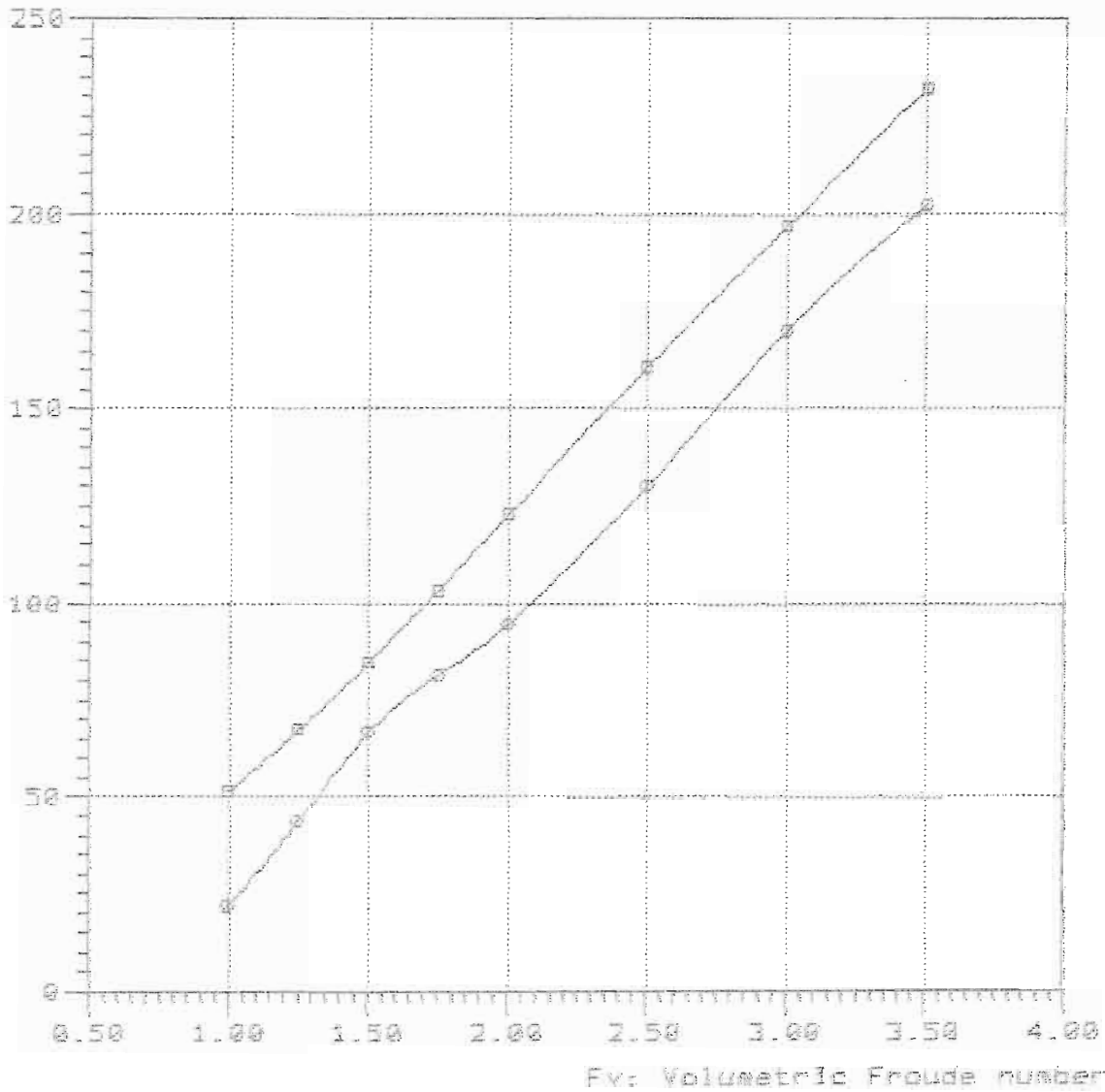


#### Curve legend

—□—

—○— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=7.838 Lpx/Vol=8.00 Lpx/Ap=9.104 Lcg/Lpx=0.36

Rbare: Bare-hull resistance (lbs)

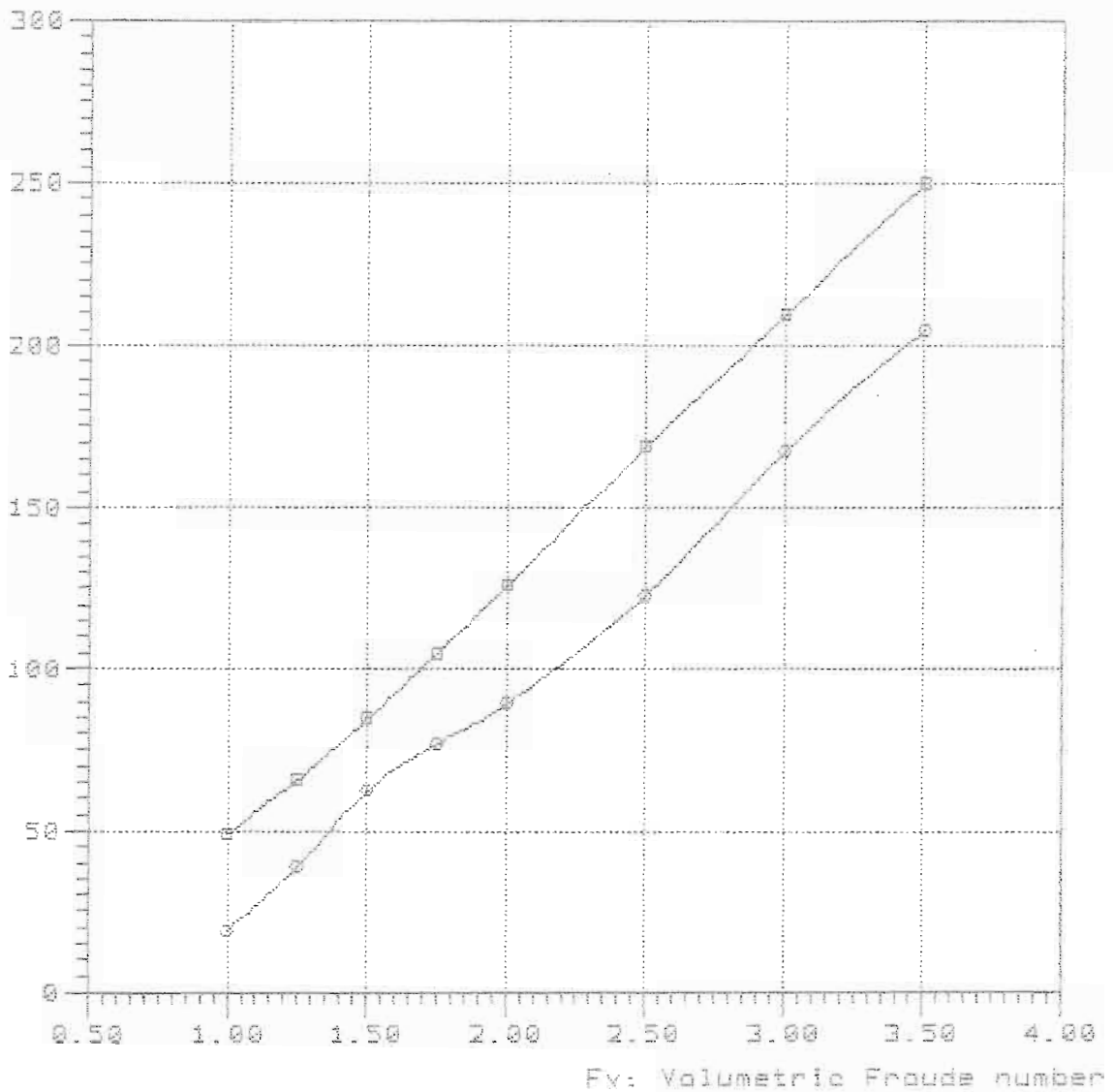


Curve legend

—■—

—●— TYB-63R 3258 Lpx/Bpx=6.6 Rp/Vol=7.838 Lpx/Vol=8.88 Lpx/Rp=3.164 Lcy/Lpx=0.46

Rbare: Bare-hull resistance (lbs)

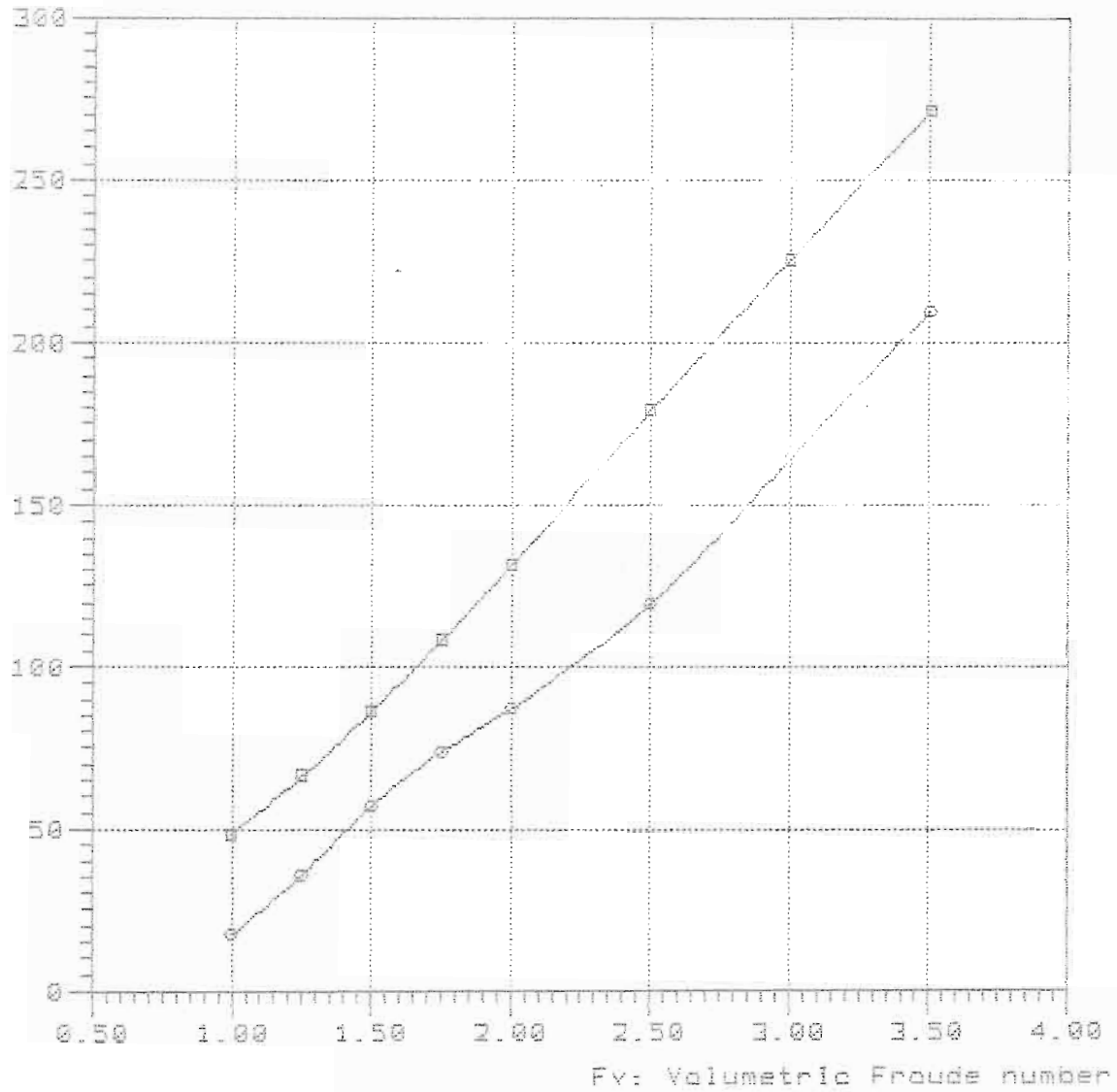


—■—

—○— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=7.030 Lpx/Vol=8.00 Lpx/Ap=9.104 Log/Lpx=0.44



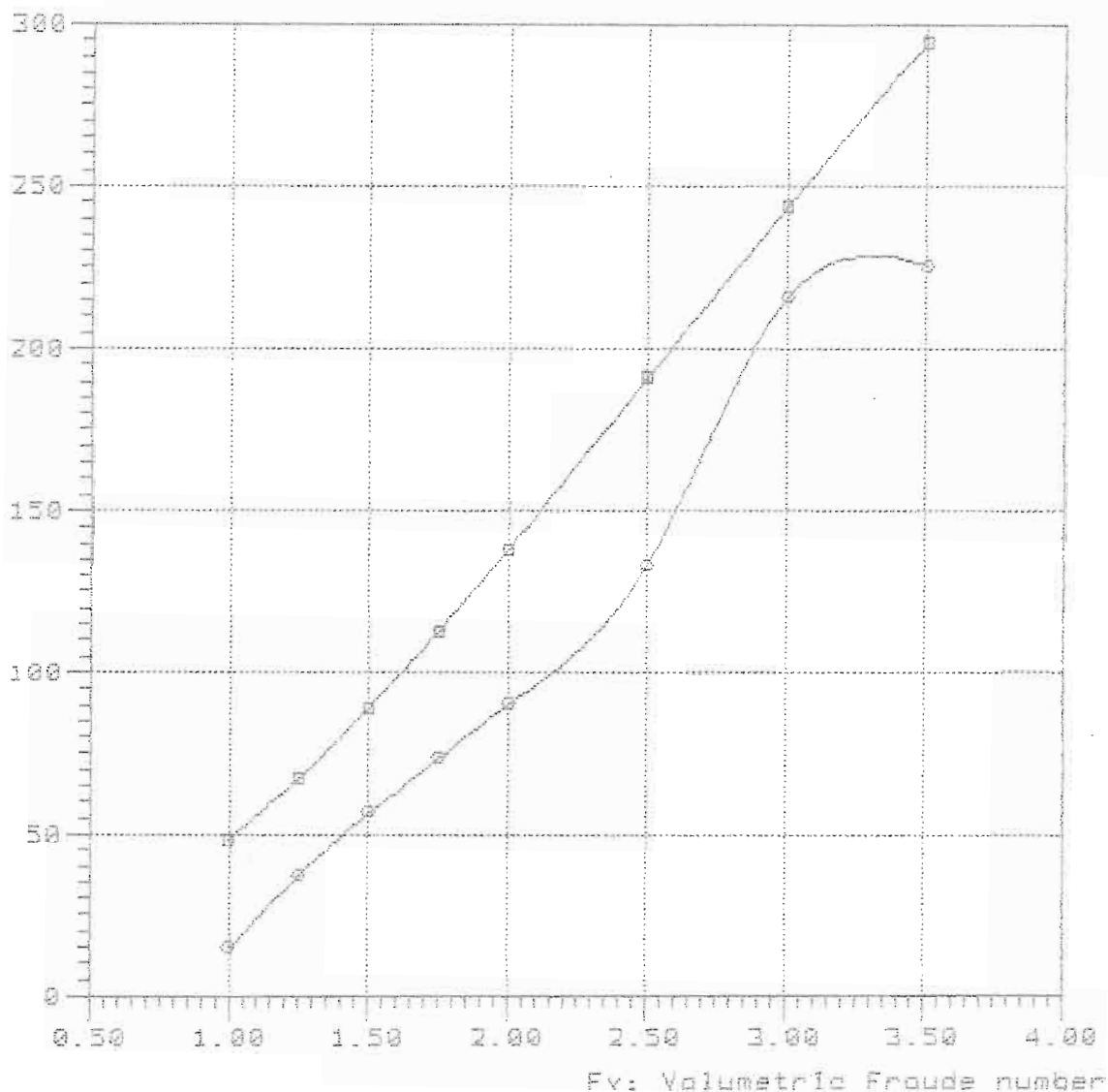
Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Val=7.030 Lpx/Val=8.00 Lpx/Ap=9.104 Log/Lpx=0.45

Rbare: Bare-hull resistance (lbs)



—□—

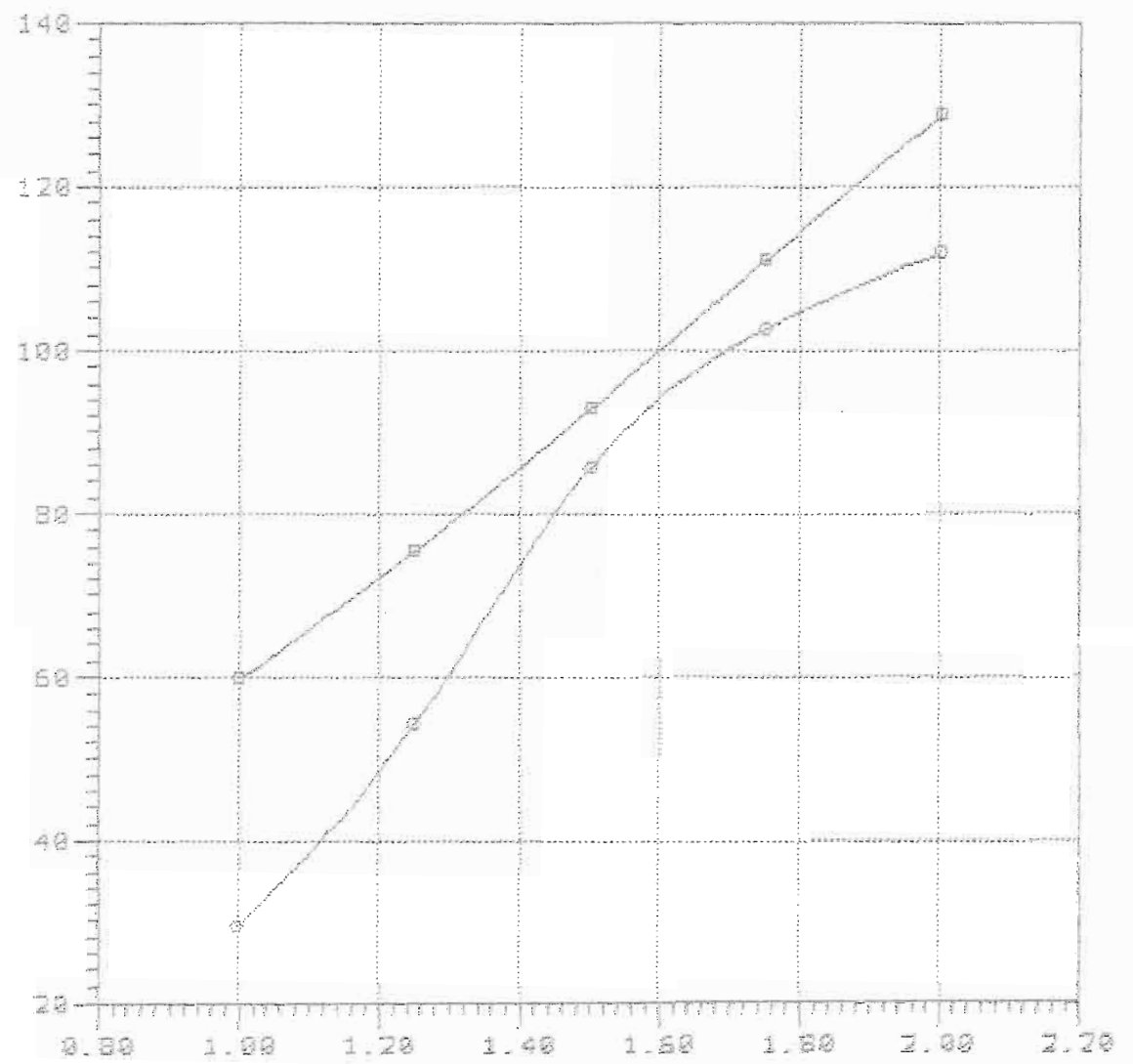
—○— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=7.030 Lpx/Vol=8.00 Lpx/Ap=9.104 Lcg/Lpx=0.52

Model = 5250  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 21.200 ft  
Lwl = 21.072 ft  
Bpx = 4.549 ft  
Ap = 49.367 sqft  
Vcg = 1.399 ft  
Disp. = 1000.00 Lb  
Deadrise = 30.40 degree  
Twist Angle = 2.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.660  
Lpx/Ap = 9.104  
Ap /Vol = 7.898  
Lpx/Vol = 8.505  
Cvload = 0.166  
Lbload = 0.013  
Disp-Lpx = 46.854

Rbare: Bare-hull resistance (lba)

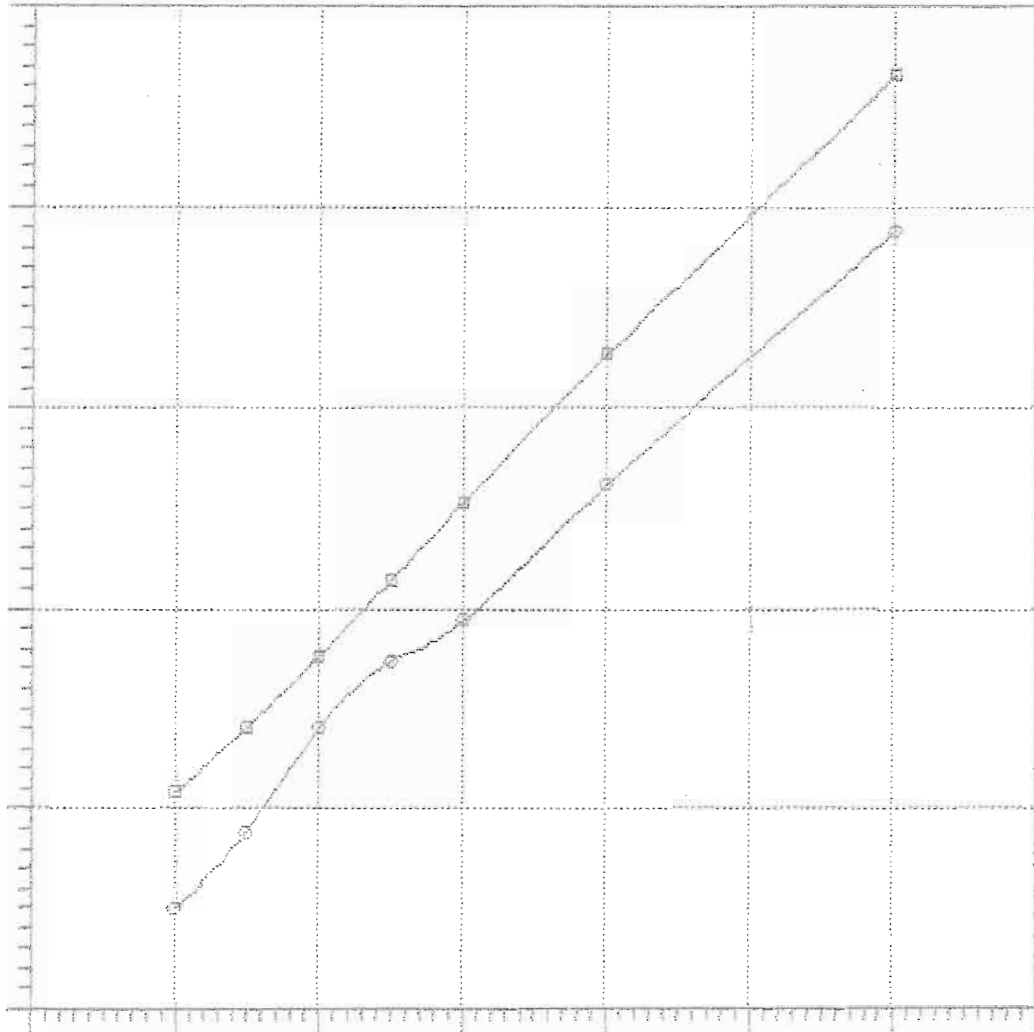


Fv: Volumetric Froude number

—■—

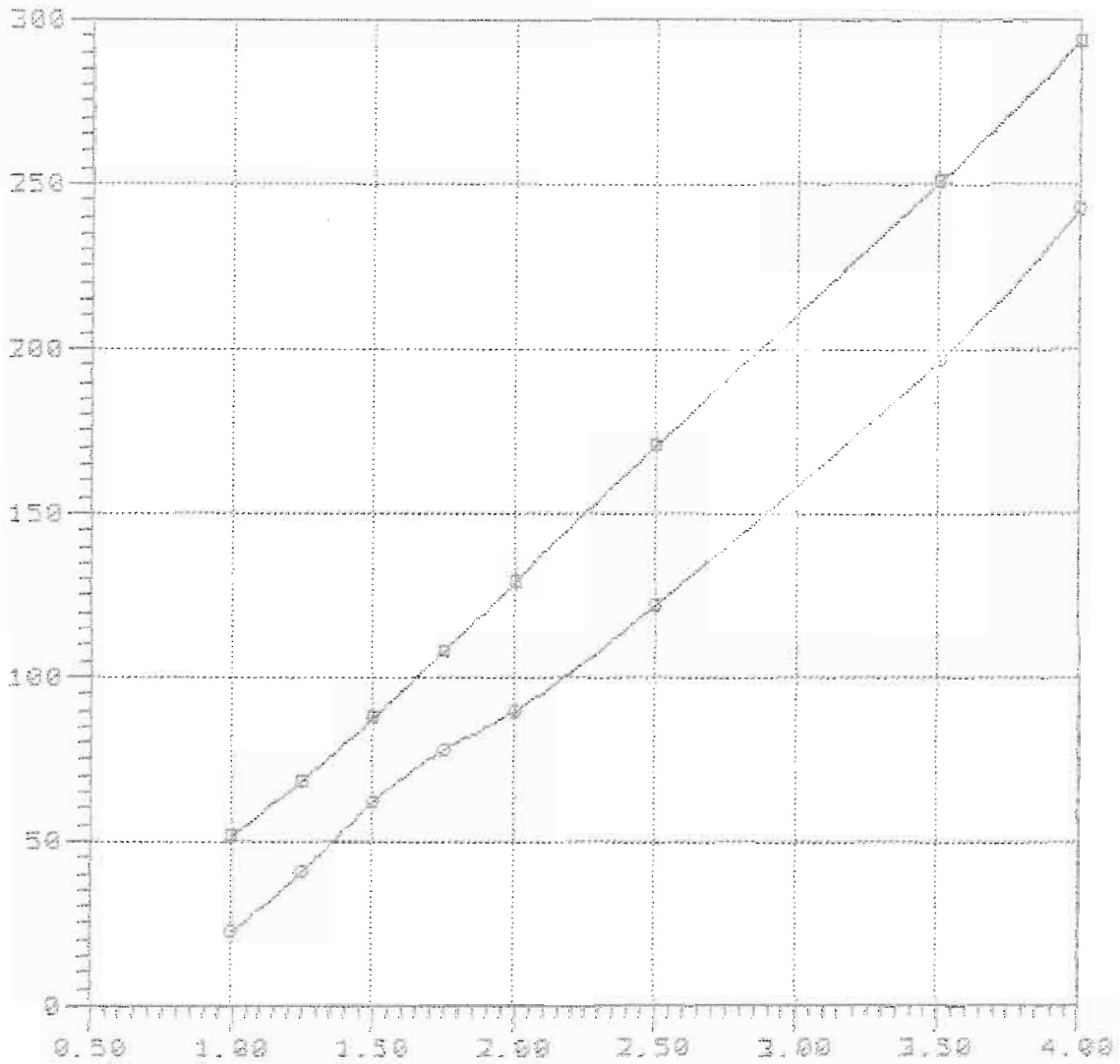
—●— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=7.830 Lox/Vol=8.00 Lpx/Ap=9.104 Lcg/Lpx=0.32

8-85-360  
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—○—

Rbare: Bare-hull resistance (lbs)



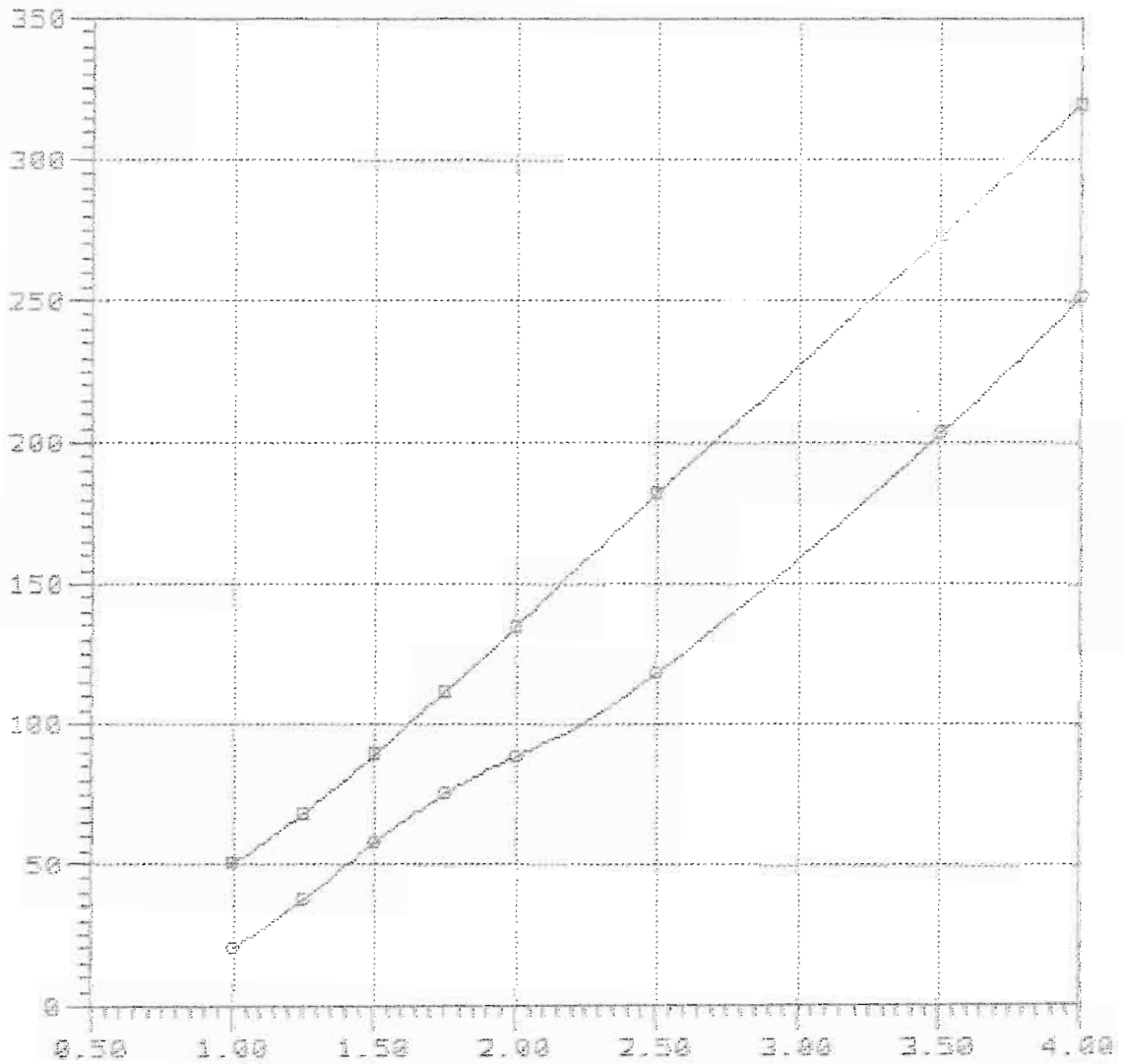
Fv: Volumetric Froude number

Curve legend

—■—

—●— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=7.699 Lpx/Vol=8.50 Lpx/Ap=9.104 Log/Lpx=0.40

Rbare: Bare-hull resistance (lbs)

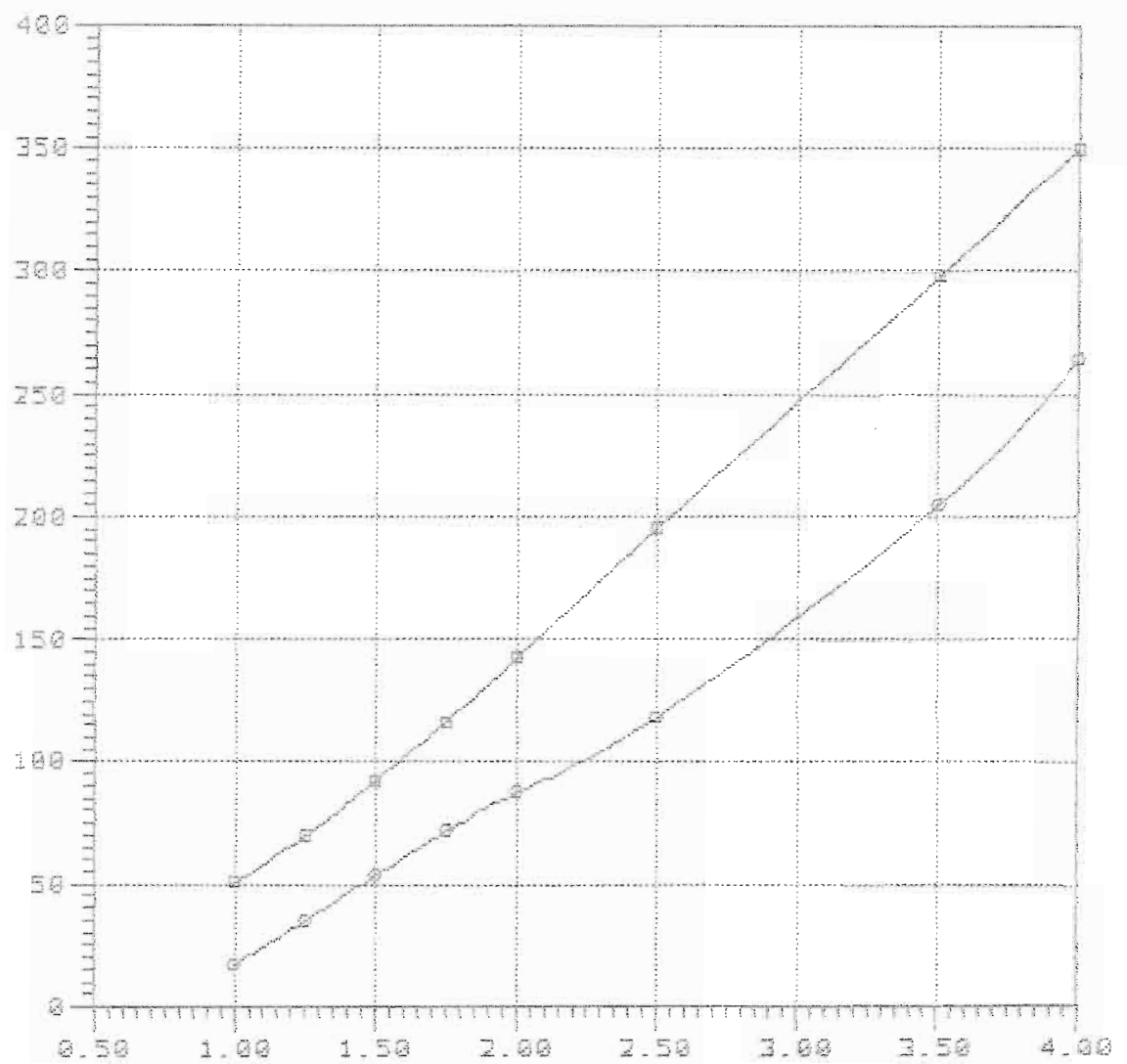


Fv: Volumetric Froude number

—■—

—●— TMB-65A 5250 Lpx/Box=6.6 Ap/Vol=7.895 Lpx/Vol=8.58 Lpx/Sp=9.164 Lcg/Lpx=0.44

Rbare: Bare-hull resistance (lbs)

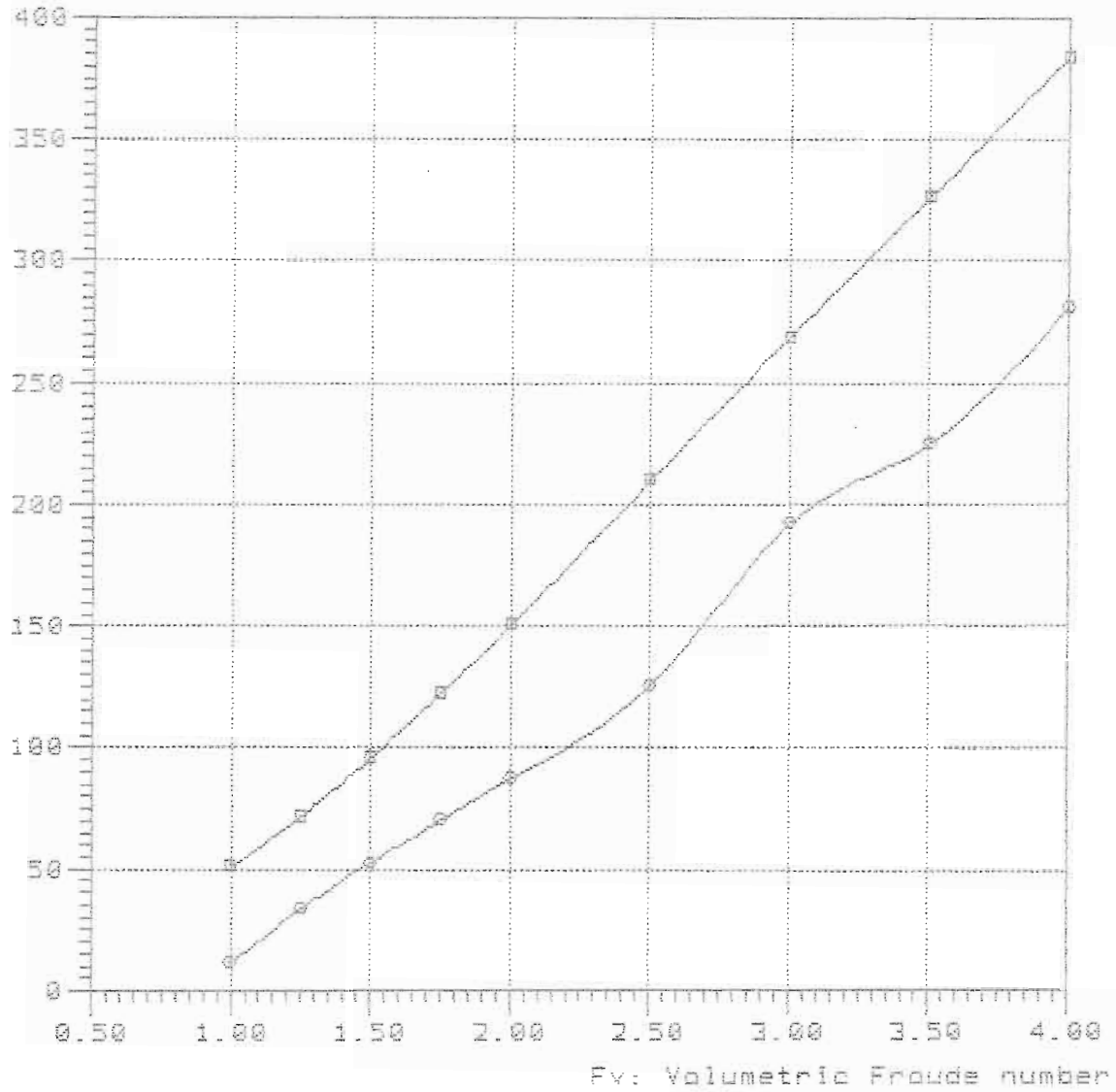


Fv: Volumetric Froude number

—■—  
 —○— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=7.599 Lpx/Vol=8.50 Lpx/Ap=9.164 Log/Lpx=0.48



Rbare: Bare-hull resistance (lbs)



—■—

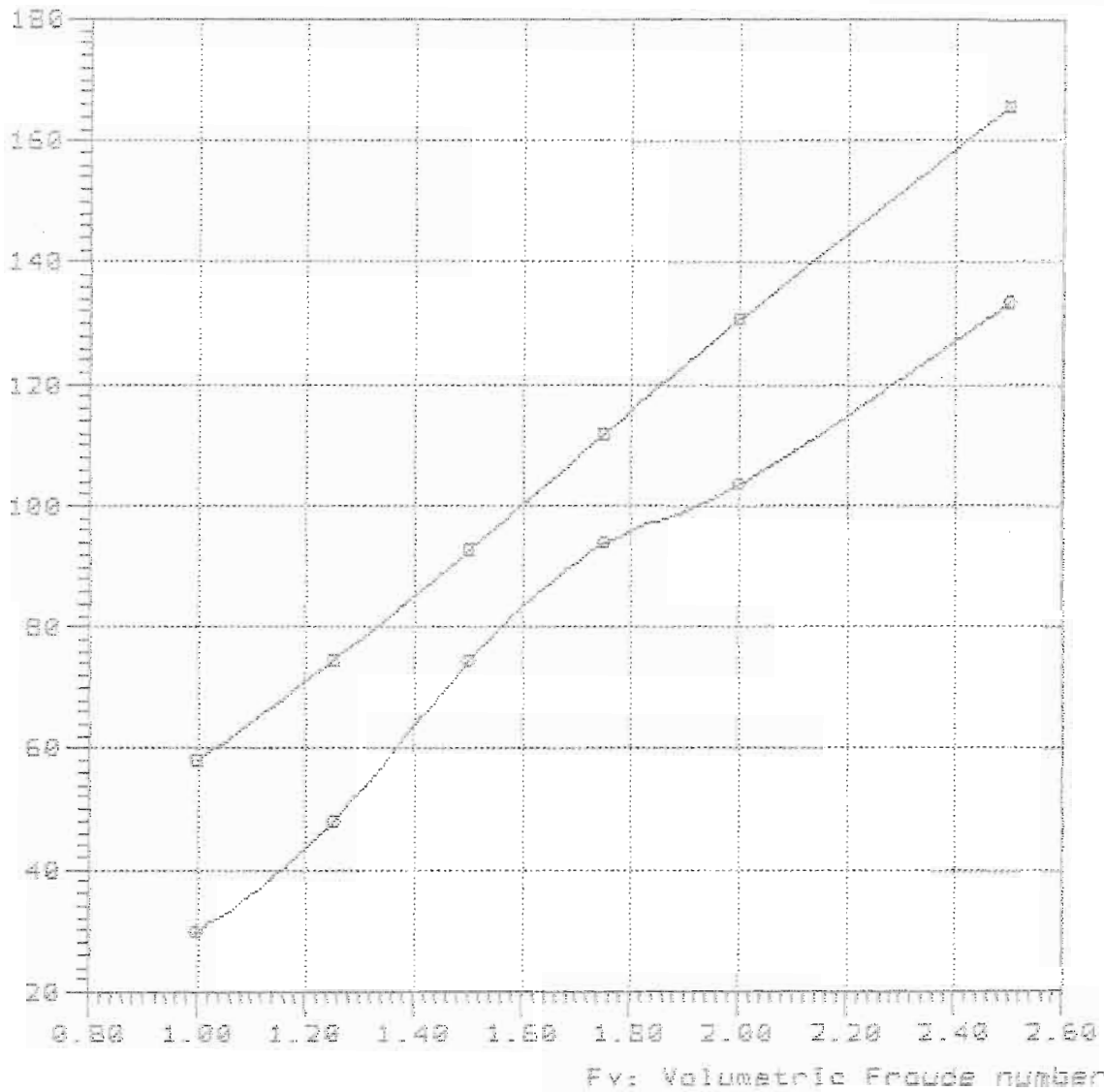
—○— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=7.899 Lpx/Vol=8.50 Lpx/Ap=9.104 Log/Lpx=0.52

Model = 5250  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 22.500 ft  
Lwl = 22.365 ft  
Bpx = 4.828 ft  
Ap = 55.607 sqft  
Vcg = 1.484 ft  
Disp. = 1000.00 Lb  
Deadrise = 30.40 degree  
Twist Angle= 2.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.660  
Lpx/Ap = 9.104  
Ap /Vol = 8.896  
Lpx/Vol = 9.027  
Cvload = 0.139  
Lbload = 0.011  
Disp-Lpx = 39.193

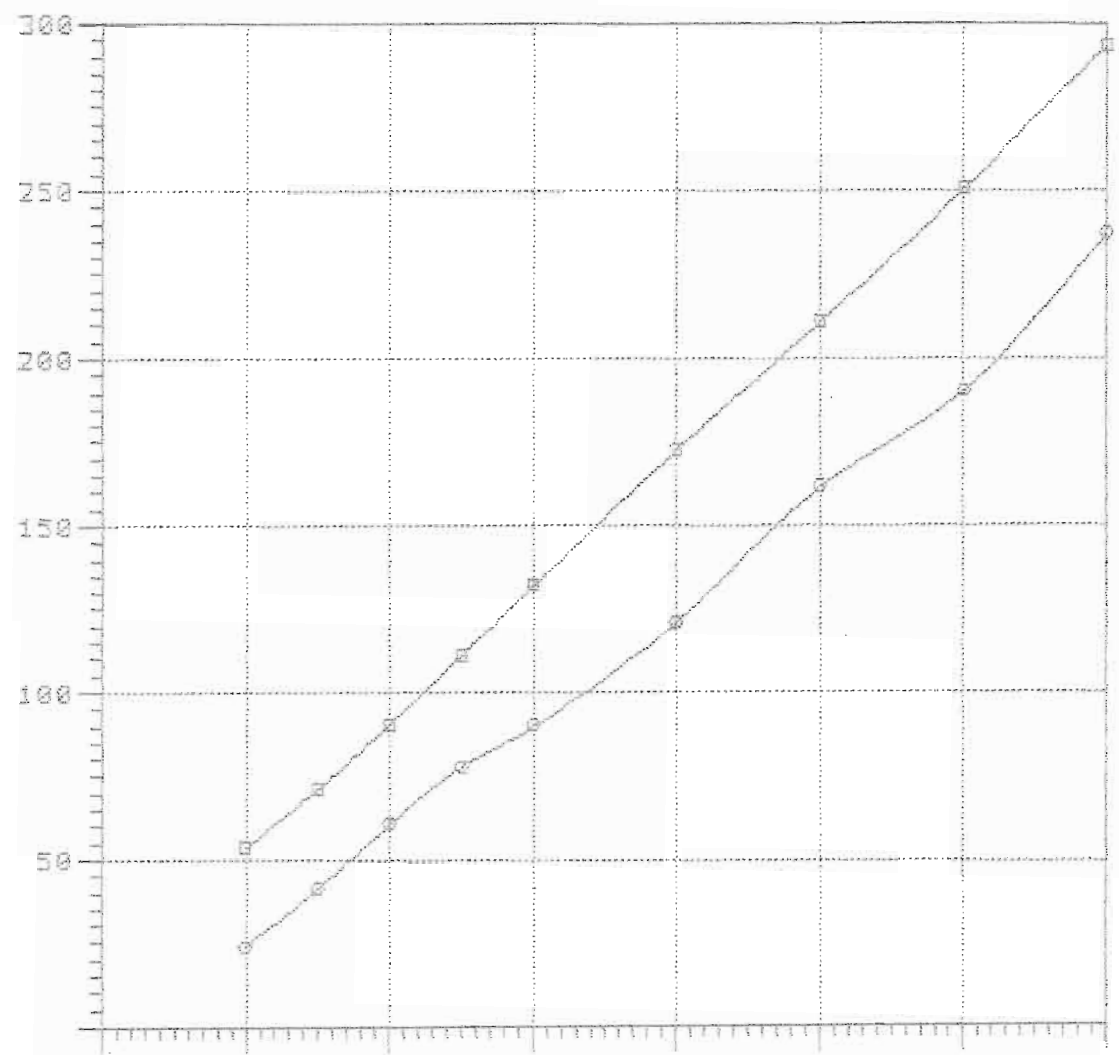
Rbare: Bare-hull resistance (lbs)



—■—

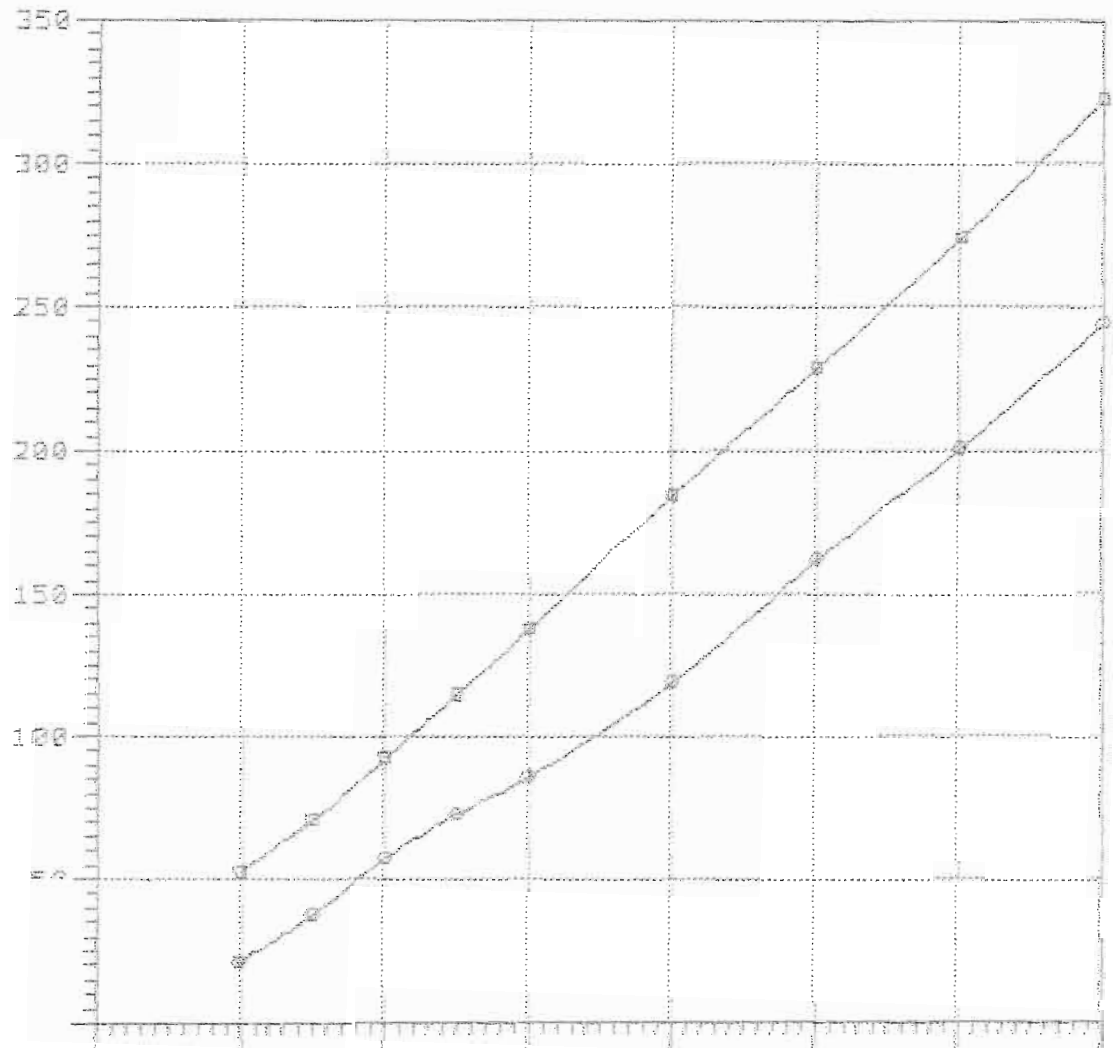
—○— TMB-65A 5258 Lpx/Bpx=6.6 Ap/Vol=8.897 Lox/Vol=9.00 Lpx/Ap=9.104 Lox/Lpx=0.32

Rbare: Bare-hull resistance (lbs)



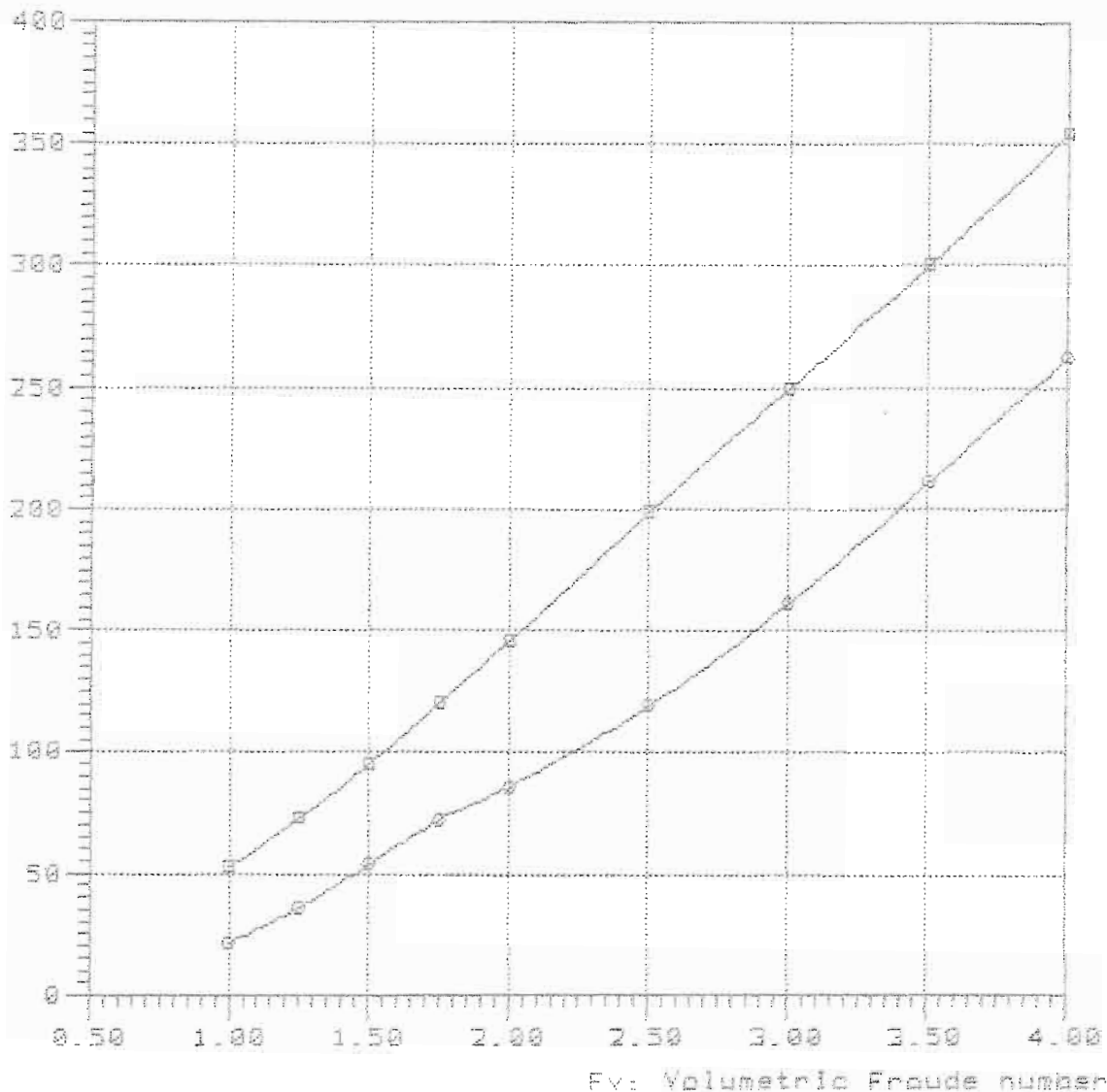
—□—  
—○—

Rbare: Bare-hull resistance (lbs)



—□—  
—○—

Rbare: Bare-hull resistance (lbs)

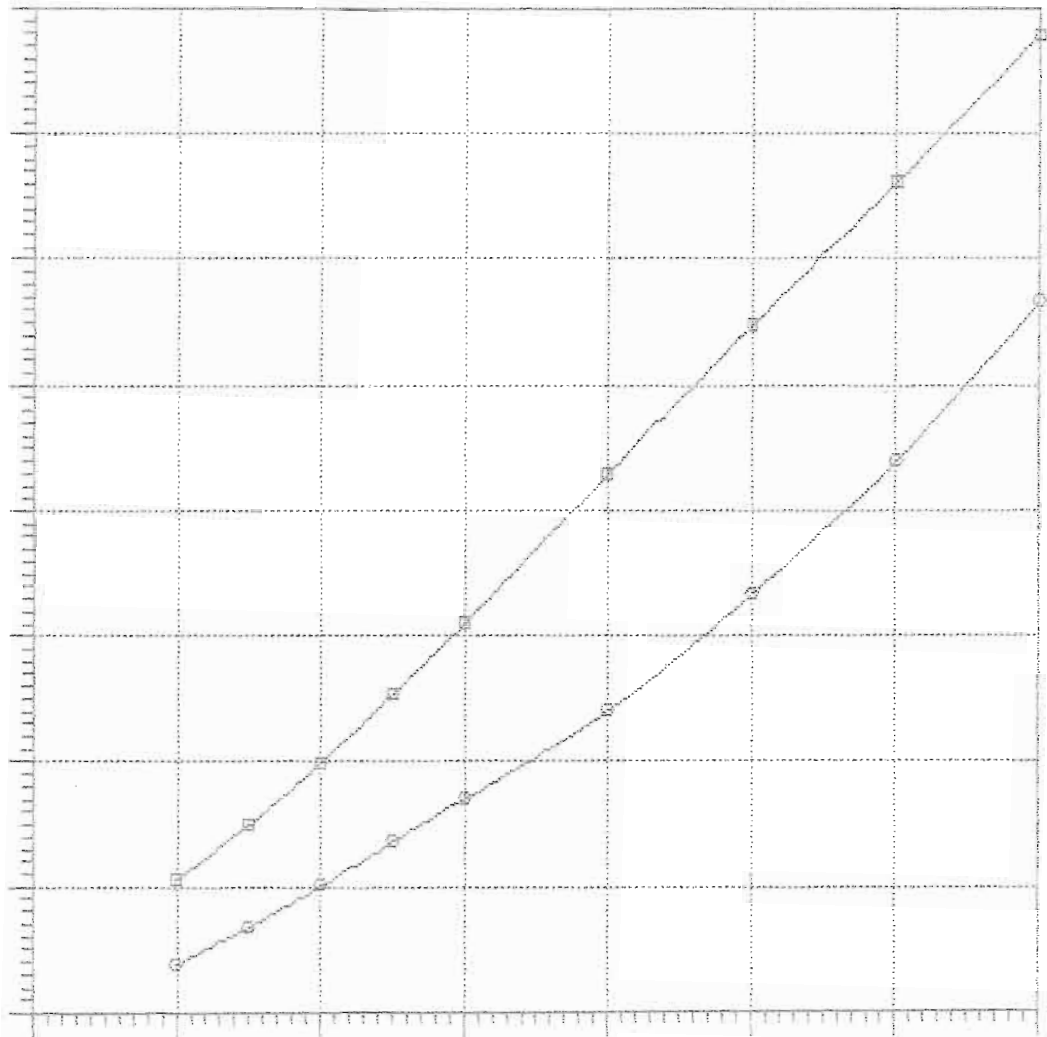


Curve legend

—○—

—□— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=8.897 Lpx/Vol=9.00 Lpx/Sp=9.104 Lcg/Lpx=8.44

9-90-480  
mdl

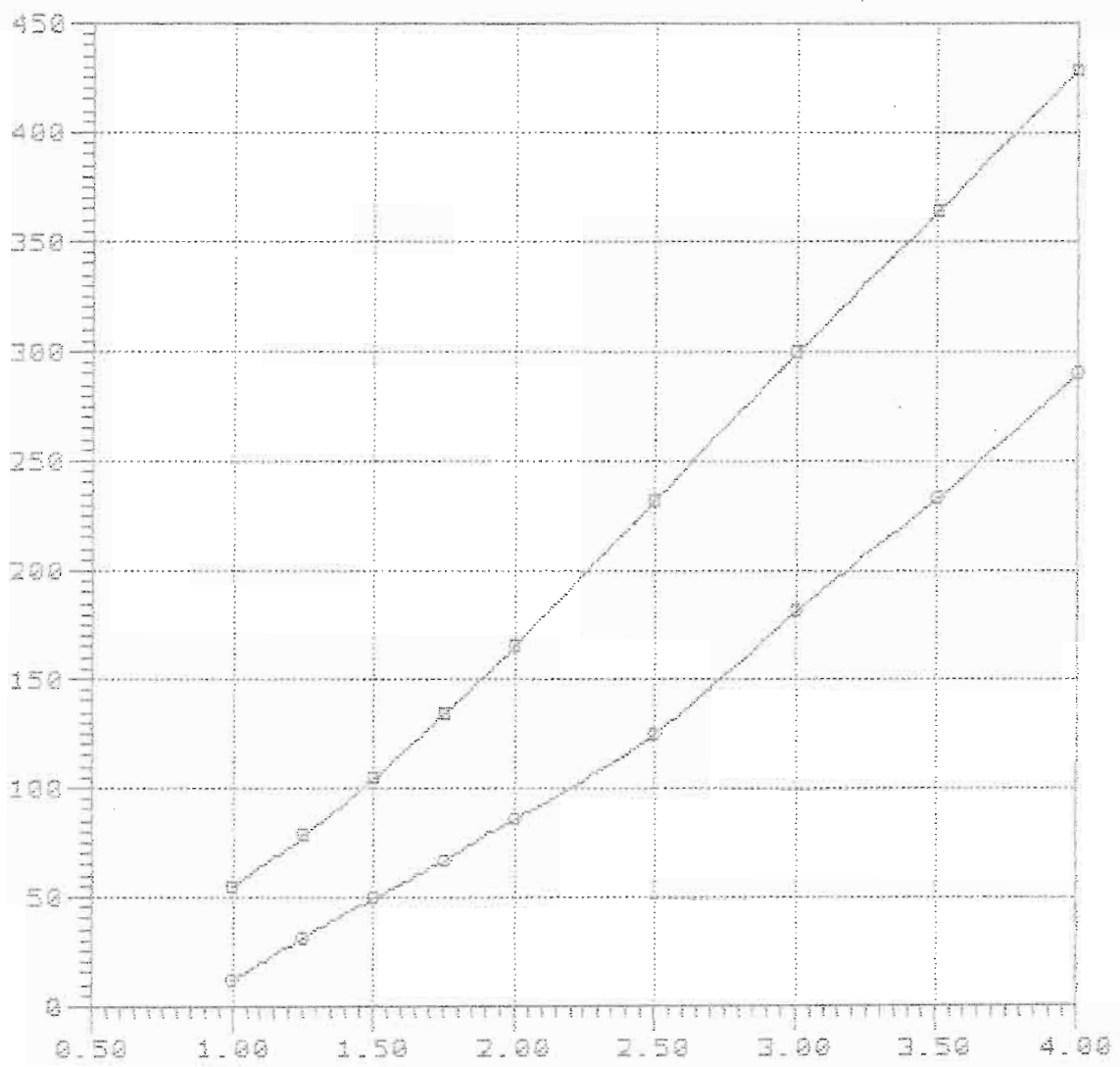


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 HydroComp, Inc.

Bare-hull resistance  
 vs.  
 Volumetric Froude number

File: 9-90-520.mdl  
 Date: 1 Mar 90  
 Time: 11:36

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

Curve legend

- 
- TME-65R 5250 Lpx/Bpx=5.6 Rp/Vol=8.897 Lpx/Vol=9.88 Lpx/Rp=9.104 Lcg/Lpx=0.52

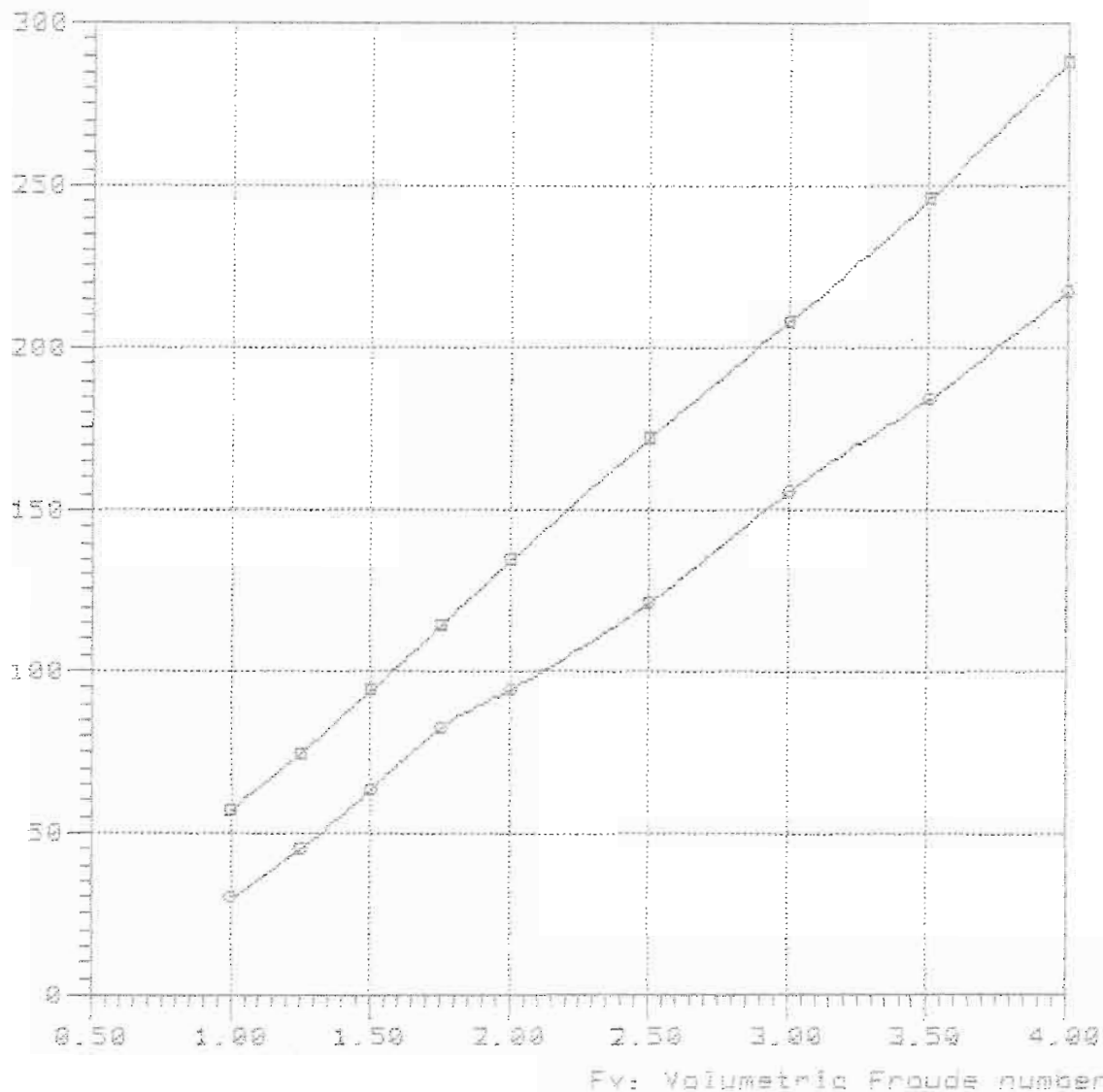


Model = 5250  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 23.700 ft  
Lwl = 23.557 ft  
Bpx = 5.086 ft  
Ap = 61.697 sqft  
Vcg = 1.563 ft  
Disp. = 1000.00 Lb  
Deadrise = 30.40 degree  
Twist Angle= 2.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.660  
Lpx/Ap = 9.104  
Ap /Vol = 9.870  
Lpx/Vol = 9.501  
Cvload = 0.119  
Lbload = 0.010  
Disp-Lpx = 33.536

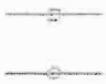
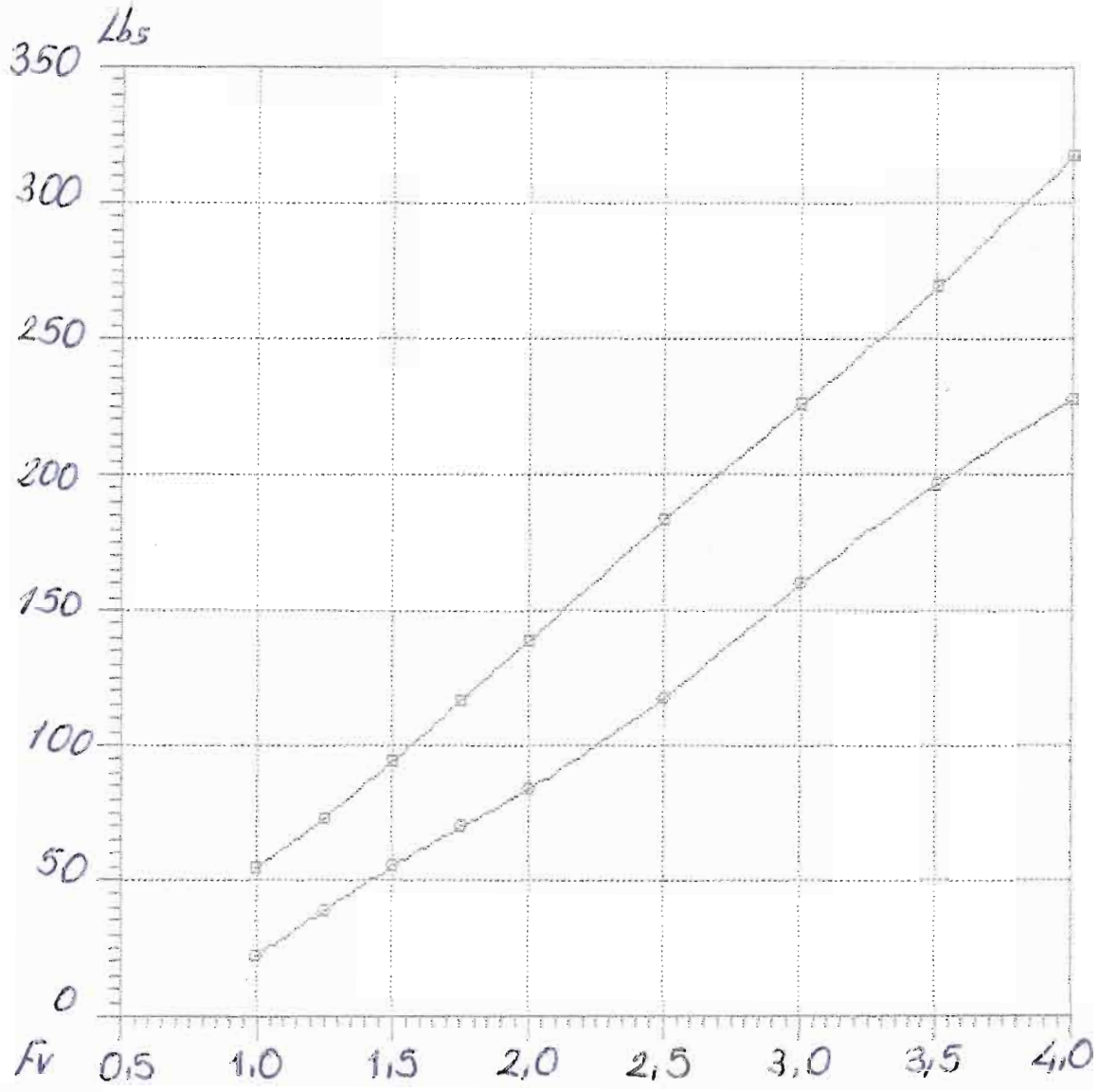
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65A 5250 Lpx/Bpx=6.6 Rp/Vol=9.871 Lpx/Vol=9.50 Lpx/Rp=9.104 Log/Lpx=0.32

10-95-36



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### Bare-hull resistance

vs.

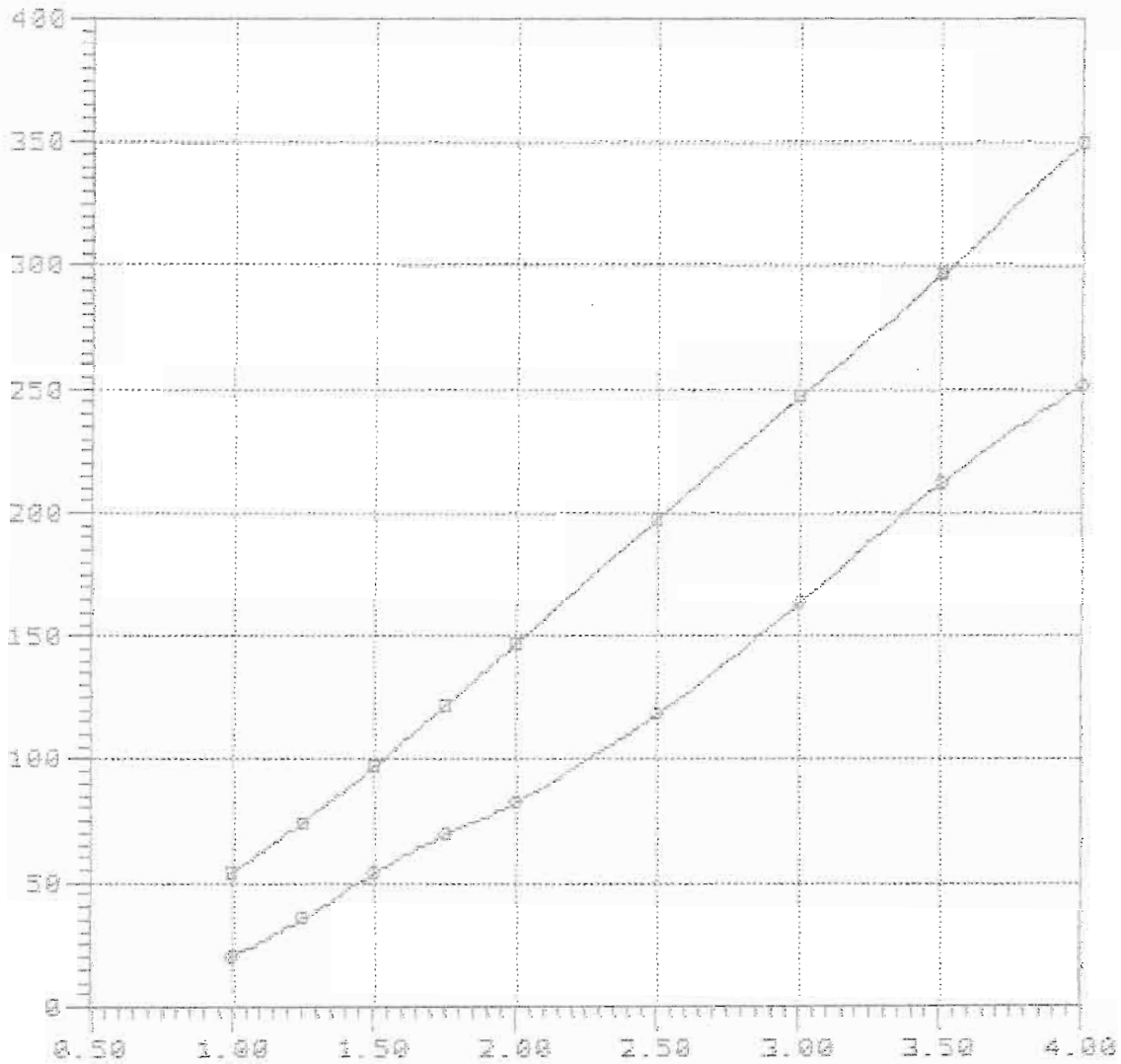
### Volumetric Froude number

File: 10-95-40.mdi

Date: 1 Mar 00

Time: 9:17

Rbare: Bare-hull resistance (lbs)



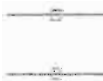
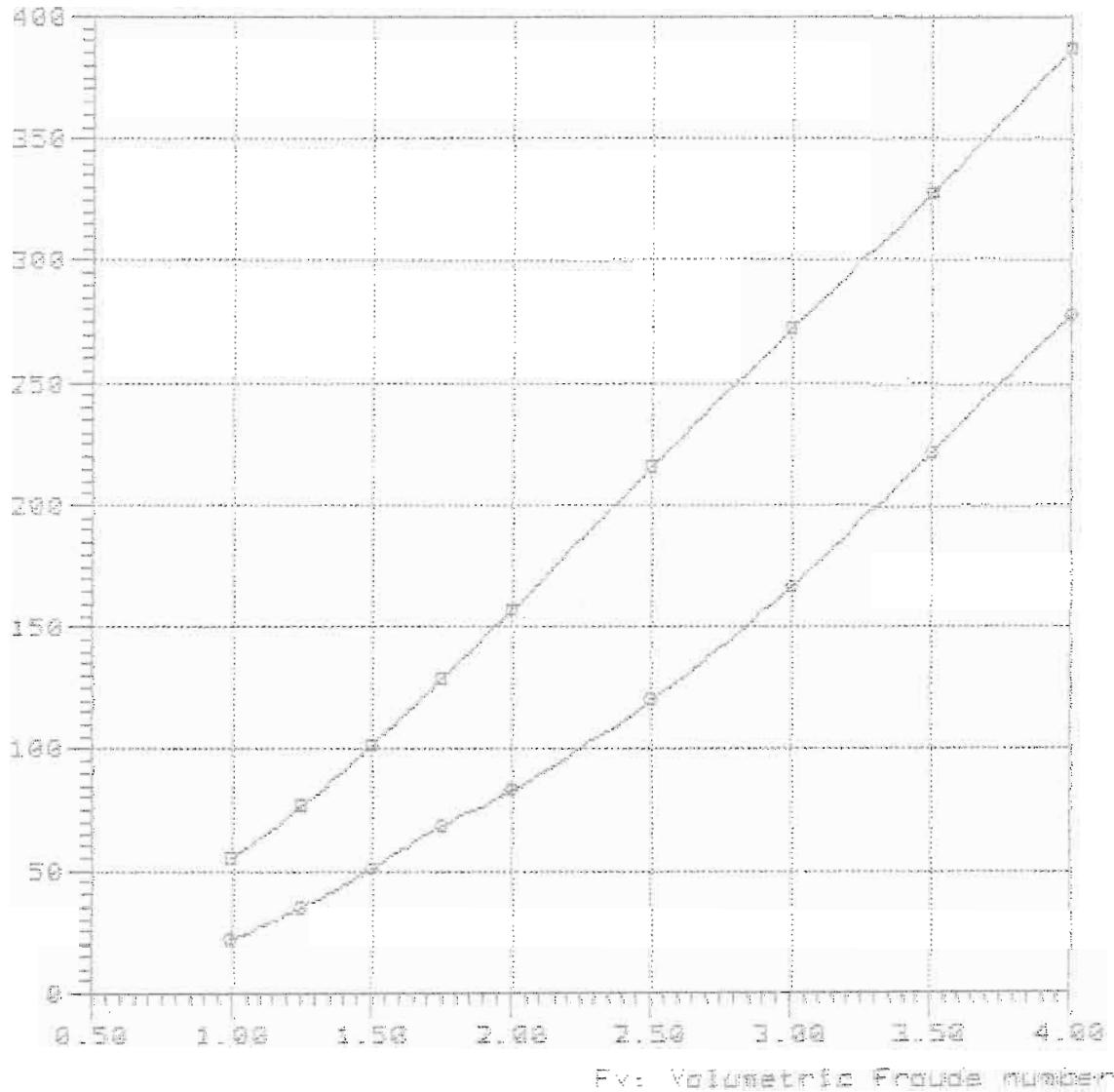
Fv: Volumetric Froude number

#### Curve legend

—□—

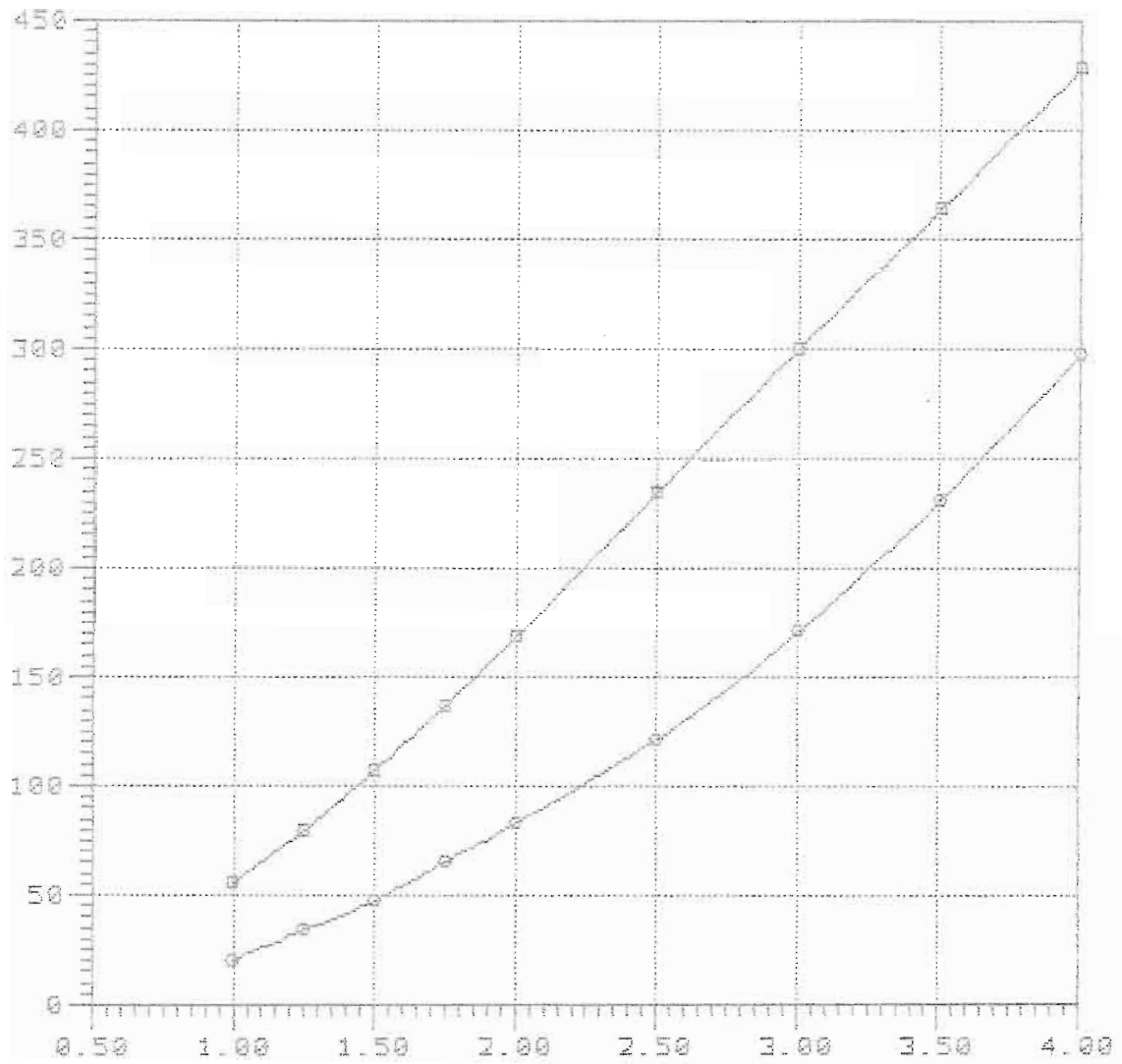
—○— TMB-65A 5258 Lpx/Bpx=5.6 Ap/Vol=9.871 Lpx/Vol=9.58 Lpx/Ap=9.184 Log/Lpx=9.46

Rbare: Bare-hull resistance (lba)



TMB-65A 5250 Lpx/Bpx=6.6 Ap/Yal=5.871 Lpx/Yal=9.56 Lpx/Ap=9.104 Log/Lpx=0.44

Rbare: Bare-hull resistance (lbs)

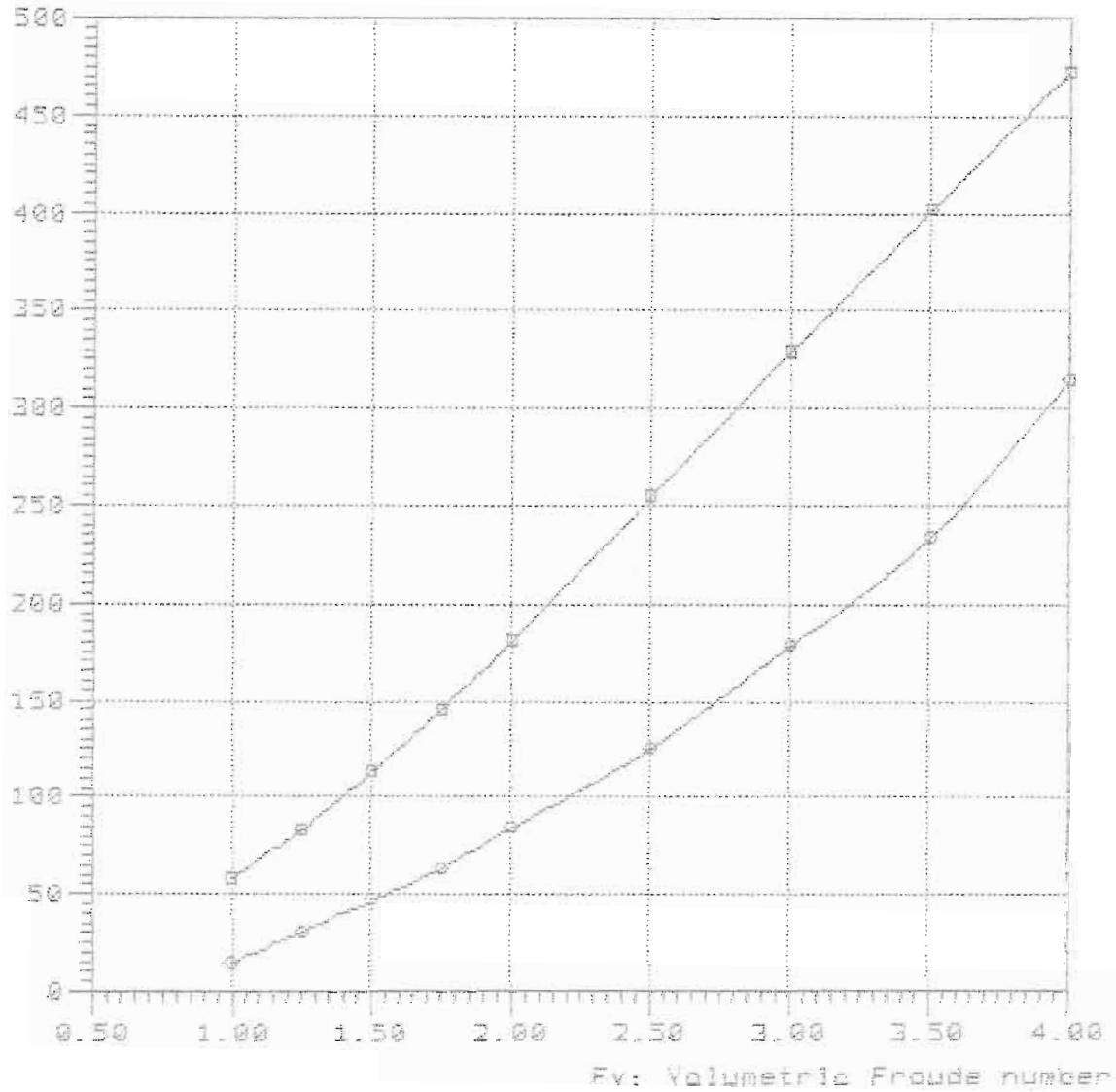


Fv: Volumetric Froude number

—□—

—○— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=9.871 Lpx/Vol=9.50 Lpx/Ap=9.104 Lcg/Lpx=6.48

Rbare: Bare-hull resistance (lbs)



—□—

—○— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=9.871 Lpx/Vol=9.50 Lpx/Ap=9.104 Log/Lpx=0.52

Model = 5250  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

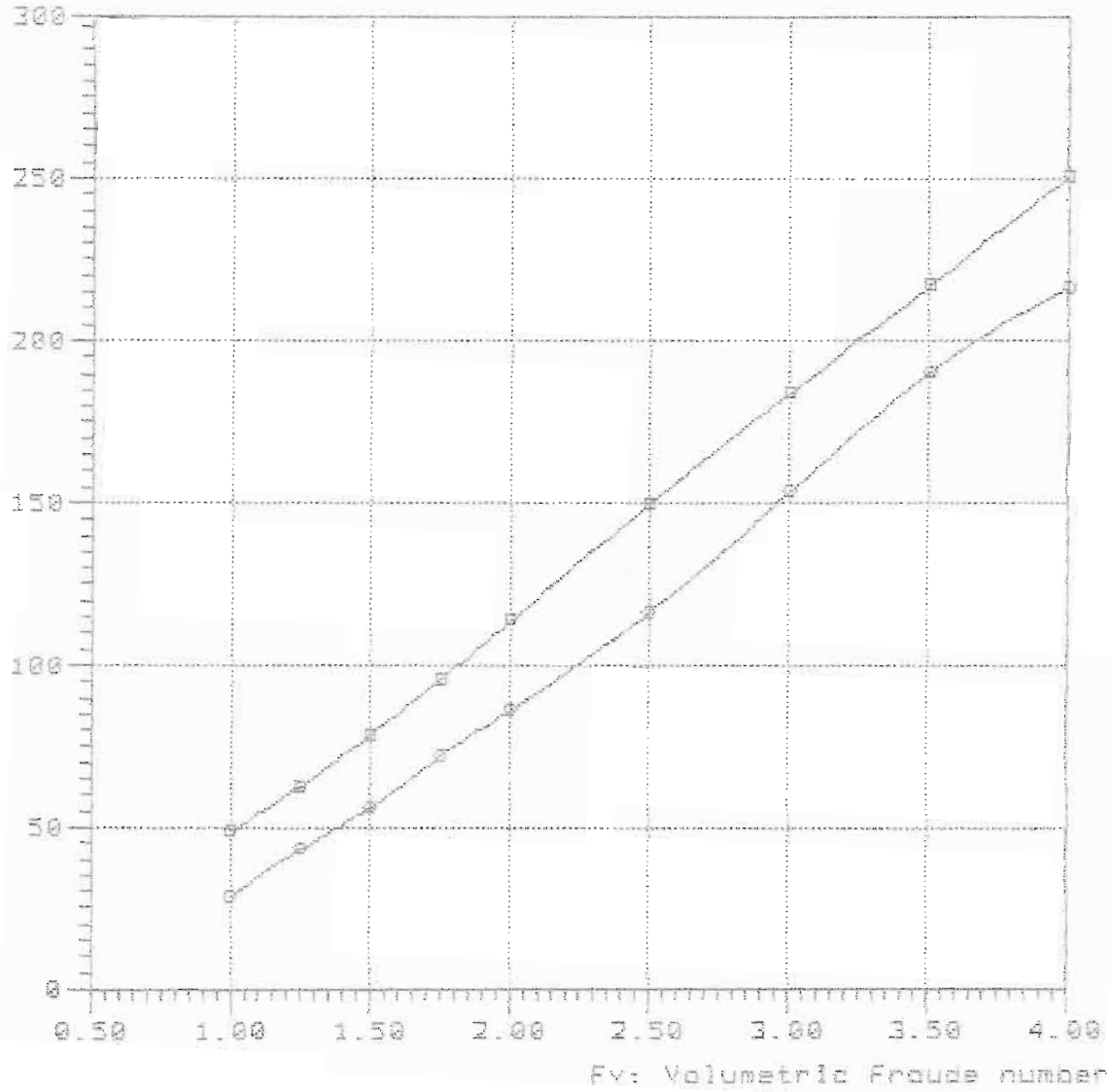
Lpx = 25.000 ft  
Lwl = 24.849 ft  
Bpx = 3.788 ft  
Ap = 68.651 sqft  
Vcg = 1.649 ft

Disp. = 1000.00 Lb  
Deadrise = 30.40 degree  
Twist Angle = 2.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 6.600  
Lpx/Ap = 9.104  
Ap /Vol = 10.983  
Lpx/Vol = 10.003  
Cvload = 0.287  
Lbload = 0.014  
Disp-Lpx = 28.571

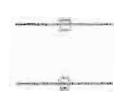
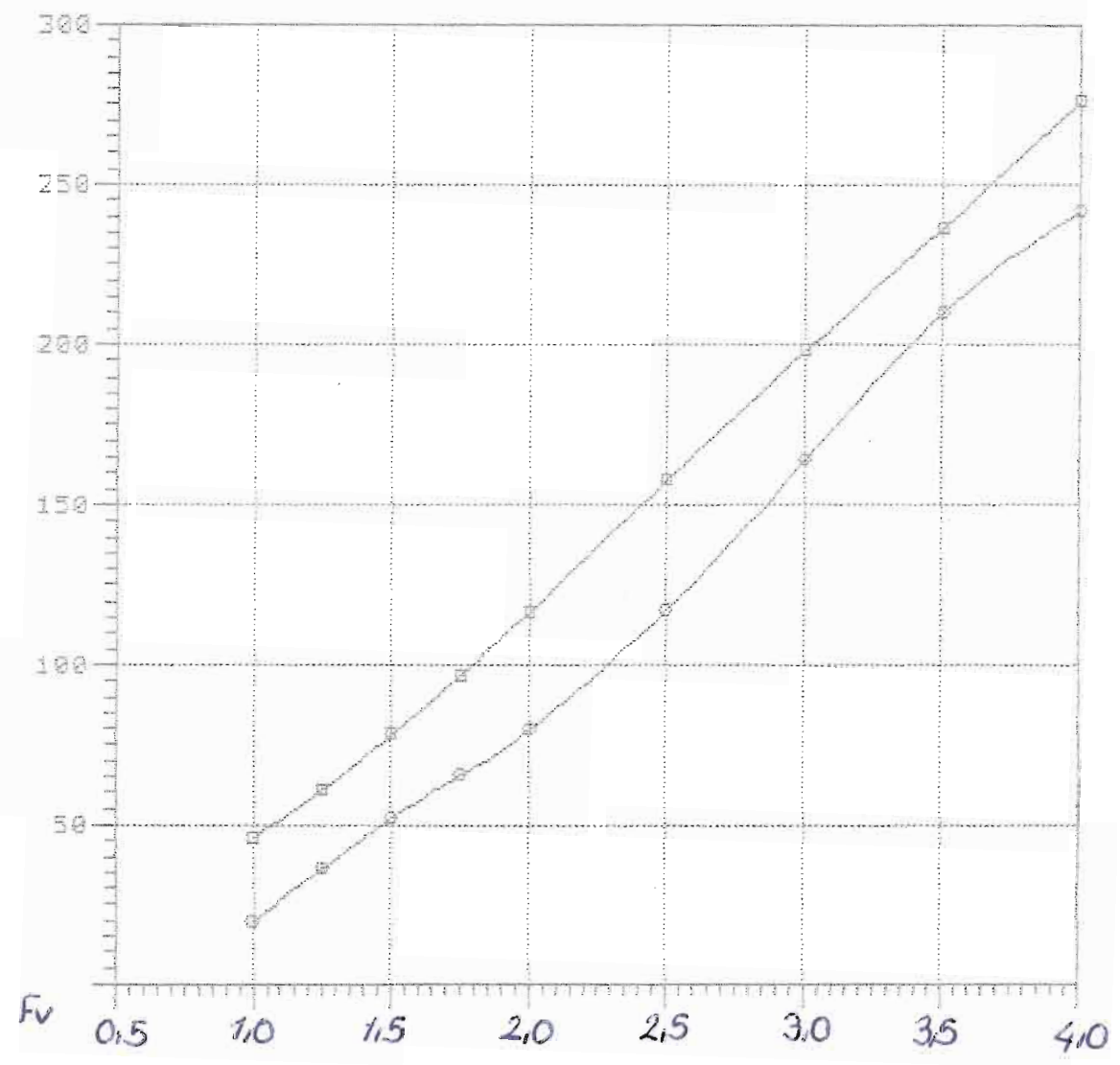


Rbare: Bare-hull resistance (lbs)

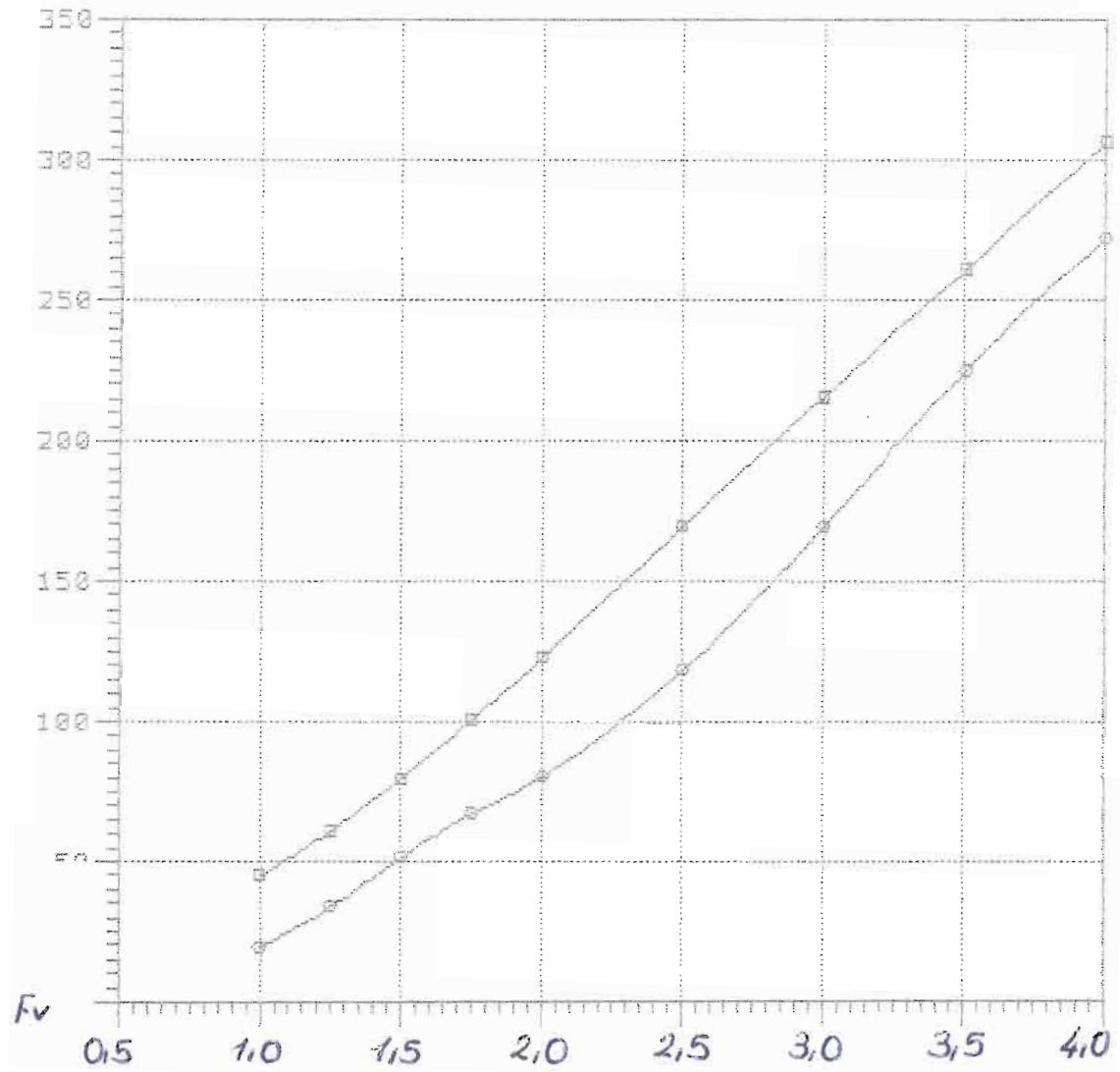


—□—  
—○— 7MB-65A 5250 Lpx/Bpx=6.5 Ap/Vol=10.984 Lpx/Vol=10.0 Lpx/Ap=9.104 Log/Lpx=0.3

Rbare: Bare-hull resistance (lbs)

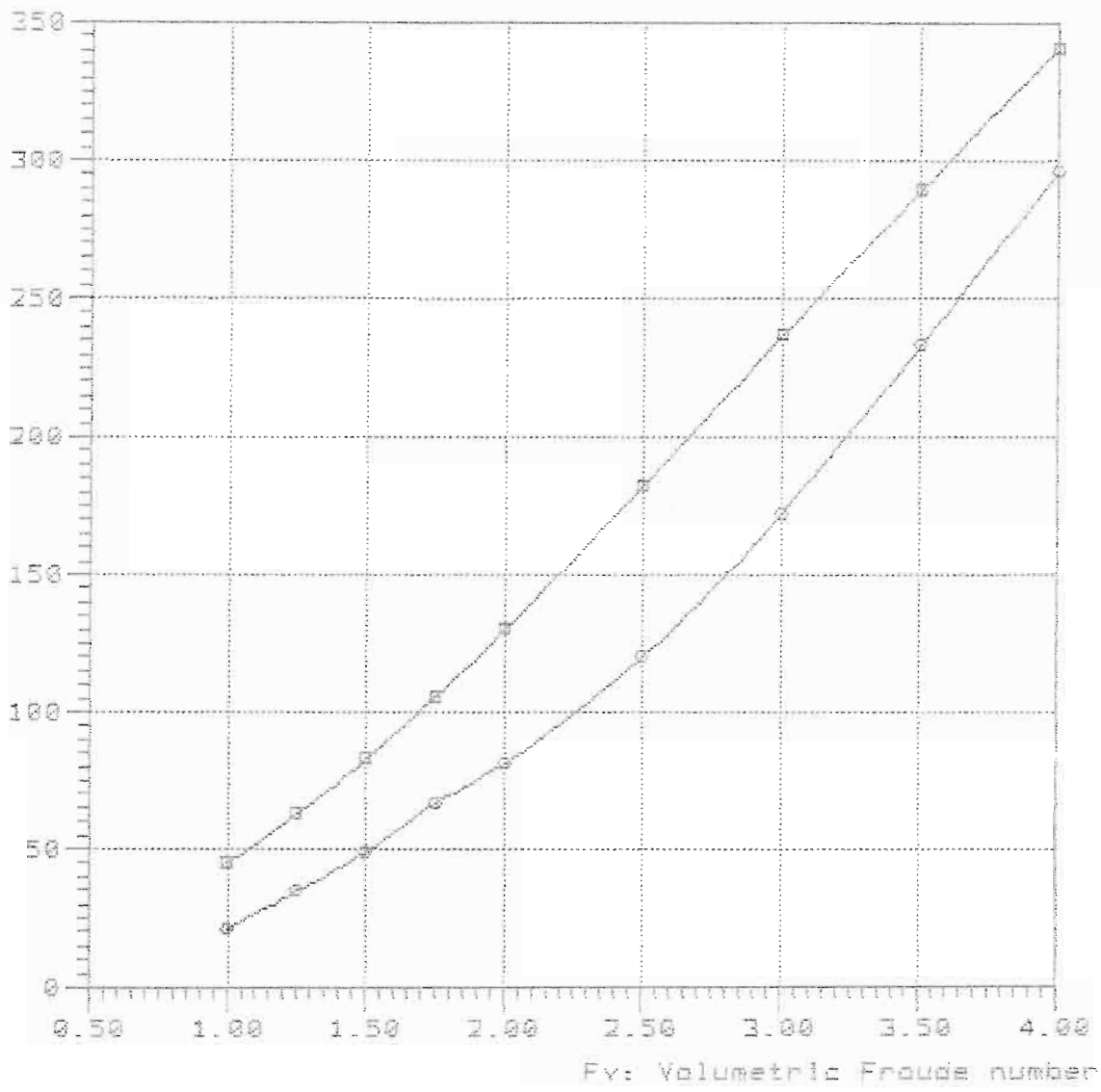


Rbare: Bare-hull resistance (lbs)



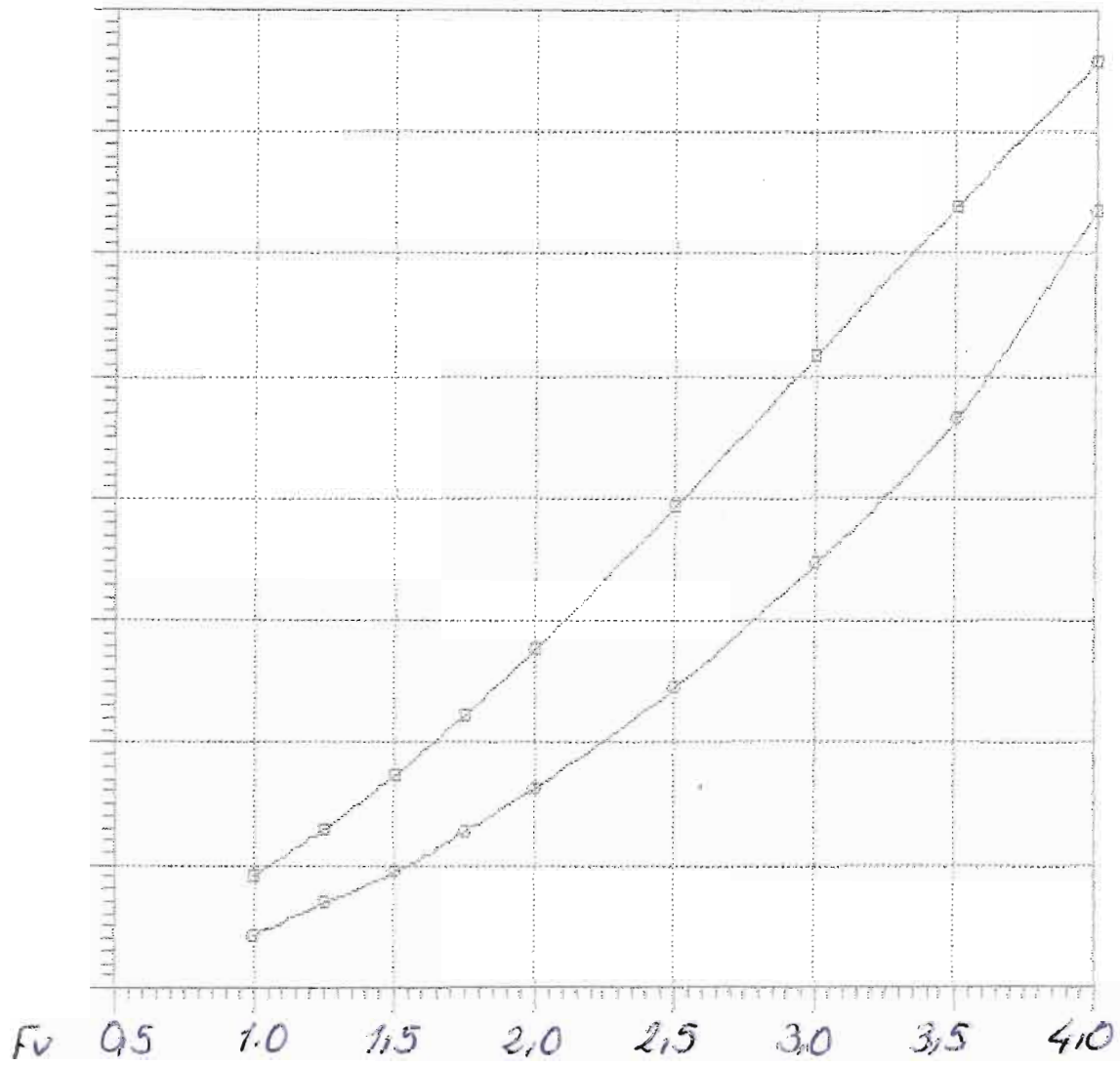
—□—  
—○—

Rbare: Bare-hull resistance (lbs)



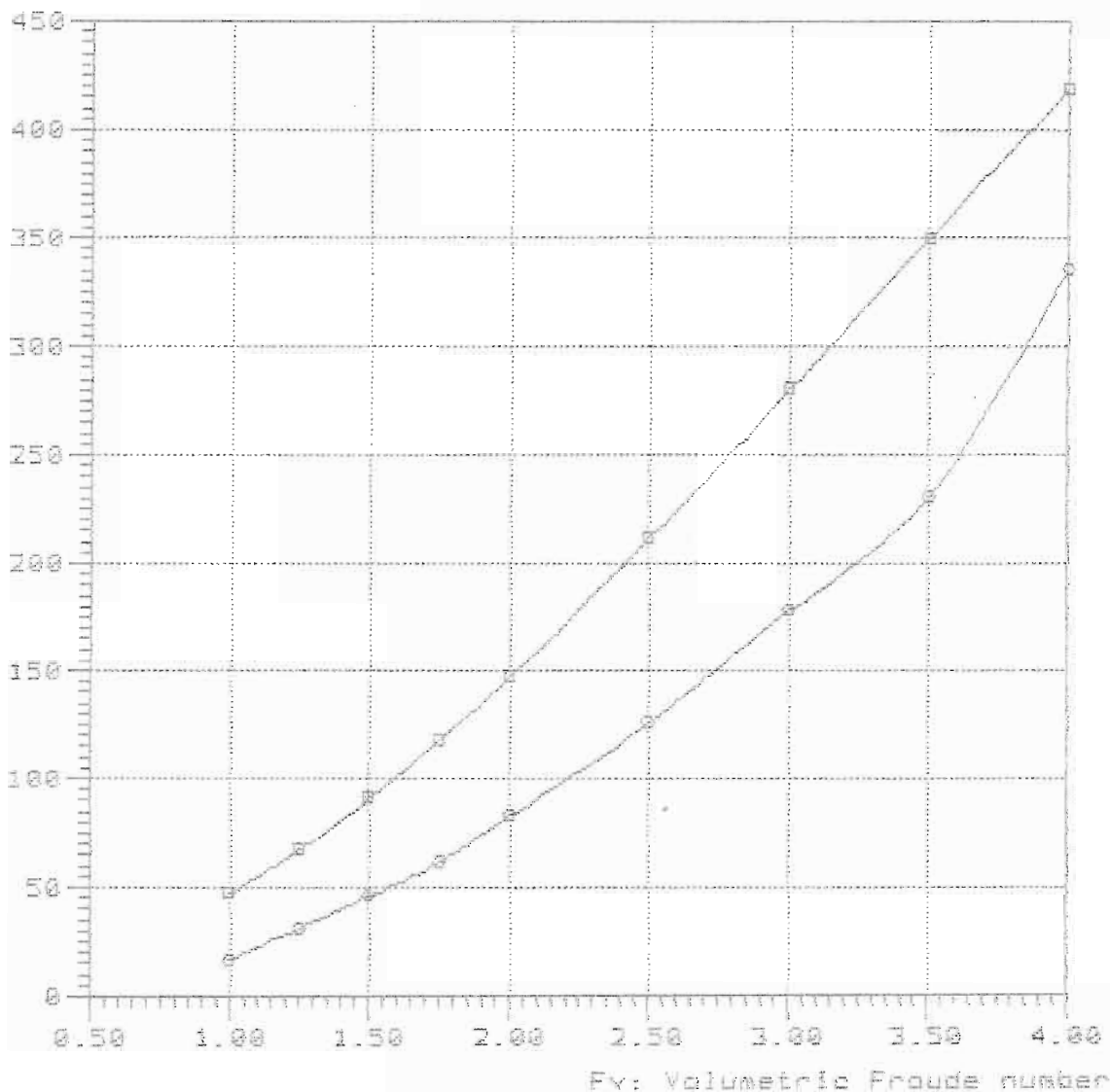
—■—  
—●— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Va1=10.984 Lpx/Va1=10.0 Lpx/Ap=9.104 Log/Lpx=0.4

11-10-48



—□—  
—○—

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—●— TMB-65A 5250 Lpx/Bpx=6.6 Ap/Vol=10.984 Lpx/Vol=10.6 Lpx/Rp=9.104 Log/Lpx=0.5

5251

Model = 5251  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

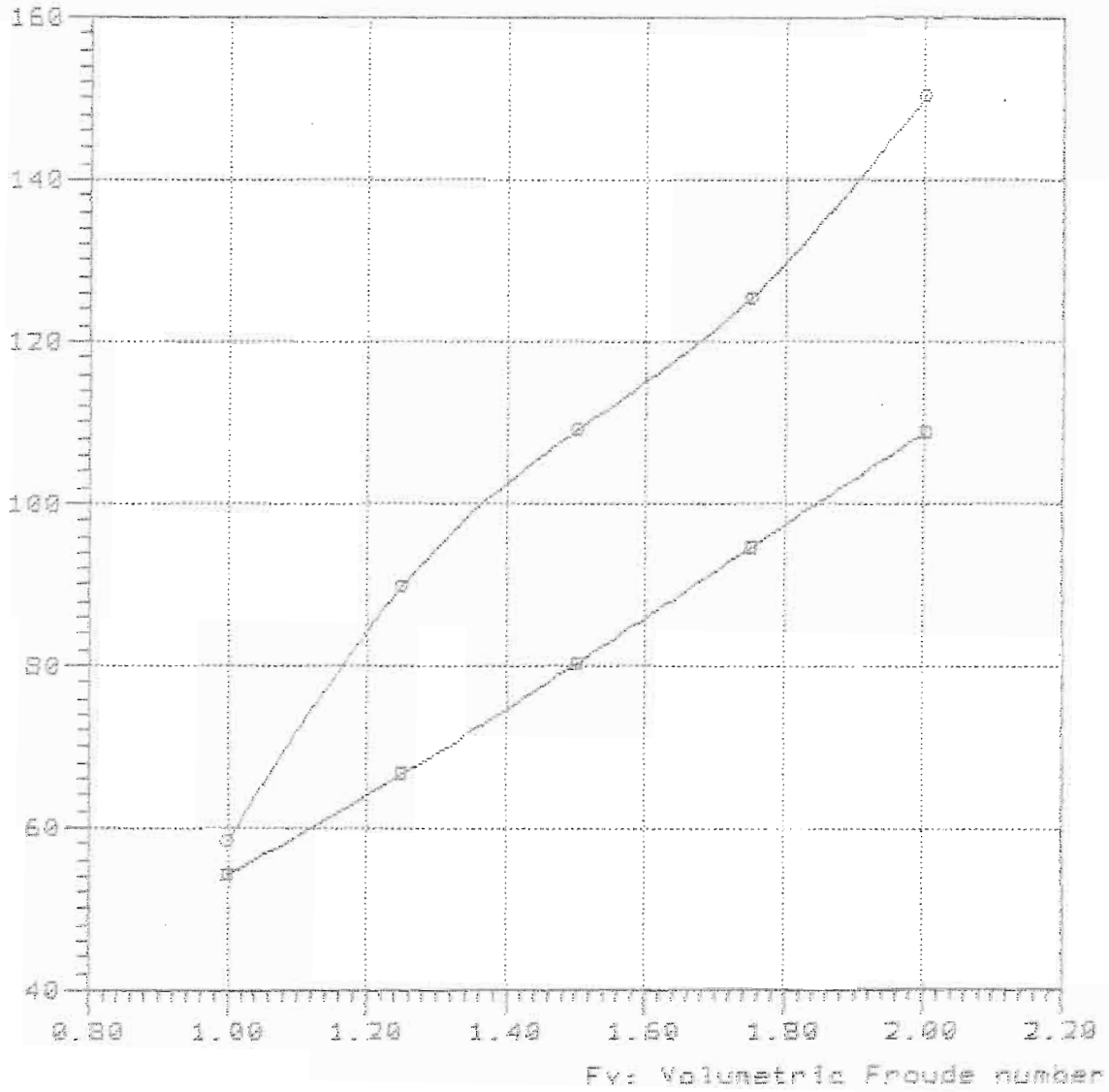
Lpx = 13.700 ft  
Lwl = 13.617 ft  
Bpx = 4.152 ft  
Ap = 41.242 sqft  
Vcg = 0.904 ft  
Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle = 1.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.300  
Lpx/AP = 4.551  
AP /Vol = 6.598  
Lpx/Vol = 5.496  
Cvload = 0.218  
Lbload = 0.030  
Disp-Lpx = 173.616

**Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCİ DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez. Tekrar  
veya kopya edilemez ve her ne amaçla  
olsa olsun maksadı dışında  
izinsiz kullanılamaz,**



Rbare: Bare-hull resistance (lbs)



—■—

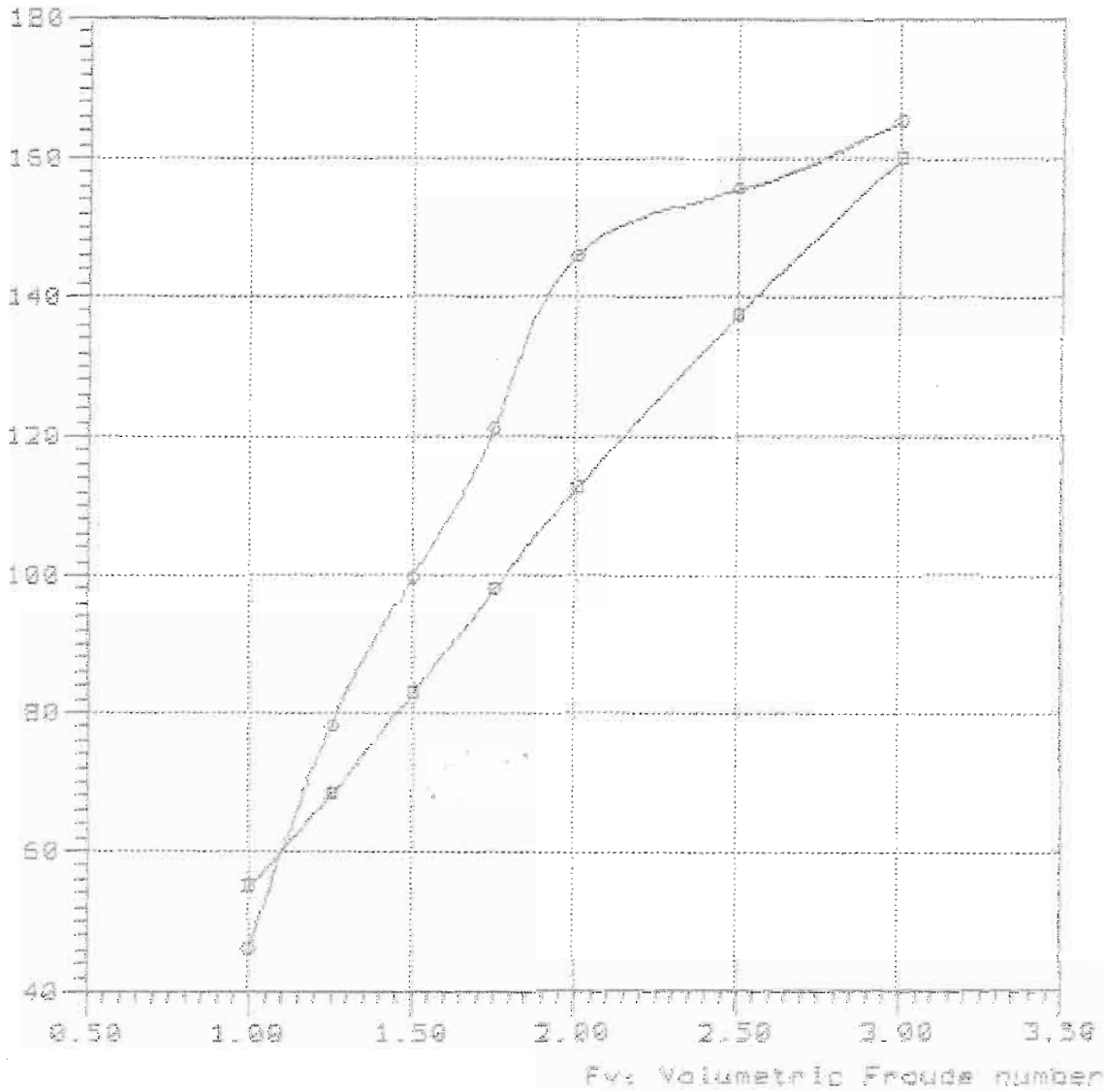
—●— TMB-659 5251 Lpx/Bpx=3.3 Rp/Vol=6.589 Lpx/Vol=5.50 Lpx/Rp=4.551 Log/Lpx=0.48

Model = 5251  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 15.000 ft  
Lwl = 14.910 ft  
Bpx = 4.546 ft  
Ap = 49.440 sqft  
Vcg = 0.990 ft  
Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle = 1.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

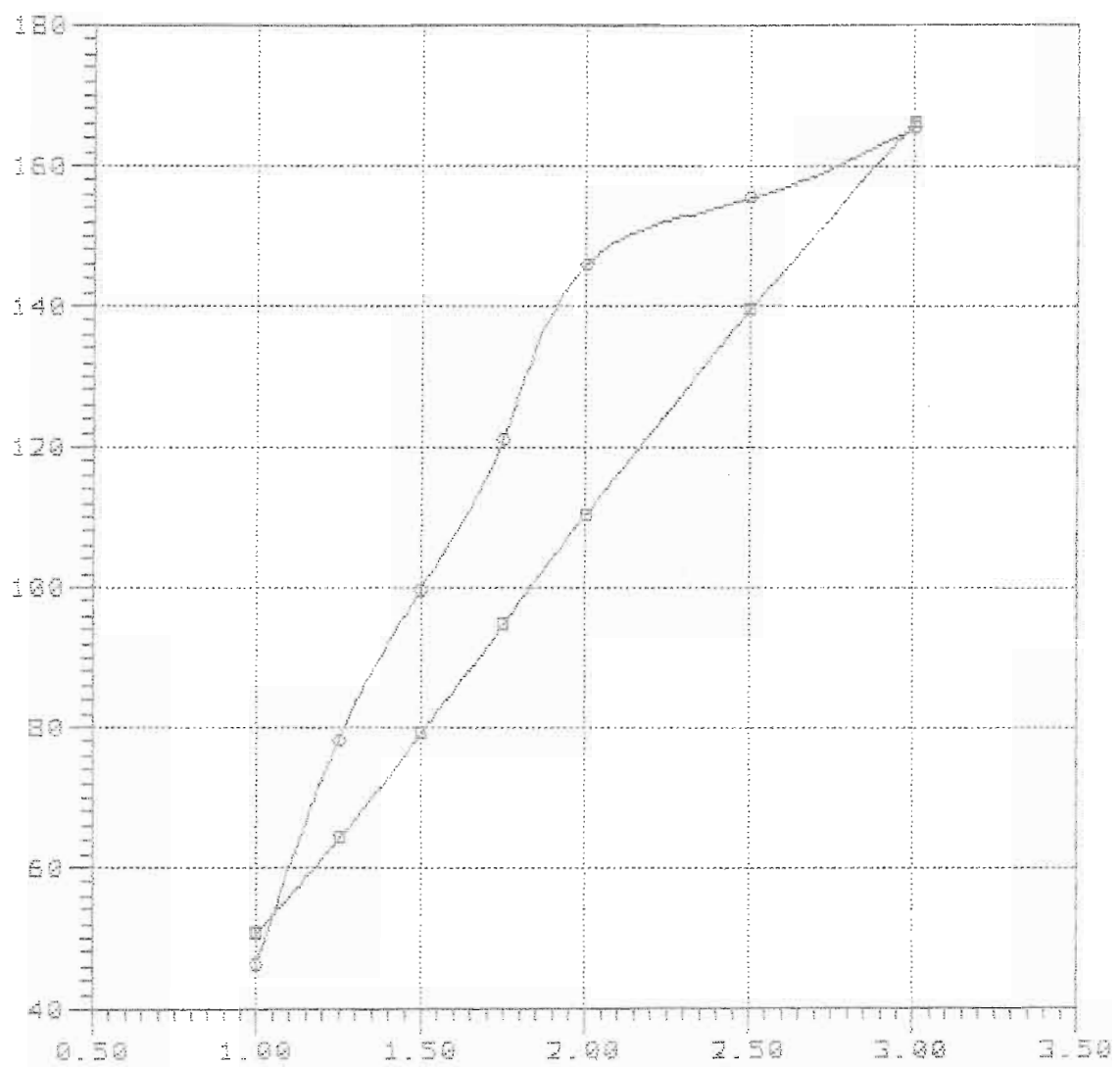
Lpx/Bpx = 3.300  
Lpx/Ap = 4.551  
Ap /Vol = 7.909  
Lpx/Vol = 6.018  
Cvload = 0.166  
Lbload = 0.023  
Disp-Lpx = 132.275

Rbars: Bare-hull resistance (lbs)



—■—  
—○— MKB-150 5251 Lpx/Bpx=3.3 Ap/Vol=7.918 Lpx/Vol=6.00 Lpx/Rp=4.551 Lcp/Lpx=0.44

Rbare: Bare-hull resistance (lbs)



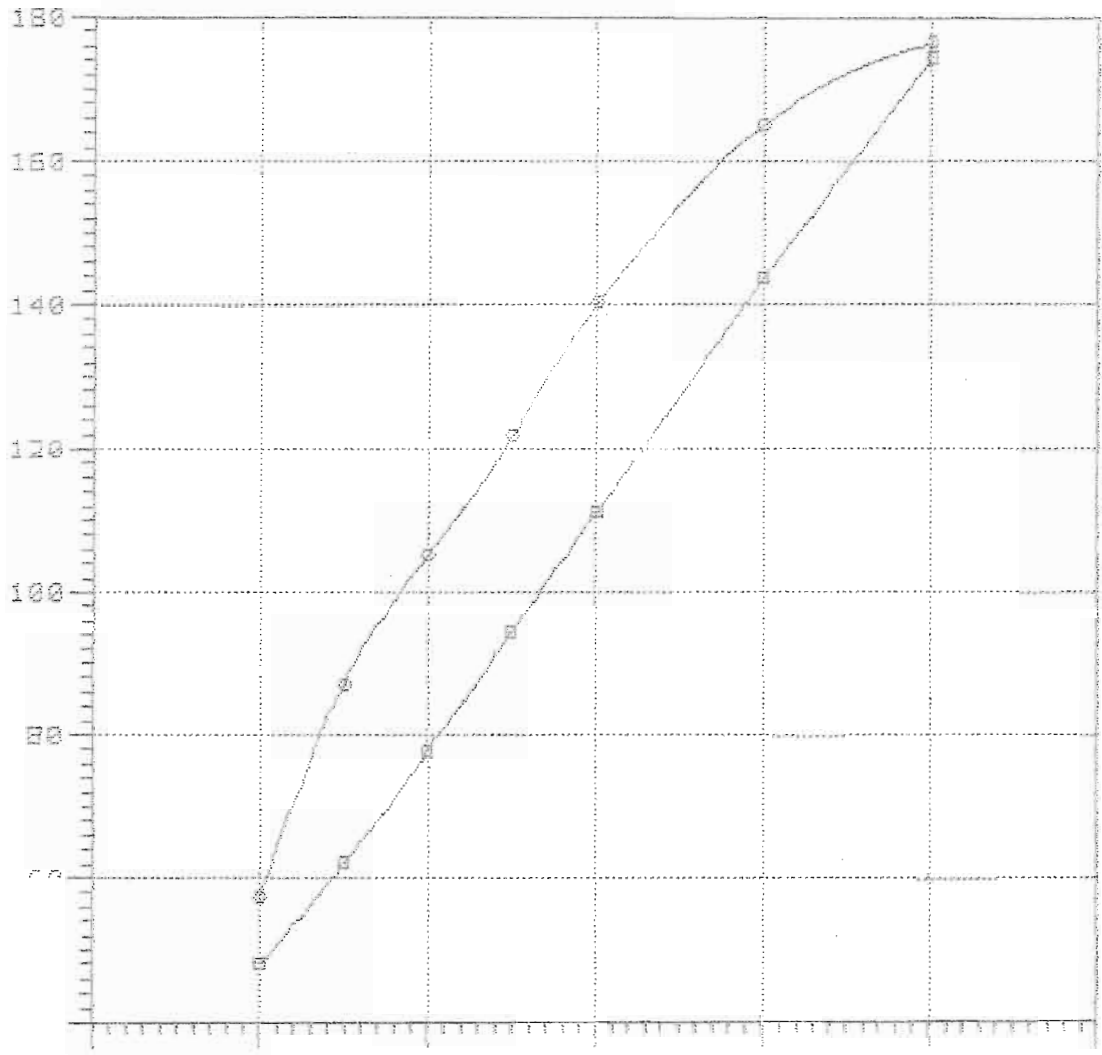
Fv: Volumetric Froude number

—■—  
—●— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=7.910 Lpx/Vol=6.80 Lpx/Ap=4.551 Lcg/Lpx=0.44

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File: B-60-520.mdl  
Date: 29 Feb 00  
Time: 17:48

Rbare: Bare-hull resistance (lbs)



—□—  
—○—

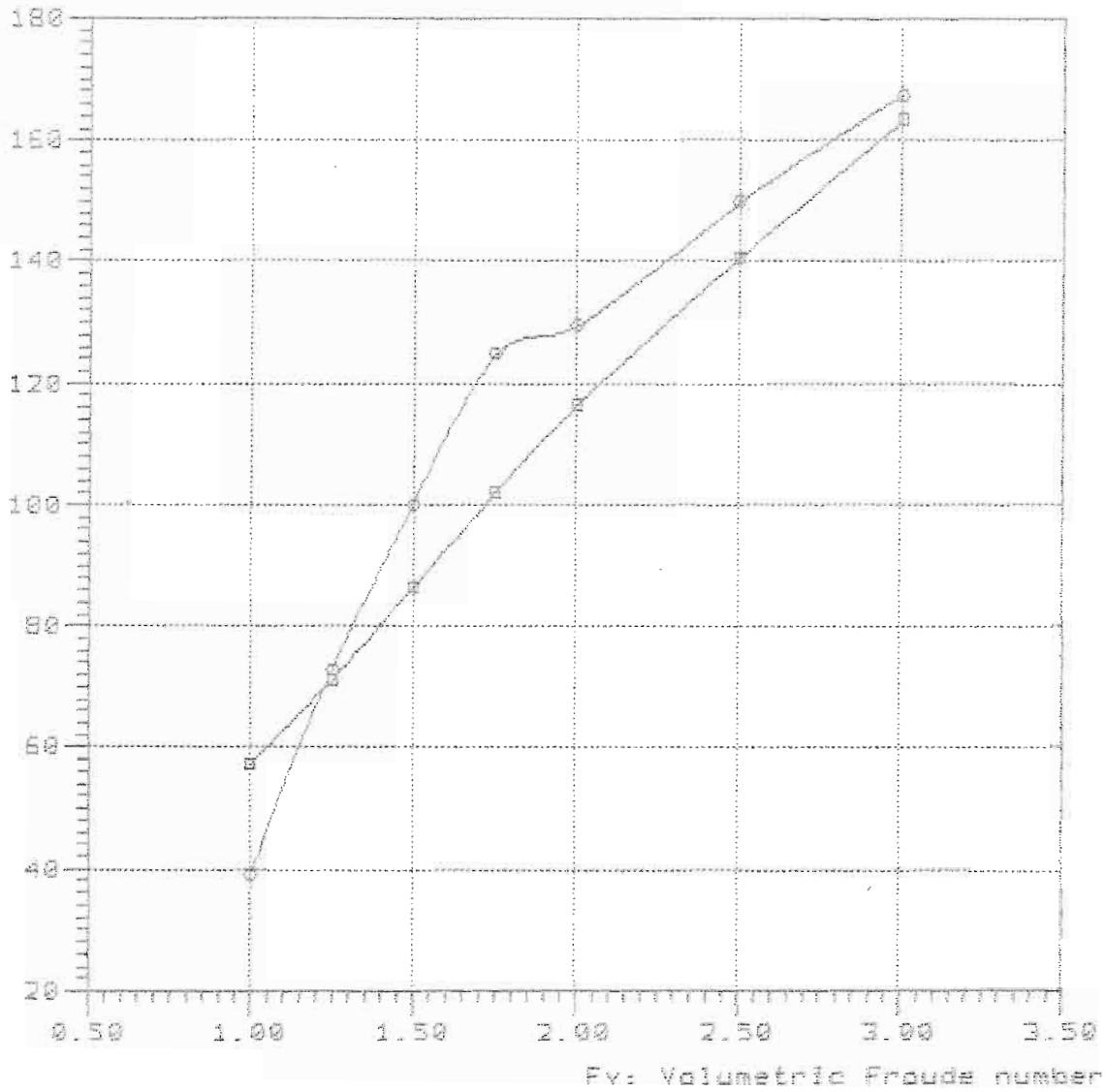
Model = 5251  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 16.200 ft  
Lwl = 16.102 ft  
Bpx = 4.909 ft  
Ap = 57.666 sqft  
Vcg = 1.069 ft

Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle= 1.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.300  
Lpx/Ap = 4.551  
Ap /Vol = 9.225  
Lpx/Vol = 6.499  
Cvload = 0.132  
Lbload = 0.018  
Disp-Lpx = 105.004

Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=9.227 Lpx/Vol=6.50 Lpx/Ap=4.531 Log/Lpx=0.46

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Bare-hull resistance

vs.

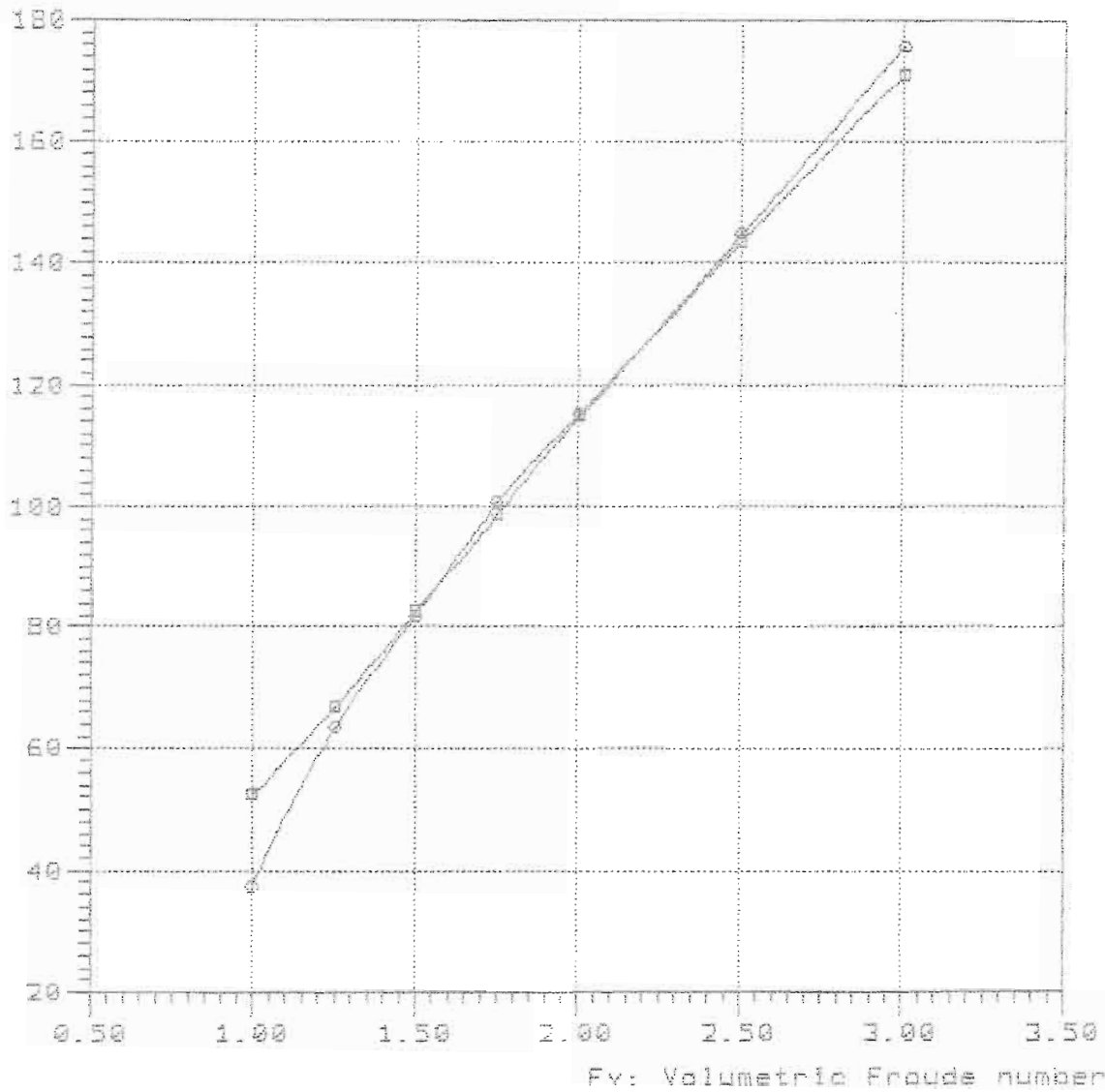
Volumetric Froude number

File: 9-65-440.mdl

Date: 29 Feb 88

Time: 17:58

Rbare: Bare-hull resistance (lbs)



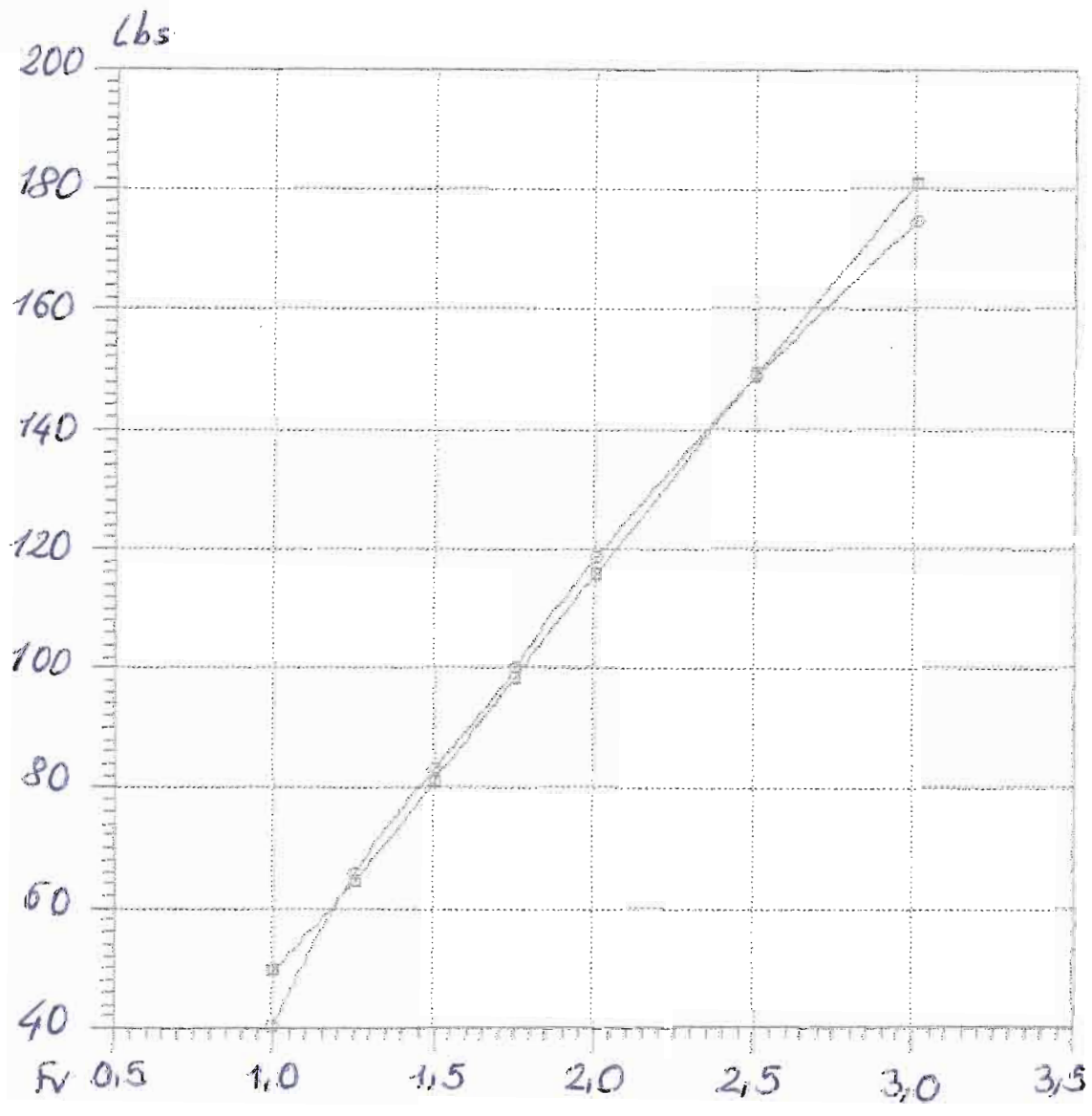
Curve legend

—■—

—●— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=9.227 Lpx/Vol=6.50 Lpx/Ap=4.551 Log/Lpx=0.44

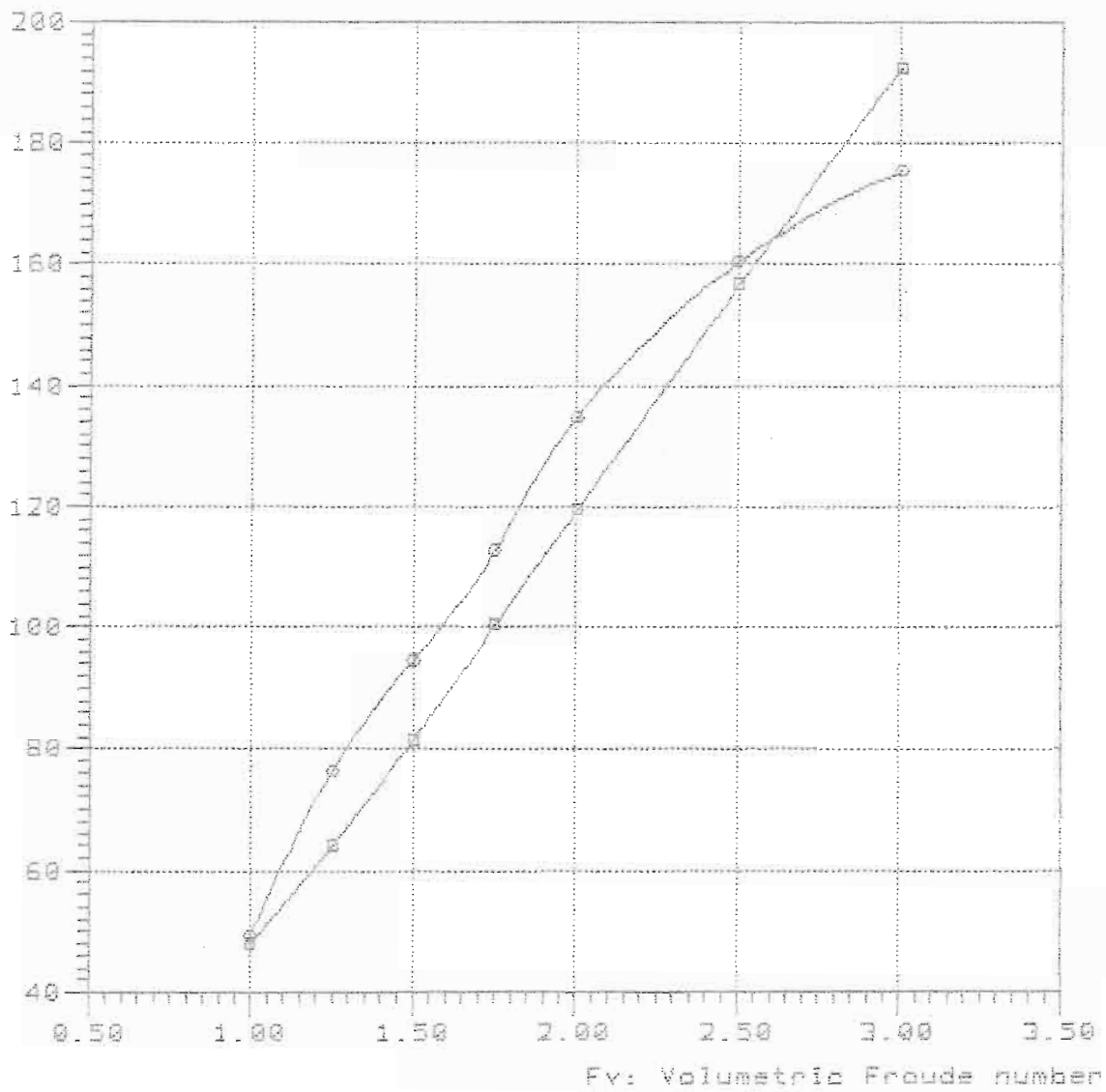


9-65-480



—□—  
—○—

Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A 5251 Lpx/Rpx=3.3 Rp/Vol=9.227 Lpx/Vol=6.50 Lpx/Rp=4.551 Log/Lpx=0.52

Model = 5251  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 17.500 ft  
Lwl = 17.395 ft  
Bpx = 5.303 ft  
Ap = 67.293 sqft  
Vcg = 1.154 ft  
Disp. = 1000.00 Lb

Deadrise = 16.30 degree  
Twist Angle = 1.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.300  
Lpx/Ap = 4.551  
Ap /Vol = 10.766  
Lpx/Vol = 7.021  
Cvload = 0.105  
Lbload = 0.014  
Disp-Lpx = 83.299

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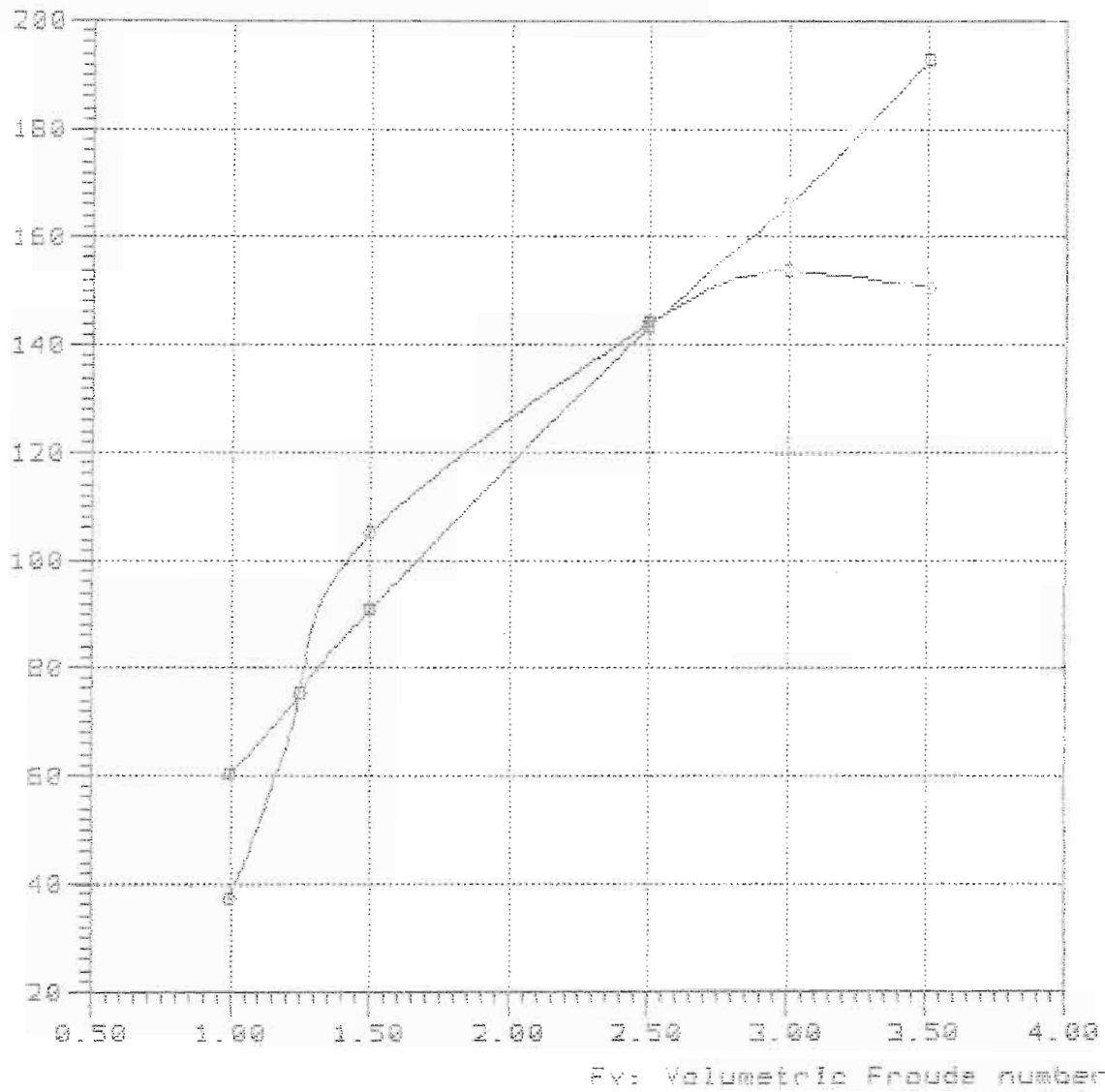
HydroComp, Inc.

File: 11-70-35.mdl

Date: 29 Feb 00

Time: 15:06

Rbare: Bare-hull resistance (lba)



—□—

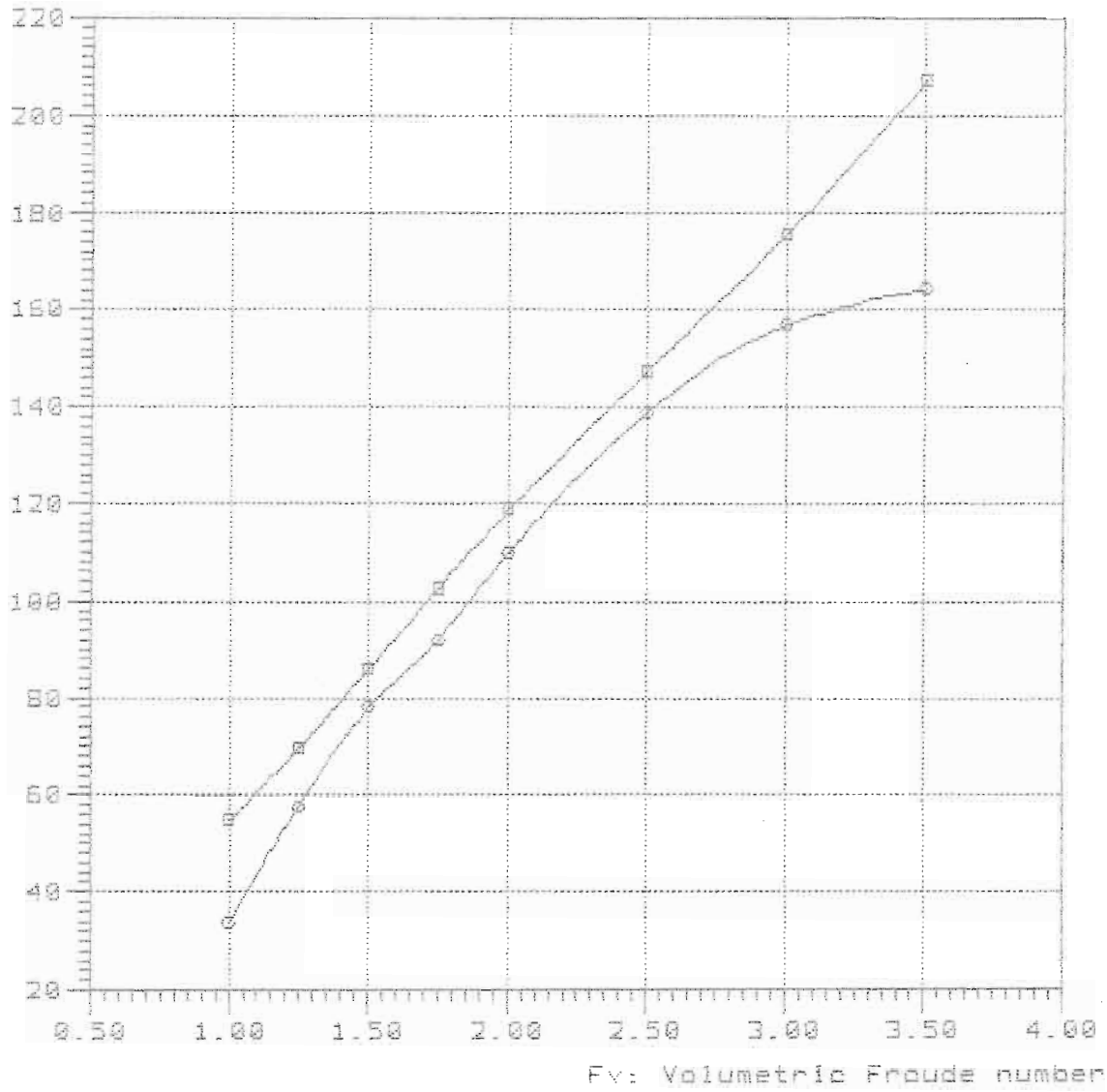
—○— TMB-65A 5251 Lpx/Bpx=3.3 Rp/Vol=10.767 Lpx/Vol=7.00 Lpx/Rp=4.551 Lcg/Lpx=0.3

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**Bare-hull resistance**  
vs.  
**Volumetric Froude number**

File: 11-78-40.mdl  
Date: 29 Feb 88  
Time: 15:07

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

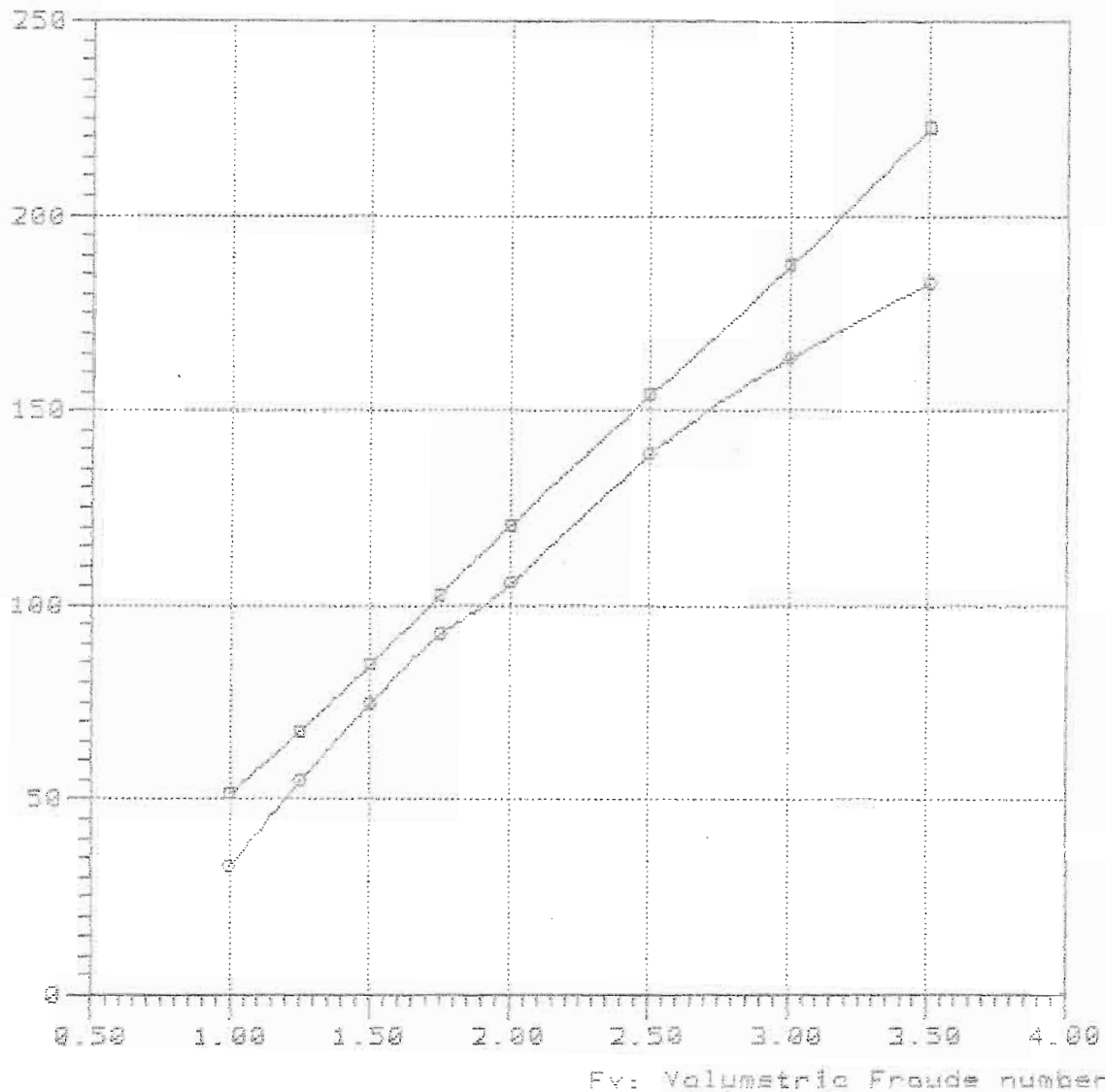
—○— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Val=10.767 Lpx/Val=7.00 Lpx/Ap=4.531 Lcg/Lpx=0.4

### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



#### Curve legend

—□—

—○— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=10.767 Lpx/Vol=7.00 Lpx/Rp=4.351 Lcg/Lpx=0.4

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### Bare-hull resistance

vs.

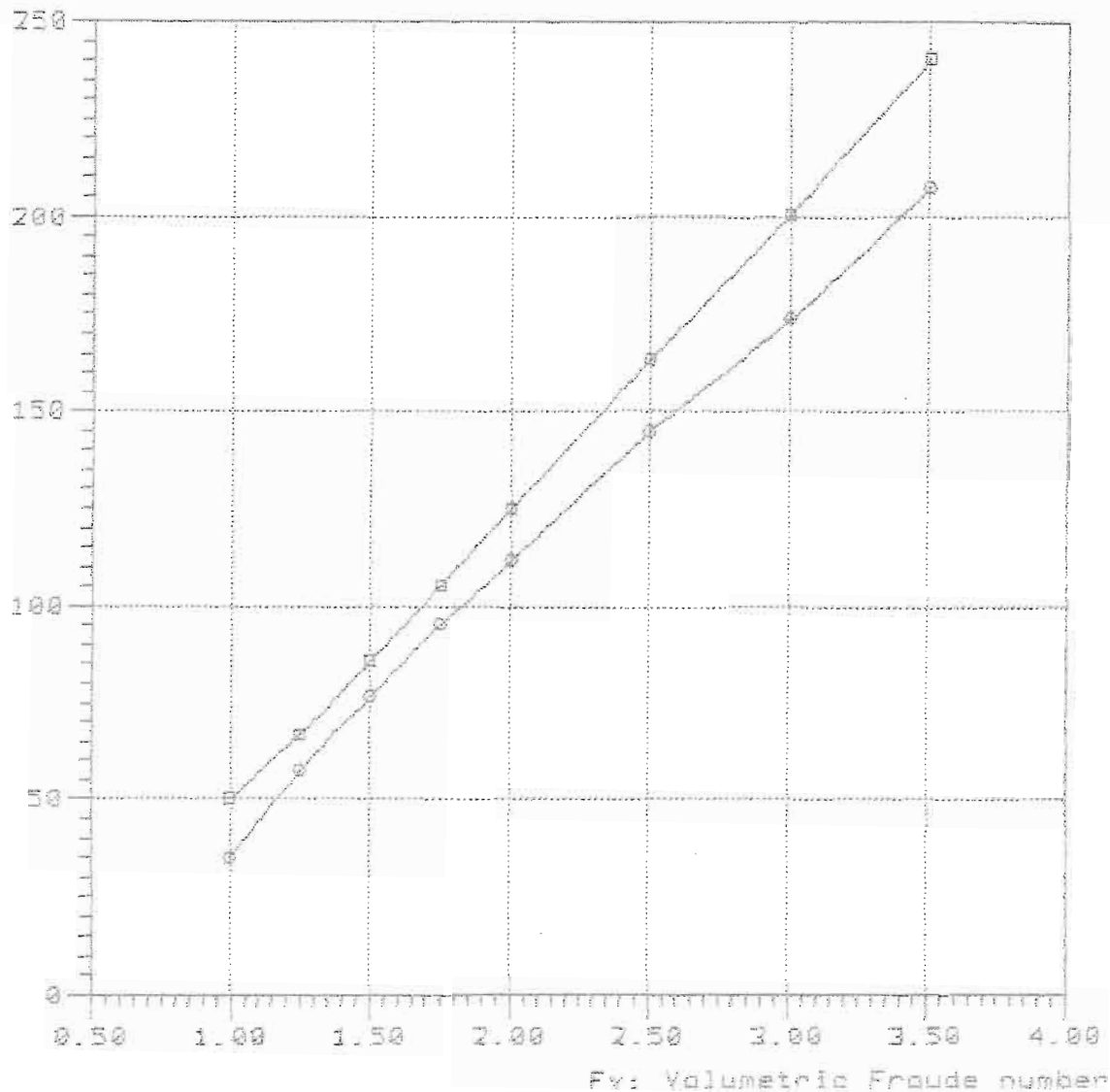
### Volumetric Froude number

File: 11-70-48.mdl

Date: 29 Feb 00

Time: 15:03

Rbare: Bare-hull resistance (lbs)

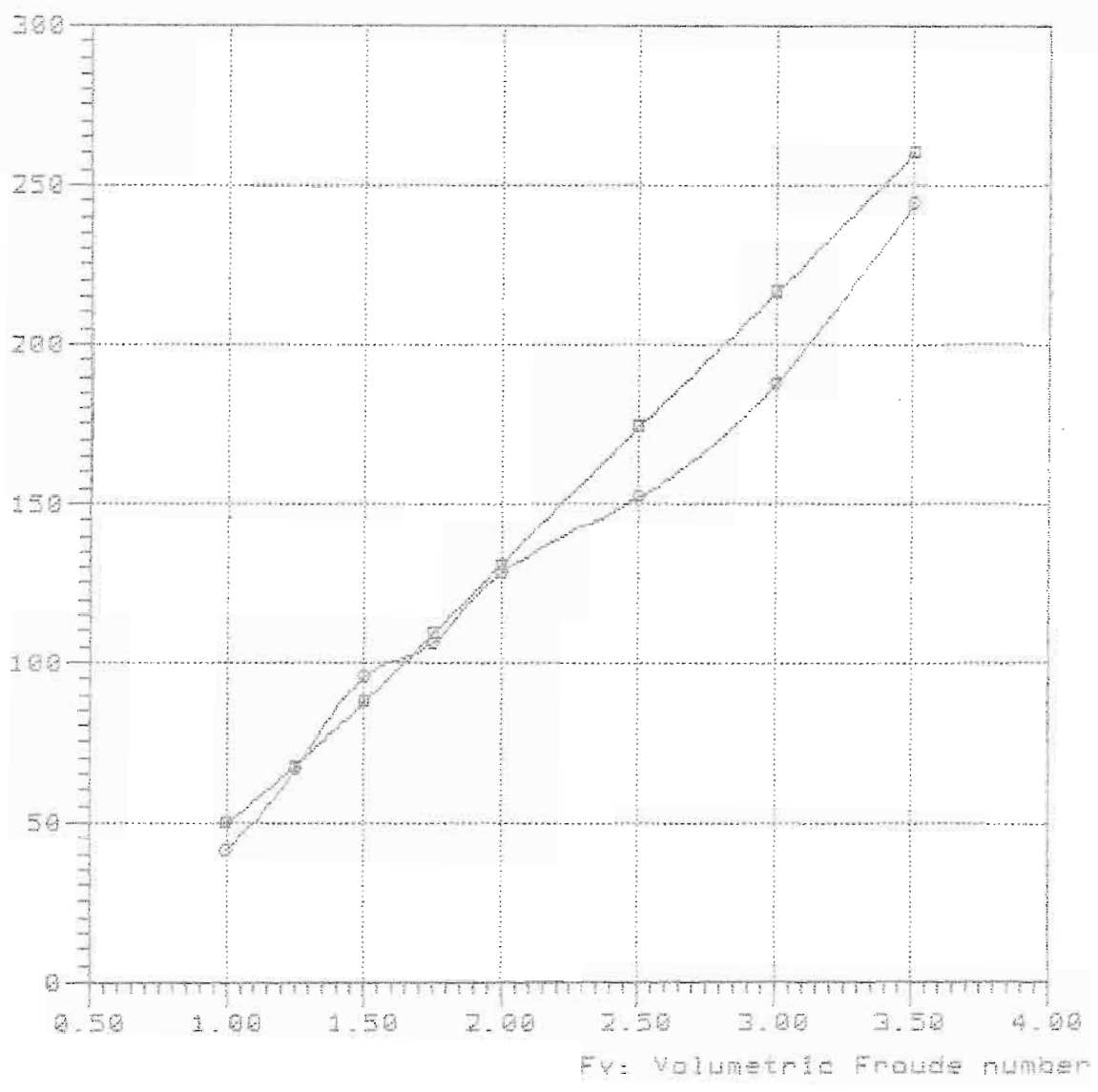


#### Curve legend

—■—

—○— TMS-65A 5251 Lpx/Bpx=3.3 Ap/Vol=10.767 Lpx/Vol=7.00 Lpx/Ap=4.551 Lcg/Lpx=0.4

Rbare: Bare-hull resistance (lbs)



—○— TMB-65A 5251 Lpx/Rpx=3.3 Rp/Vol=10.767 Lpx/Vol=7.00 Lpx/Rp=4.551 Log/Lpx=0.5



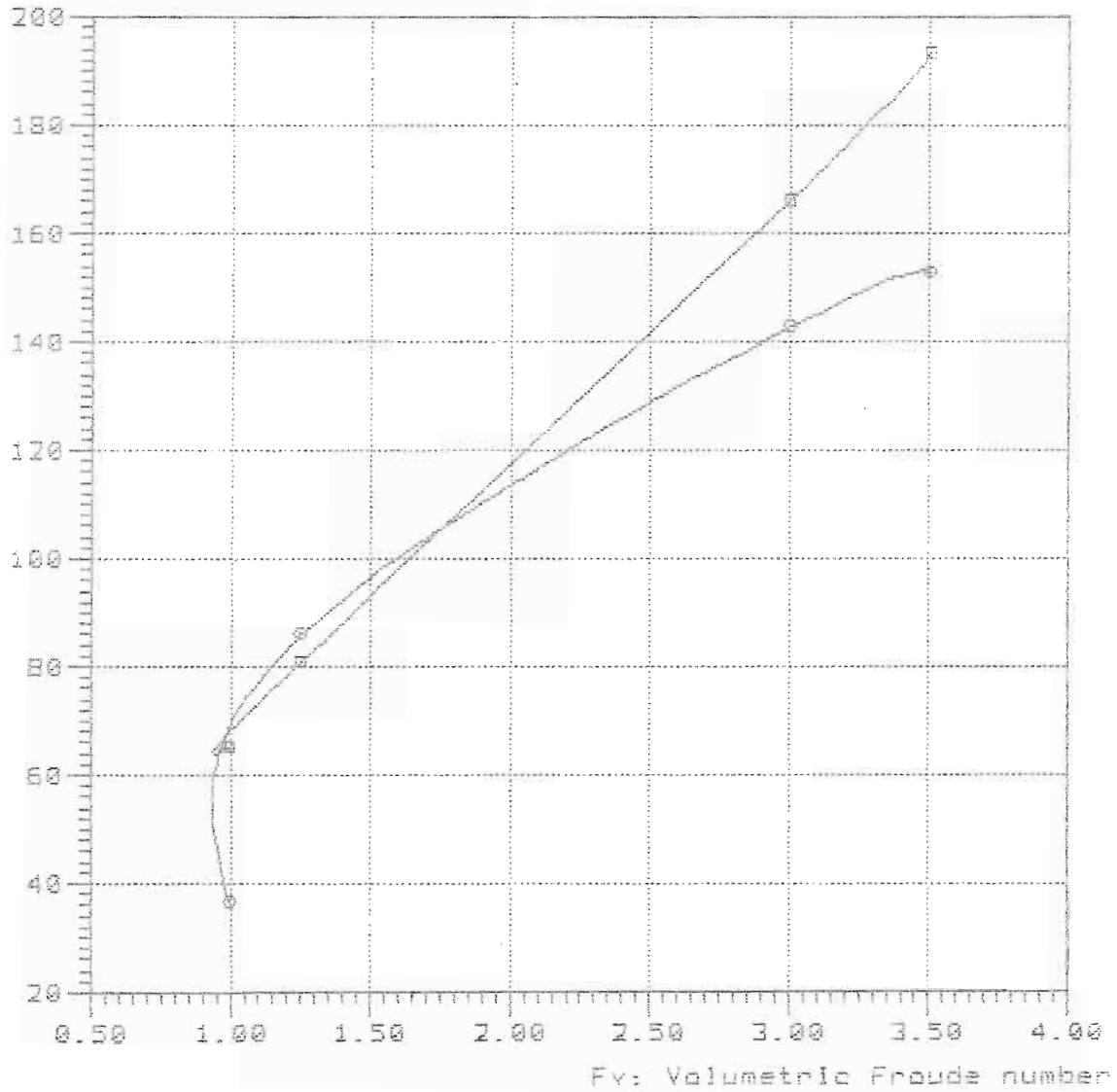
Model = 5251  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 18.700 ft  
Lwl = 18.587 ft  
Bpx = 5.667 ft  
Ap = 76.838 sqft  
Vcg = 1.234 ft  
Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle= 1.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.300  
Lpx/Ap = 4.551  
Ap /Vol = 12.293  
Lpx/Vol = 7.502  
Cvload = 0.086  
Lbload = 0.012

Disp-Lpx = 68.270

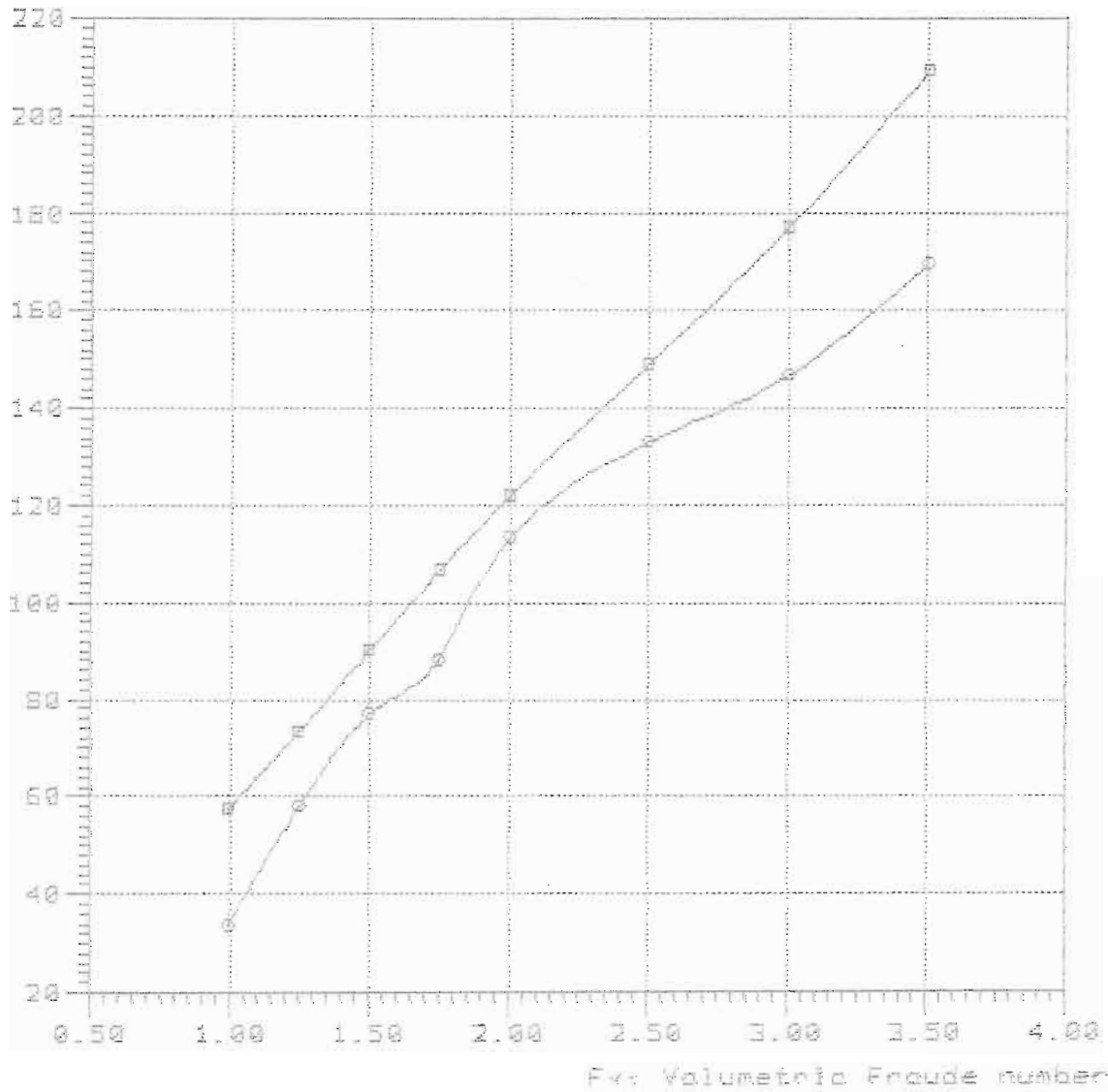
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=12.294 Lpx/Vol=7.50 Lpx/Rp=4.551 Log/Lpx=0.3

Rbare: Bare-hull resistance (lbs)



—■—  
—●— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=12.294 Lpx/Vol=7.50 Lpx/Ap=4.551 Log/Lpx=0.3

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Bare-hull resistance

File: 12-75-40.mdl

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vs.

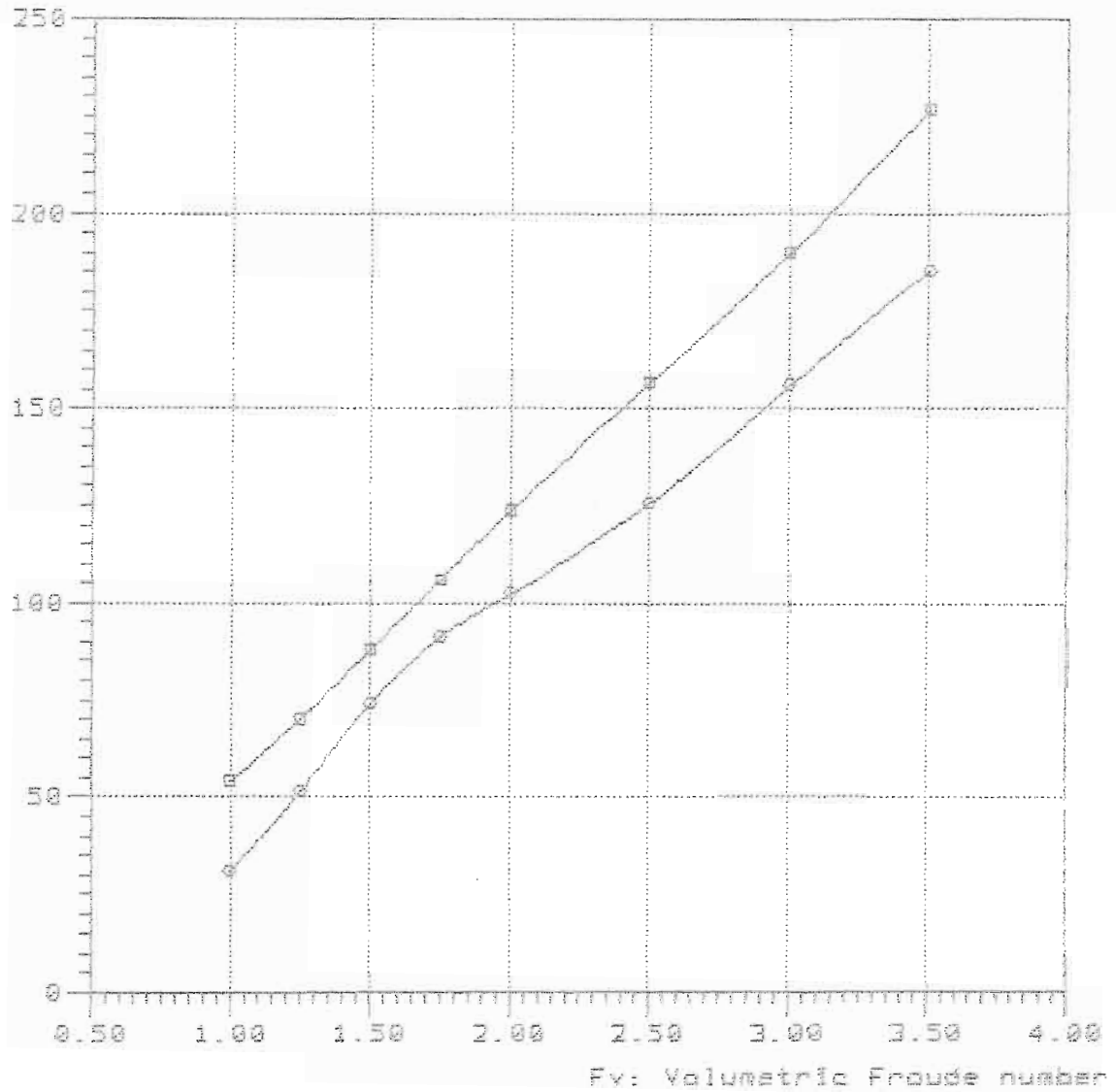
Date: 29 Feb 00

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Volumetric Froude number

Time: 15:25

Rbare: Bare-hull resistance (lbs)

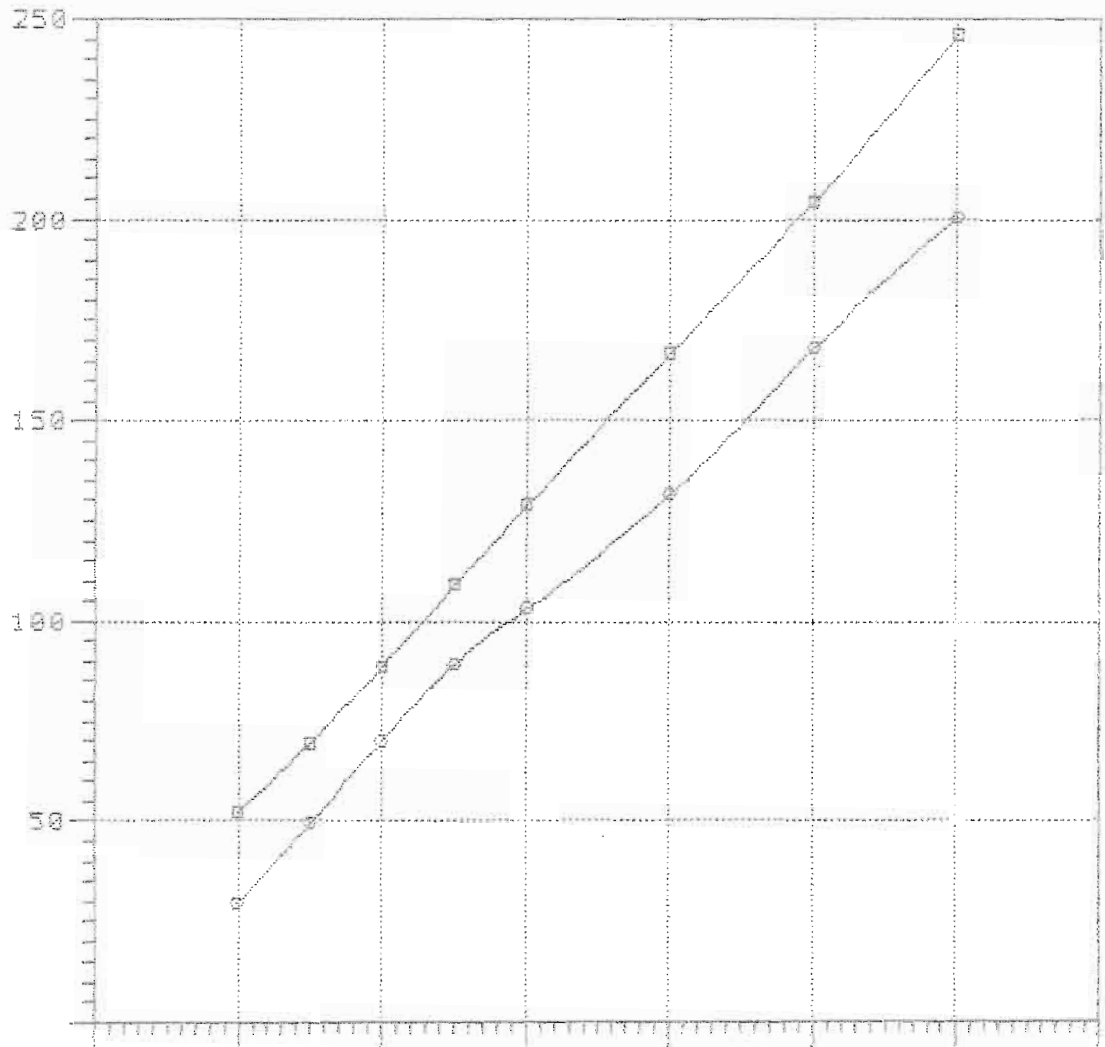


Curve legend

—■—

—●— 7MB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=12.294 Lpx/Vol=7.50 Lpx/As=4.551 Lcg/Lpx=0.4

Rbare: Bare-hull resistance (lbs)



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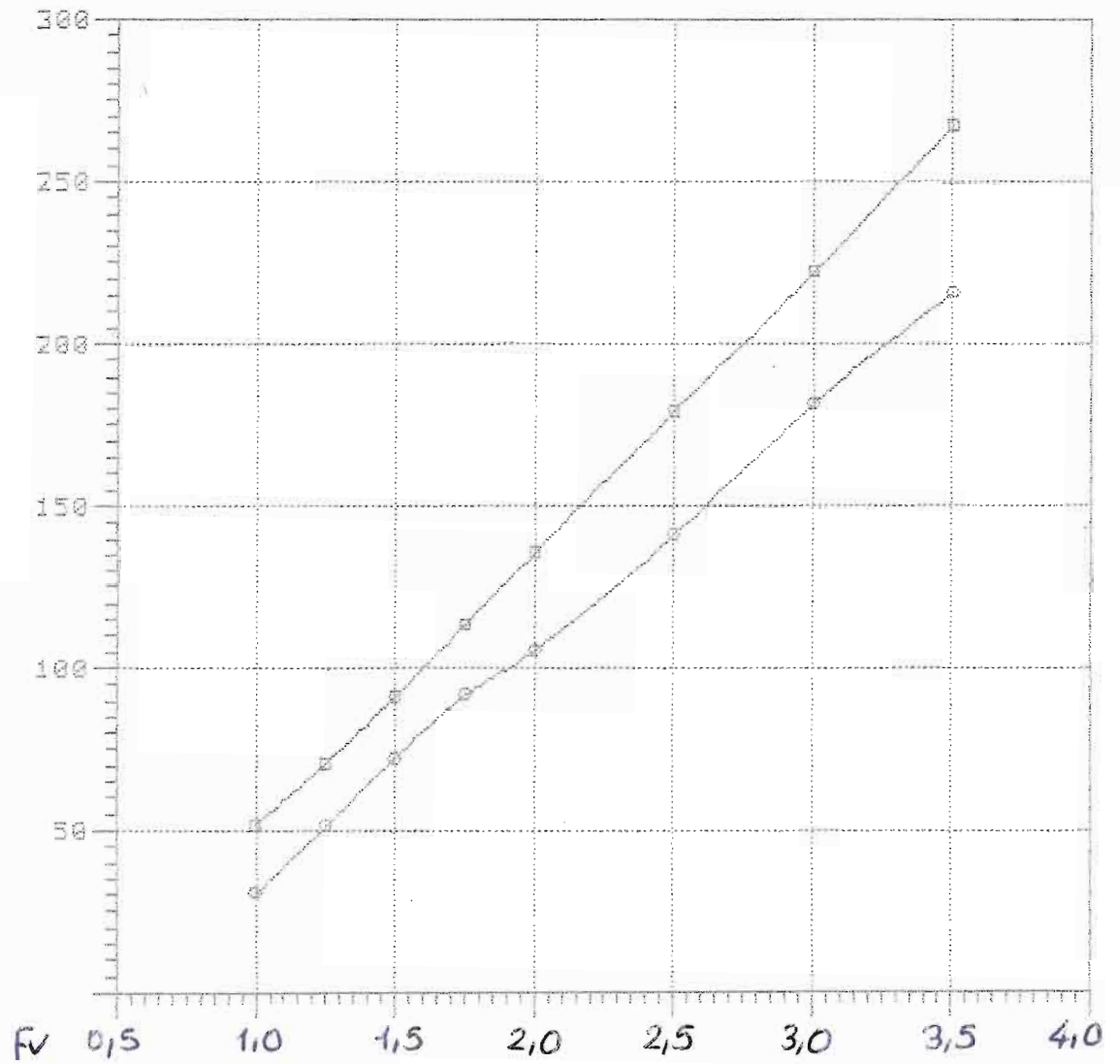
HydroComp, Inc.

File: 12-75-48.mdl

Date: 29 Feb 00

Time: 15:29

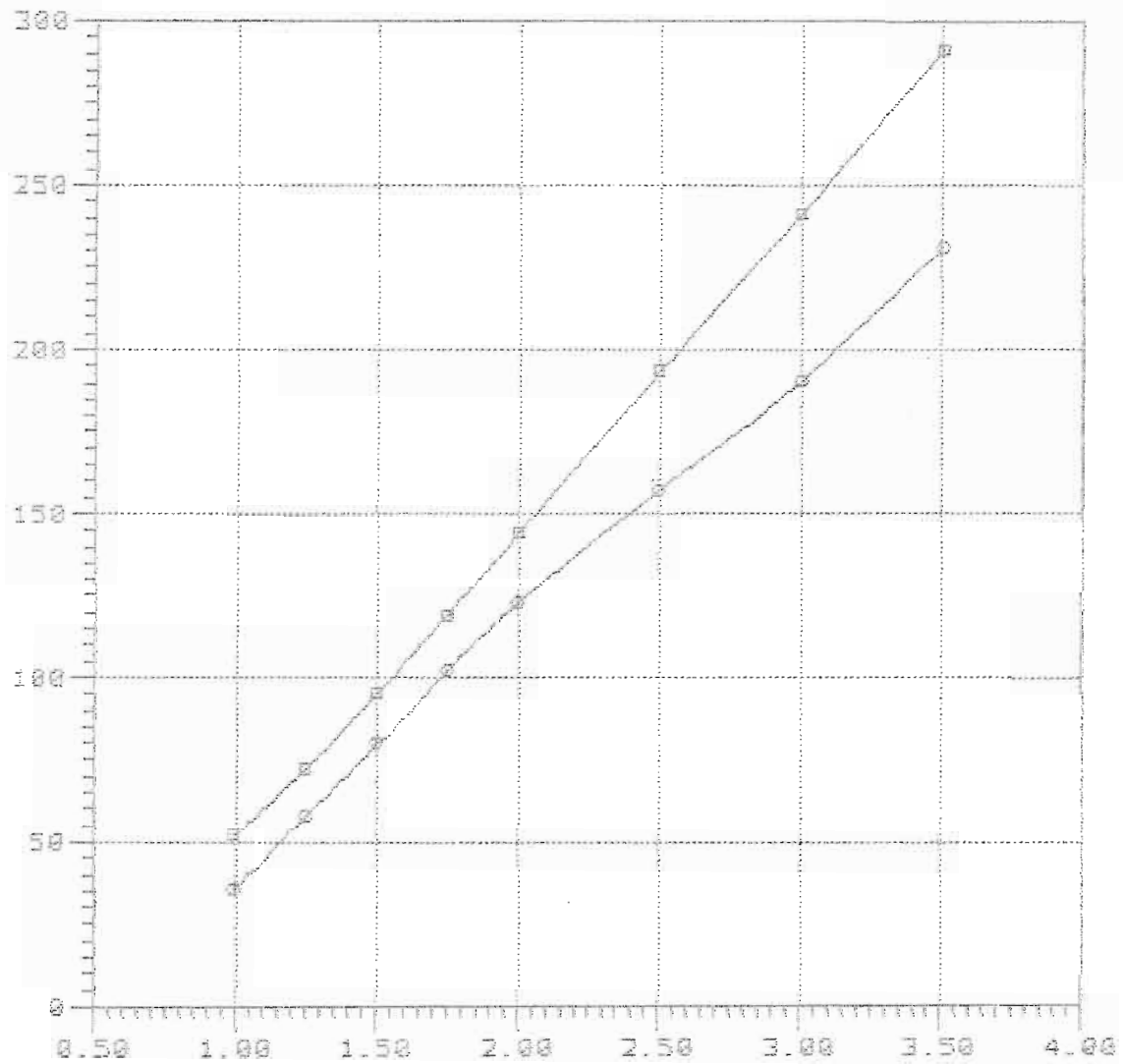
Rbare: Bare-hull resistance (lbs)



—■—

—○—

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—■—

—●— TMB-65A 5251 Lpx/Bpx=3.3 Rp/Vol=12.294 Lpx/Vol=7.58 Lpx/Rp=4.551 Log/Lpx=0.5

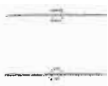
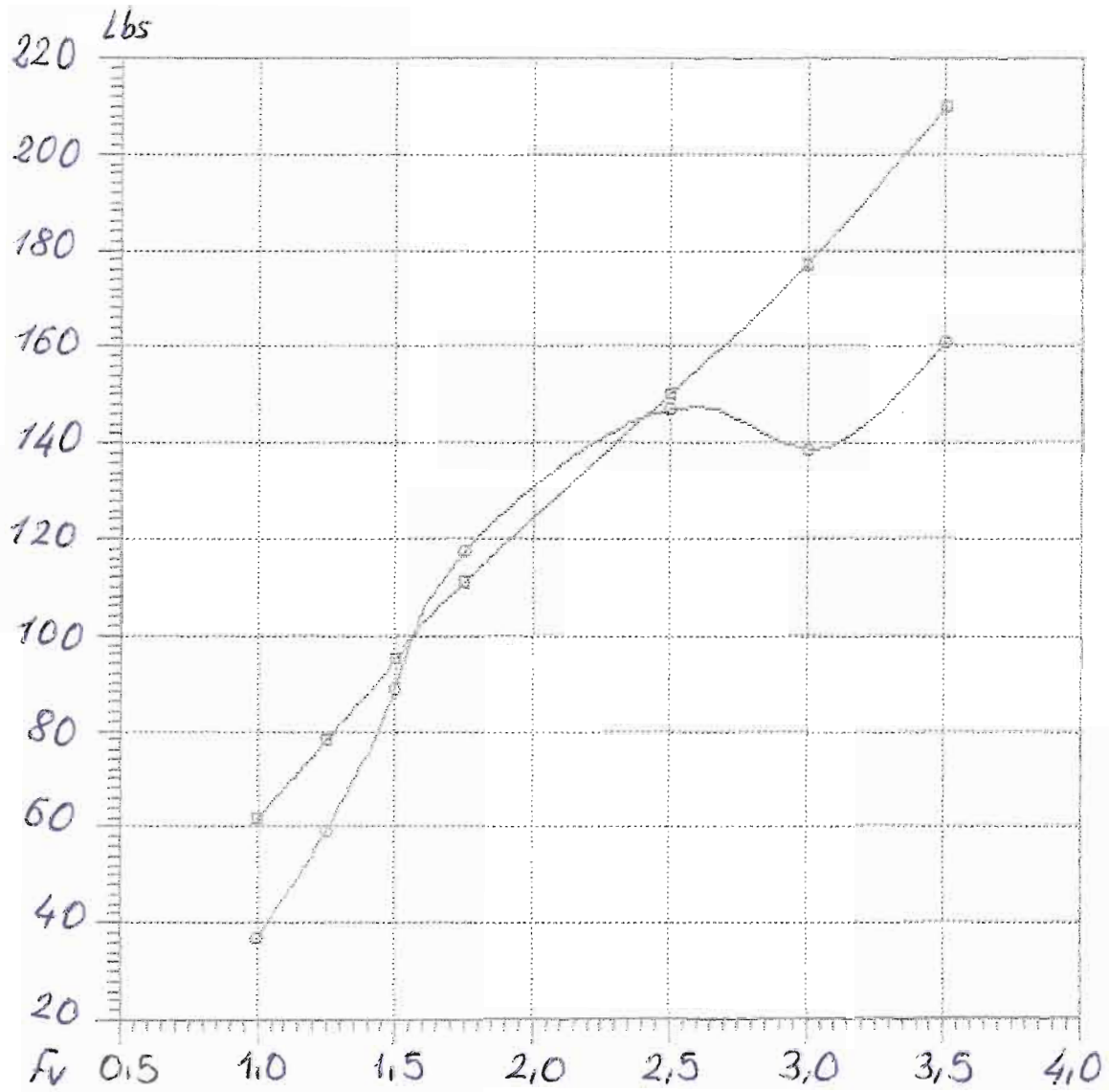
Model = 5251  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 20.000 ft  
Lwl = 19.880 ft  
Bpx = 6.061 ft  
Ap = 87.893 sqft  
Vcg = 1.319 ft  
Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle= 1.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.300  
Lpx/Ap = 4.551  
Ap /Vol = 14.061  
Lpx/Vol = 8.024  
Cvload = 0.070  
Lbload = 0.010  
Disp-Lpx = 55.804



14-80-32



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Bare-hull resistance

vs.

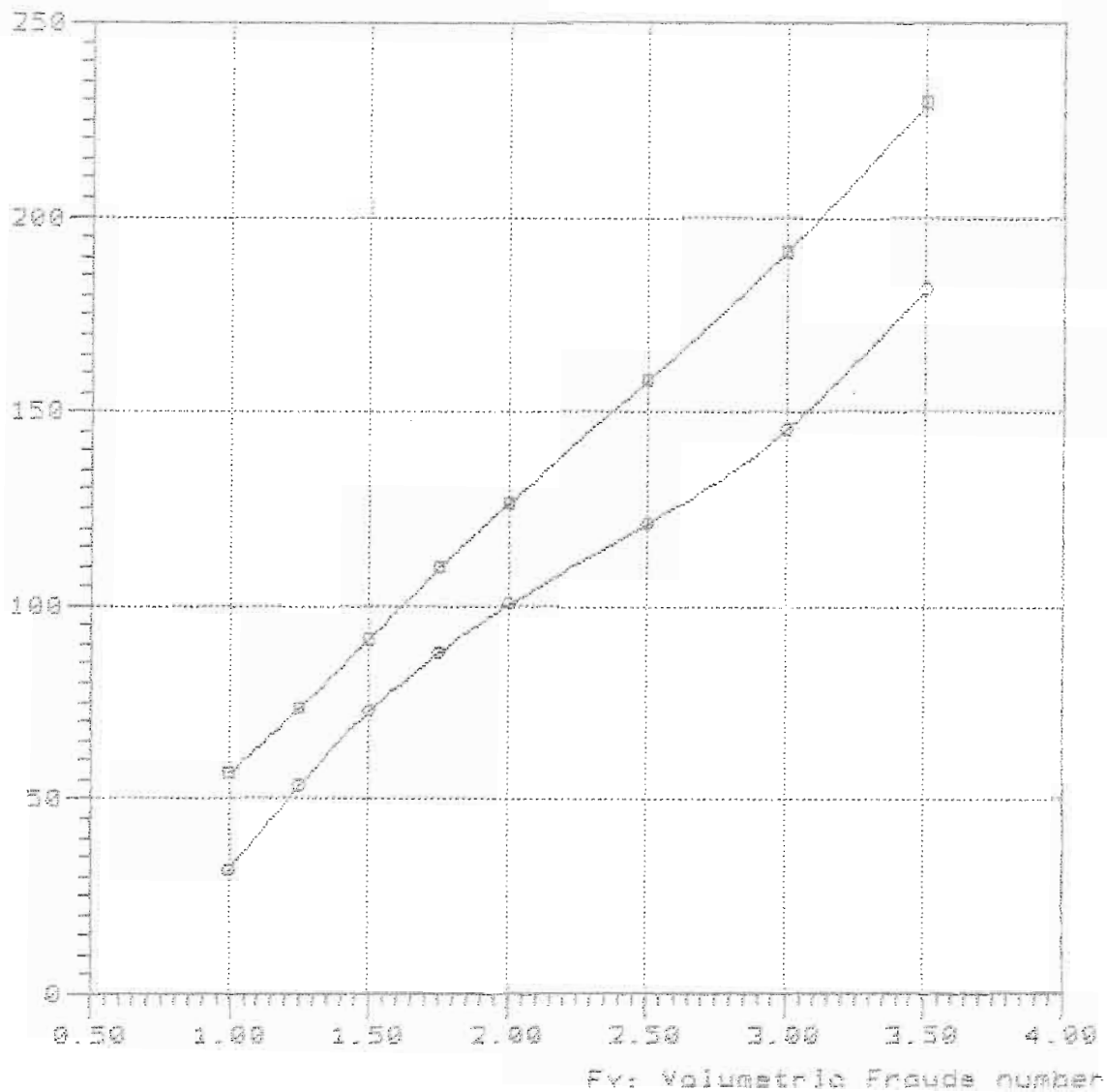
Volumetric Froude number

File: 14-80-36.mdl

Date: 29 Feb 80

Time: 15:48

Rbare: Bare-hull resistance (lbs)

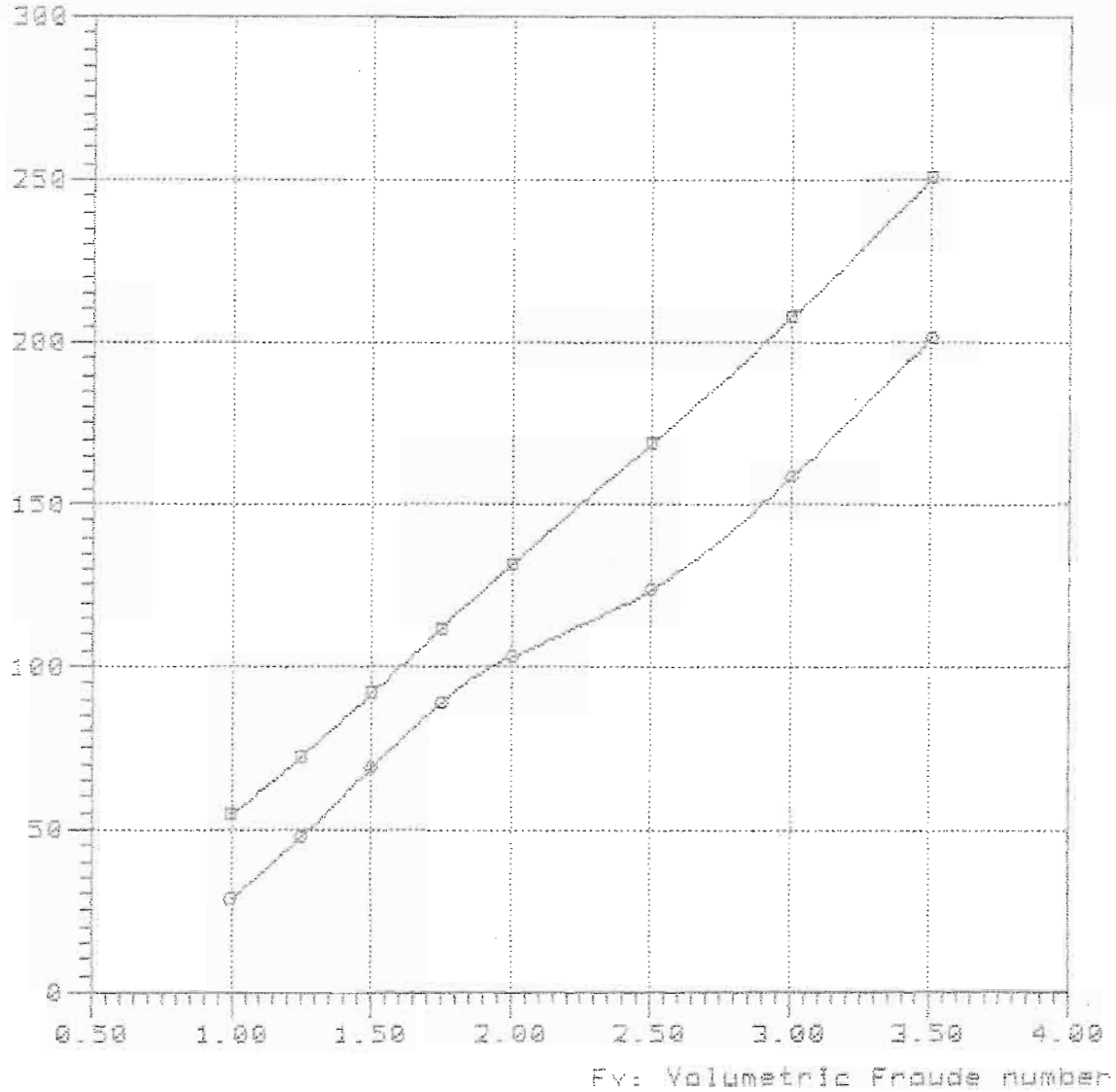


Curve legend

—□—

—○— THB-65R 5251 Lpx/Bpx=3.3 Ap/Vol=14.063 Lpx/Vol=8.0 Lpx/Ap=4.551 Log/Lpx=0.36

Rbare: Bare-hull resistance (lbs)

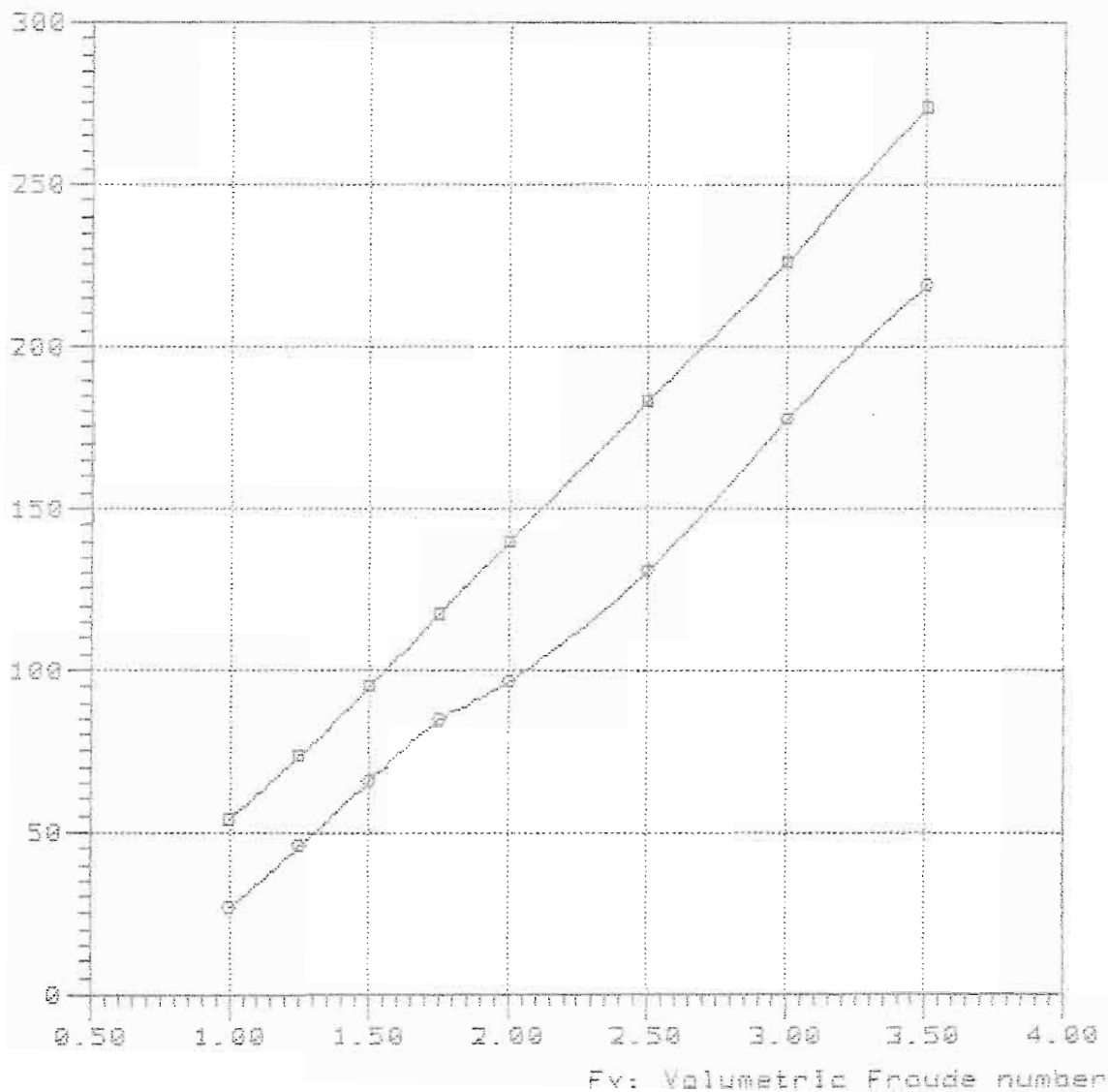


Curve legend

—■—

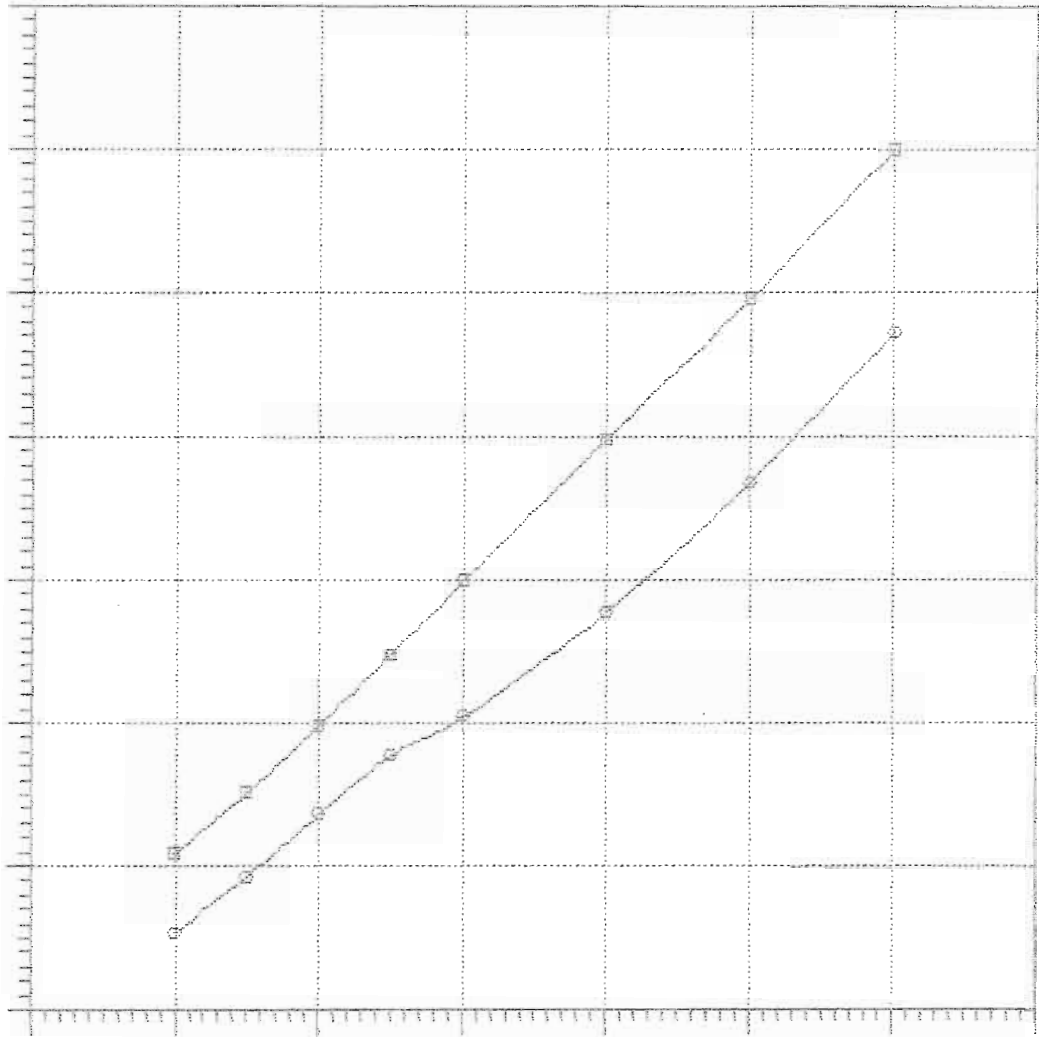
—○— TMB-65A 5251 Lpx/Epx=3.3 Rp/Vol=14.063 Lpx/Vol=8.0 Lpx/Rp=4.551 Lcg/Lpx=0.40

Rbare: Bare-hull resistance (lbs)



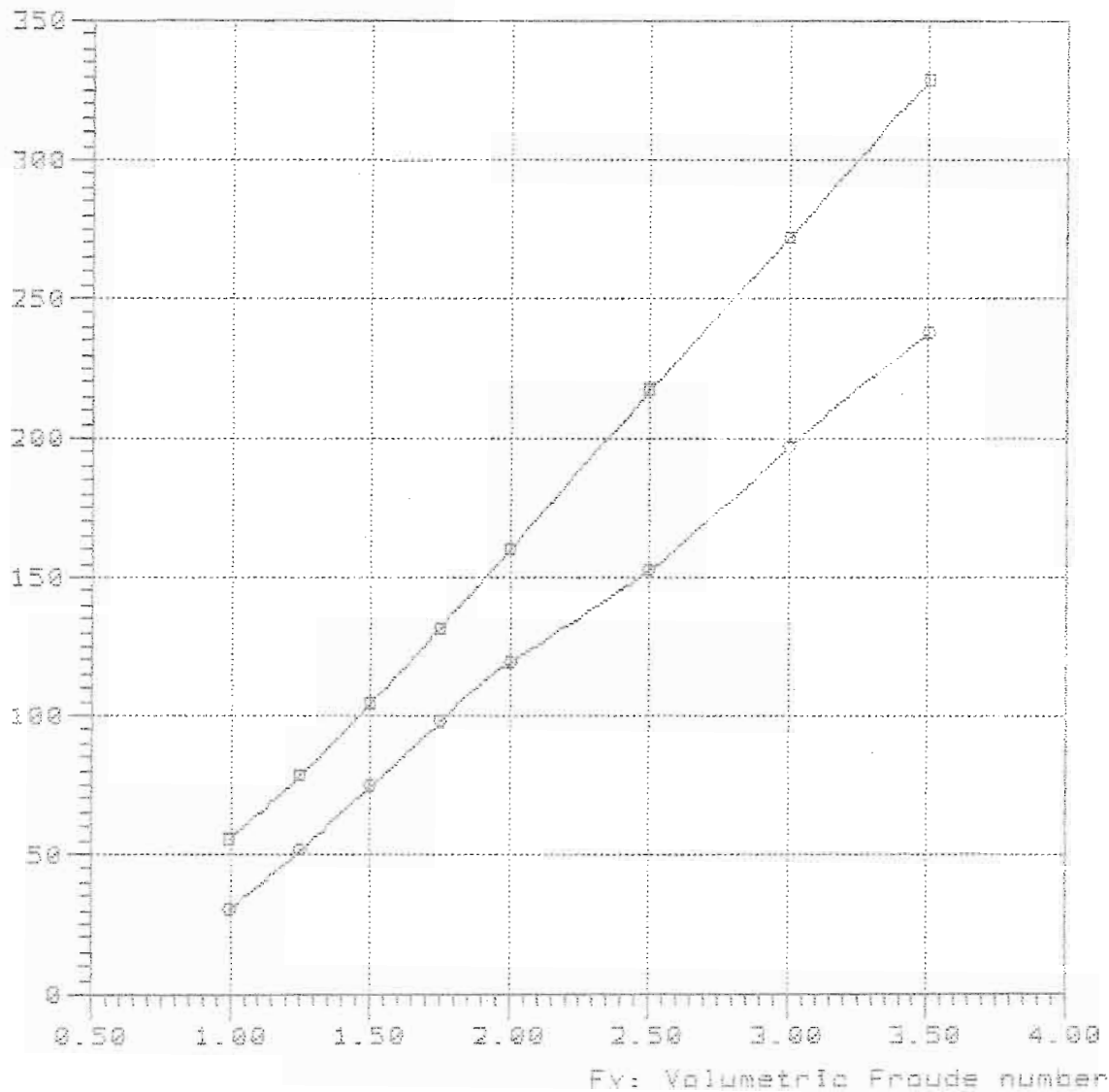
—■—  
—●— TMB-65A 325i Lpx/Bpx=3.3 Ap/Vol=14.063 Lpx/Vol=8.0 Lpx/Ap=4.531 Lcg/Lpx=0.44

14-80-48



□  
○

Rbare: Bare-hull resistance (lbs)



Curve legend

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—●—

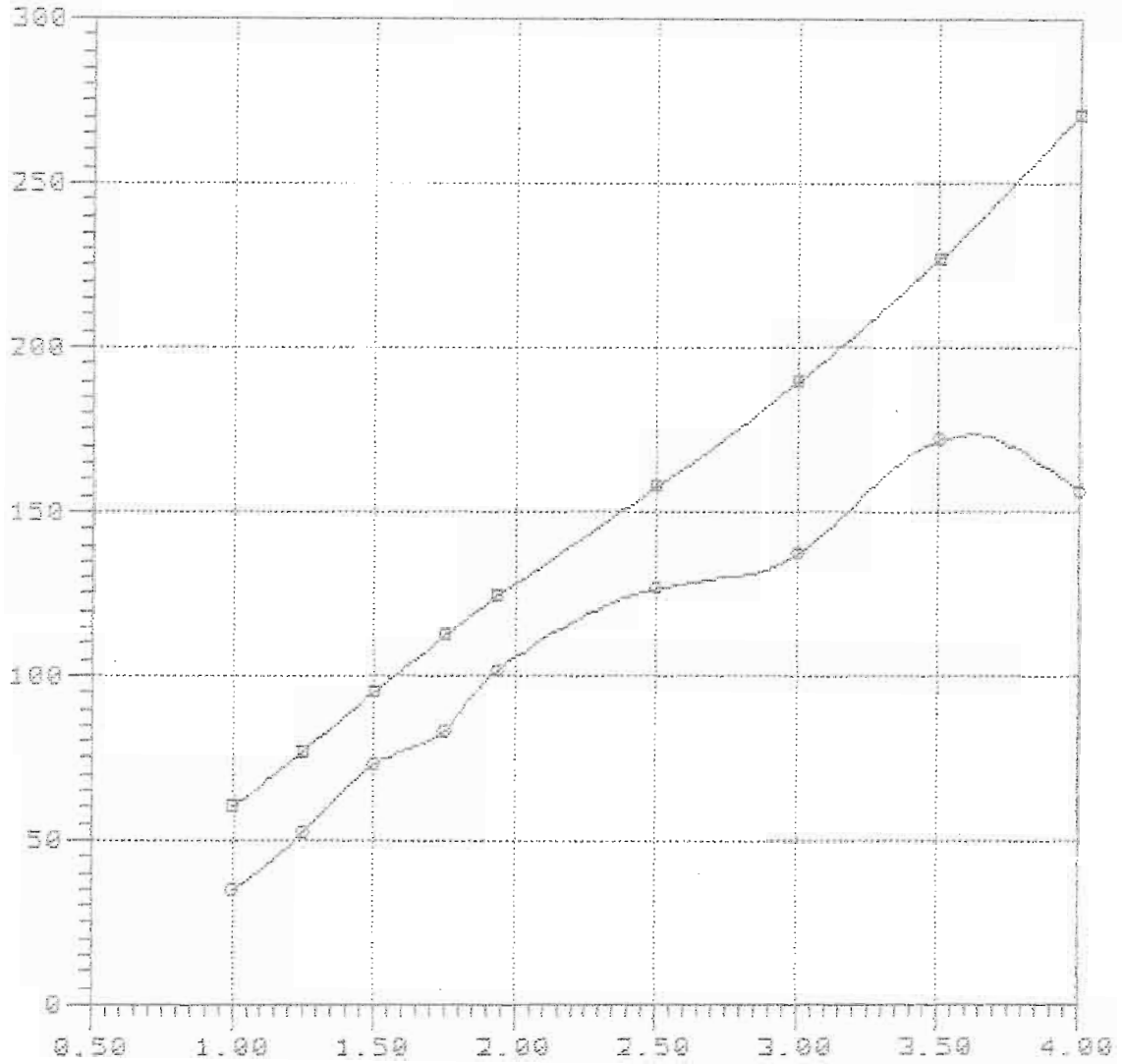
TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=14.063 Lpx/Vol=8.0 Lpx/Ap=4.551 Log/Lpx=0.52

Model = 5251  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 21.200 ft  
Lwl = 21.072 ft  
Bpx = 6.424 ft  
Ap = 98.756 sqft  
Vcg = 1.399 ft  
Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle= 1.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.300  
Lpx/Ap = 4.551  
Ap /Vol = 15.799  
Lpx/Vol = 8.505  
Cvload = 0.059  
Lbload = 0.008  
Disp-Lpx = 46.854

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

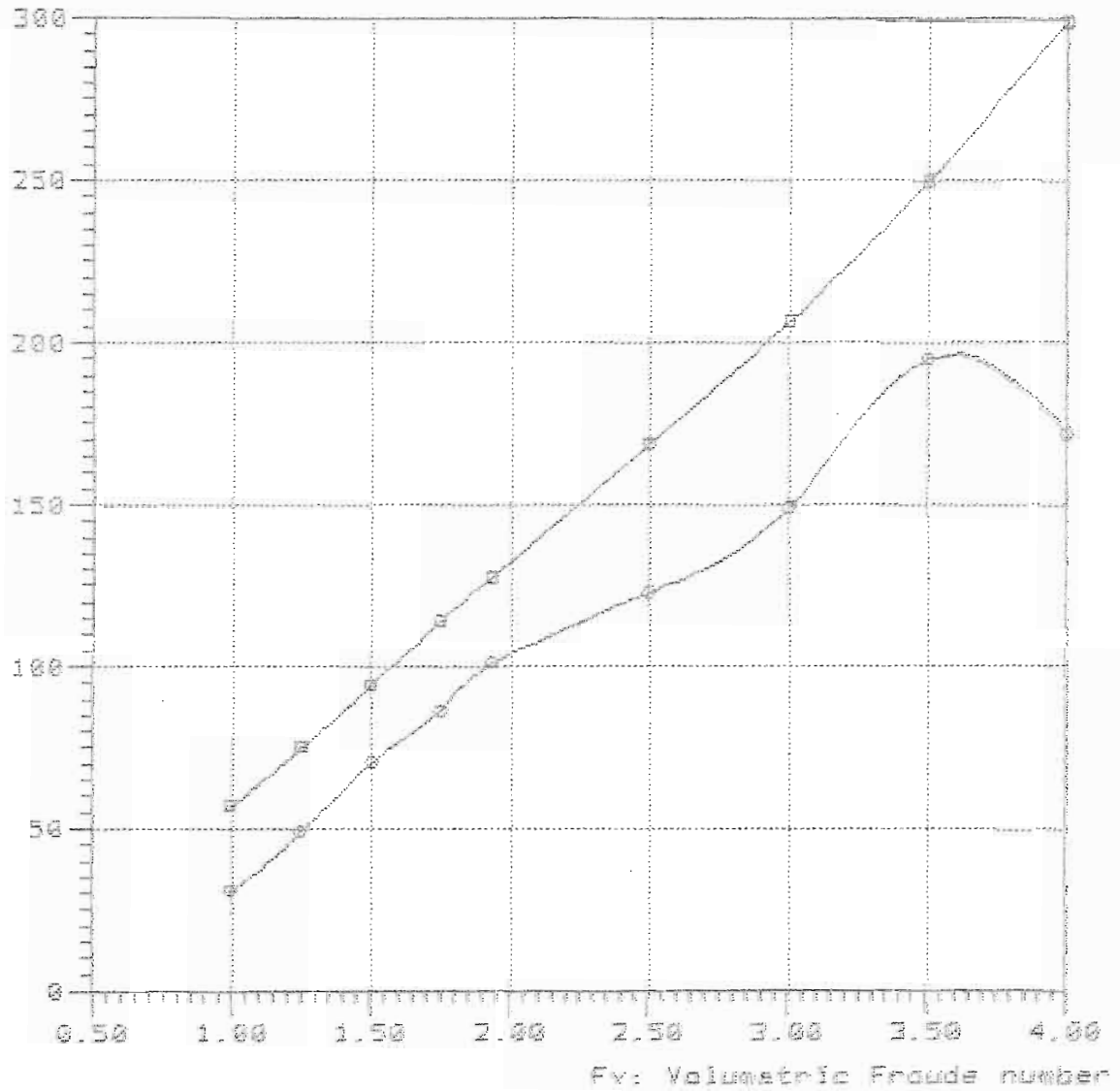
Curve legend

—■—

—○— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=15.801 Lpx/Vol=8.3 Lpx/Ap=4.551 Lcg/Lpx=0.32



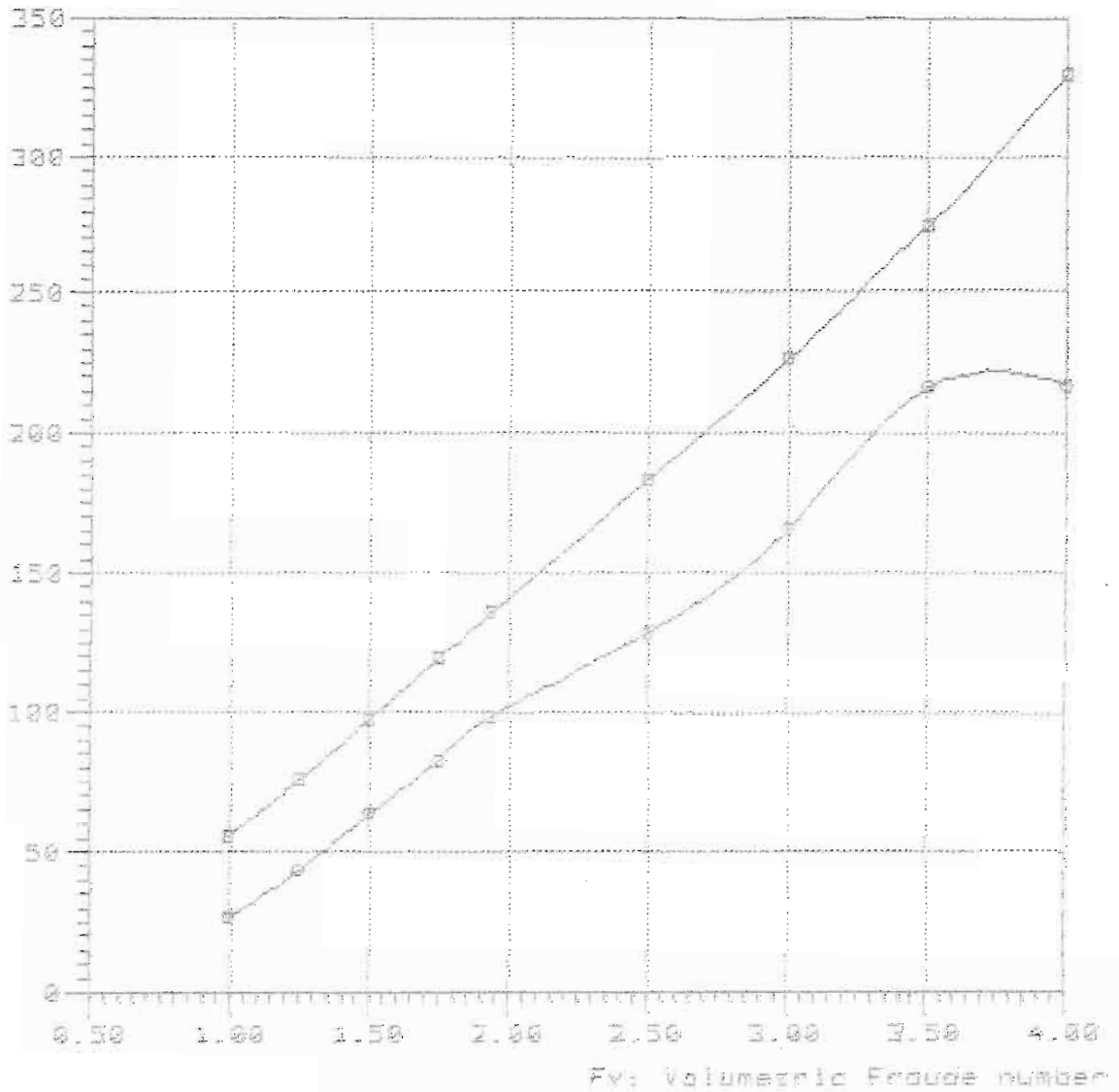
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=15.80i Lpx/Vol=8.5 Lpx/Ap=4.55i Log/Lpx=6.36

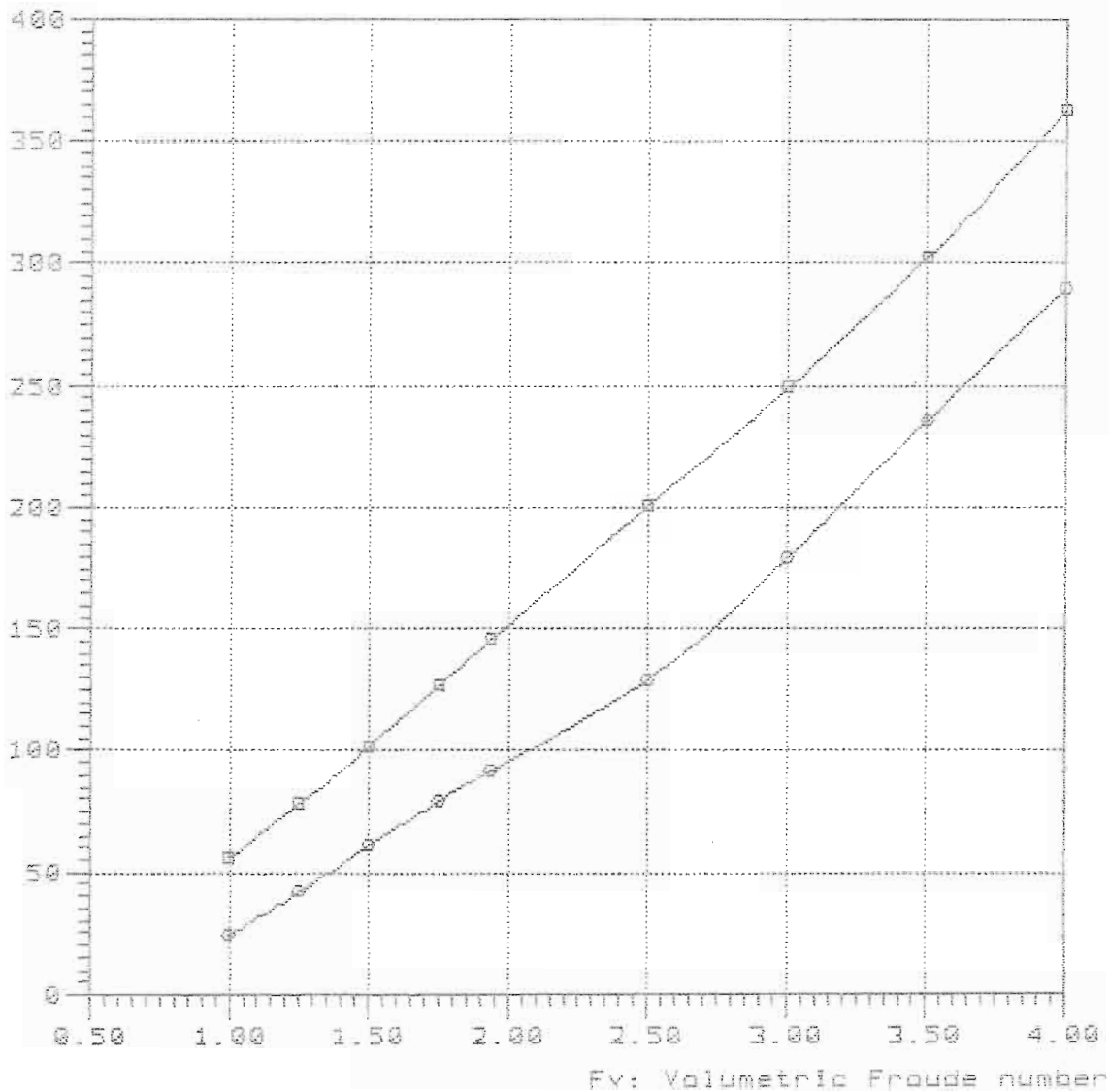
Rbare: Bare-hull resistance (lbs)



—■—

—○— TN8-654 5251 Lpx/Bpx=3.3 Ap/Vol=13.881 Lpx/Vol=8.5 Lox/Ap=4.551 Lox/Lox=8.46

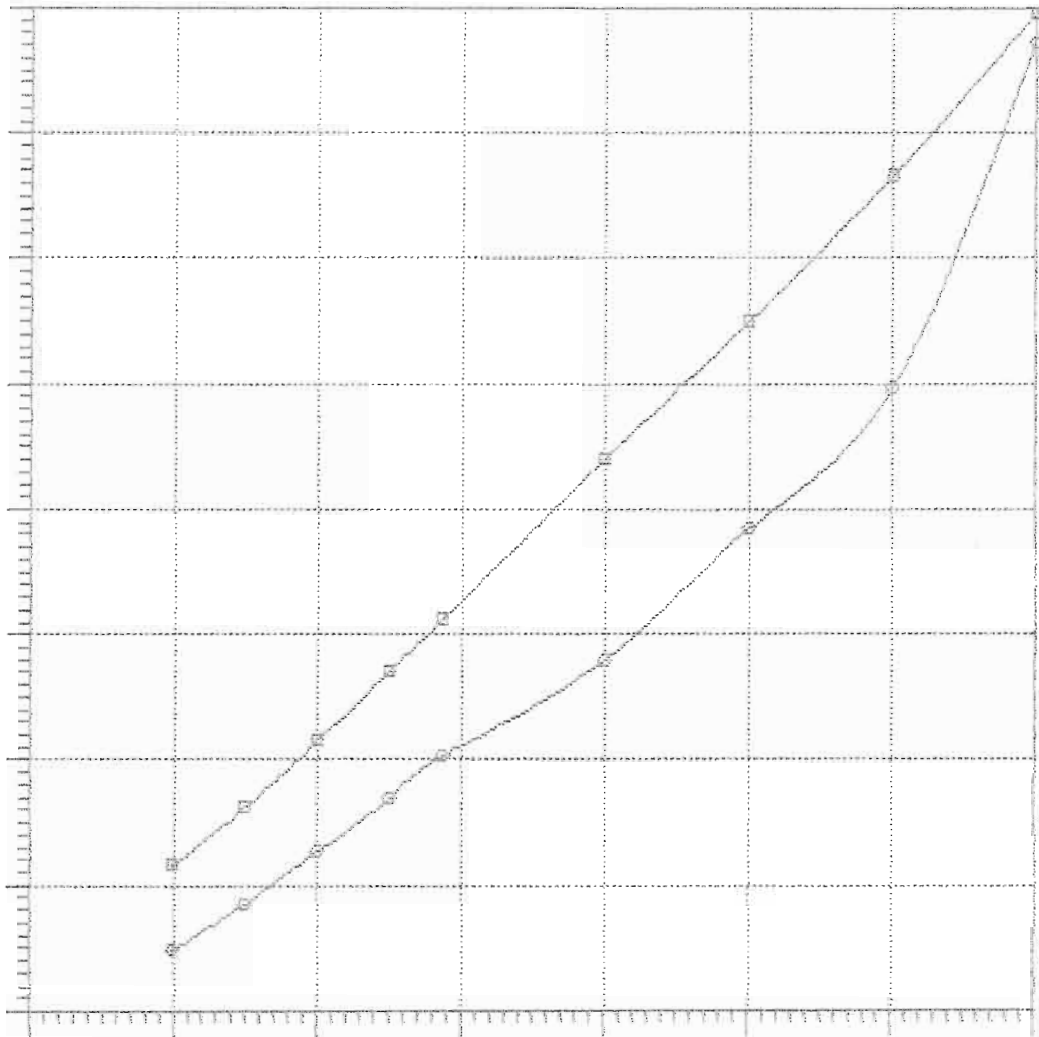
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Val=15.801 Lpx/Val=8.5 Lpx/Ap=4.551 Log/Lpx=0.44

16-85-48



— □ —  
— ○ —

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vs.

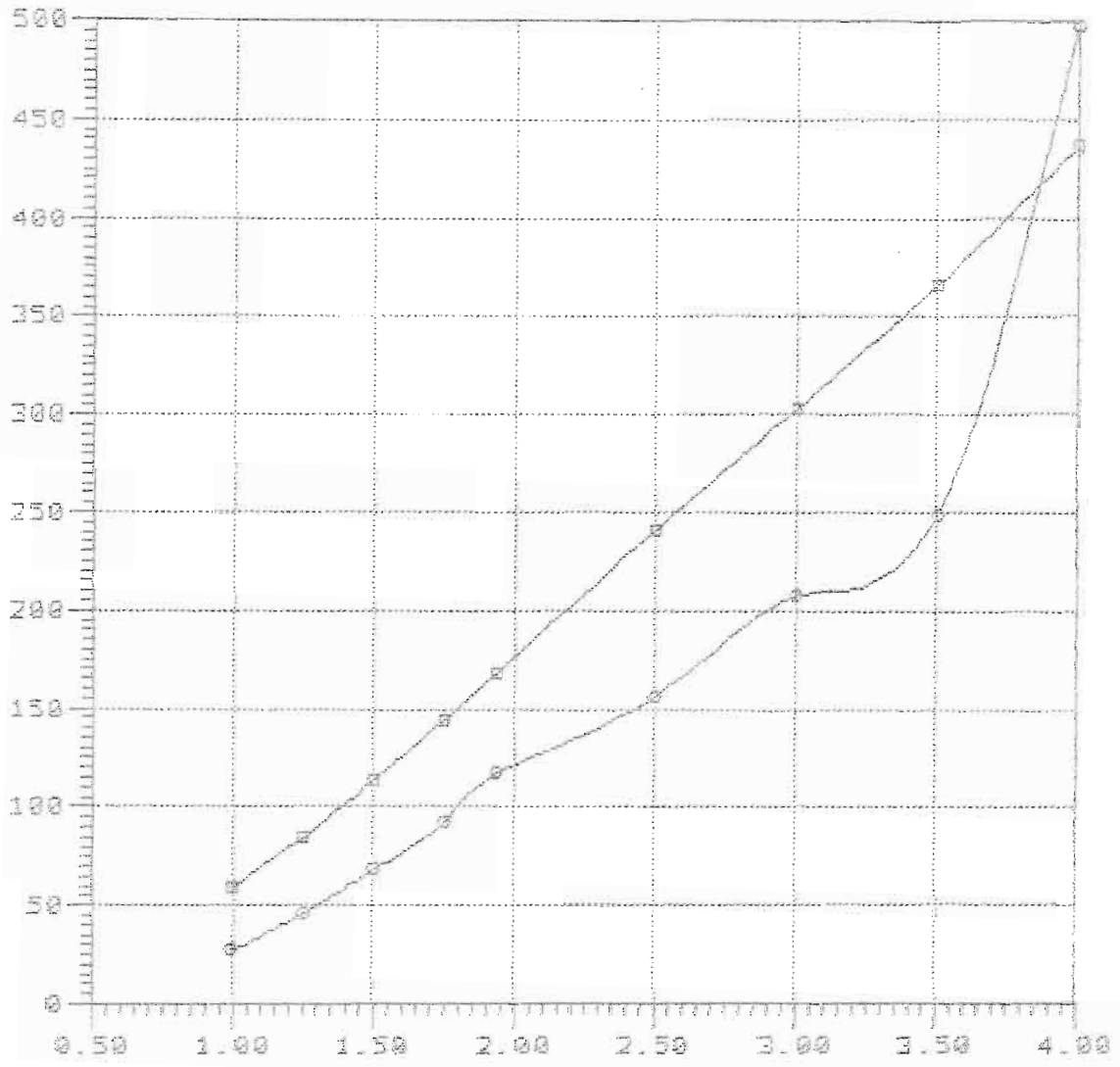
Date: 29 Feb 00

HydroComp, Inc.

Volumetric Froude number

Time: 16:33

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

Curve legend

—■—

—●— 748-654 5251 Lpx/Bpx=3.3 Rp/Vol=15.801 Lpx/Vol=8.5 Lpx/Rp=4.951 Log/Lpx=0.52

Model = 5251  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

Lpx = 22.500 ft  
Lwl = 22.365 ft  
Bpx = 6.818 ft  
Ap = 111.239 sqft  
Vcg = 1.484 ft

Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle= 1.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.300  
Lpx/Ap = 4.551  
Ap /Vol = 17.796  
Lpx/Vol = 9.027  
Cvload = 0.049  
Lbload = 0.007  
Disp-Lpx = 39.193

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### Bare-hull resistance

vs.

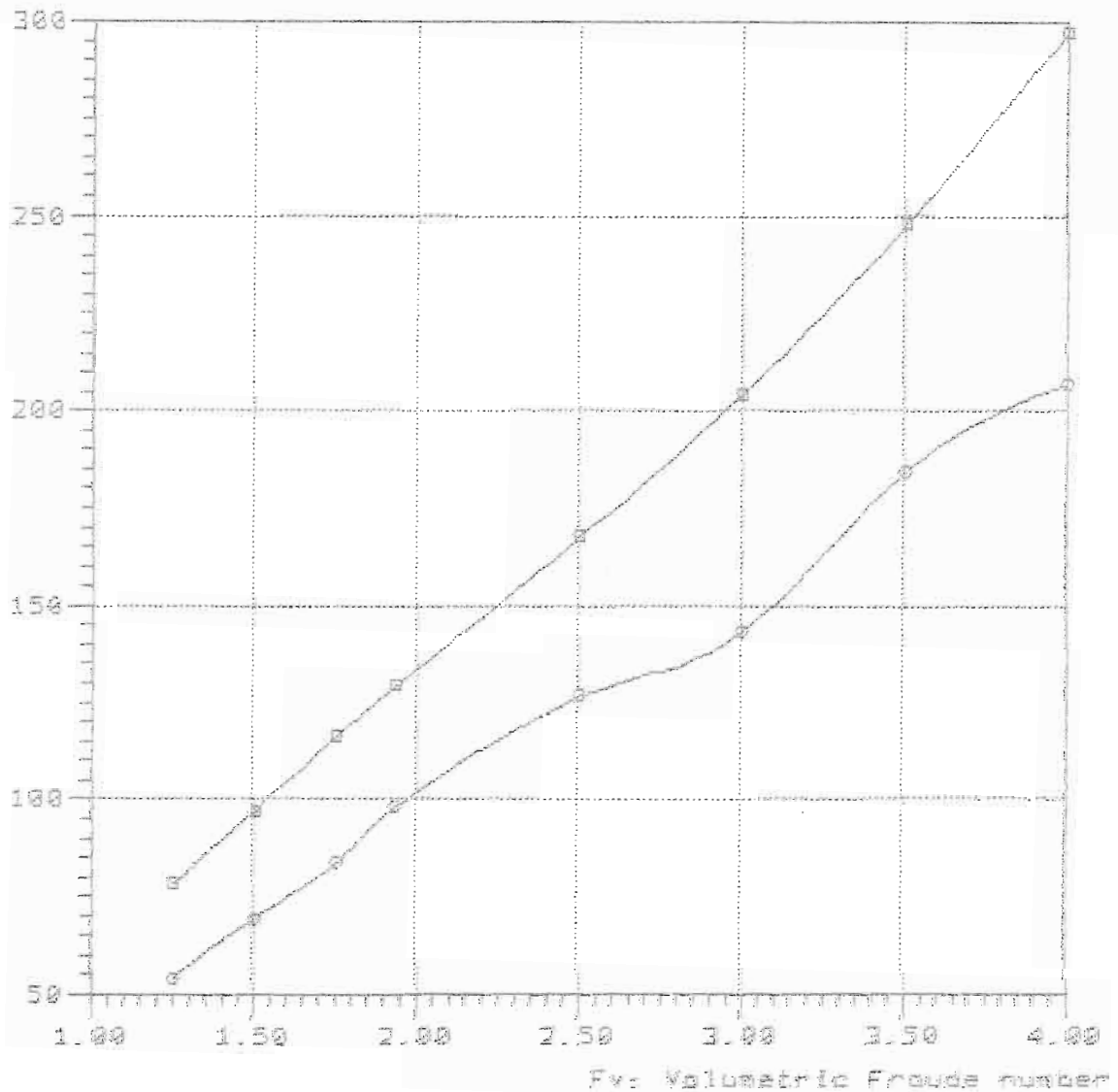
### Volumetric Froude number

File: 18-90-32.mdl

Date: 29 Feb 00

Time: 16:34

Rbare: Bare-hull resistance (lbs)

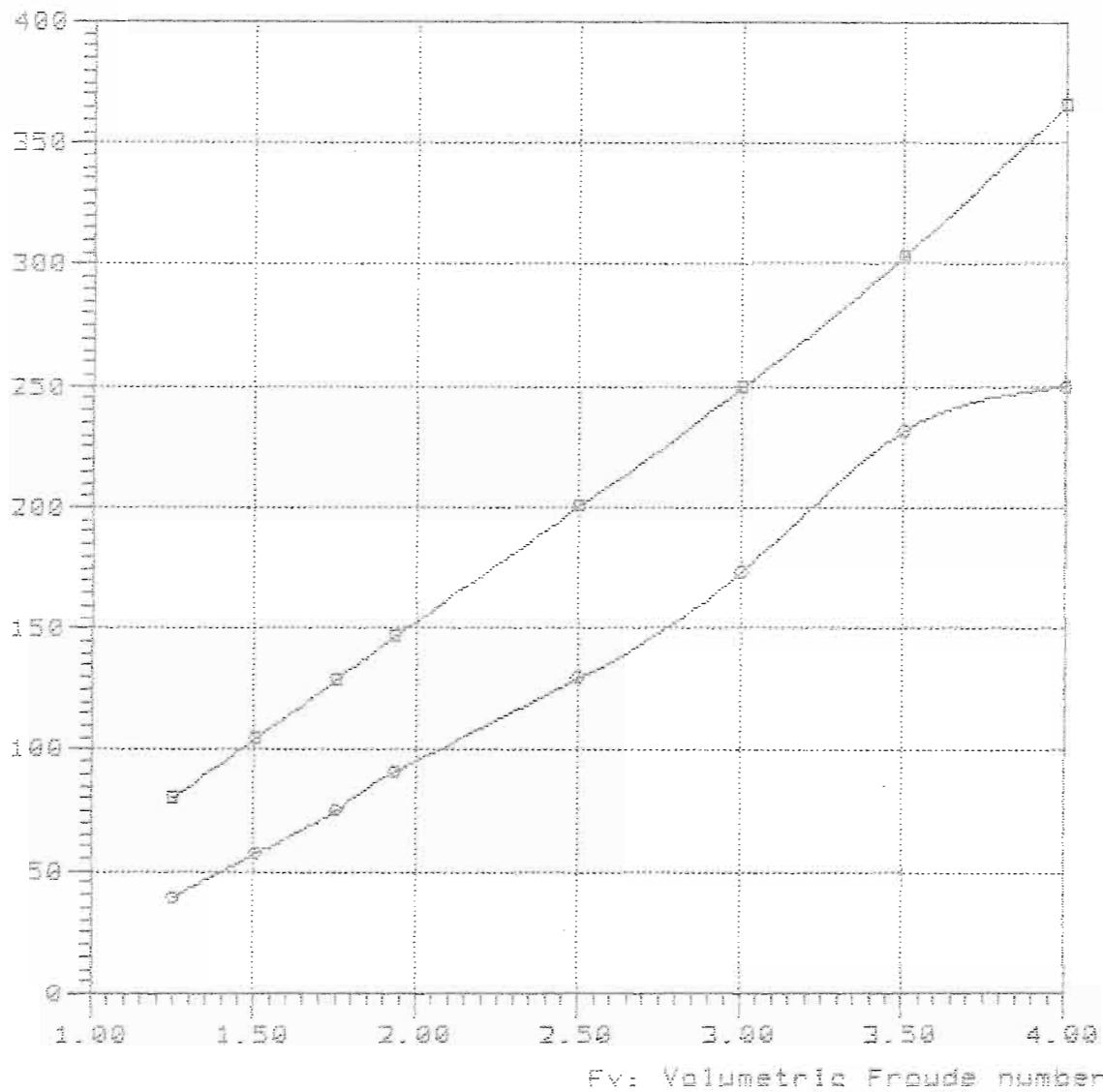


#### Curve legend

—■—

—●— TNB-85A 5251 Lpx/Rpx=3.3 Ap/Vol=17.798 Lpx/Vol=9.0 Lpx/Ap=4.551 log/Lpx=0.32

Rbare: Bare-hull resistance (lba)

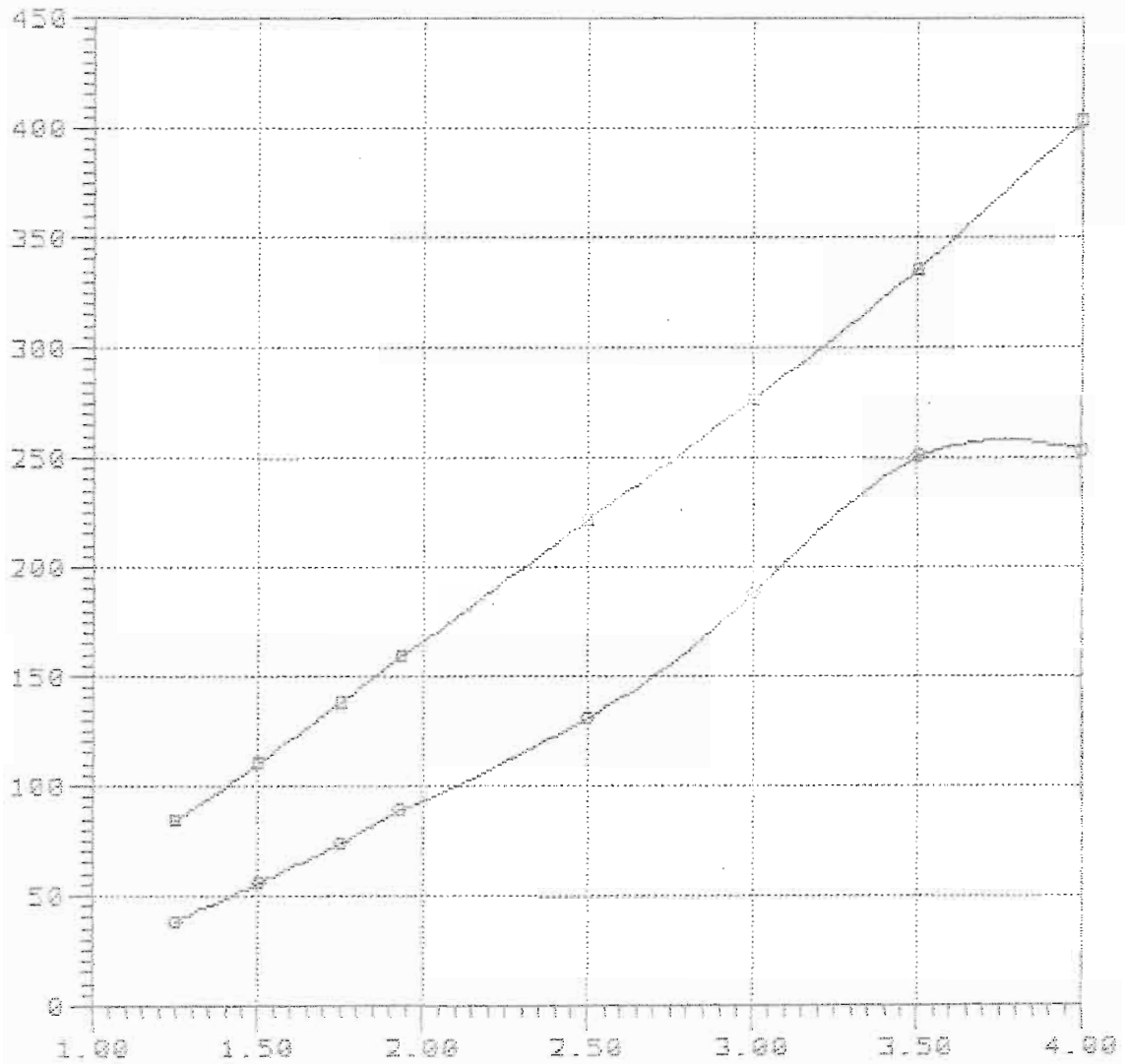


—■—

—○— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=17.758 Lpx/Vol=9.0 Lpx/Ap=4.551 Lcg/Lpx=0.40



Rbare: Bare-hull resistance (lbs)

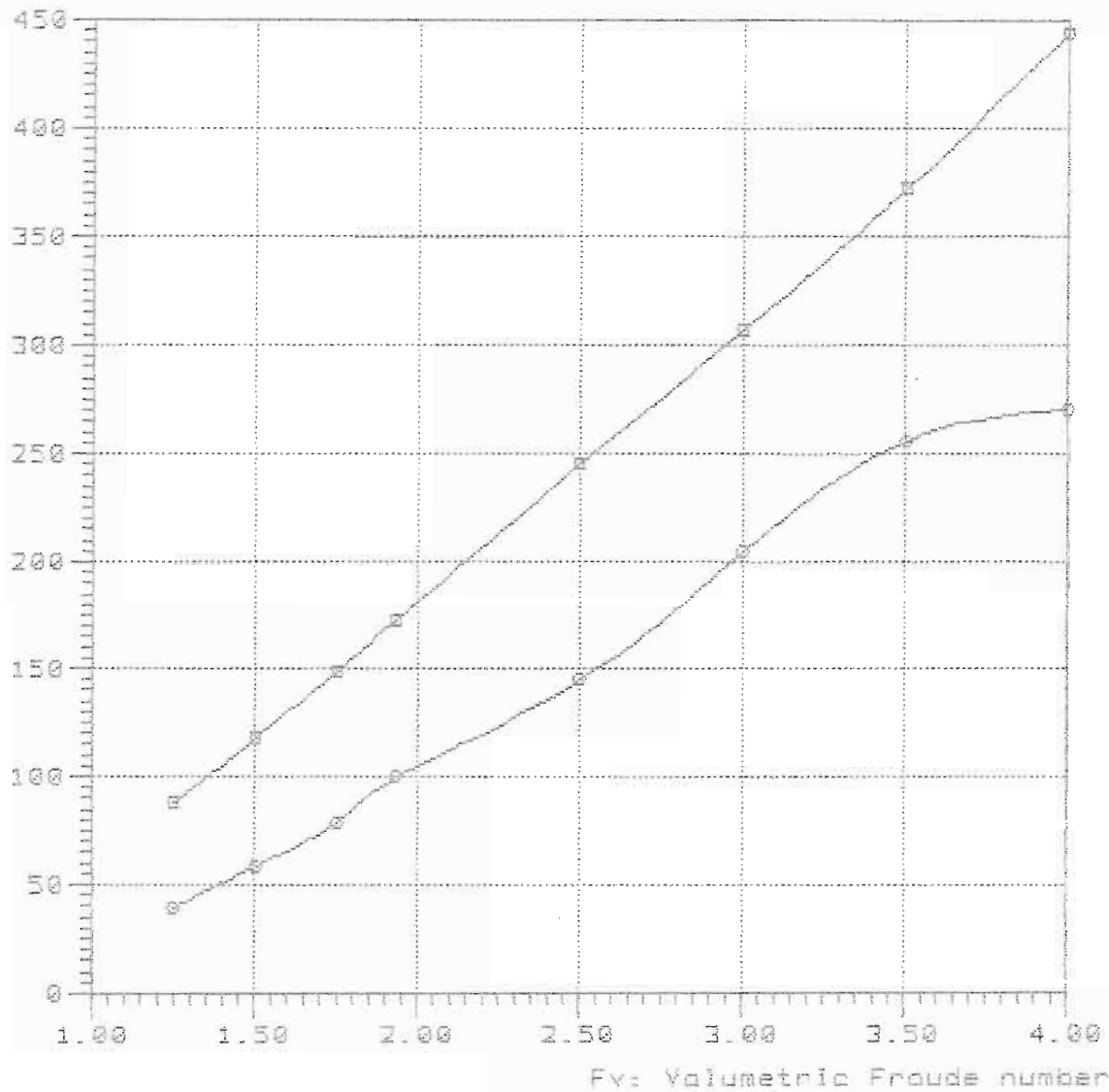


Fv: Volumetric Froude number

—■—

—●— TMB-65A 5251 Lpx/Bpx=3.3 Rp/Val=17.798 Lpx/Val=9.6 Lpx/Rp=4.551 Lcg/Lpx=8.44

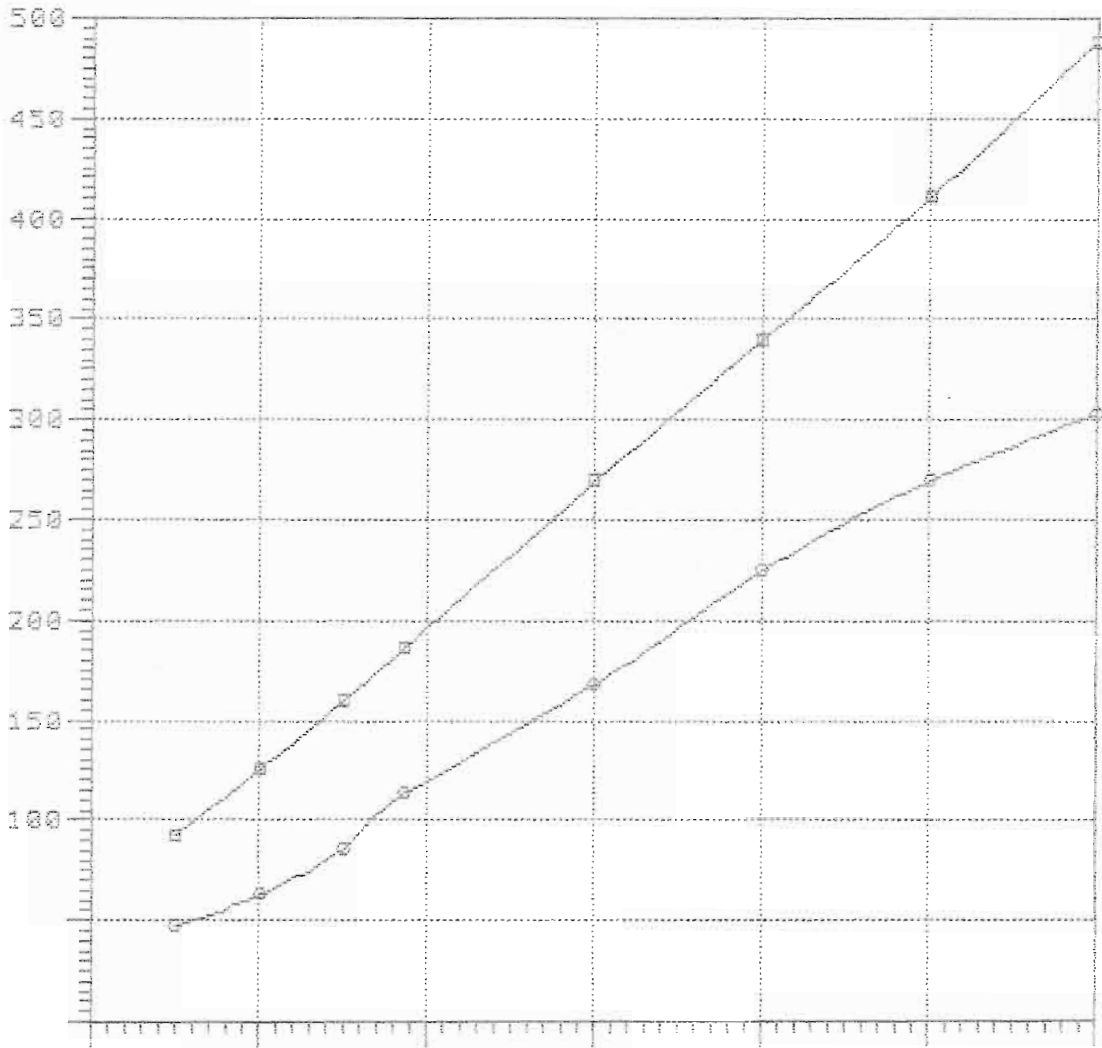
Rbare: Bare-hull resistance (lbs)



—■—

—○— TMB-65A 5231 Lpx/Bpx=3.3 Ap/Vol=17.798 Lpx/Vol=9.0 Lpx/Ap=4.551 Log/Lpx=8.48

Rbare: Bare-hull resistance (lbs)

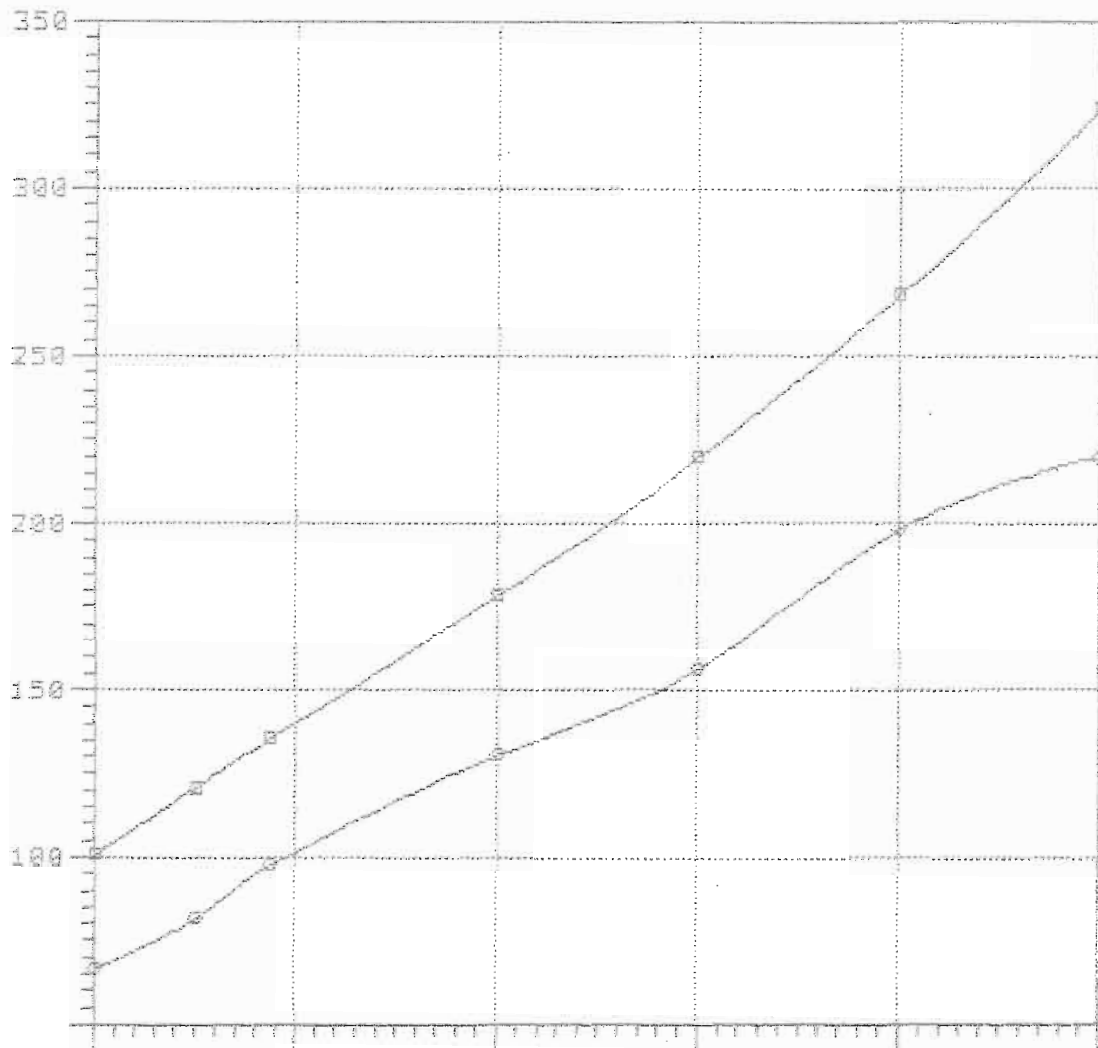


Model = 5251  
Ref = NSRDC  
Friction = ~~A~~TTC Ca=4e-4

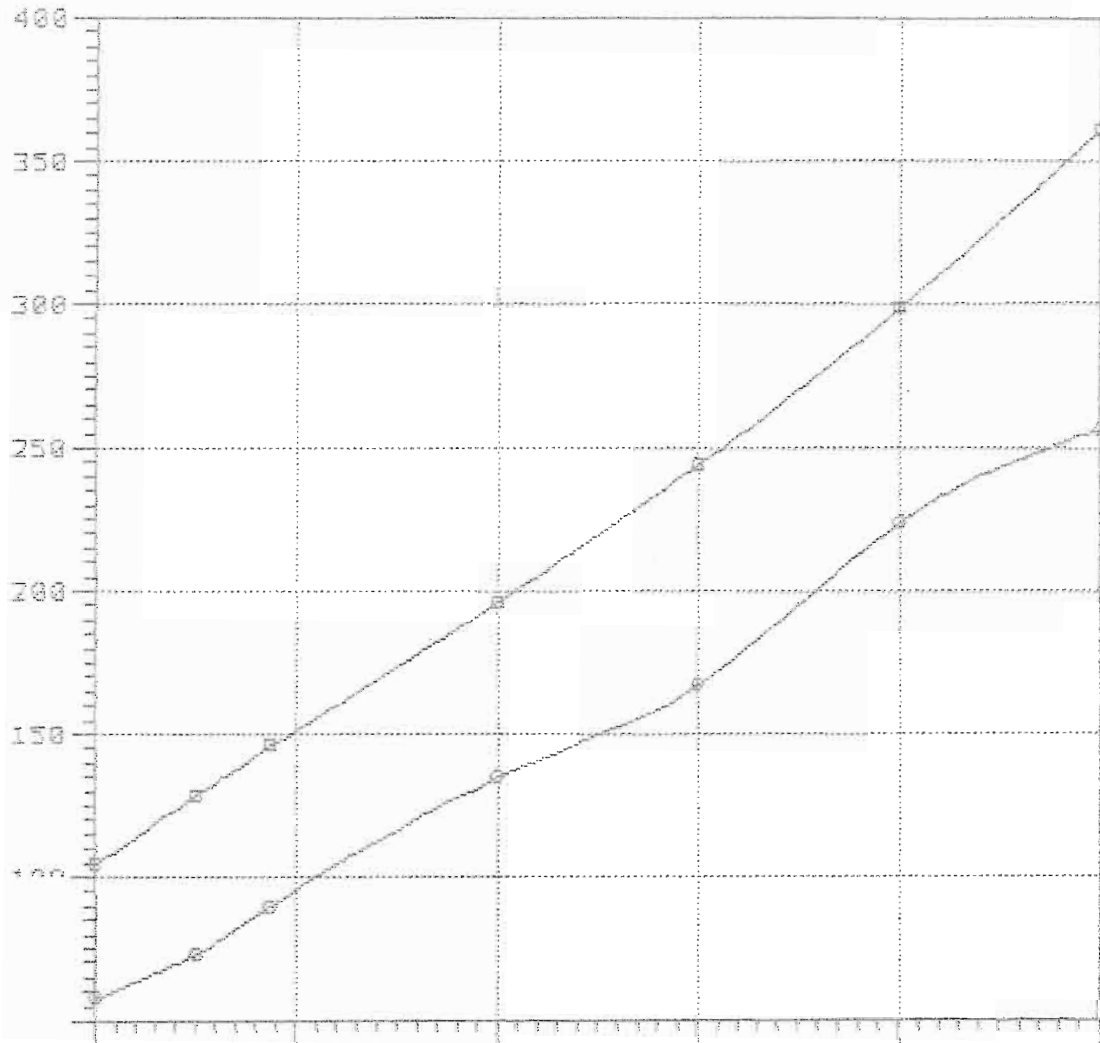
Lpx = 23.700 ft  
Lwl = 23.557 ft  
Bpx = 7.182 ft  
Ap = 123.421 sqft  
Vcg = 1.563 ft  
Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle = 1.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.300  
Lpx/Ap = 4.551  
Ap /Voi = 19.745  
Lpx/Voi = 9.508  
Cvload = 0.042  
Lbload = 0.006  
Disp-Lpx = 33.536

Rbare: Bare-hull resistance (lba)



Rbare: Bare-hull resistance (lbs)



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### Bare-hull resistance

File: 20-95-40.mdl

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vs.

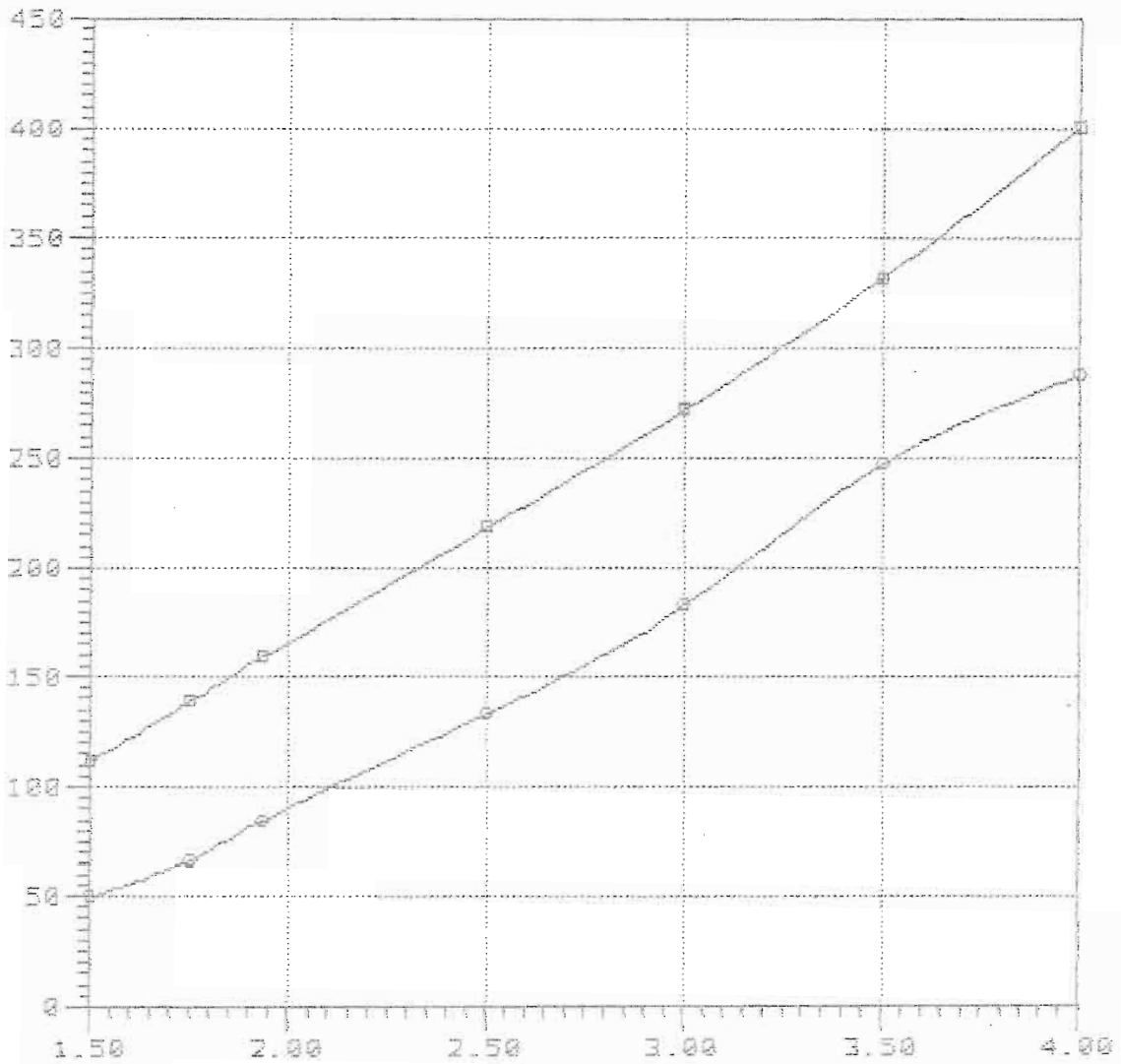
Date: 29 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 17:02

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

#### Curve legend

—■—

—○— TMB-65A 5251 Lpx/Bpx=3.3 Rp/Vol=15.747 Lpx/Vol=9.5 Lpx/Rp=4.551 Log/Lpx=0.40

NavCad(tm) 3.1d

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Bare-hull resistance

vs.

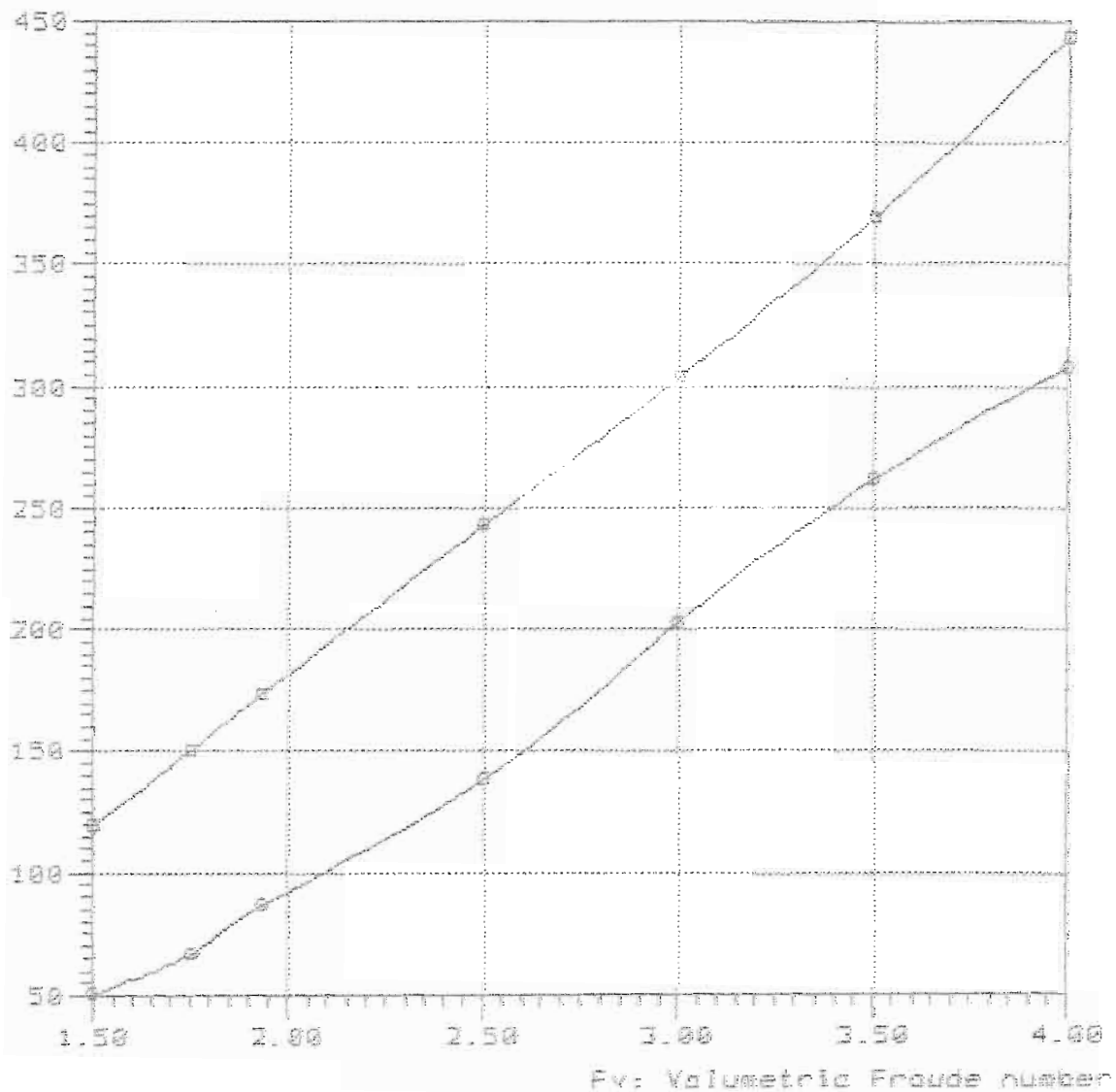
Volumetric Froude number

File: 26-95-44.mdl

Date: 29 Feb 00

Time: 17:03

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—●— TMB-65A 5251 Lpx/Bpx=3.3 Rp/Vol=19.747 Lpx/Vol=9.5 Lpx/Rp=4.551 Leg/Lex=6.44



NavCad(tm) 3.1d

### Bare-hull resistance

File: 20-95-48.mdl

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vs.

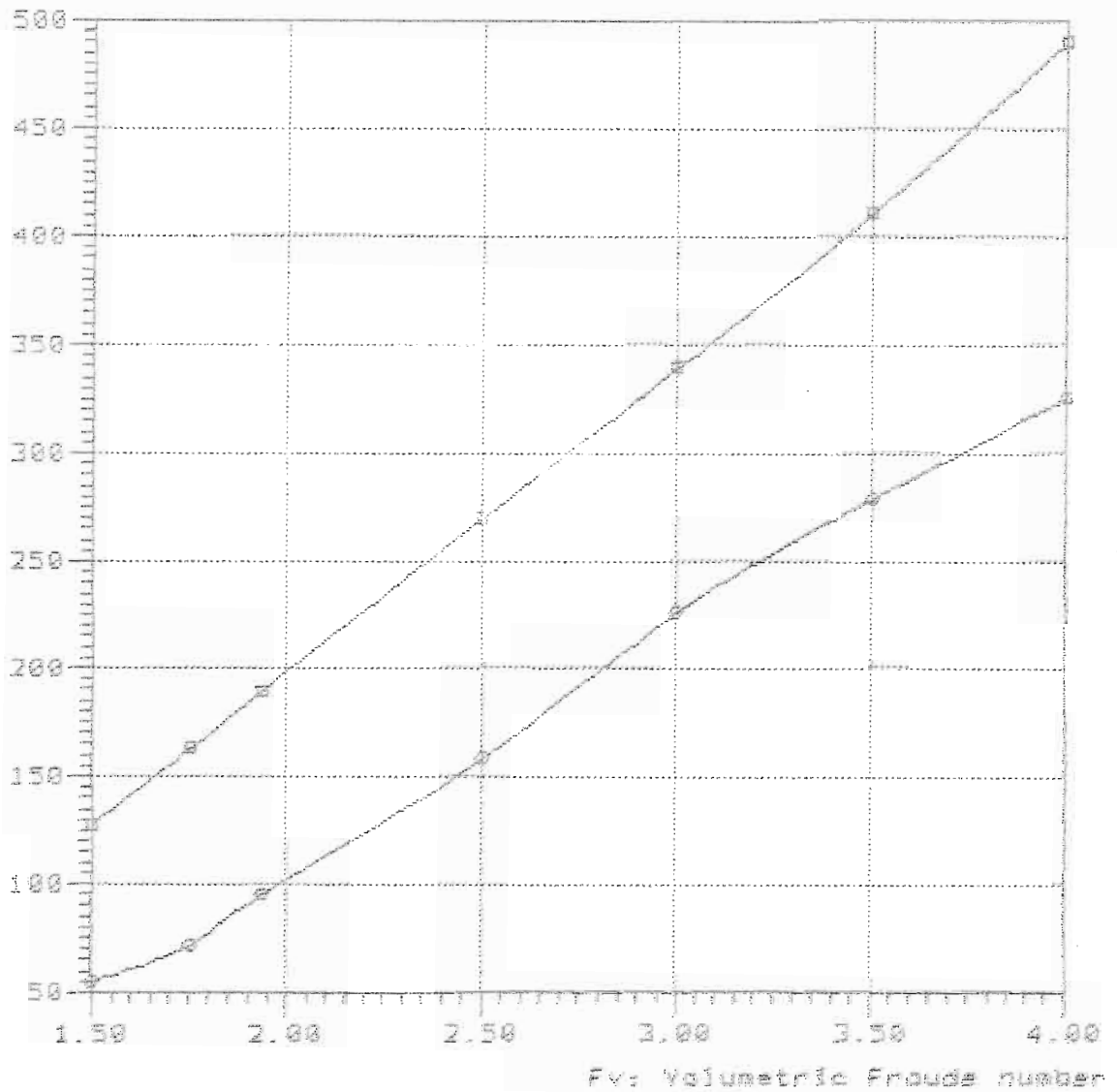
Date: 23 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 17:03

Rbare: Bare-hull resistance (lbs)

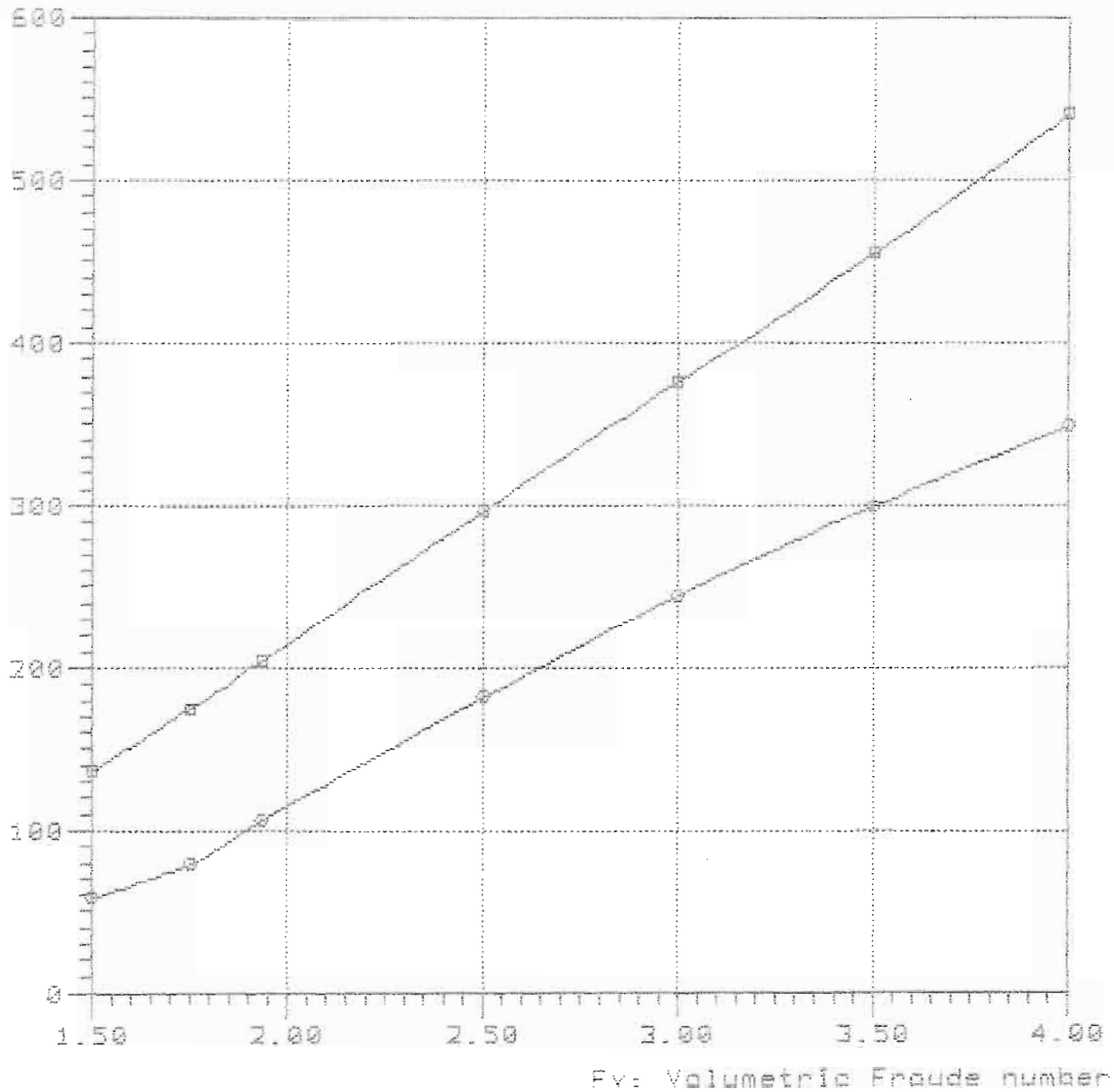


#### Curve legend

—○—

—○— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=19.747 Lpx/Vol=9.5 Lpx/Sp=4.551 Log/Lpx=0.48

Rbare: Bare-hull resistance (lbs)



—■—  
—○— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=19.747 Lpx/Vol=9.5 Lpx/Ap=4.531 Lag/Lpx=0.52

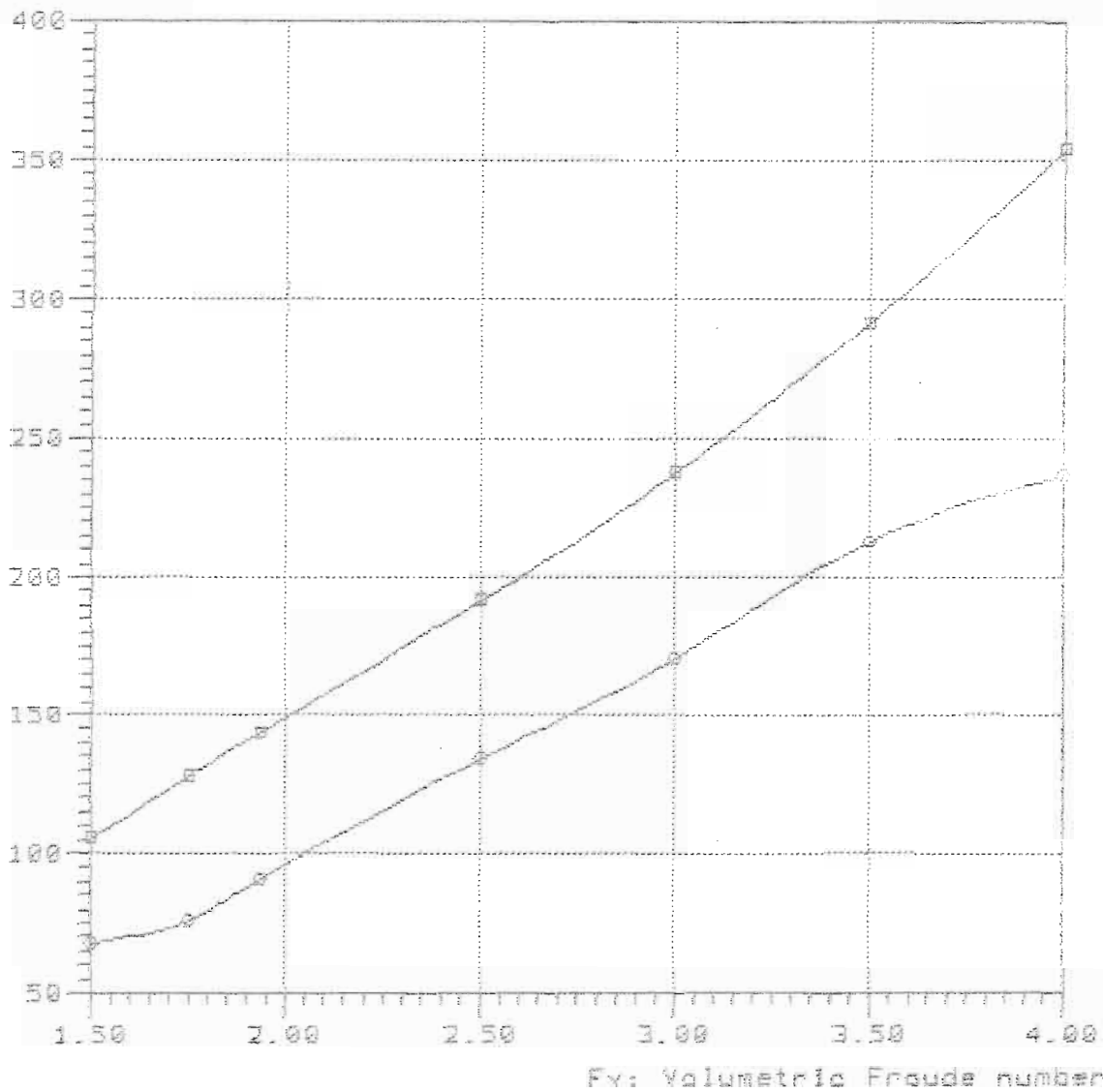
Model = 5251  
Ref = NSRDC  
Friction = ~~4~~TTC Ca=4e-4

Lpx = 25.000 ft  
Lwl = 24.849 ft  
Bpx = 7.576 ft  
Ap = 137.333 sqft  
Vcg = 1.649 ft  
Disp. = 1000.00 Lb  
Deadrise = 16.30 degree  
Twist Angle = 1.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.300  
Lpx/Ap = 4.551  
Ap /Vol = 21.971  
Lpx/Vol = 10.030  
Cvload = 0.036  
Lbload = 0.005

Disp-Lpx = 28.571

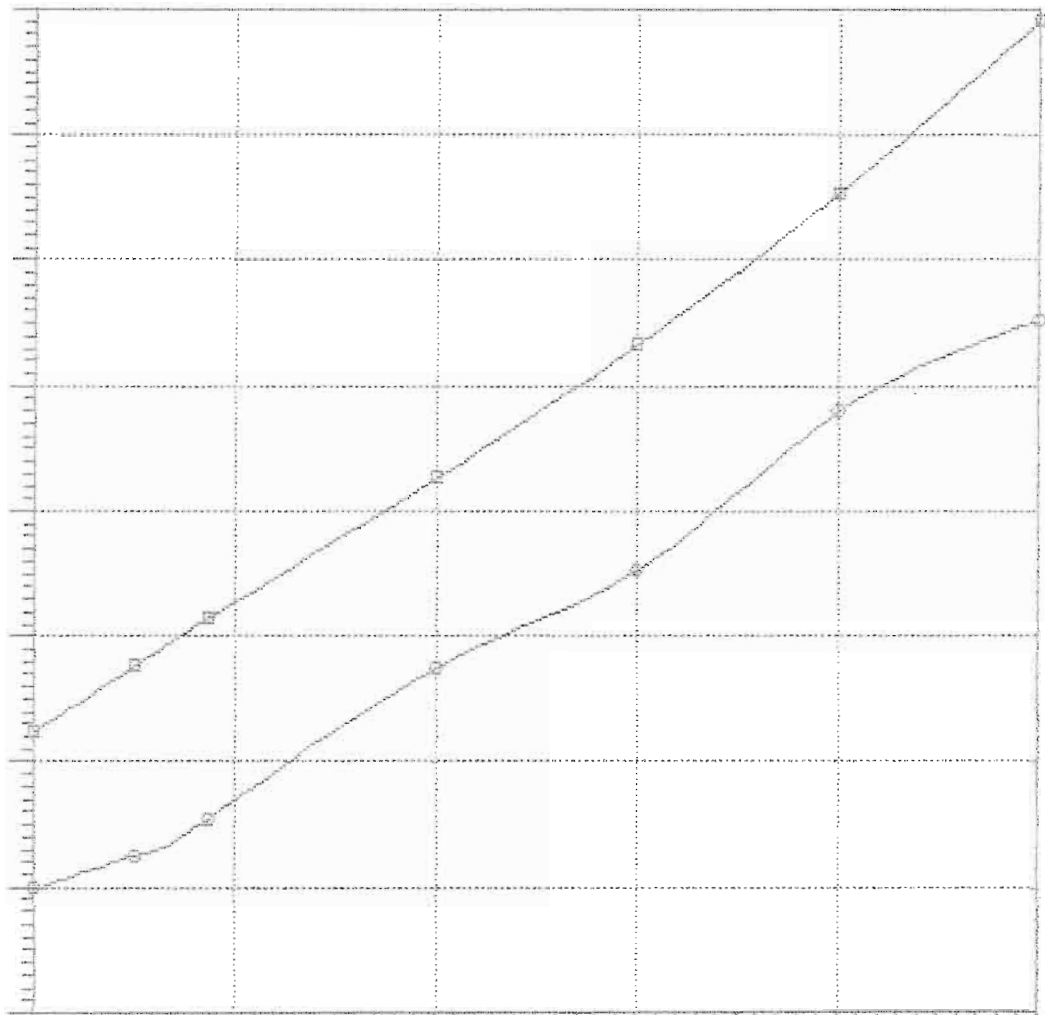
Rbare: Bare-hull resistance (lbs)



—■—

—◆— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=21.973 Lpx/Vol=18 Lpx/Sp=4.531 Lcg/Lpx=0.326

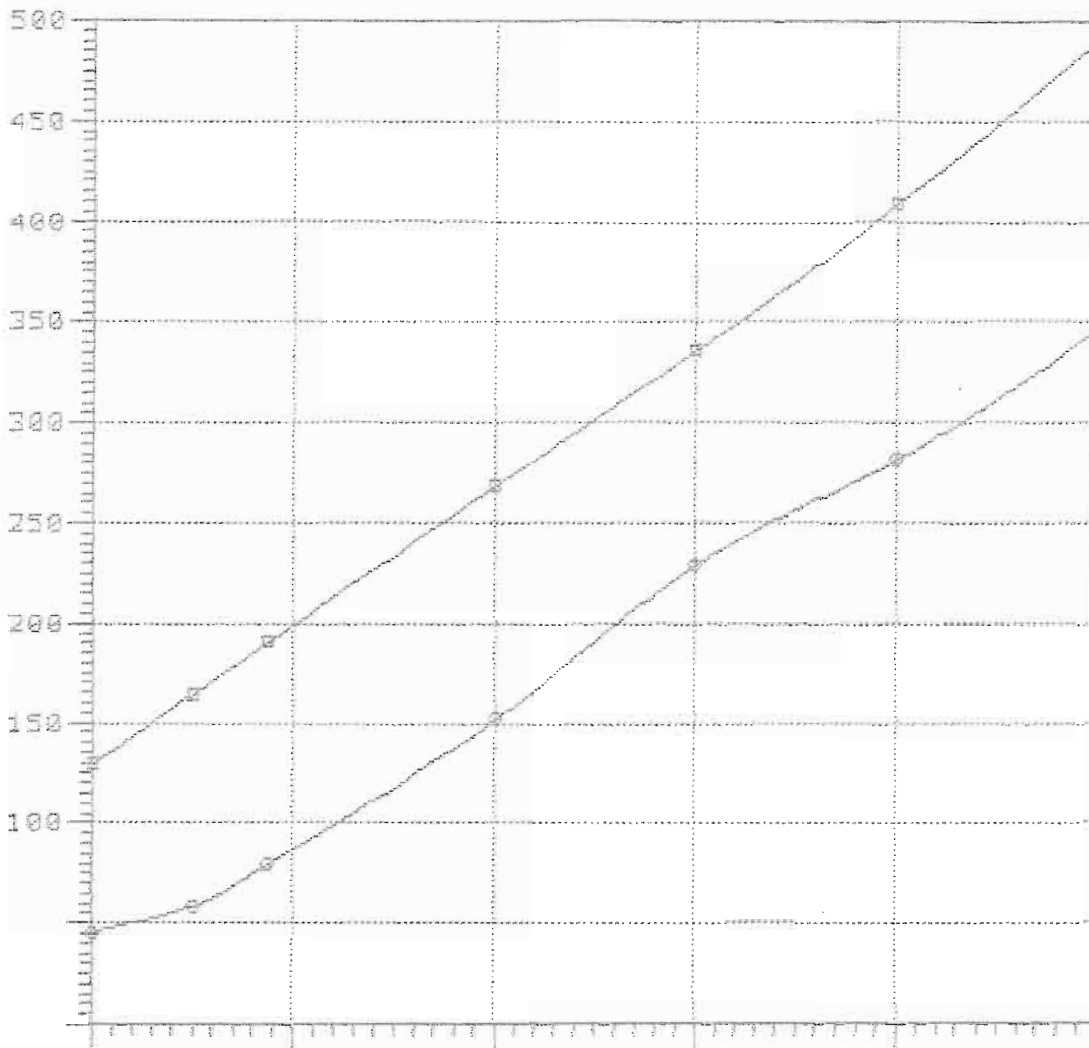
22-10-40



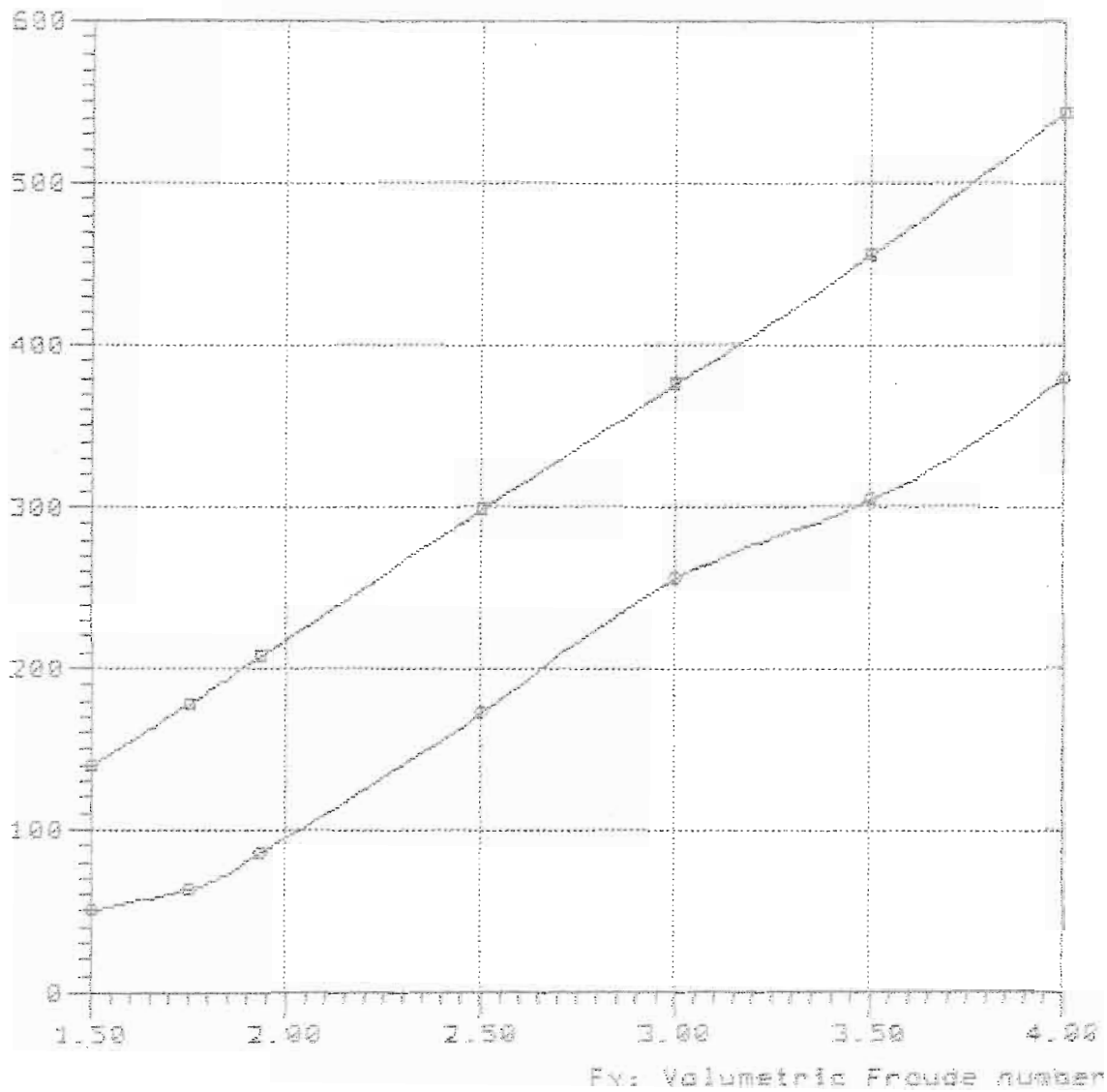
Fv 1.5 2.0 2.5 3.0 3.5 4.0

—□—  
—○—

Rbare: Bare-hull resistance (lbs)



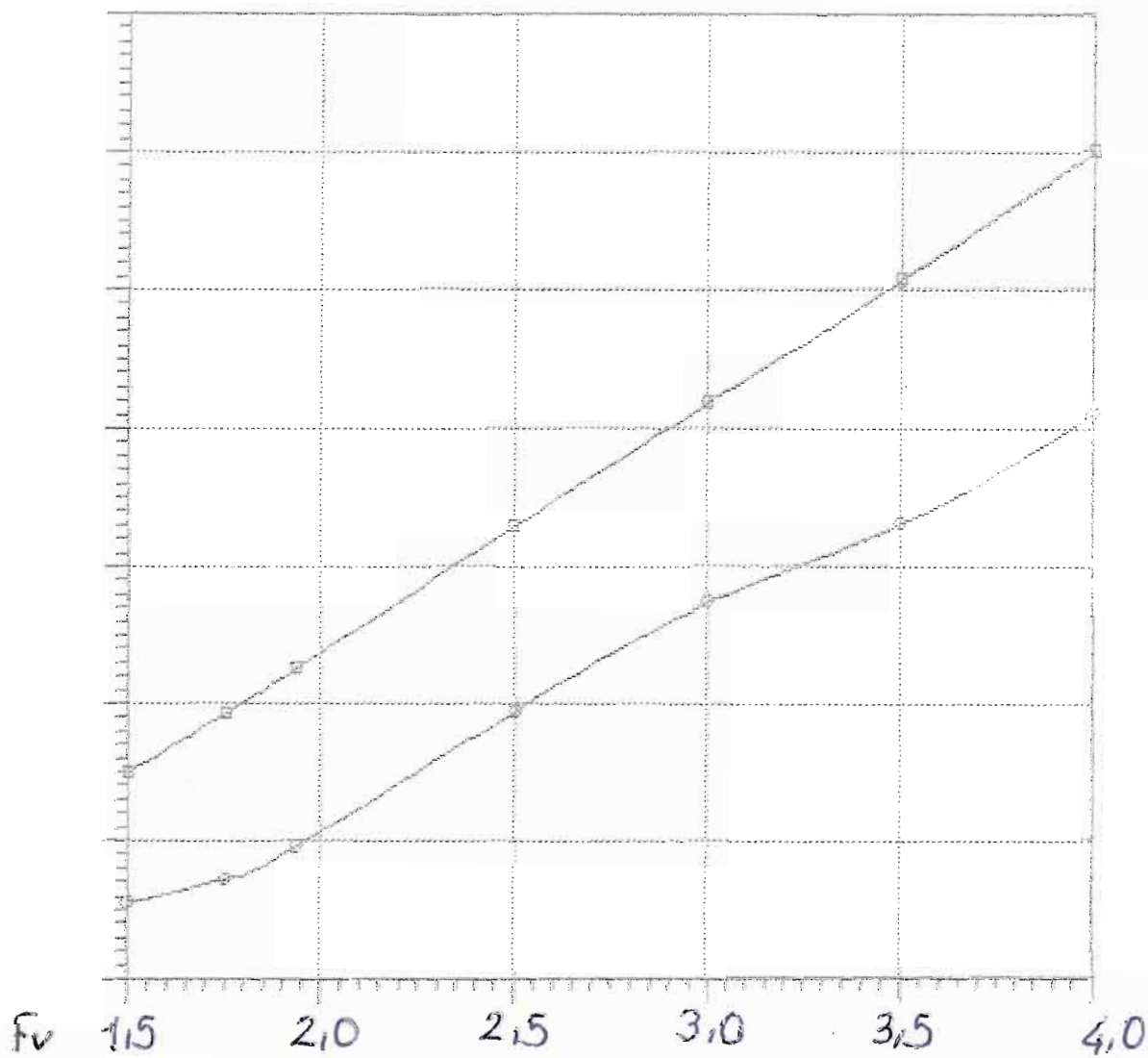
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-65A 5251 Lpx/Bpx=3.3 Ap/Vol=21.973 Lpx/Vol=10 Lpx/Ap=4.551 Lcg/Lpx=0.480

22-10-52



—□—  
—○—



BK

&

MBK

Model = BK  
Ref = SNAME  
Friction = ITTC Ca=0.0

Lpx = 9.643 ft  
Lwl = 9.450 ft  
Bpx = 1.837 ft  
Ap = 0.000 sqft  
Vcg = 0.000 ft  
Disp. = 168.60 Lb  
Deadrise = 15.50 degree  
Twist Angle = 15.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 5.249  
Lpx/Ap = 0.000  
Ap /Vol = 0.000  
Lpx/Vol = 7.002  
Cvload = 0.425  
Lbload = 0.029

~~Friction = ITTC Ca=0.0~~  
Disp-Lpx = 83.941

Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCI DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez, kopyası  
veya kopya edilemez ve her ne maksadla  
olsa olsun maksadı dışında  
izinsiz kullanılamaz,

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Bare-hull resistance

vs.

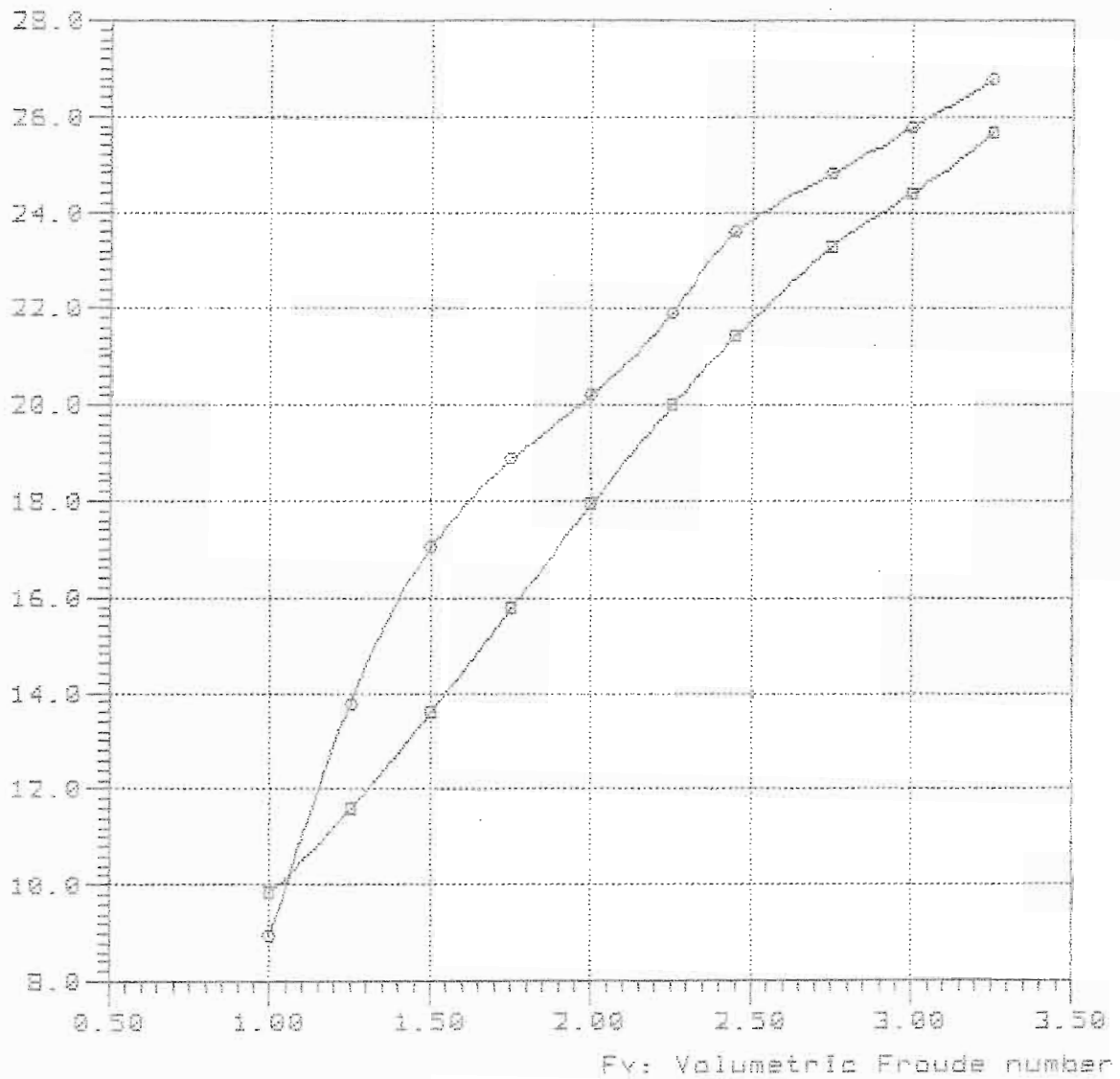
Volumetric Froude number

File: 427-350a.mdl

Date: 28 Feb 88

Time: 13:58

Rbare: Bare-hull resistance (lbs)

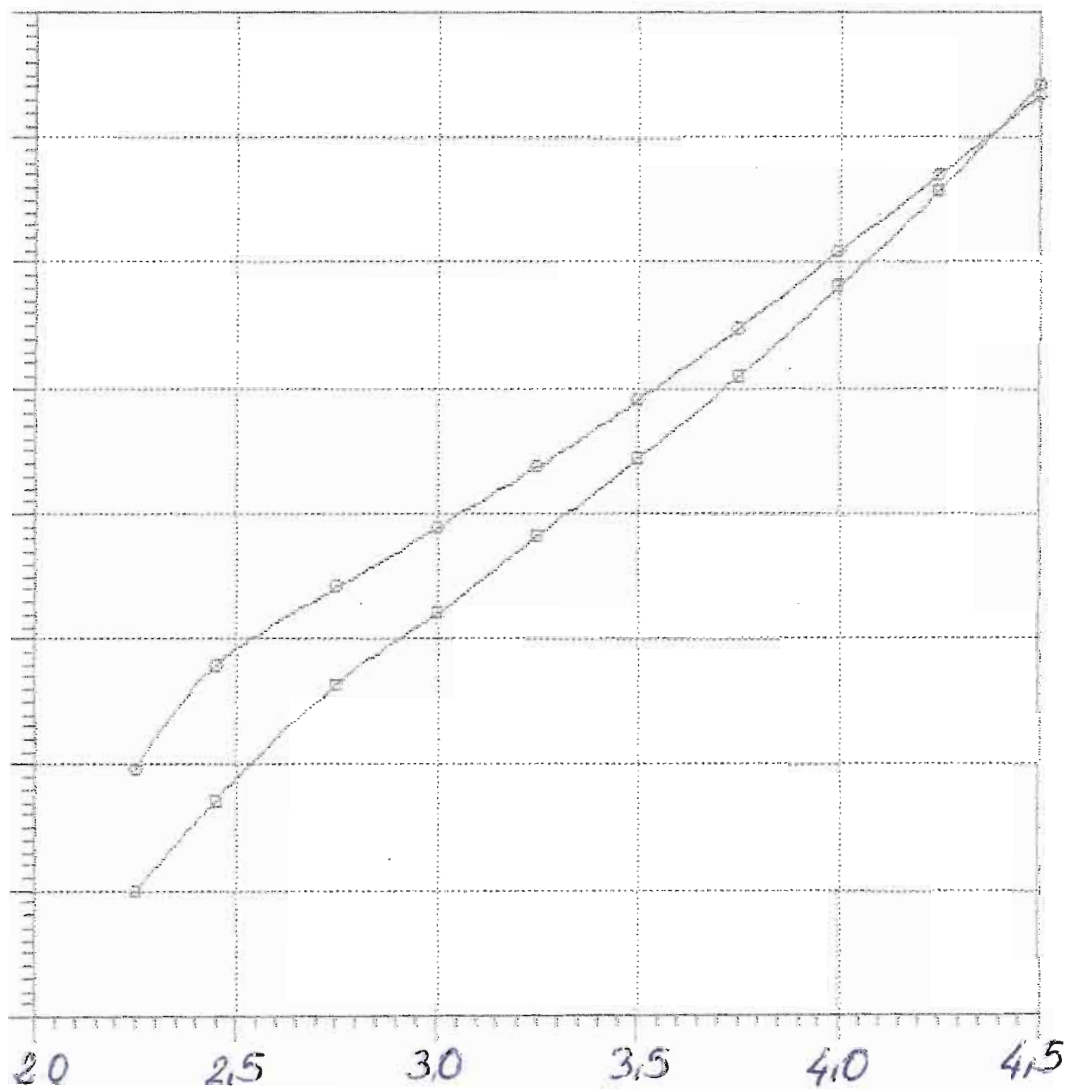


Curve legend

—■—

—○— BK series Model=1 L/B=5.25 Cload=0.427 Lcg=0.358 1989

427-3506



—○—  
—□—

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### Bare-hull resistance

vs.

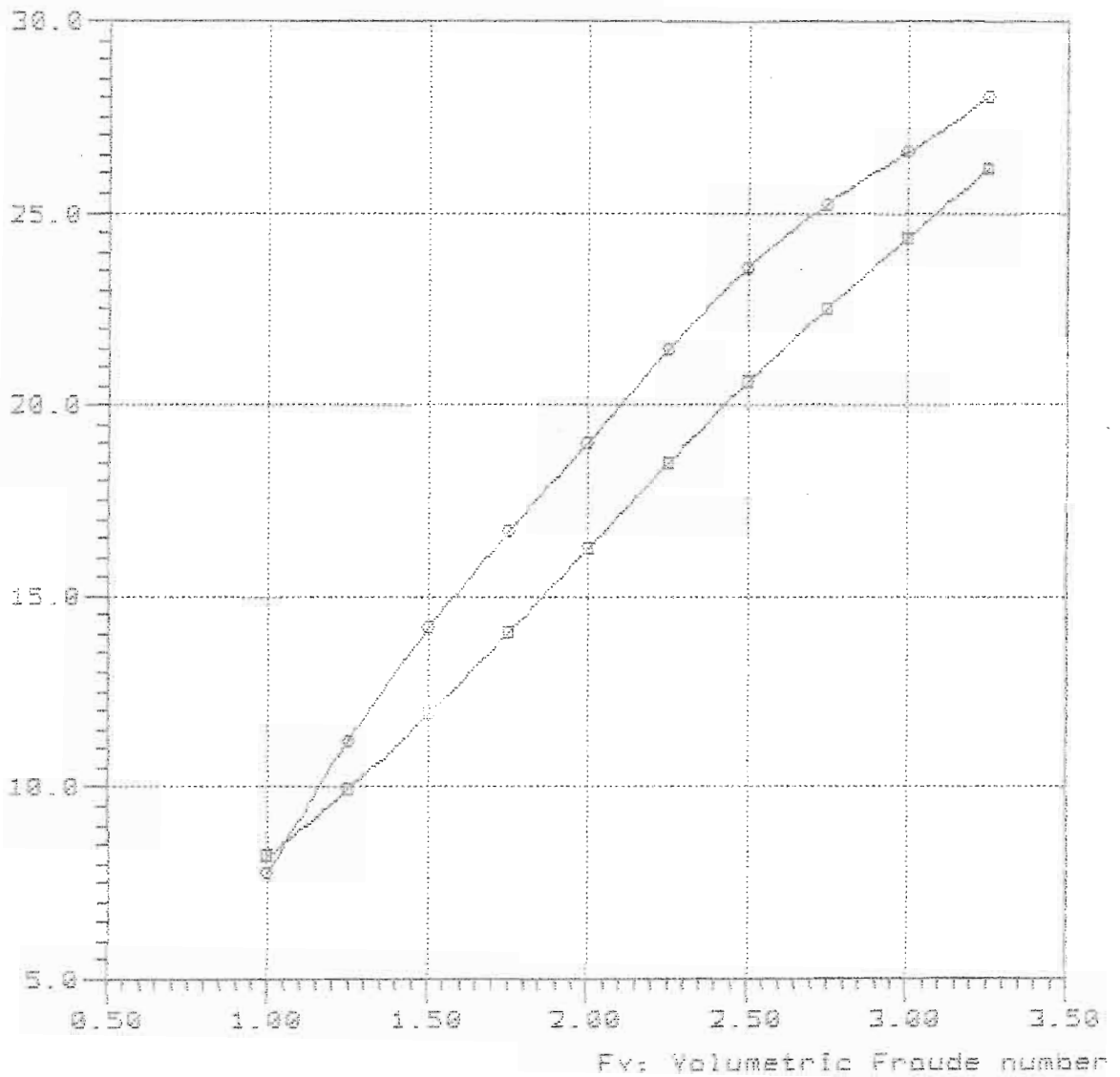
### Volumetric Froude number

File: 427-400a.mdl

Date: 26 Feb 88

Time: 14:05

Rbare: Bare-hull resistance (lbs)

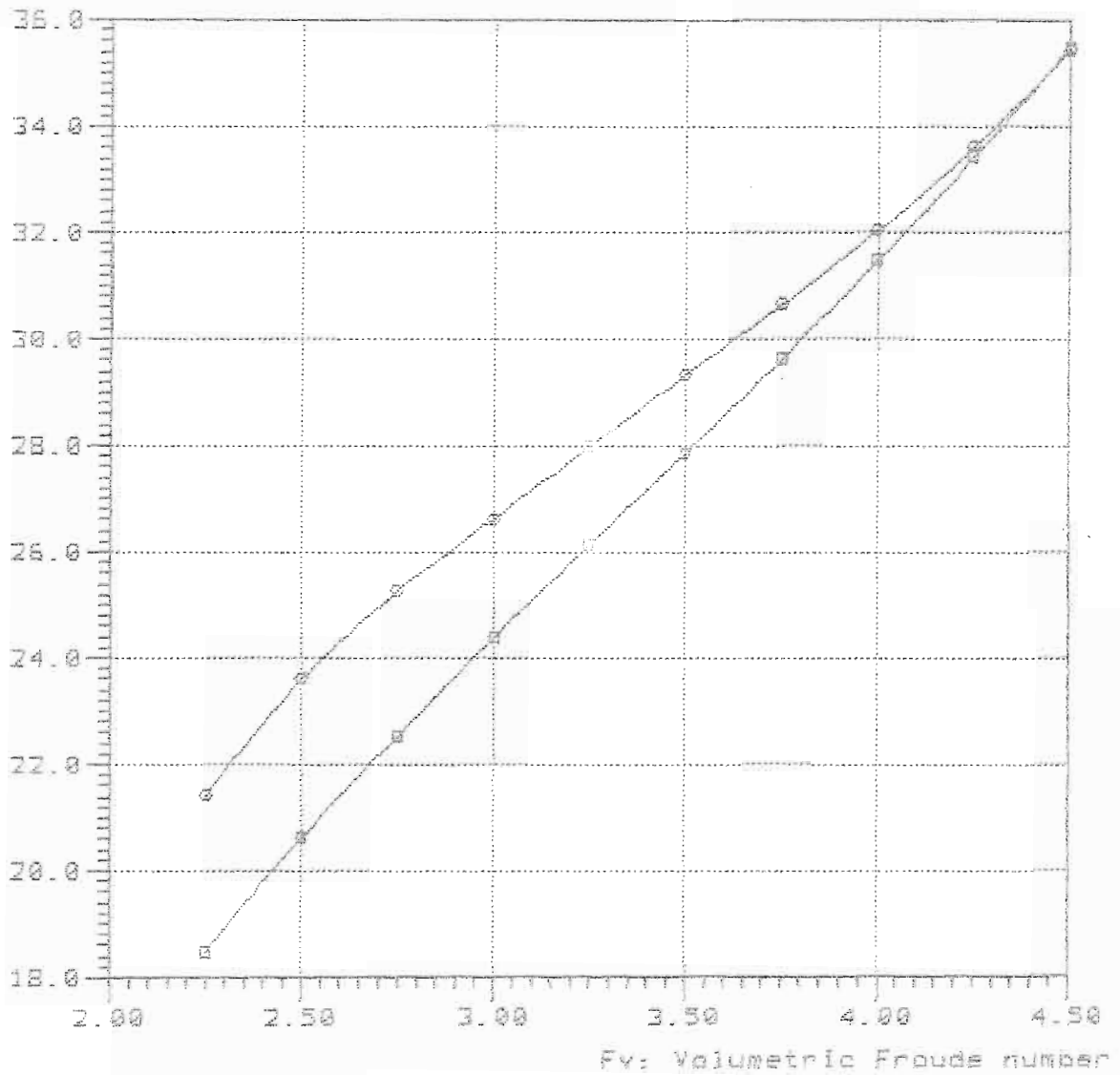


#### Curve legend

—□—

—○— BK series Model=1 L/B=5.25 Cload=0.427 Log=0.400 1983

Rbare: Bare-hull resistance (lbs)



Curve legend

—□—

—○— BK series Model=1 L/B=5.25 Cload=0.427 Log=0.400 1989

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Bare-hull resistance

vs.

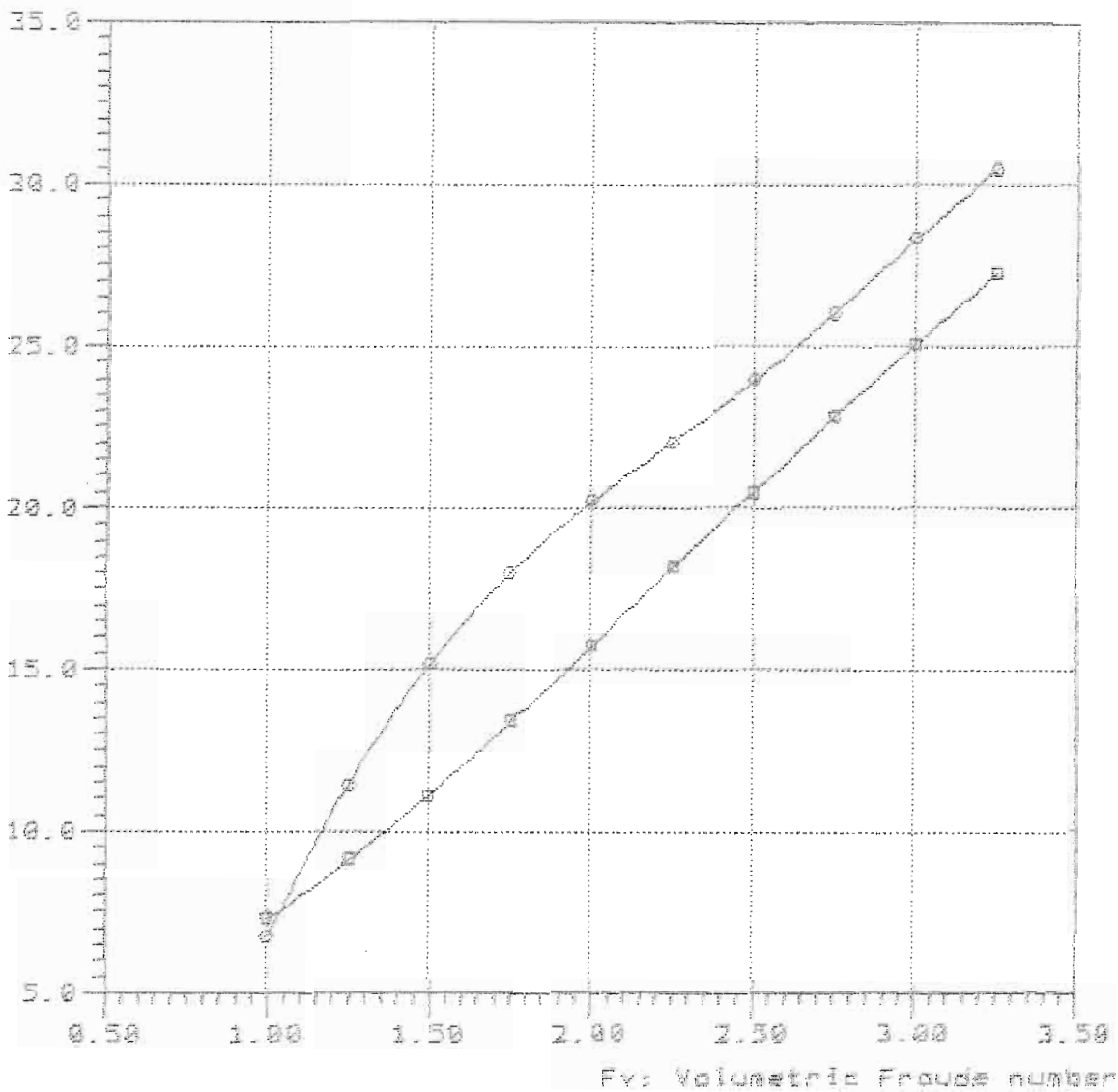
Volumetric Froude number

File: 427-450a.mdl

Date: 28 Feb 88

Time: 14:12

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—○— BK series Model=1 L/B=5.25 Clad=0.427 Log=0.456 1985

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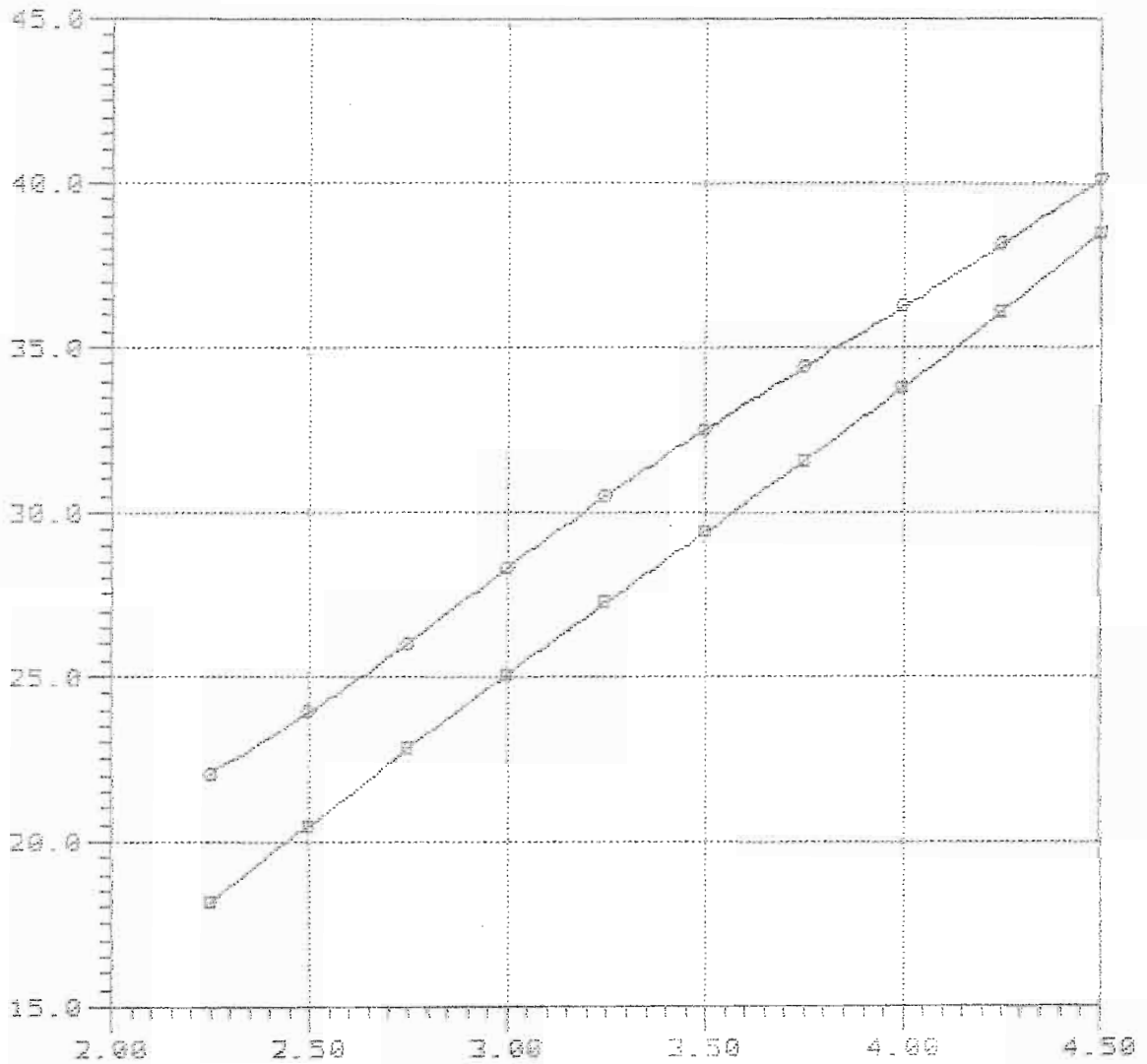
HydroComp, Inc.

File: 427-450b.mdl

Date: 28 Feb 00

Time: 14:14

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

—○—

—□— BK series Model=1 L/B=5.25 Cload=0.427 Log=0.450 1999



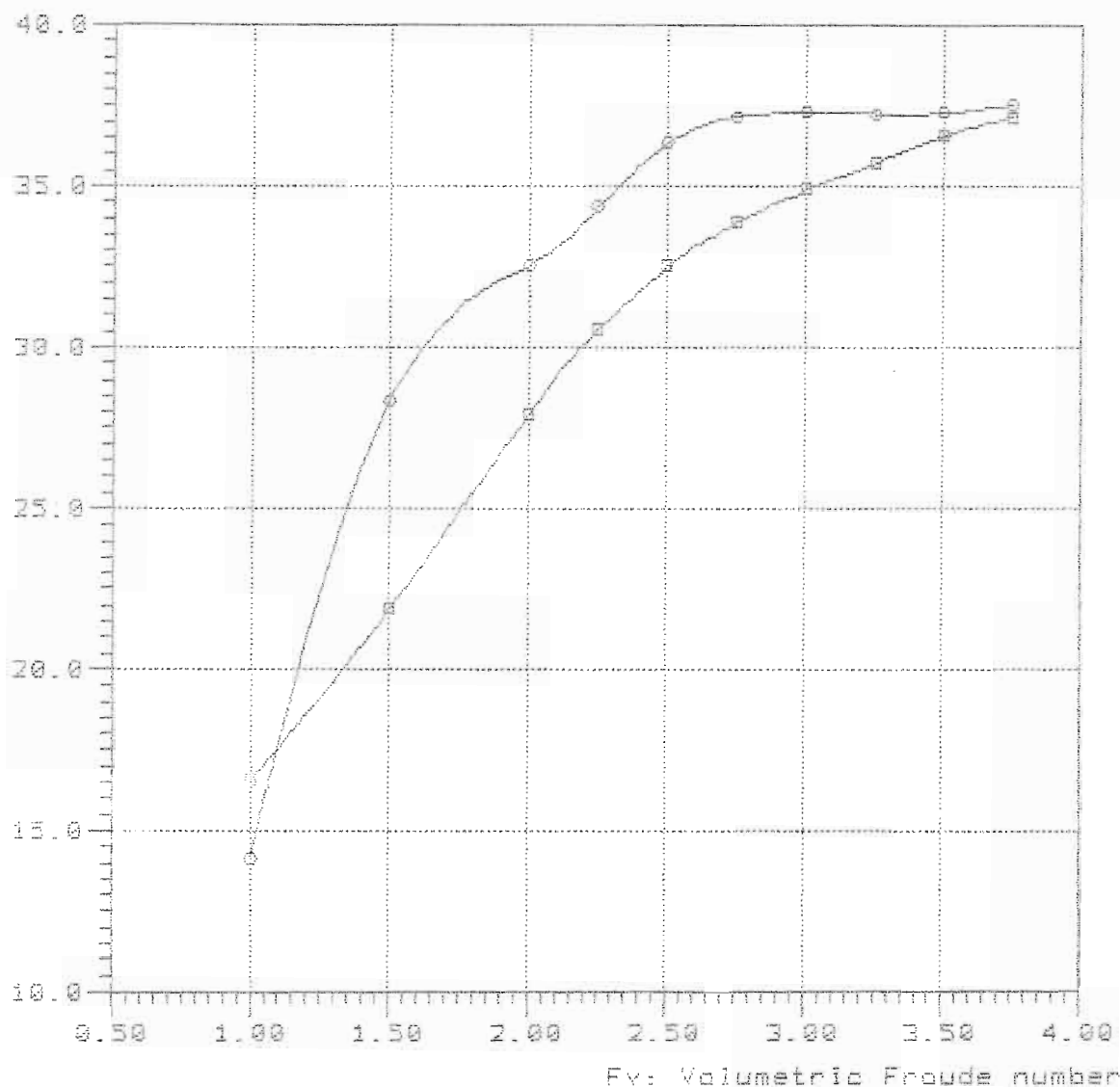
Model = BK  
Ref = SNAME  
Friction = ITTC Ca=0.0

Lpx = 9.643 ft  
Lwl = 9.450 ft  
Bpx = 1.837 ft  
Ap = 0.000 sqft  
Vcg = 0.000 ft  
Disp. = 236.04 Lb  
Deadrise = 15.50 degree  
Twist Angle = 15.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 5.249  
Lpx/Ap = 0.000  
Ap /Vol = 0.000  
Lpx/Vol = 6.259  
Cvload = 0.598  
Lbload = 0.040

**████████████████████**  
Disp-Lpx = 117.517

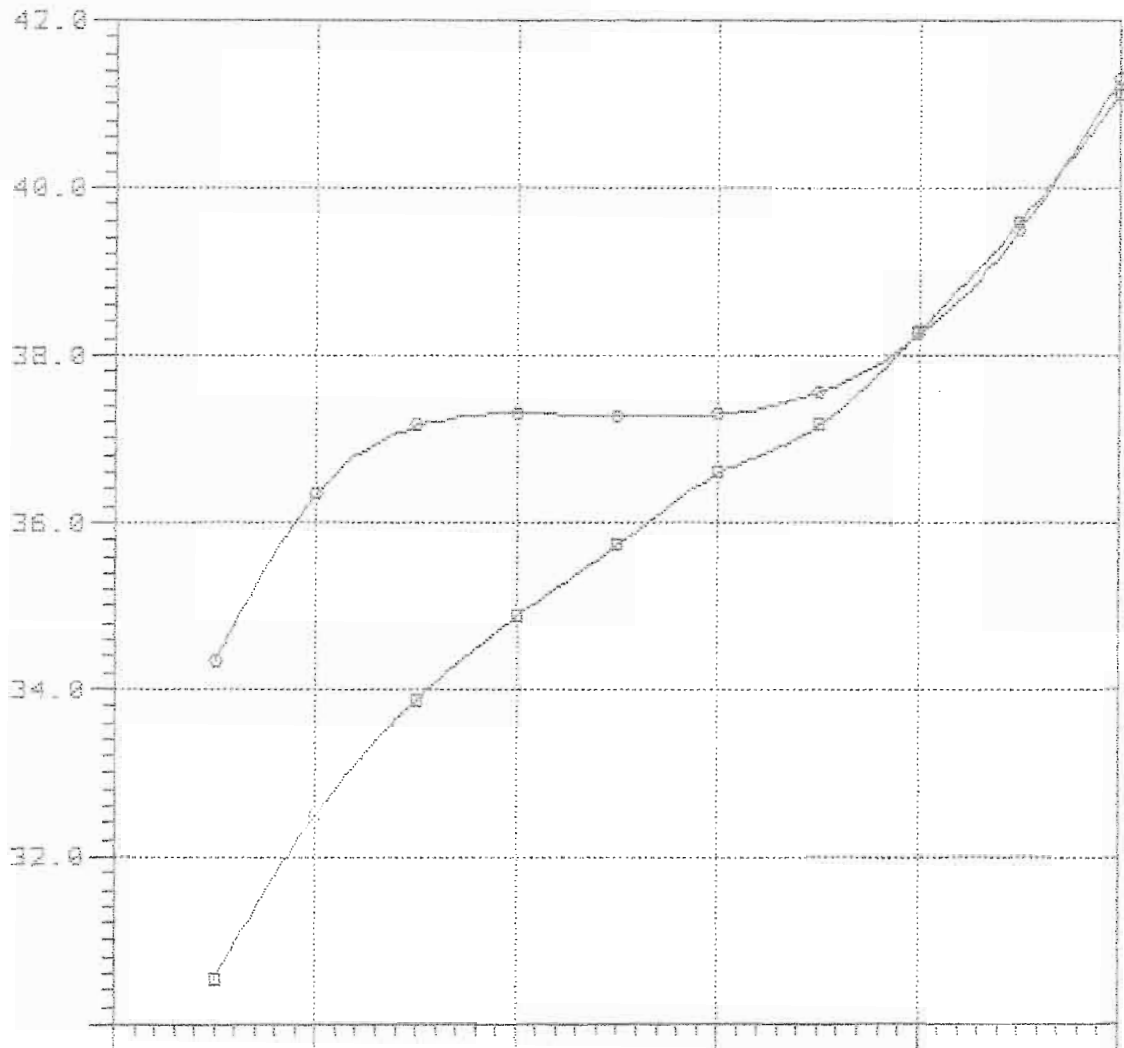
Rbare: Bare-hull resistance (lbs)



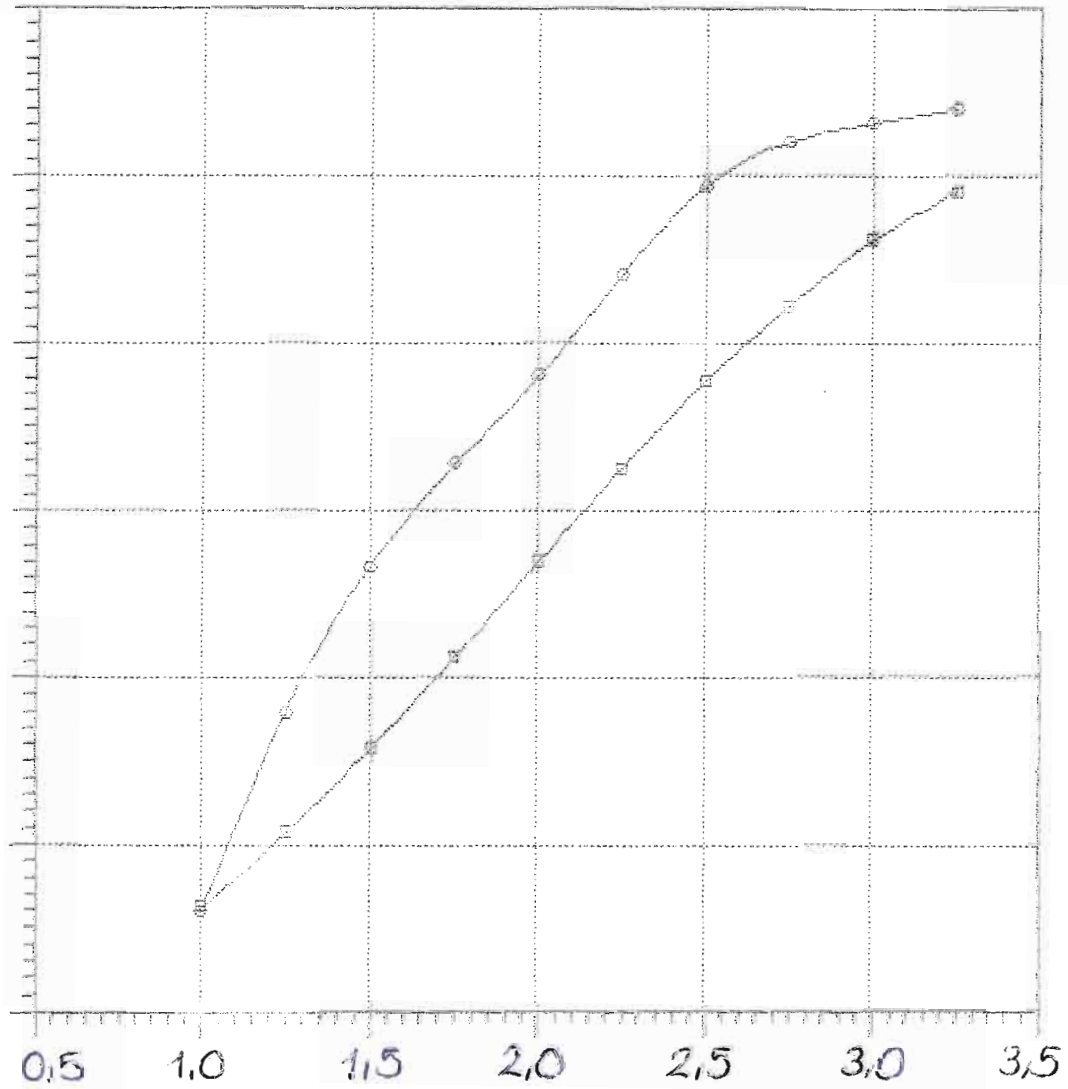
—■—

—●— BK series Model=2 L/B=5.25 Cload=0.598 Log=0.350 1989

Rbare: Bare-hull resistance (lbs)

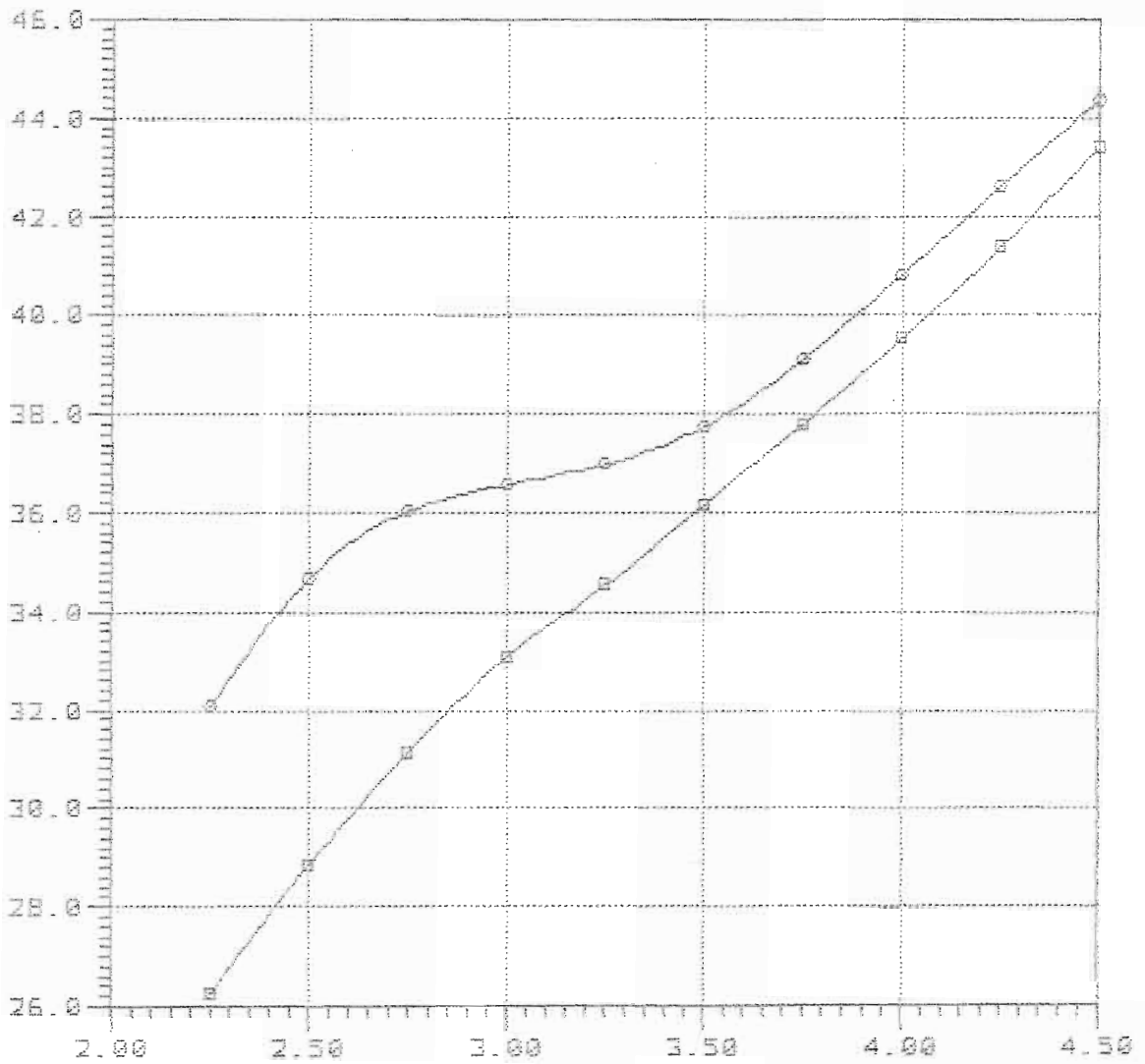


598-400a



—○—  
—□—

Rbare: Bare-hull resistance (lbs)

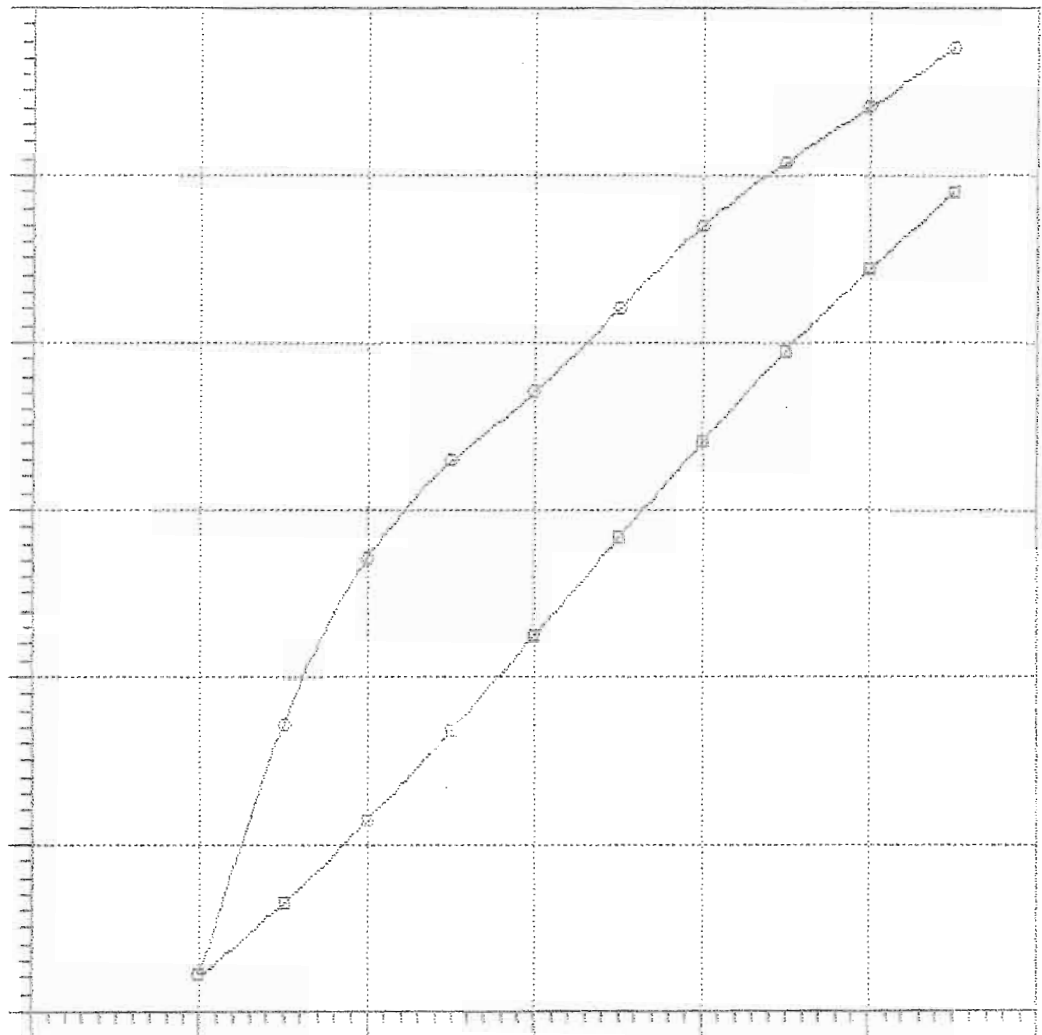


Fv: Volumetric Froude number

—■—

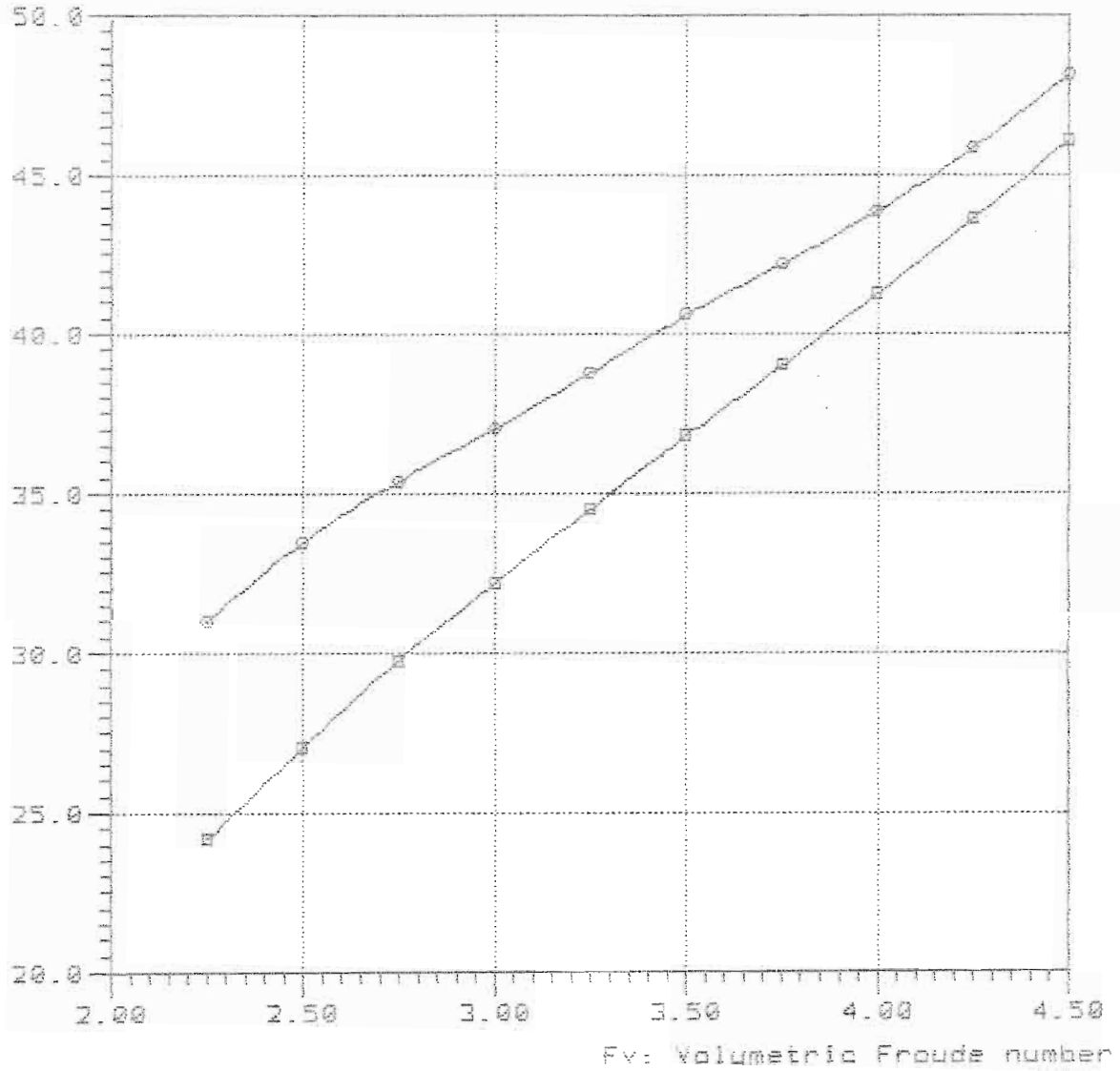
—○— BK series Model=2 L/B=5.25 Cload=0.595 Log=0.400 1989

598-450a



—○—  
—□—

Rbare: Bare-hull resistance (lbs)



Curve legend

—■—

—●— BK series Model=2 L/B=5.25 Cload=0.598 Log=0.450 1985

Model = BK  
Ref = SNAME  
Friction = ITTC Ca=0.0

Lpx = 9.643 ft  
Lwl = 9.450 ft  
Bpx = 1.837 ft  
Ap = 0.000 sqft

Vcg = 0.000 ft  
Disp. = 337.02 Lb  
Deadrise = 15.50 degree  
Twist Angle = 15.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 5.249  
Lpx/Ap = 0.000  
Ap /Vol = 0.000  
Lpx/Vol = 5.559  
Cvload = 0.854  
Lbload = 0.058

~~XXXXXXXXXXXX~~  
Disp-Lpx = 167.792

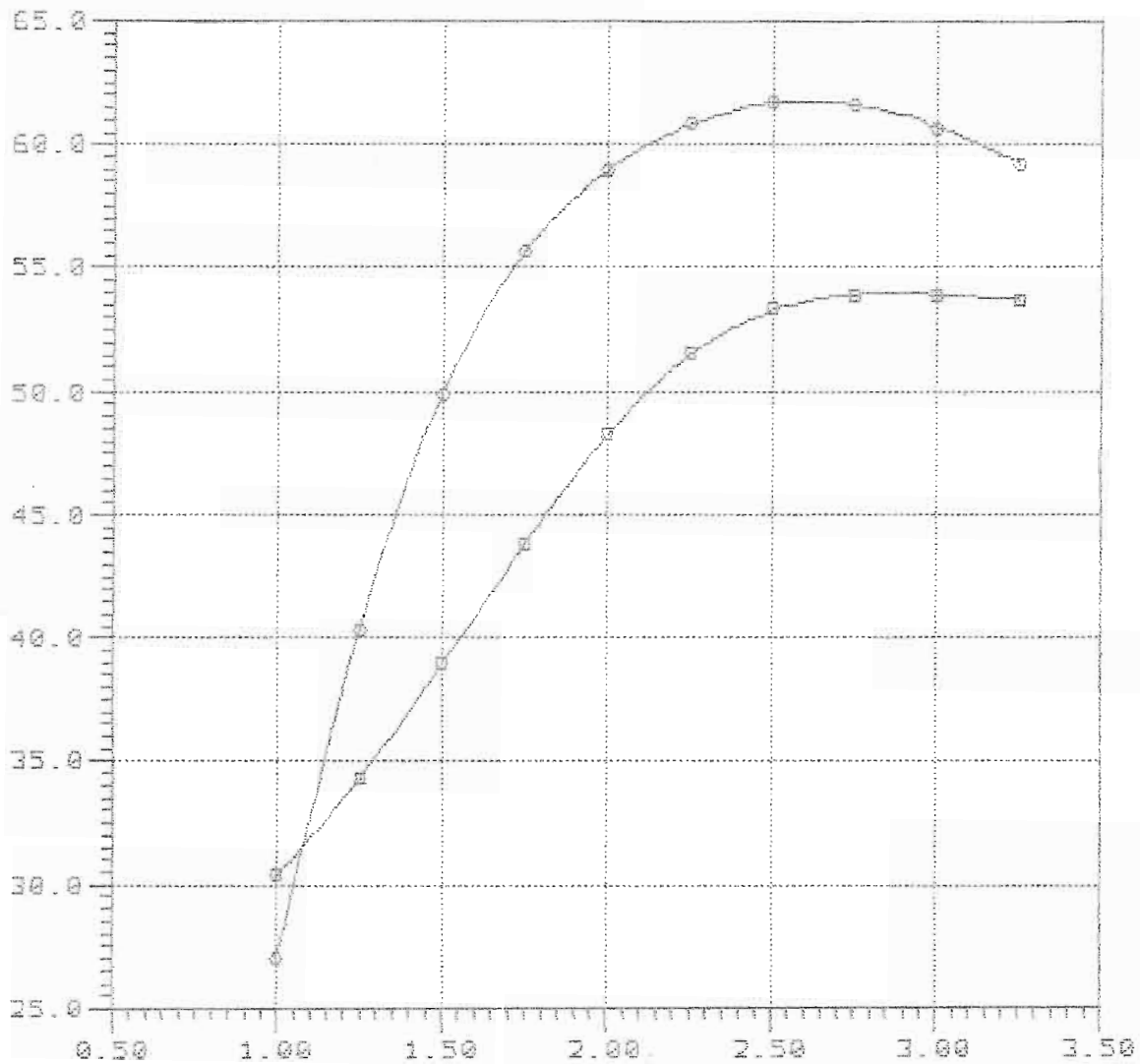


### Bare-hull resistance

vs.

### Volumetric Froude number

Rbare: Bare-hull resistance (lbs)



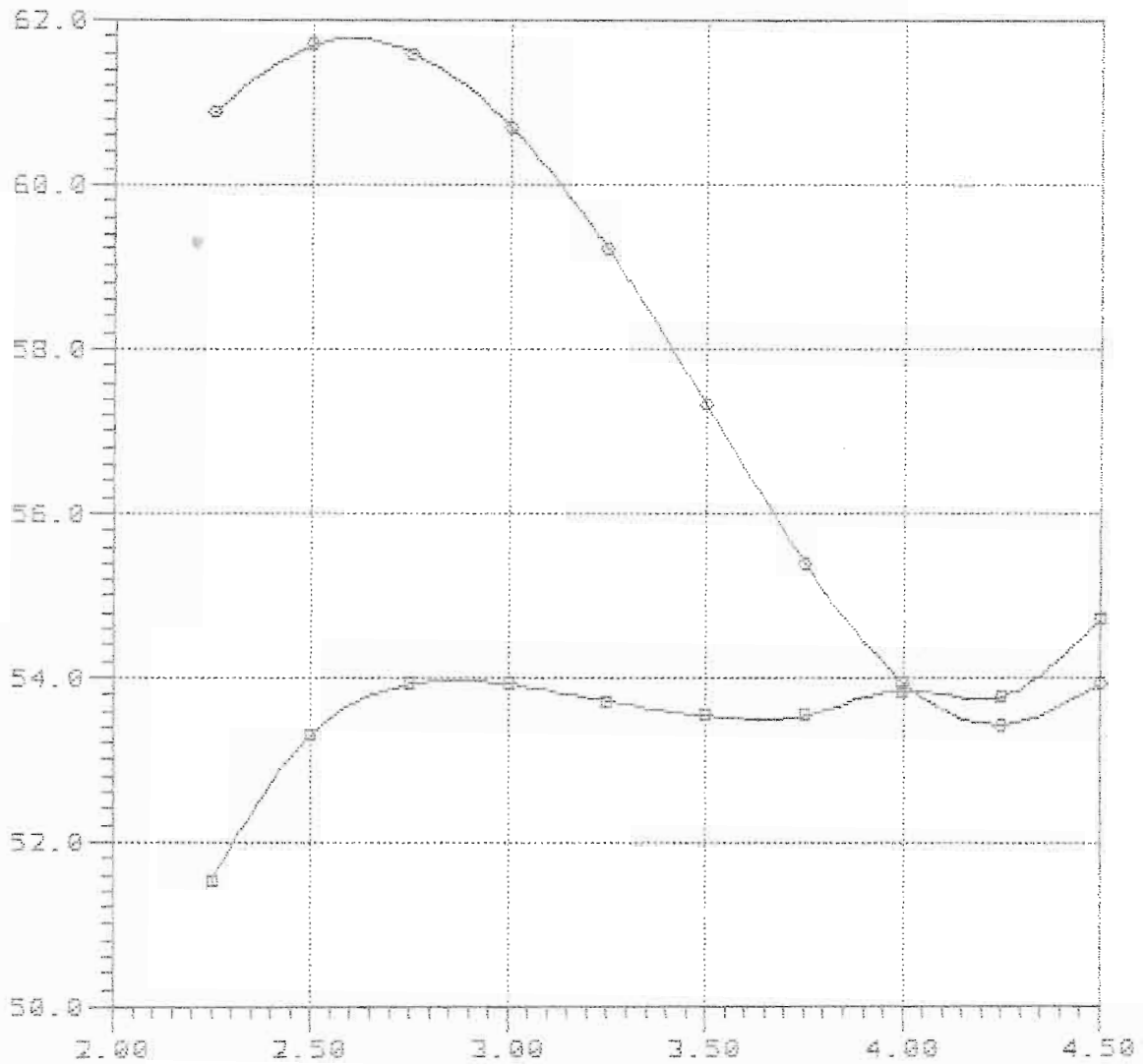
Fv: Volumetric Froude number

#### Curve legend

—□—

—○— BK series Model=3 L/B=5.25 Cload=0.854 Log=0.350 1989

Rbare: Bare-hull resistance (lbs)

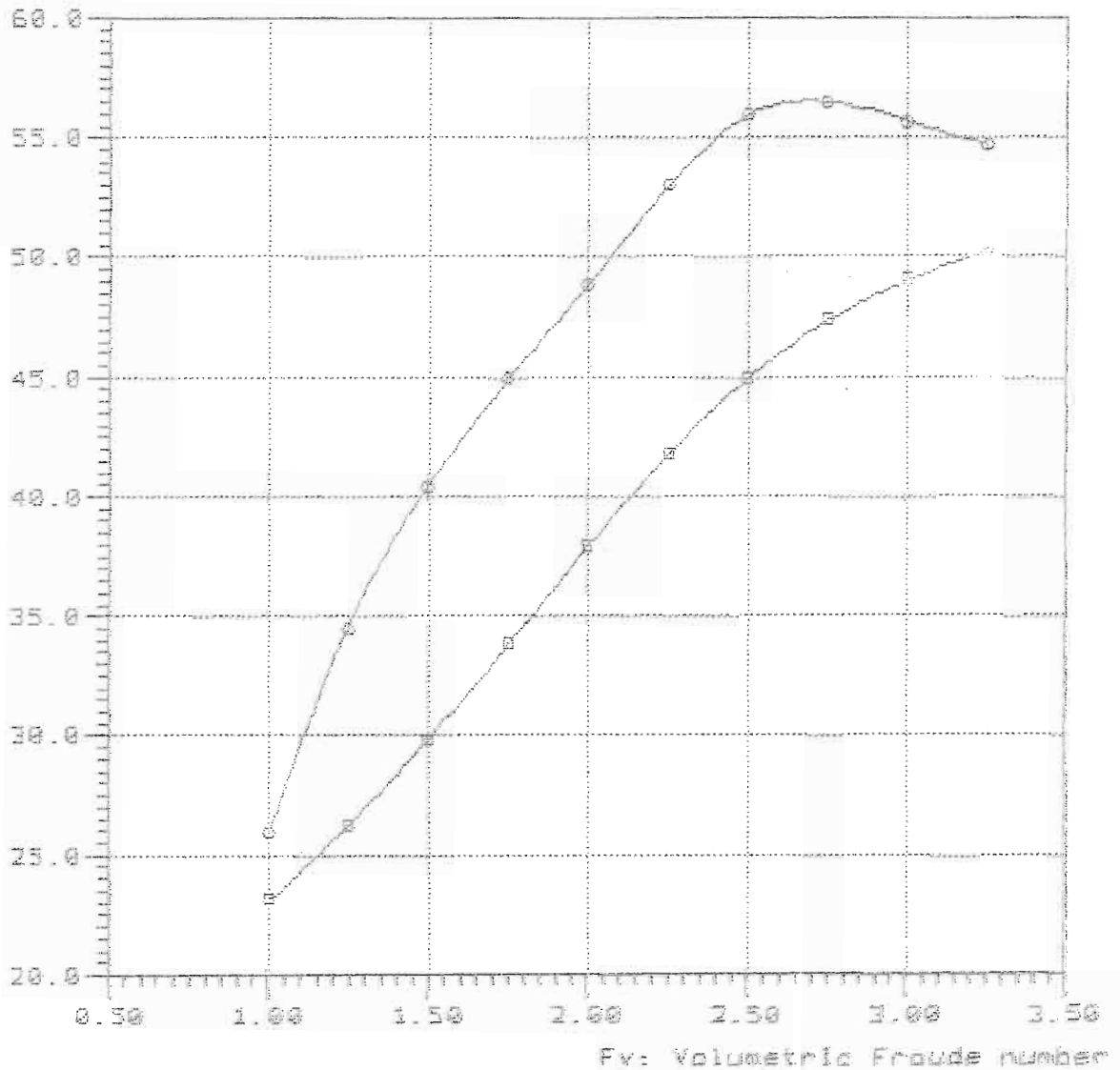


Fv: Volumetric Froude number

—■—

—●— BK series Model=3 L/B=5.25 Cload=0.854 Log=0.350 1989

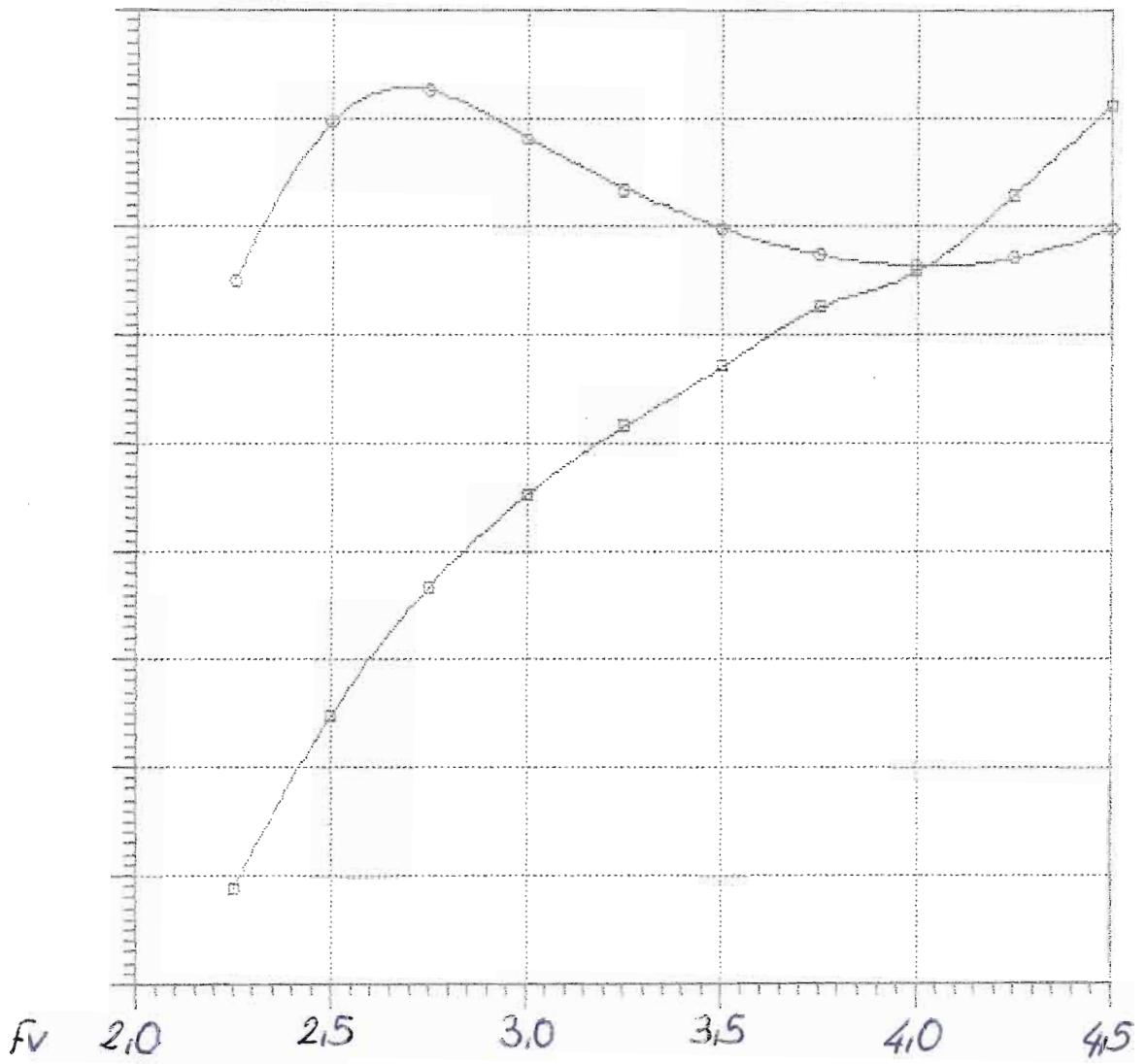
Rbare: Bare-hull resistance (lba)



—○—

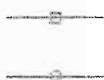
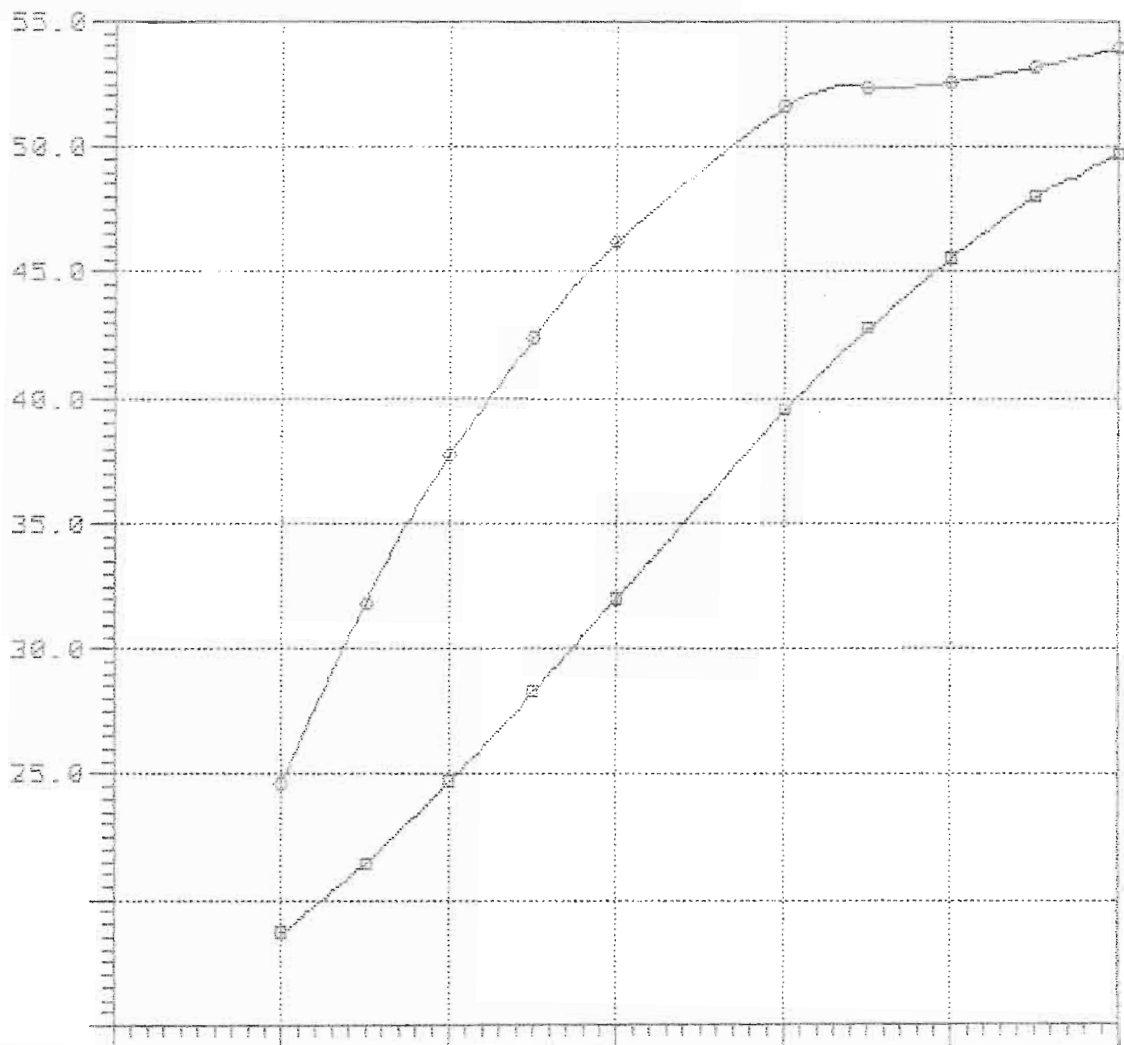
—□— BK series Model=3 L/B=5.23 Cload=0.854 Log=0.400 1989

854-400b

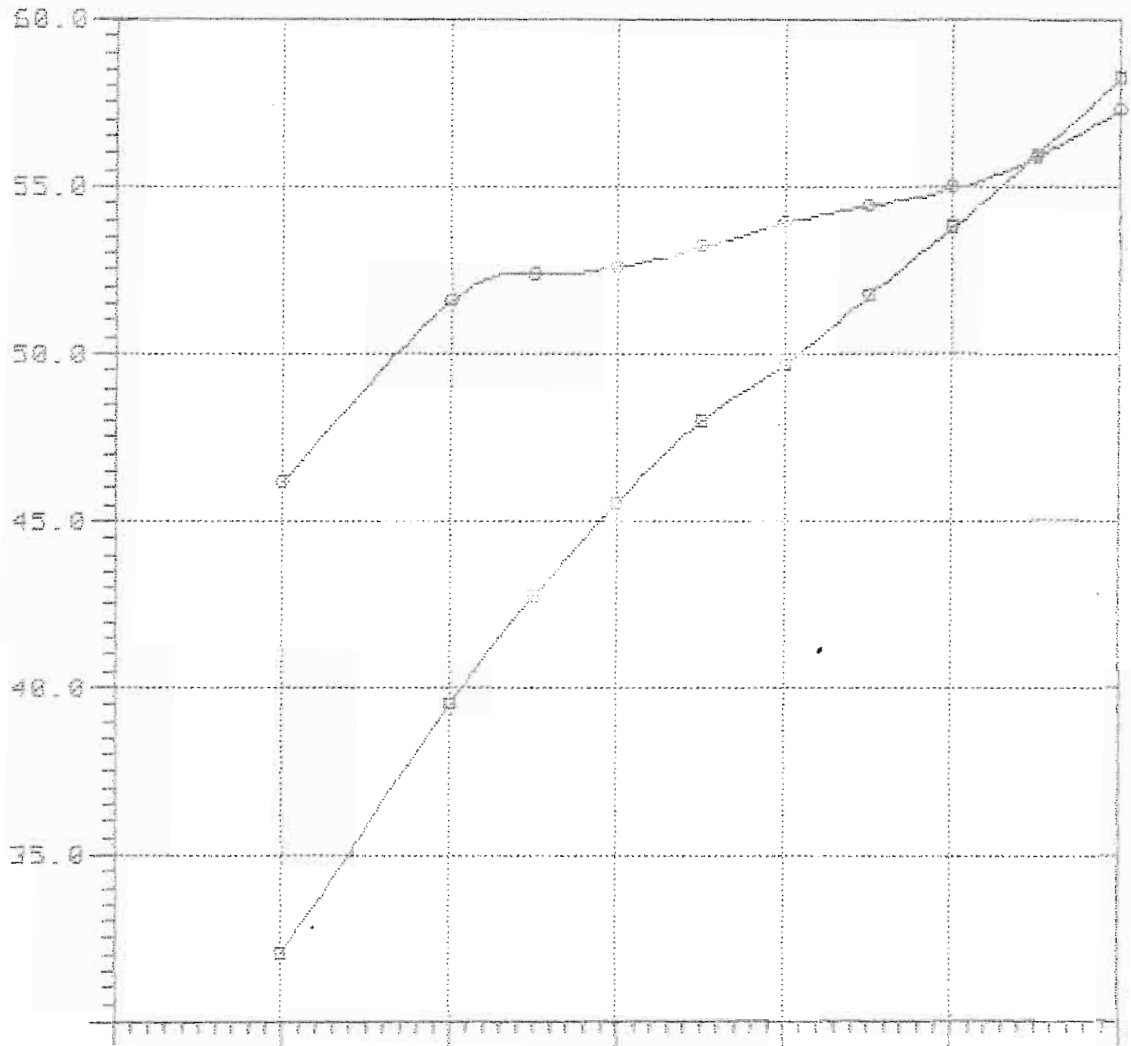


—□—  
—○—

Rbare: Bare-hull resistance (lbs)



Rbare: Bare-hull resistance (lbs)



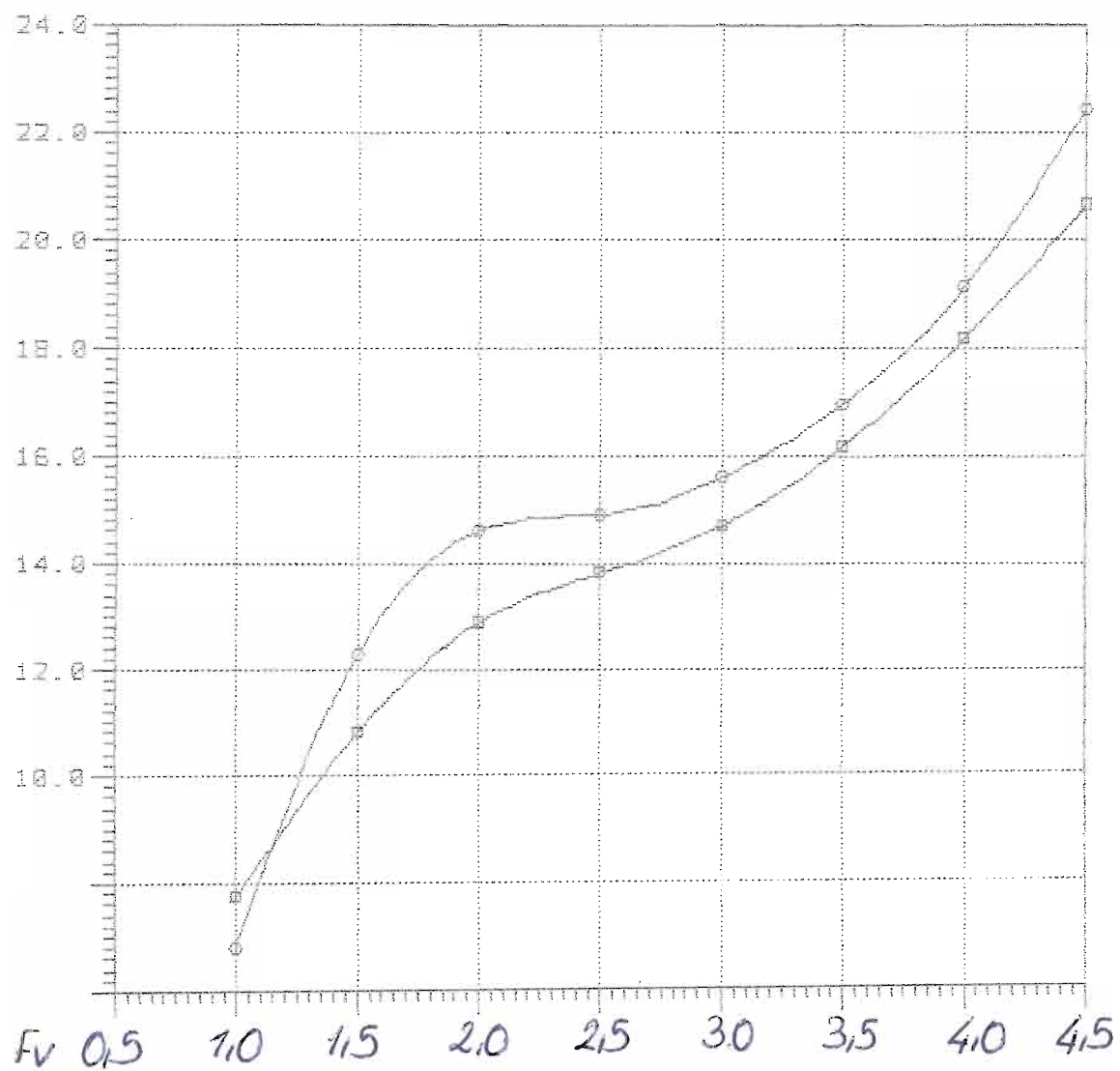
Model = MBK  
Ref = SNAME  
Friction = ITTC Ca=0.0

Lpx = 6.724 ft  
Lwl = 6.590 ft  
Bpx = 2.132 ft  
Ap = 0.000 sqft  
Vcg = 0.000 ft  
Disp. = 97.56 Lb  
Deadrise = 12.50 degree  
Twist Angle = 7.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.154  
Lpx/Ap = 0.000  
Ap /Vol = 0.000  
Lpx/Vol = 5.859  
Cvload = 0.158  
Lbload = 0.023

~~XXXXXXXXXX~~  
Disp-Lpx = 143.265

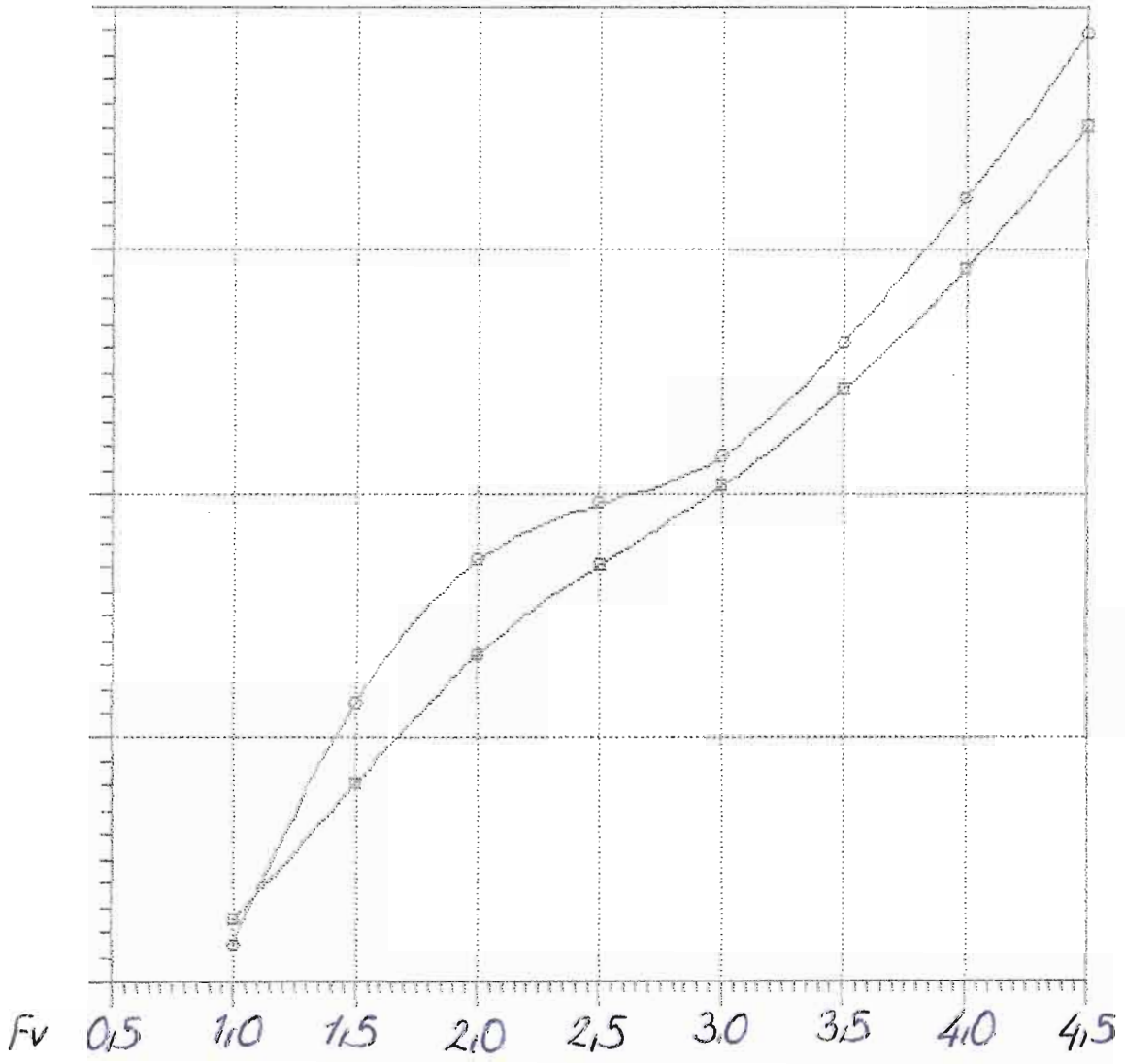
Rbare: Bare-hull resistance (lbs)



—□—  
—○—



158-400



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### Bare-hull resistance

vs.

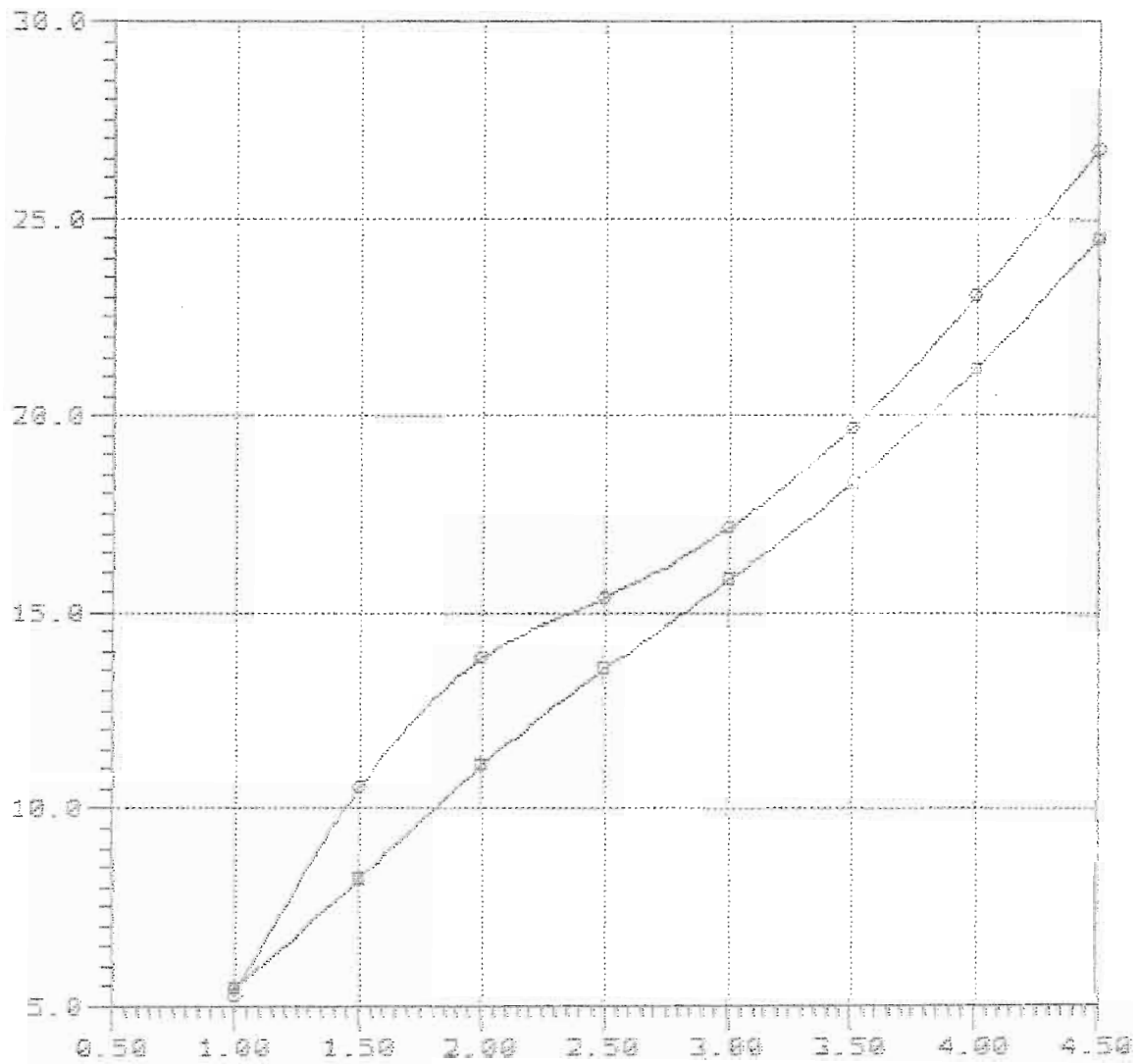
### Volumetric Froude number

File: 15B-450.mdl

Date: 28 Feb 00

Time: 15:02

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

#### Curve legend

—■—

—●— KBK series Model=1 L/B=3.15 Cload=0.156 Log=0.450 1995

Model = MBK  
Ref = SNAME  
Friction = ITTC Ca=0.0

Lpx = 6.724 ft  
Lwl = 6.590 ft  
Bpx = 2.132 ft  
Ap = 0.000 sqft  
Vcg = 0.000 ft  
Disp. = 155.12 Lb  
Deadrise = 12.50 degree  
Twist Angle= 7.50 degree  
Shaft Angle= 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.154  
Lpx/Ap = 0.000  
Ap /Vol = 0.000

Lpx/Vol = 5.020  
Cvload = 0.251  
Lbload = 0.036

~~XXXXXXXXXX~~  
Disp-Lpx = 227.791

NavCad(tm) 3.1d

### Bare-hull resistance

File: 251-350.mdl

(c) Copyright 1995

vs.

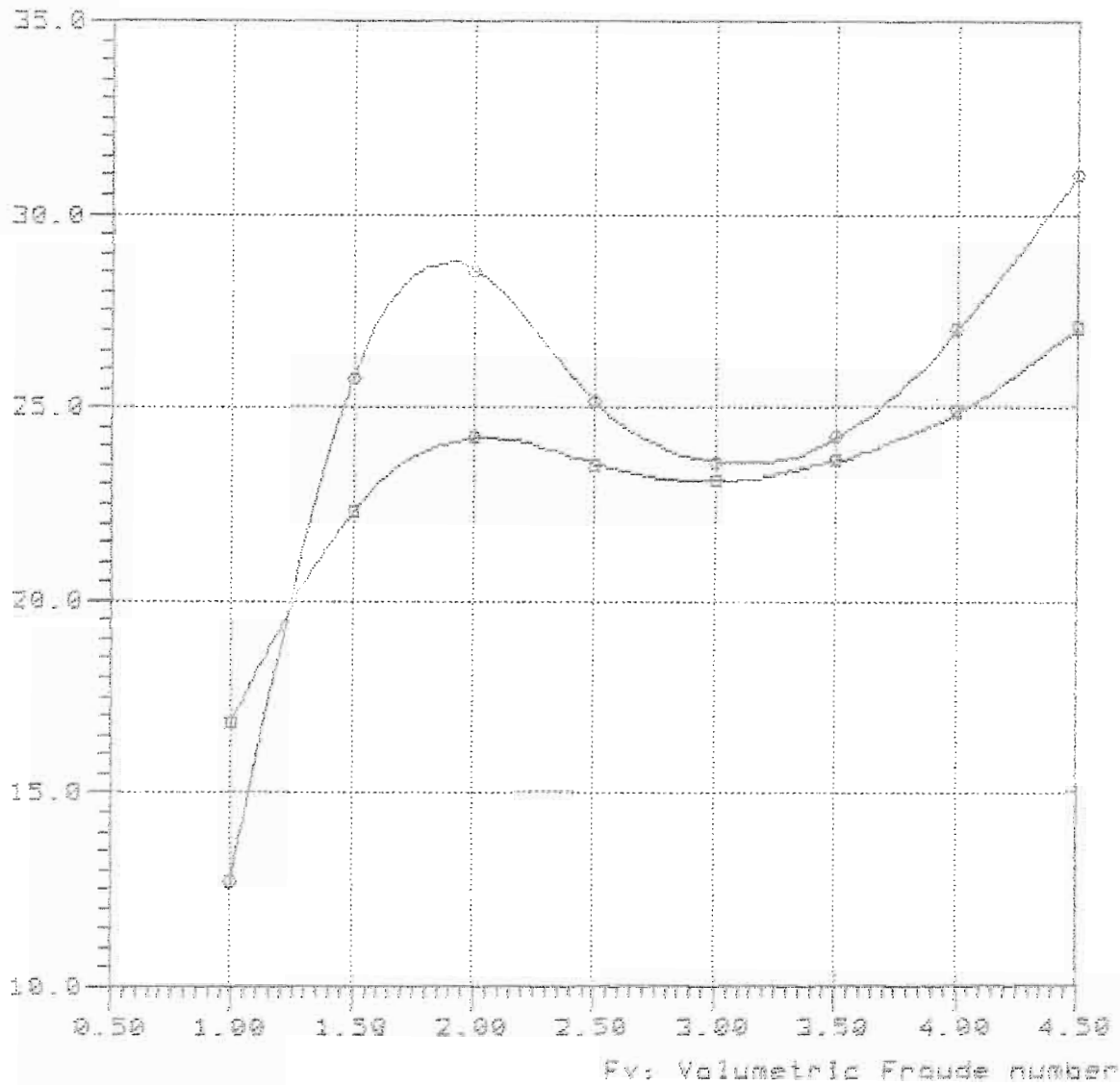
Date: 28 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 15:03

Rbare: Bare-hull resistance (lbs)

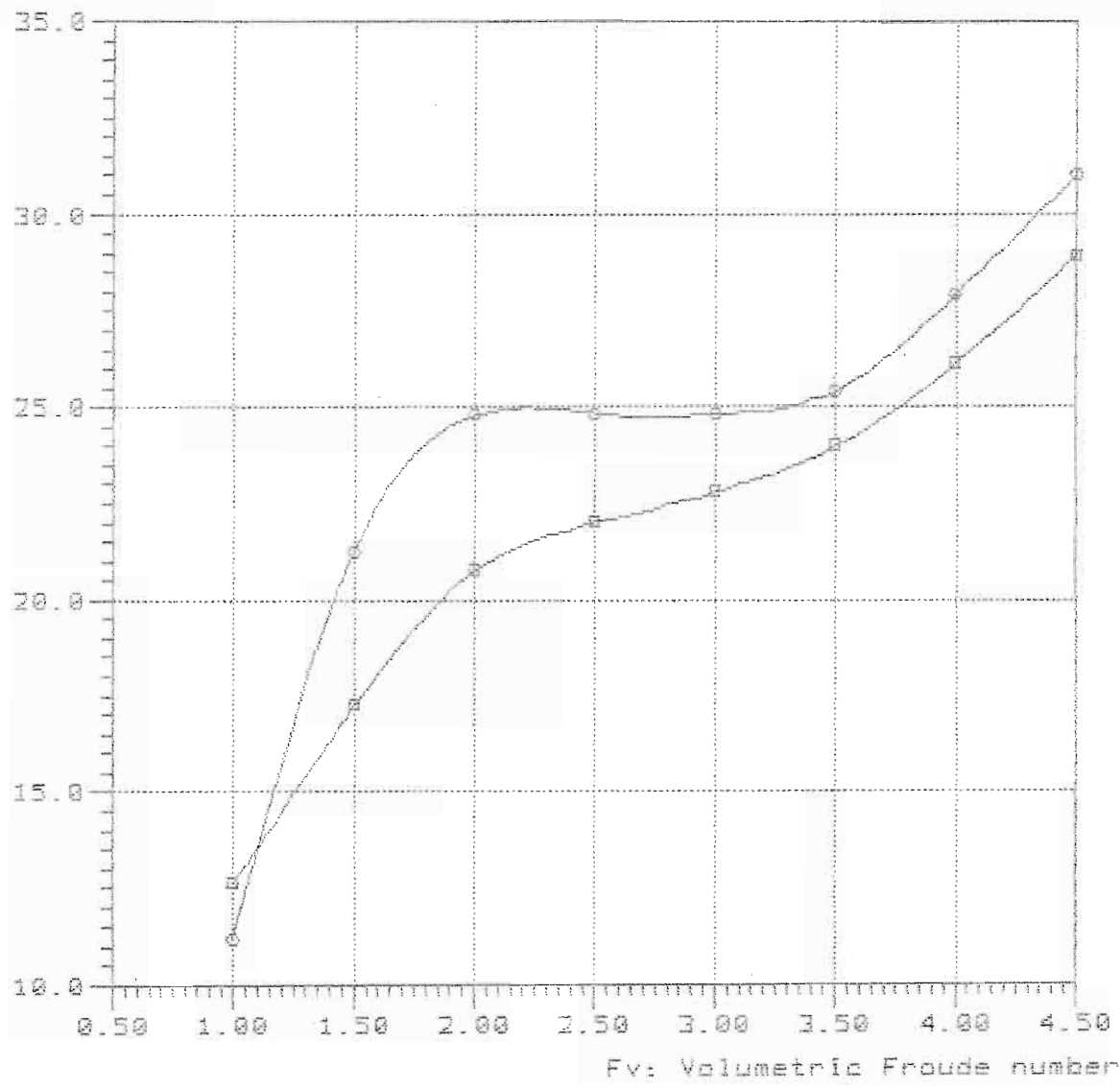


#### Curve legend

—■—

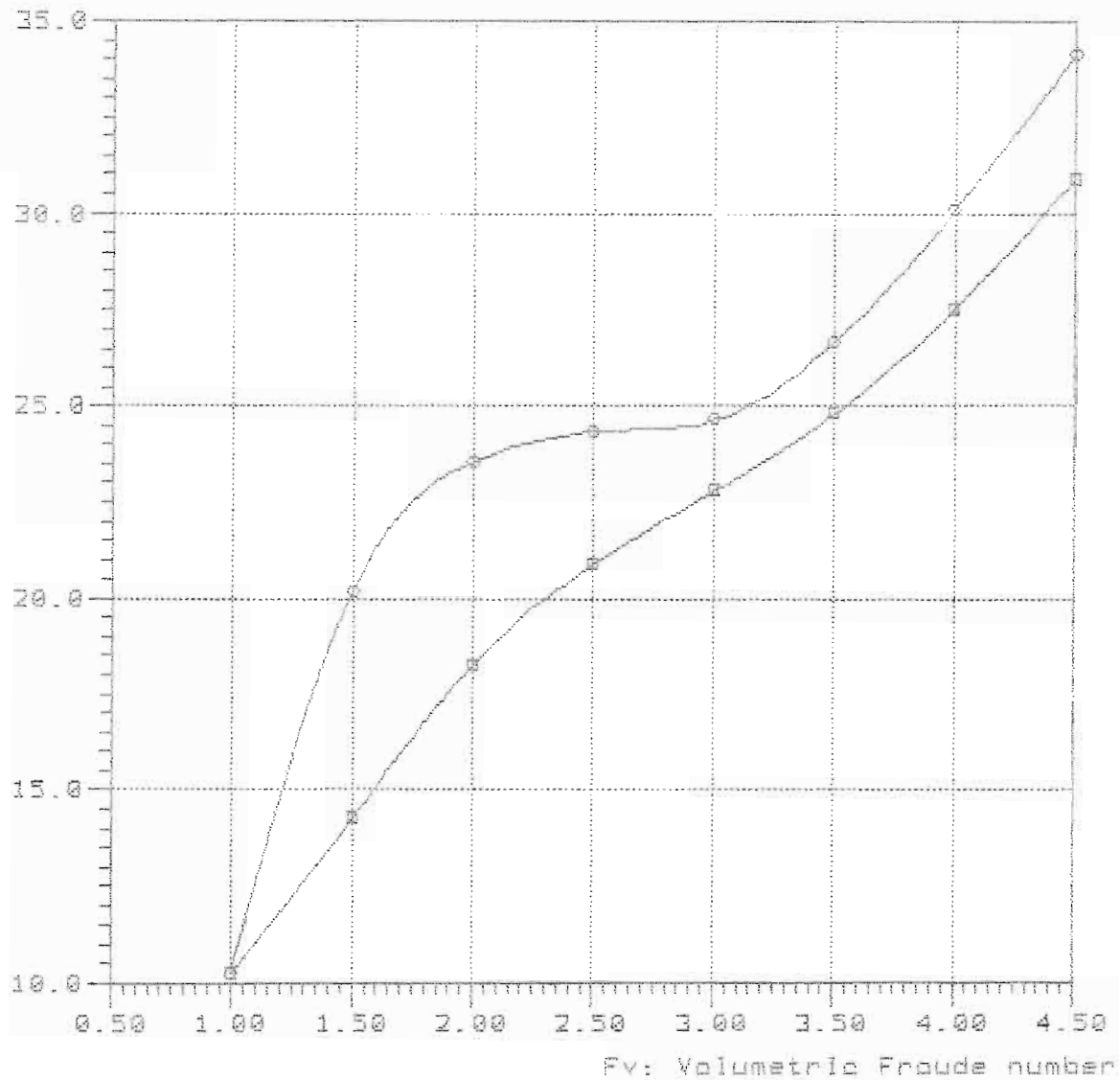
—●— WBK series Model=2 L/B=3.15 Cload=0.251 Log=0.350 1989

Rbare: Bare-hull resistance (lbs)



—■—  
—○— MBK series Model=2 L/B=3.15 Cload=0.751 Log=0.400 1989

Rbare: Bare-hull resistance (lbs)



—■—

—○— MBK series Model=2 L/B=3.15 Cload=0.251 Lcg=0.450 1985

Model = MBK  
Ref = SNAME  
Friction = ITTC Ca=0.0

Lpx = 6.724 ft  
Lwl = 6.590 ft  
Bpx = 2.132 ft  
Ap = 0.000 sqft  
Vcg = 0.000 ft  
Disp. = 218.06 Lb  
Deadrise = 12.50 degree  
Twist Angle = 7.50 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.154  
Lpx/Ap = 0.000  
Ap /Vol = 0.000  
Lpx/Vol = 4.481  
Cvload = 0.352  
Lbload = 0.051

~~XXXXXXXXXX~~  
Disp-Lpx = 320.217

NavCad(tm) 3.1d

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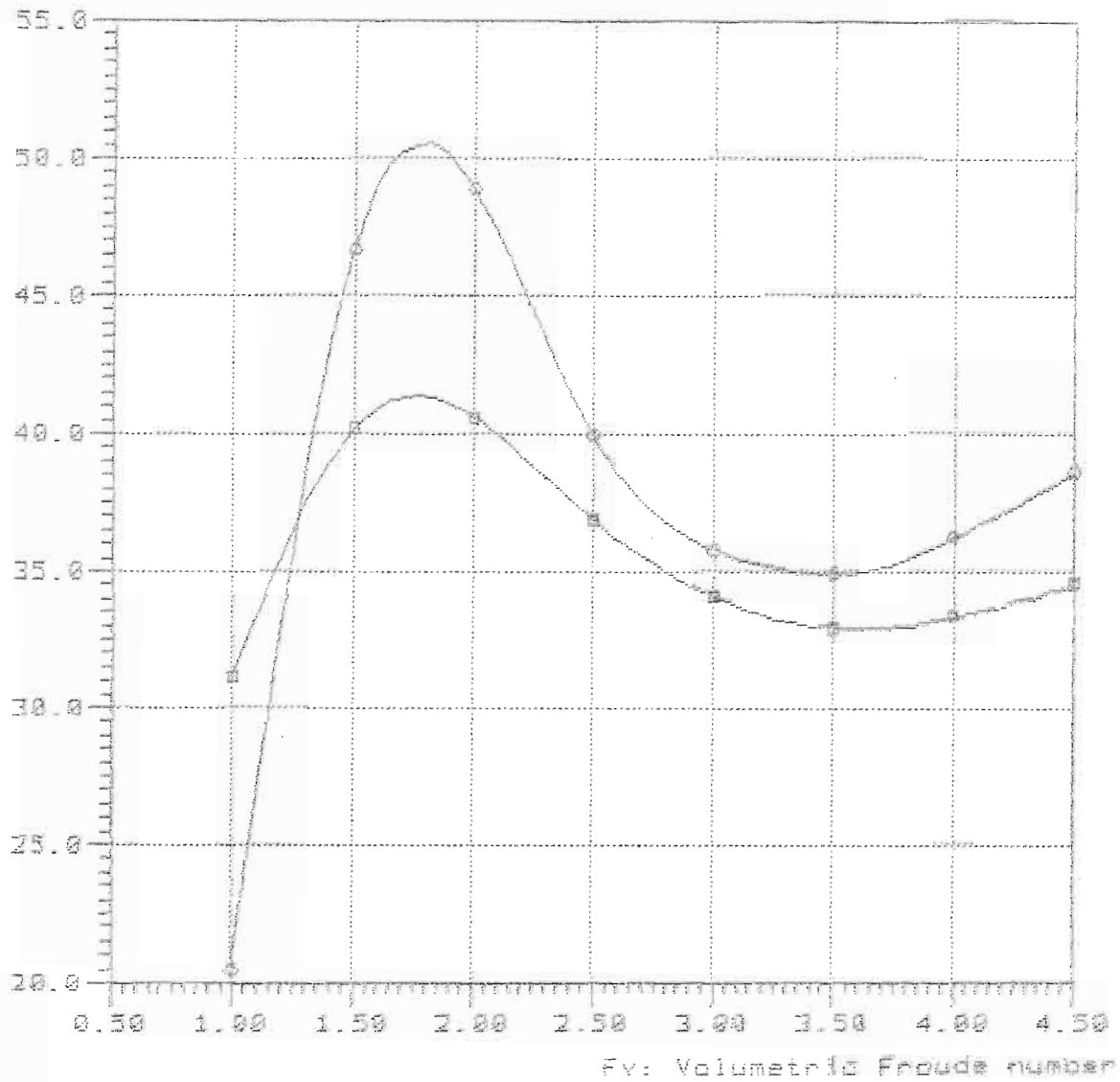
HydroComp, Inc.

File: 352-350.mdl

Date: 28 Feb 00

Time: 15:06

Rbare: Bare-hull resistance (lbs)





NavCad(tm) 3.1d

(c) Copyright 1995

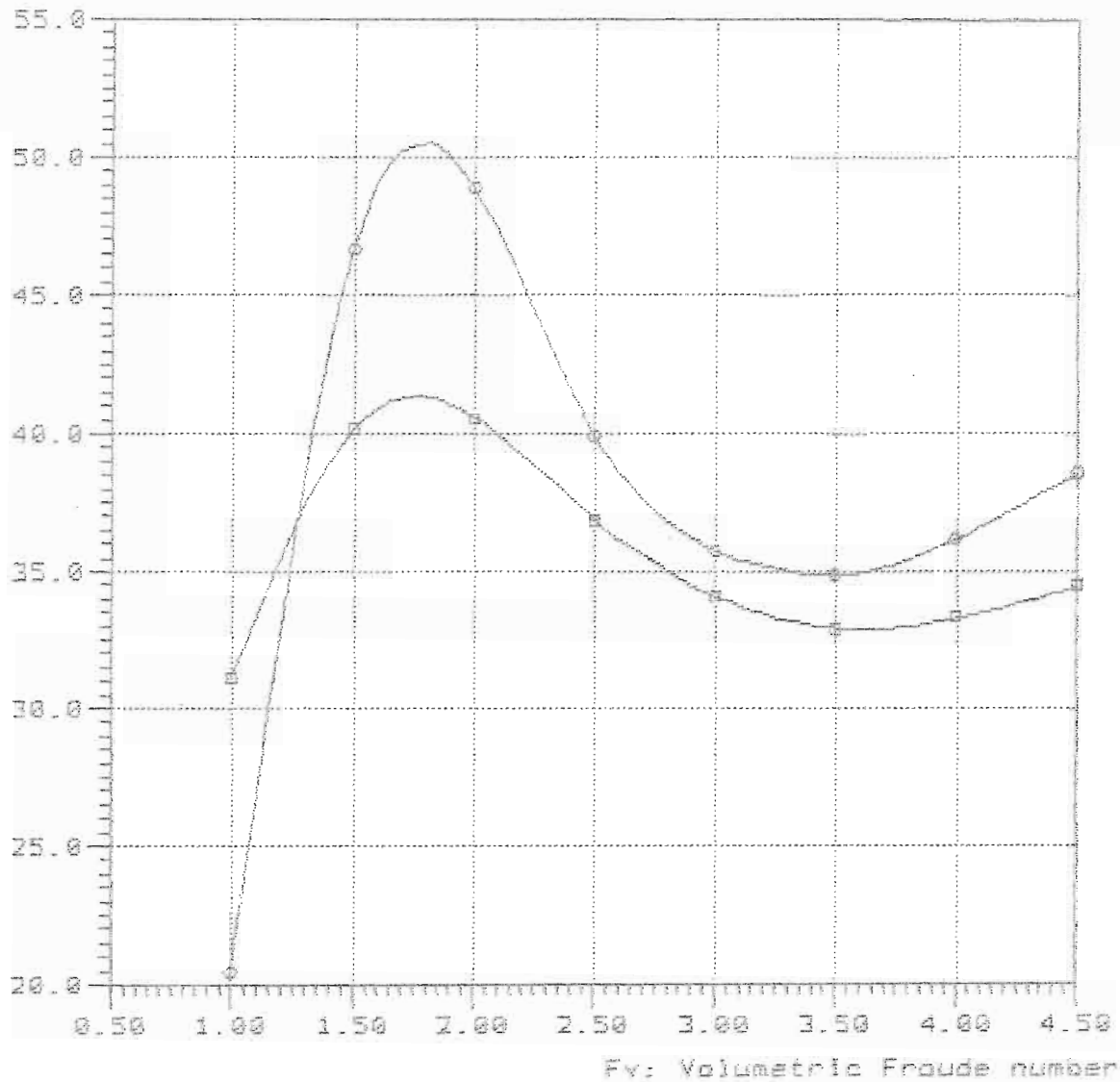
HydroComp, Inc.

File: 352-350.mdl

Date: 28 Feb 00

Time: 15:06

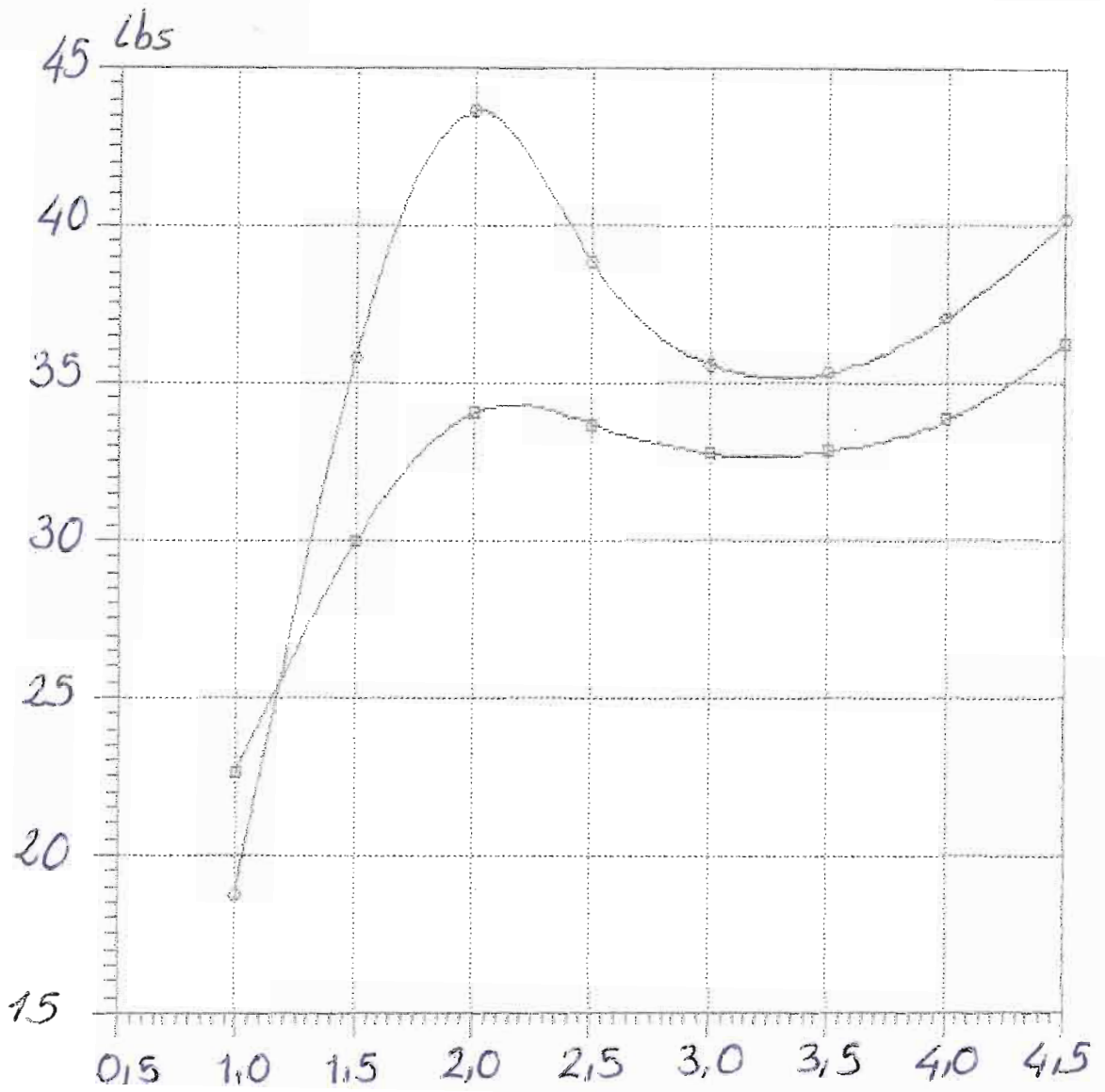
Rbare: Bare-hull resistance (lbs)



—□—

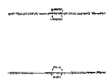
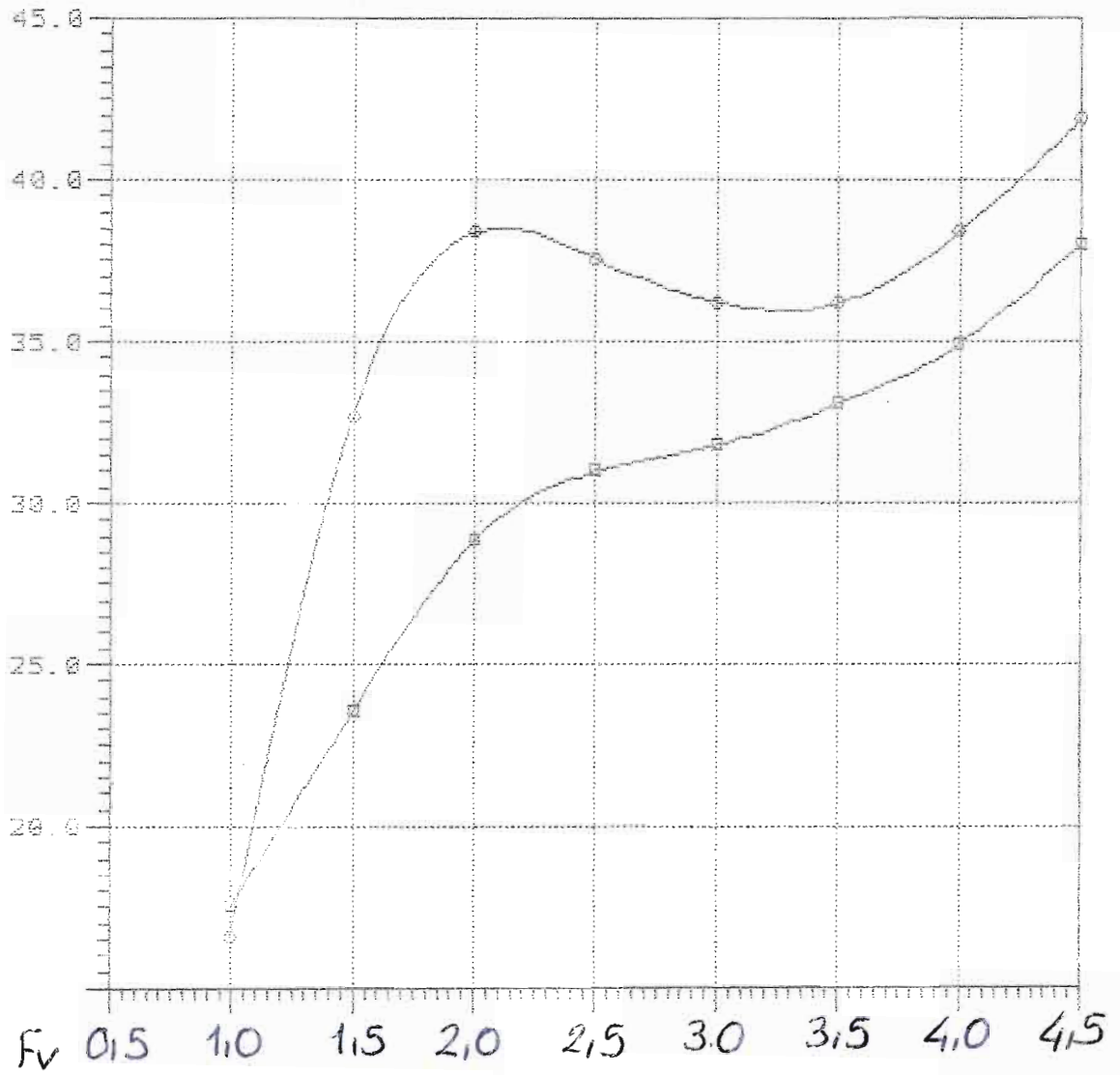
—○— MBK series Model=3 L/B=3.15 Cload=0.352 Log=0.350 1989

352-400



—□—  
—○—

Rbare: Bare-hull resistance (lbs)



84

&

85

Model = 84885  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 4.50 dm  
Ap = 55.50 sqdm  
Disp = 268.11 N  
Deadrise = 12.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 mm

Lpx/Bpx = 3.333  
Lpx/Ap = 4.054  
Ap /Vol = 6.115  
Lpx/Vol = 5.035  
Cvload = 0.292  
Lbload = 0.040  
Disp-Lpx = 225.73

NavCad(tm) 3.1d

Bare-hull resistance

File: 6-50-44a.mdl

(c) Copyright 1995

VR

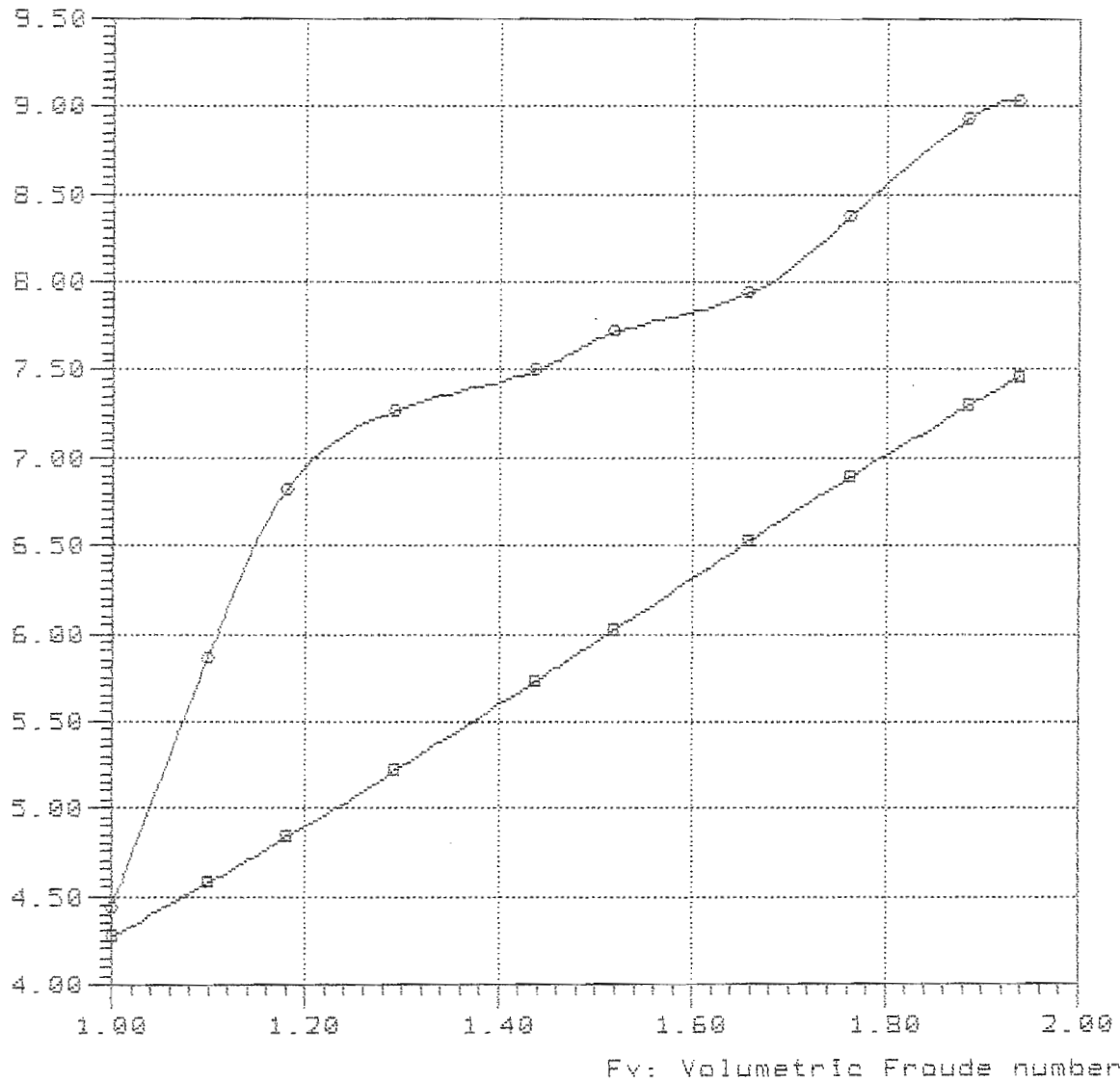
Date: 24 Feb 00

HydroComp, Inc.

Volumetric Froude number

Time: 10:12

Rbare: Bare-hull resistance (lba)



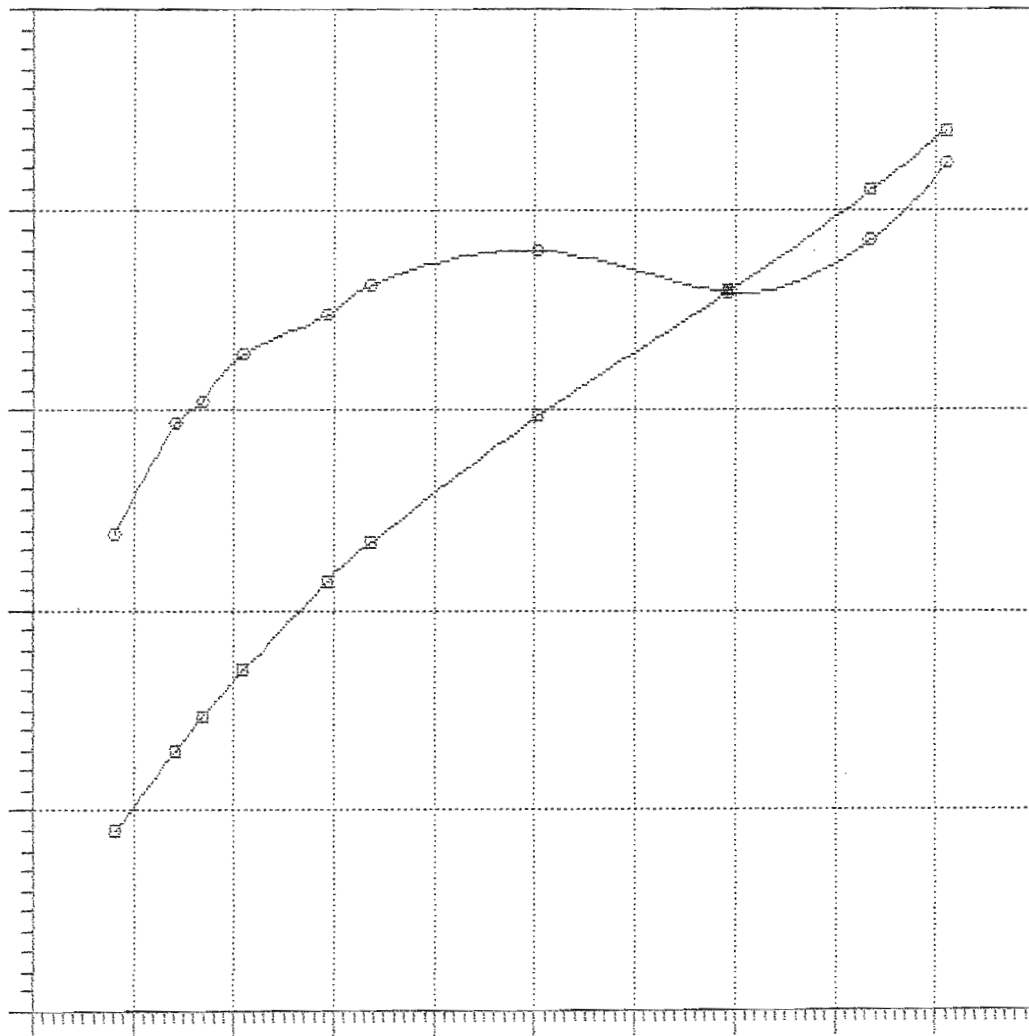
Curve legend

—■—

—○— Delft mdl=84 L/B=3.33 Ap/Vol=6.11 Lpx/Ap=4.054 Lp/Vol=5.00 Lcg/Lpx=0.443

84

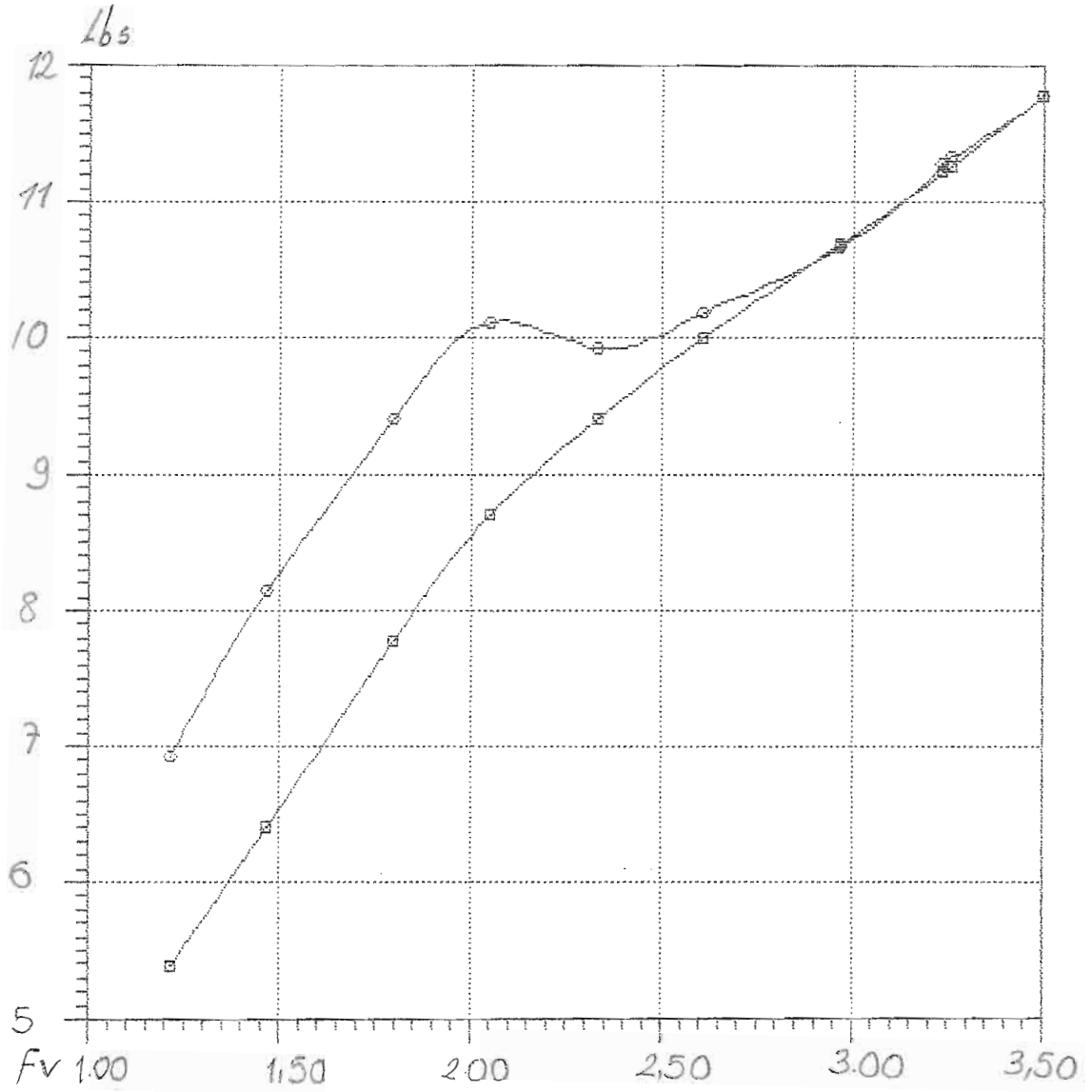
6-50-44B



— ○ —  
— □ —

85

6-50-44A



—□—  
—○—



Delft

186

187

188

189

190

Model = 186  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 10.00 dm  
Lwl = 9.75 dm  
Bpx = 5.00 dm  
Ap = 42.967 sqdm  
Disp = 345.41 N  
Deadrise = 25.00 degree  
Shaft Ang= 19.40 degree  
Vce = -46.00 mm

Lpx/Bpx = 2.000  
Lpx/Ap = 2.327  
Ap /Vol = 3.999  
Lpx/Vol = 3.085

**Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCI DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez. Teksir  
veya kopya edilemez ve her ne mak-  
sada olursa olsun maksadı dışında  
izinsiz kullanılamaz,**

NavCad(tm) 3.1d

(c) Copyright 1995

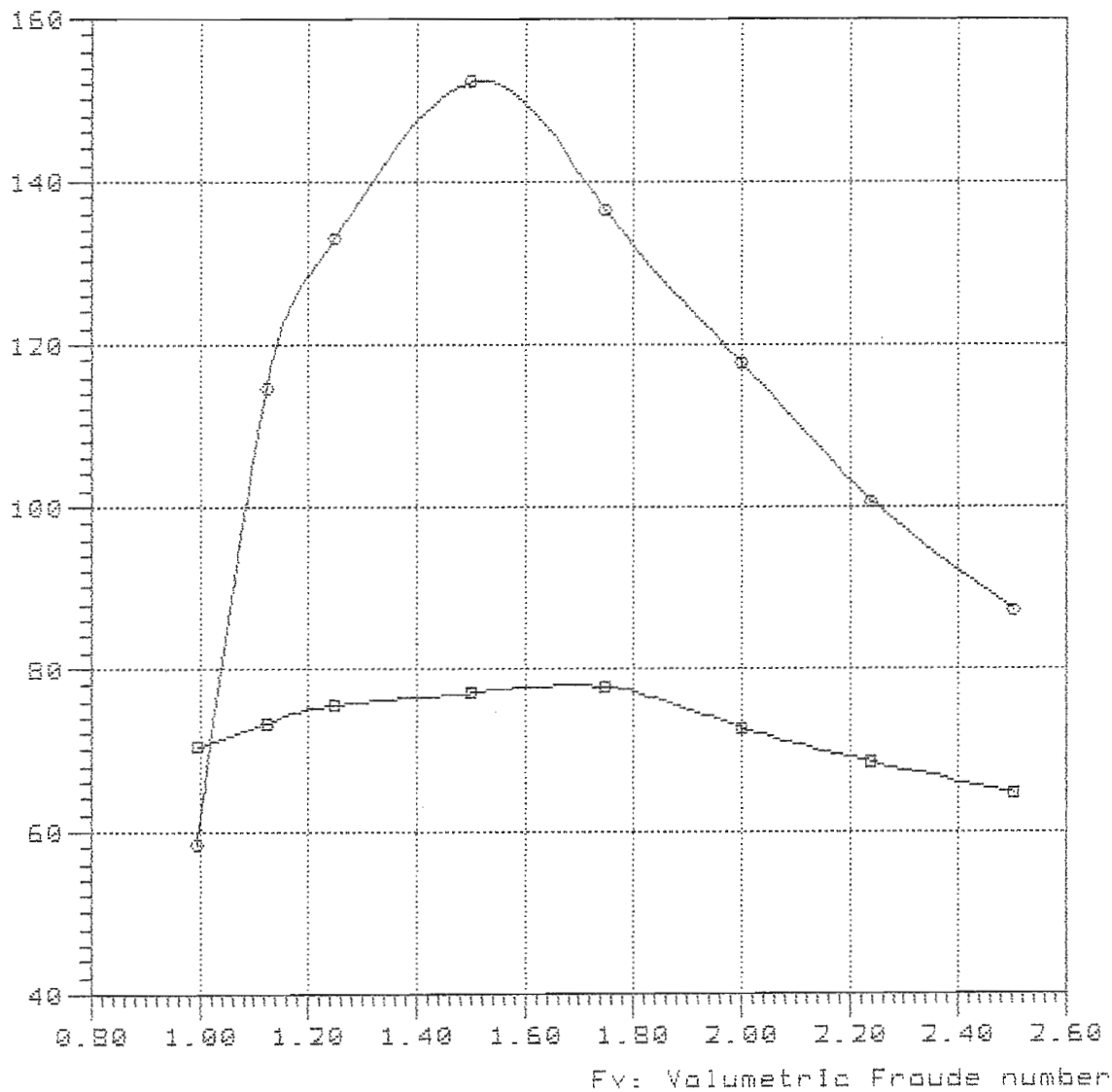
HydroComp, Inc.

File: 4-31-391.mdl

Date: 23 Feb 00

Time: 10:41

Rbare: Bare-hull resistance (N)



—■—

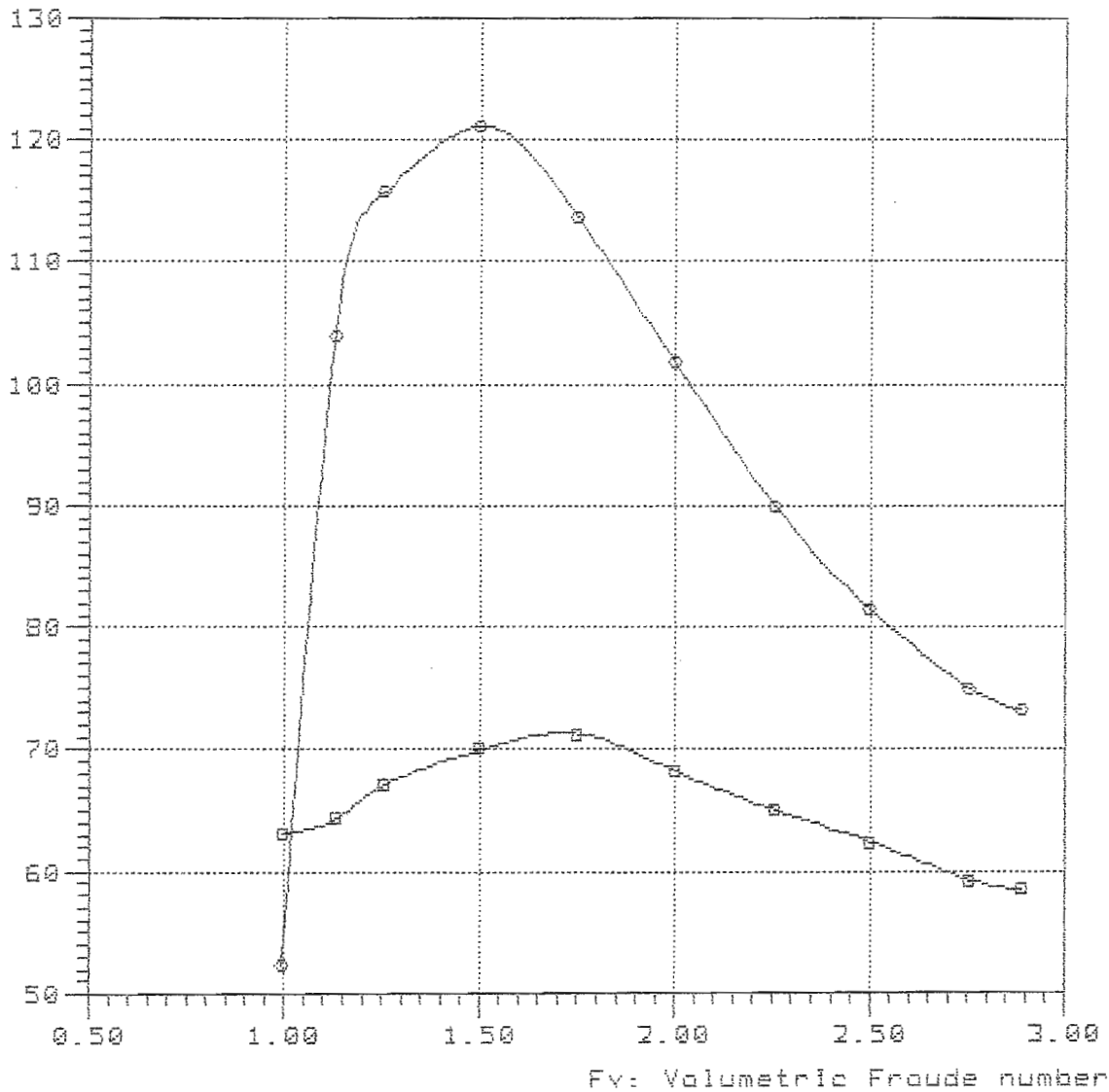
—○— Delft-186 Lpx/Bpx=2.0 Ap/Val=4.00 Val/Lpx=3.1 Lpx/Ap=2.33 Log/Lpx=0.391

NavCad(tm) 3.1d  
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HydroComp, Inc.

**Bare-hull resistance**  
vs.  
**Volumetric Froude number**

File: 4-31-431.mdl  
Date: 23 Feb 00  
Time: 10:44

Rbare: Bare-hull resistance (N)



Curve legend

—■—

—○— Delft-186 Lpx/Bpx=2.0 Ap/Vol=4.00 Vol/Lpx=3.1 Lpx/Ap=2.33 Lcg/Lpx=0.431

NavCad(tm) 3.1d

### Bare-hull resistance

File: 4-31-471.mdl

(c) Copyright 1995

vs.

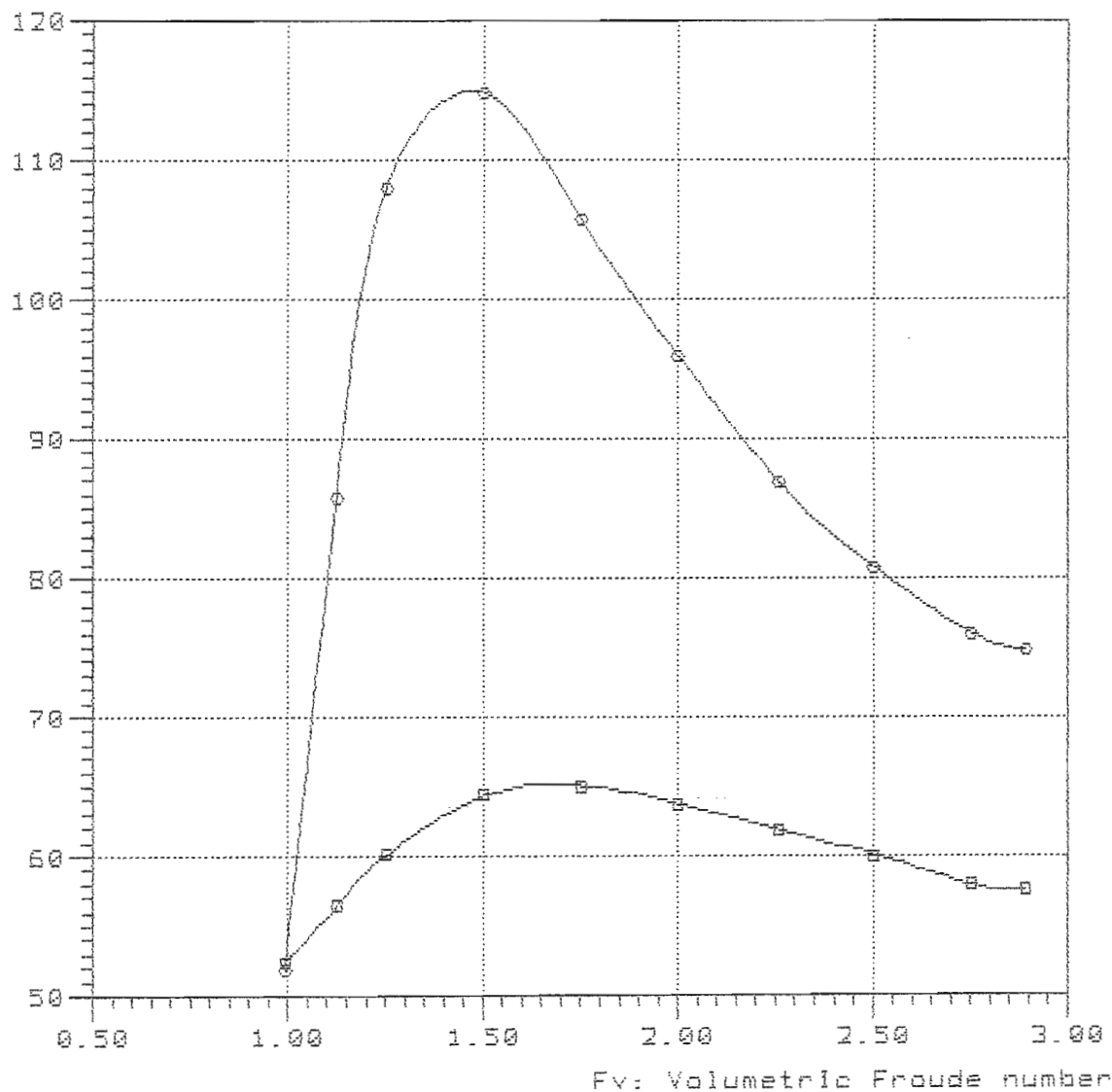
Date: 23 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 10:48

Rbare: Bare-hull resistance (N)



#### Curve legend

—■—

—○— Delft-186 Lpx/Bpx=2.0 Ap/Vol=4.00 Vol/Lpx=3.1 Lpx/Ap=2.33 Lcg/Lpx=0.471

Model = 186  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 10.00 dm  
Lwl = 9.75 dm  
Bpx = 5.00 dm  
Ap = 42.967 sqdm  
Disp = 214.25 N  
Deadrise = 25.00 degree  
Shaft Ang= 19.40 degree  
Vce = -46.00 dm

Lpx/Bpx = 2.000  
Lpx/Ap = 2.327  
Ap /Vol = 5.498  
Lpx/Vol = 3.617

NavCad(tm) 3.1d

### Bare-hull resistance

File: 6-36-351.mdl

(c) Copyright 1995

vs.

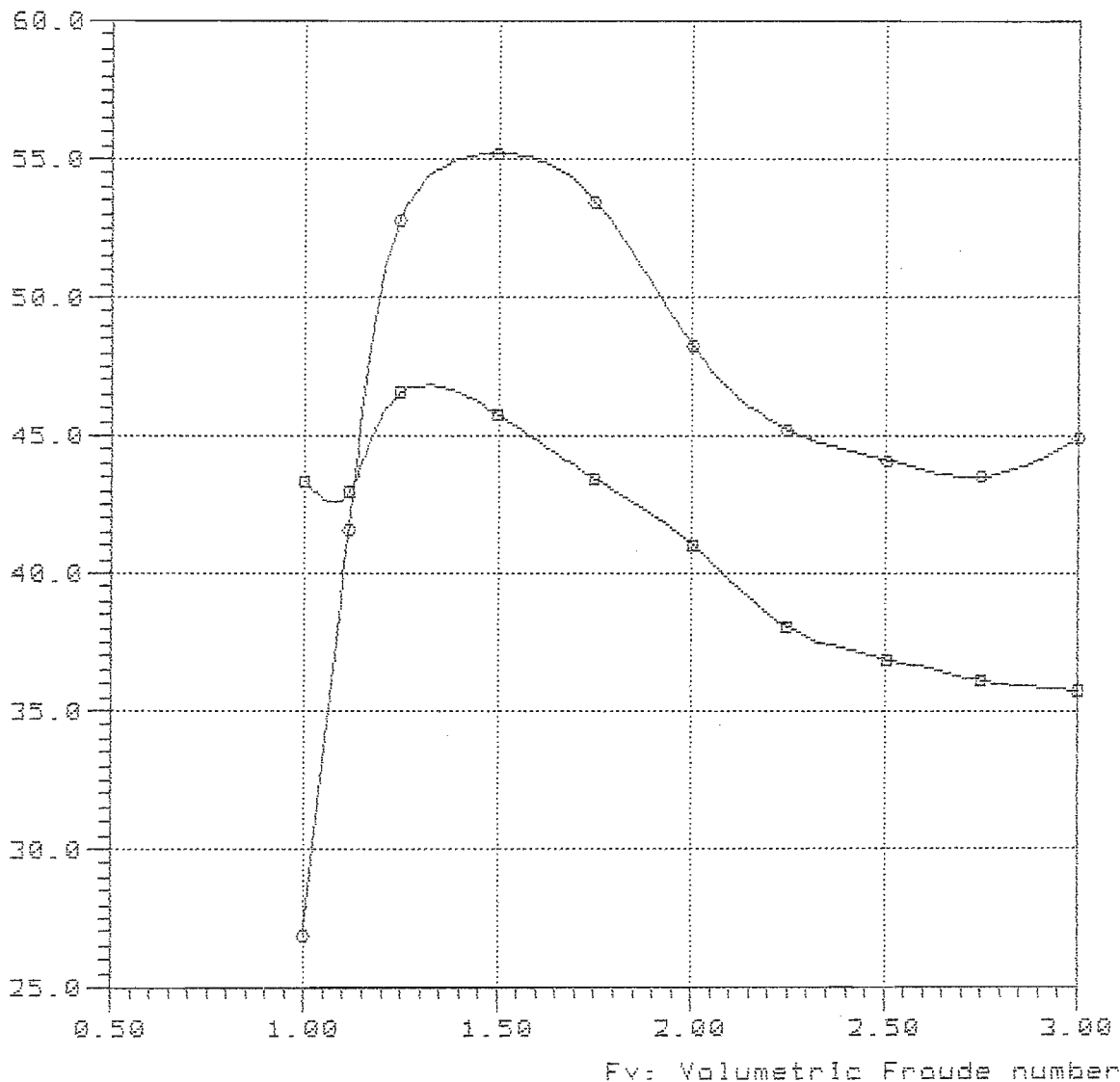
Date: 23 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 10:51

Rbare: Bare-hull resistance (N)



Fv: Volumetric Froude number

#### Curve legend

—□—

—○— Delft-186 Lpx/Bpx=2.0 Ap/Vol=5.50 Vol/Lpx=3.6 Lpx/Ap=2.33 Log/Lpx=0.351

NavCad(tm) 3.1d

(c) Copyright 1995

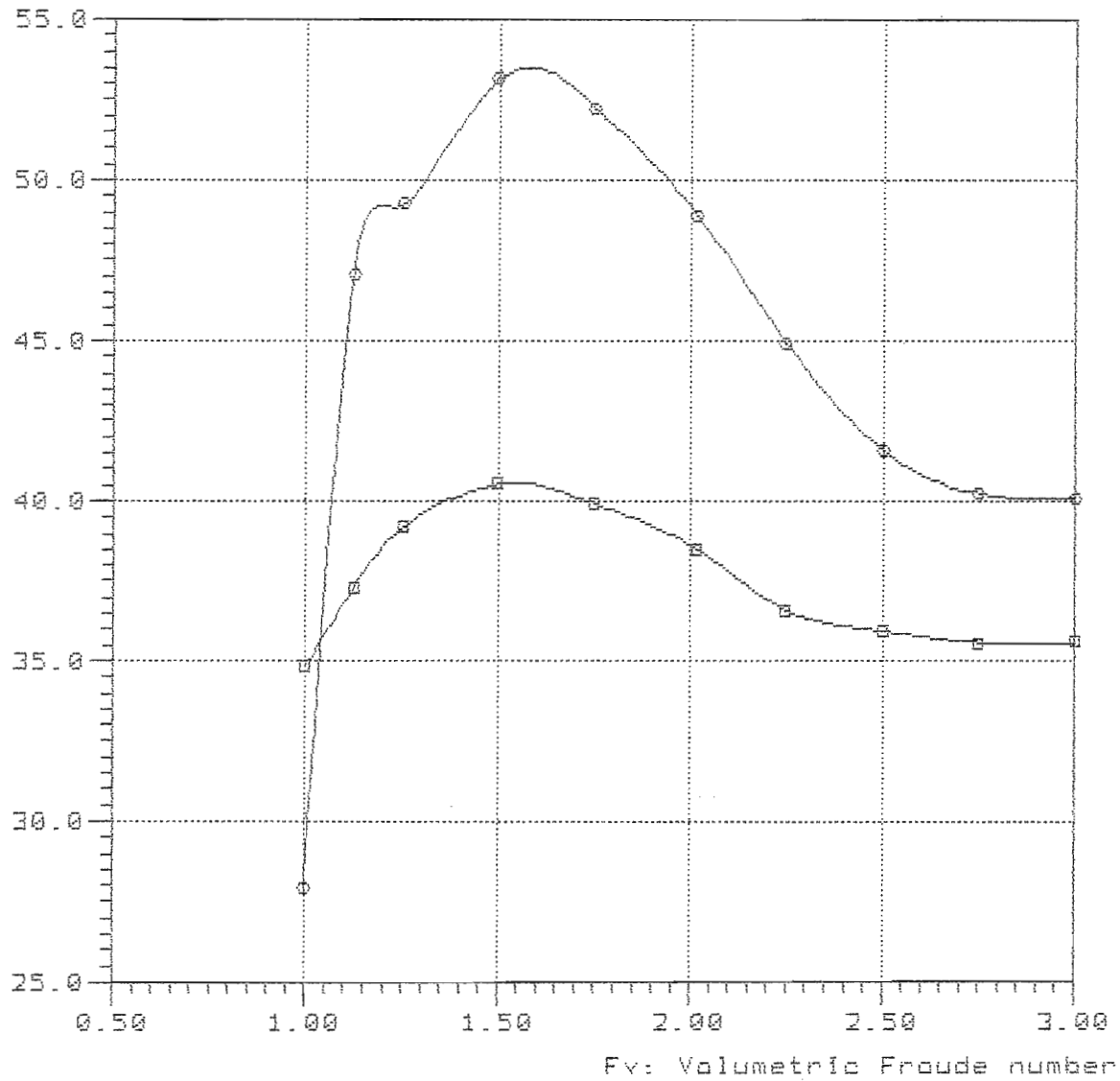
HydroComp, Inc.

File: 6-36-391.mdl

Date: 23 Feb 00

Time: 10:54

Rbare: Bare-hull resistance (N)



—■—

—○— Delft-186 Lpx/Bpx=2.0 Ap/Vol=5.50 Vol/Lpx=3.6 Lpx/Ap=2.33 Lcg/Lpx=0.391



NavCad(tm) 3.1d

(c) Copyright 1995

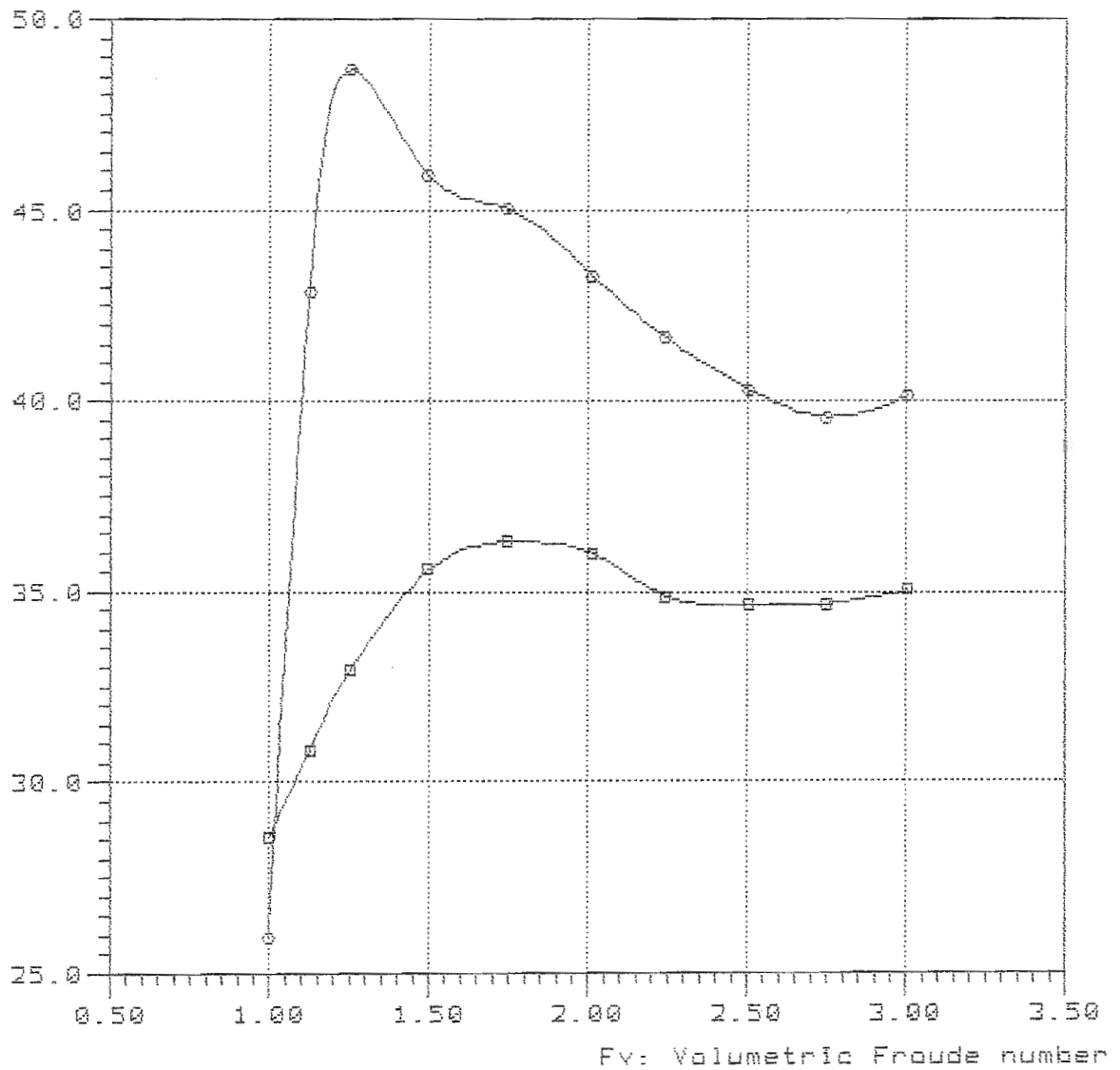
HydroComp, Inc.

File: 6-36-431.mdl

Date: 23 Feb 00

Time: 11:44

Rbare: Bare-hull resistance (N)



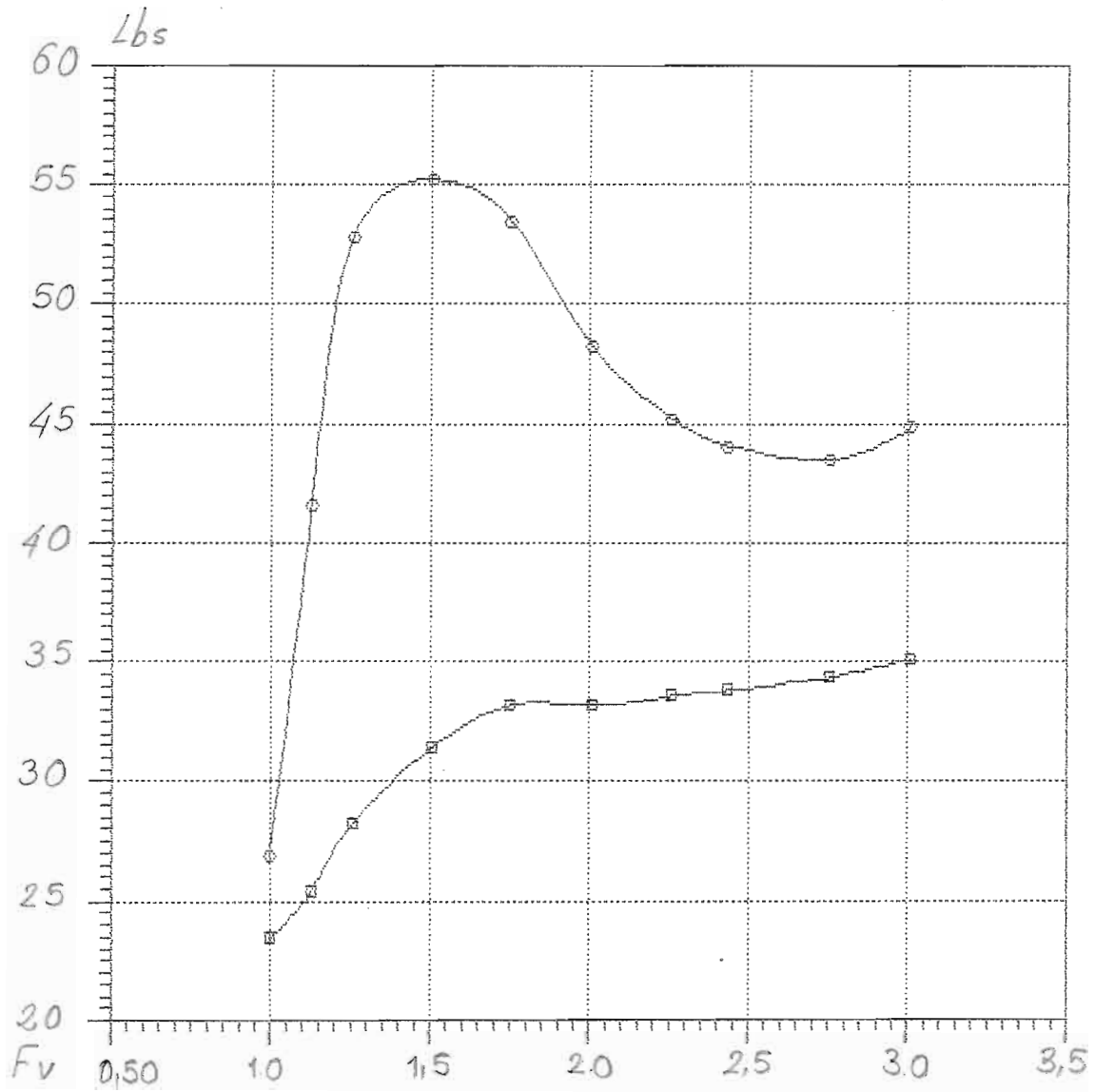
—■—

—○— Delft-186 Lpx/Bpx=2.0 Ap/Vol=5.50 Vol/Lpx=3.6 Lpx/Ap=2.33 Lcg/Lpx=0.431

File: 6-36-471.mdl

Date: 23 Feb 00

Time: 11:02



—□—

—○—

Model = 186  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 10.00 dm  
Lwl = 9.75 dm  
Bpx = 5.00 dm  
Ap = 42.967 sqdm  
Disp = 149.21 N  
Deadrise = 25.00 degree  
Shaft Ang= 19.40 degree  
Vce = -46.00 dm

Lpx/Bpx = 2.000  
Lpx/Ap = 2.327  
Ap /Vol = 6.998  
Lpx/Vol = 4.081

NavCad(tm) 3.1d

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HydroComp, Inc.

### Bare-hull resistance

vs.

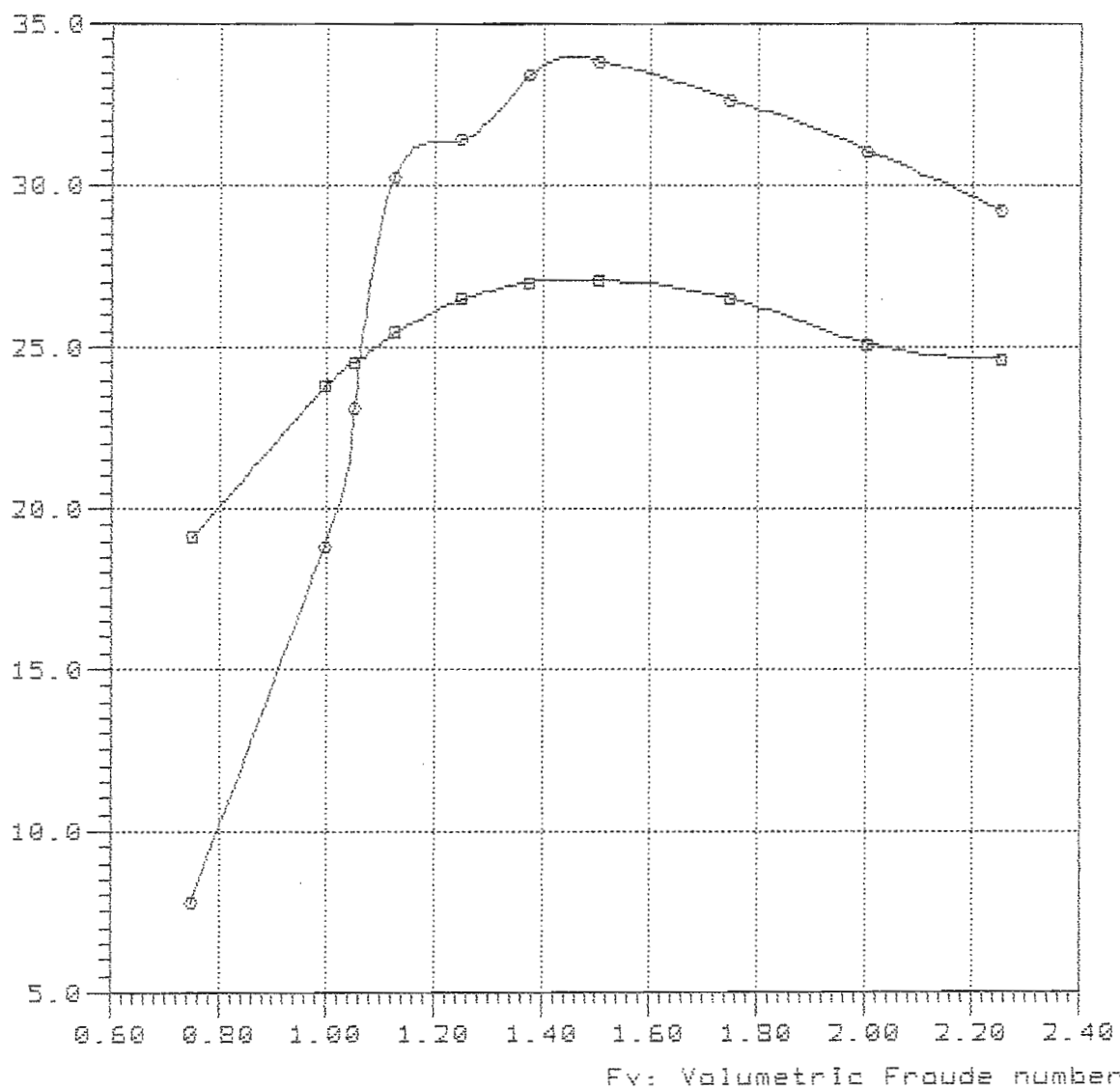
### Volumetric Froude number

File: 7-41-35a.mdl

Date: 23 Feb 00

Time: 11:51

Rbare: Bare-hull resistance (N)



#### Curve legend

—■—

—●— Delft-186 Lpx/Bpx=2.0 Ap/Val=7.00 Val/Lpx=4.10 Lpx/Ap=2.33 Lcg/Lpx=0.351

NavCad(tm) 3.1d

### Bare-hull resistance

File: 7-41-391.mdl

(c) Copyright 1985

vs.

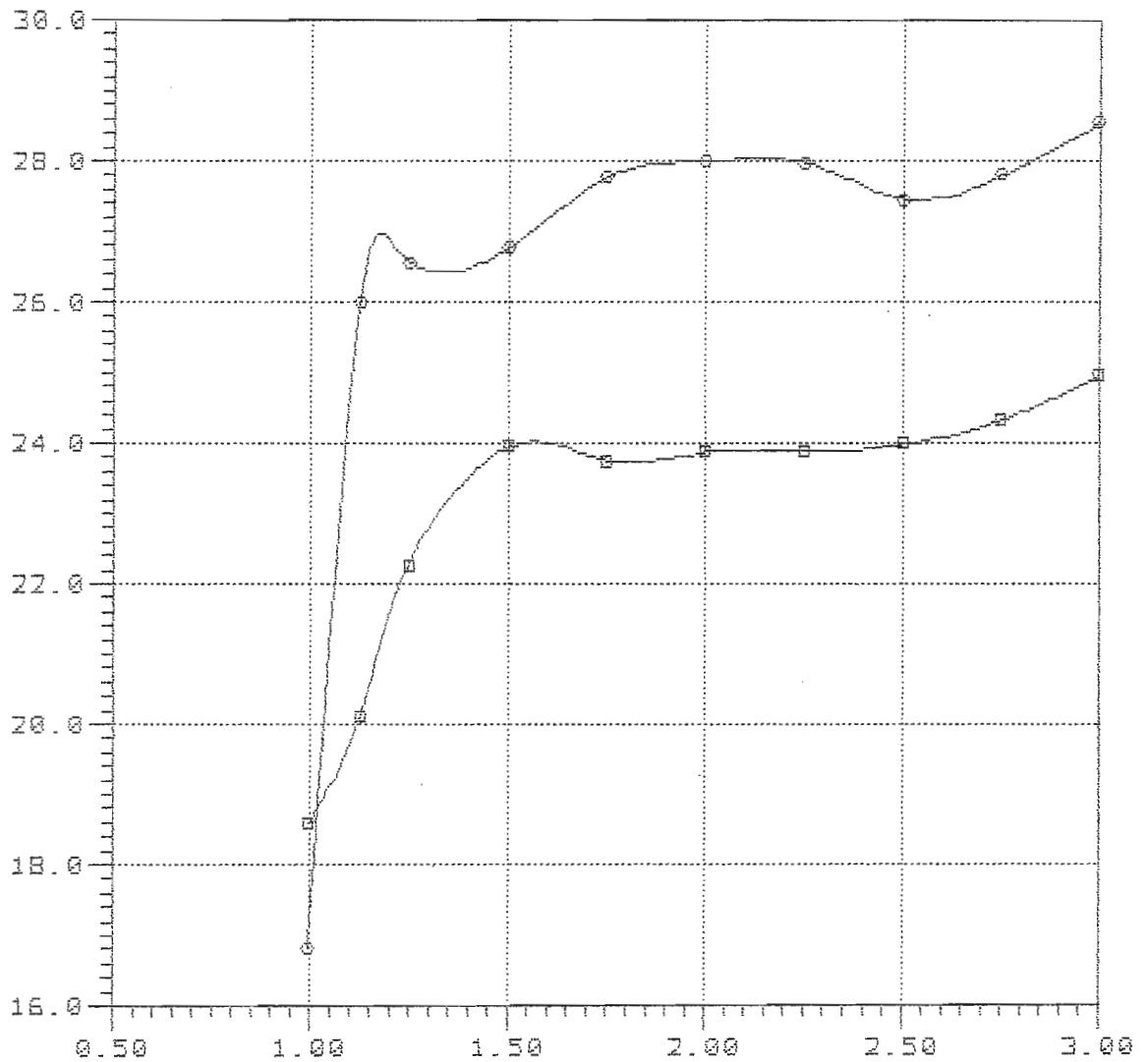
Date: 23 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 11:55

Rbare: Bare-hull resistance (N)



Fv: Volumetric Froude number

#### Curve legend

—■—

—●— Delft-186 Lpx/Bpx=2.0 Ap/Vol=7.00 Vol/Lpx=4.10 Lpx/Ap=2.33 Lcg/Lpx=0.391

NavCad(tm) 3.1d

### Bare-hull resistance

File: 7-41-431.mdl

(c) Copyright 1995

vs.

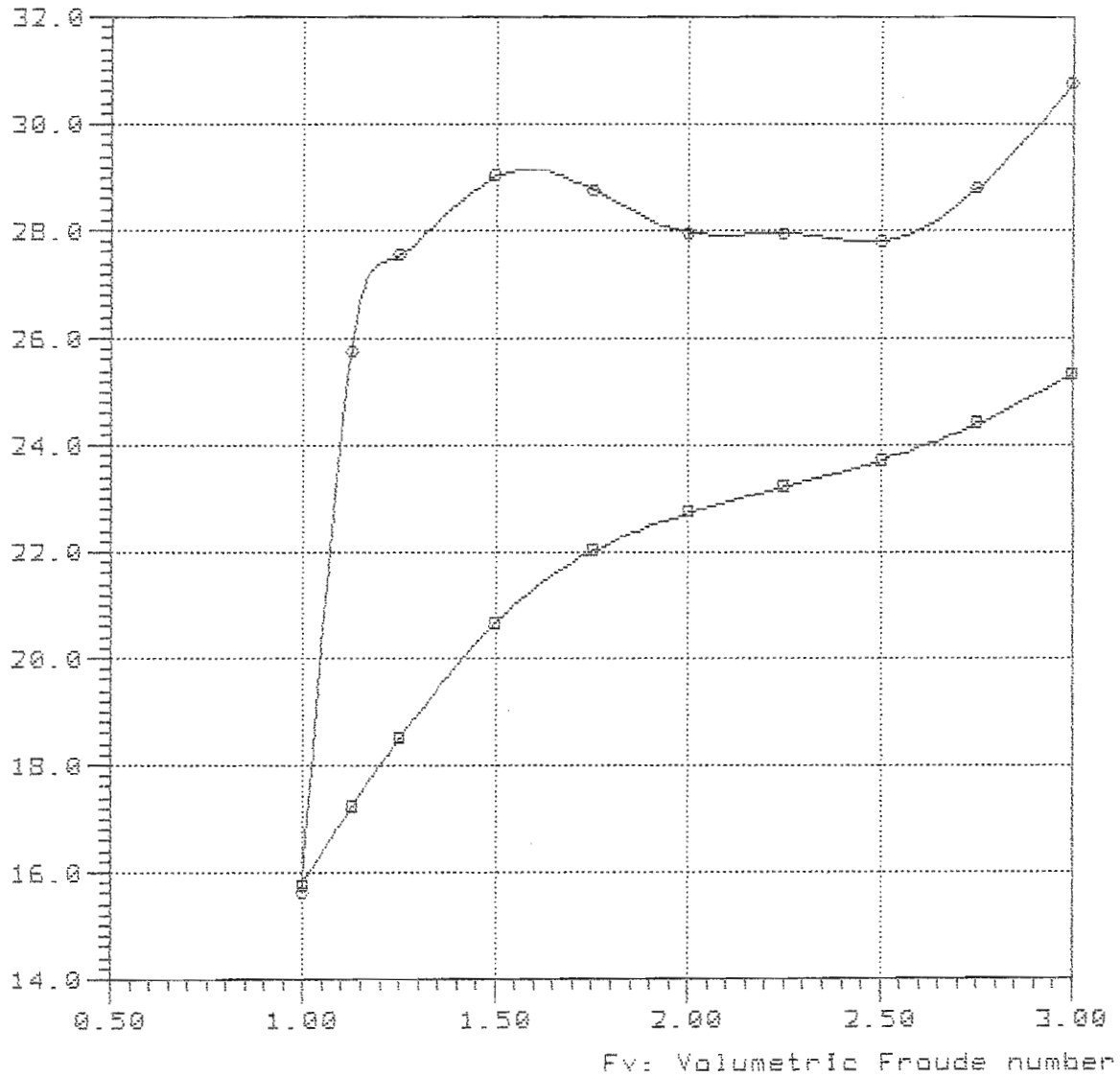
Date: 23 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 11:58

Rbare: Bare-hull resistance (N)

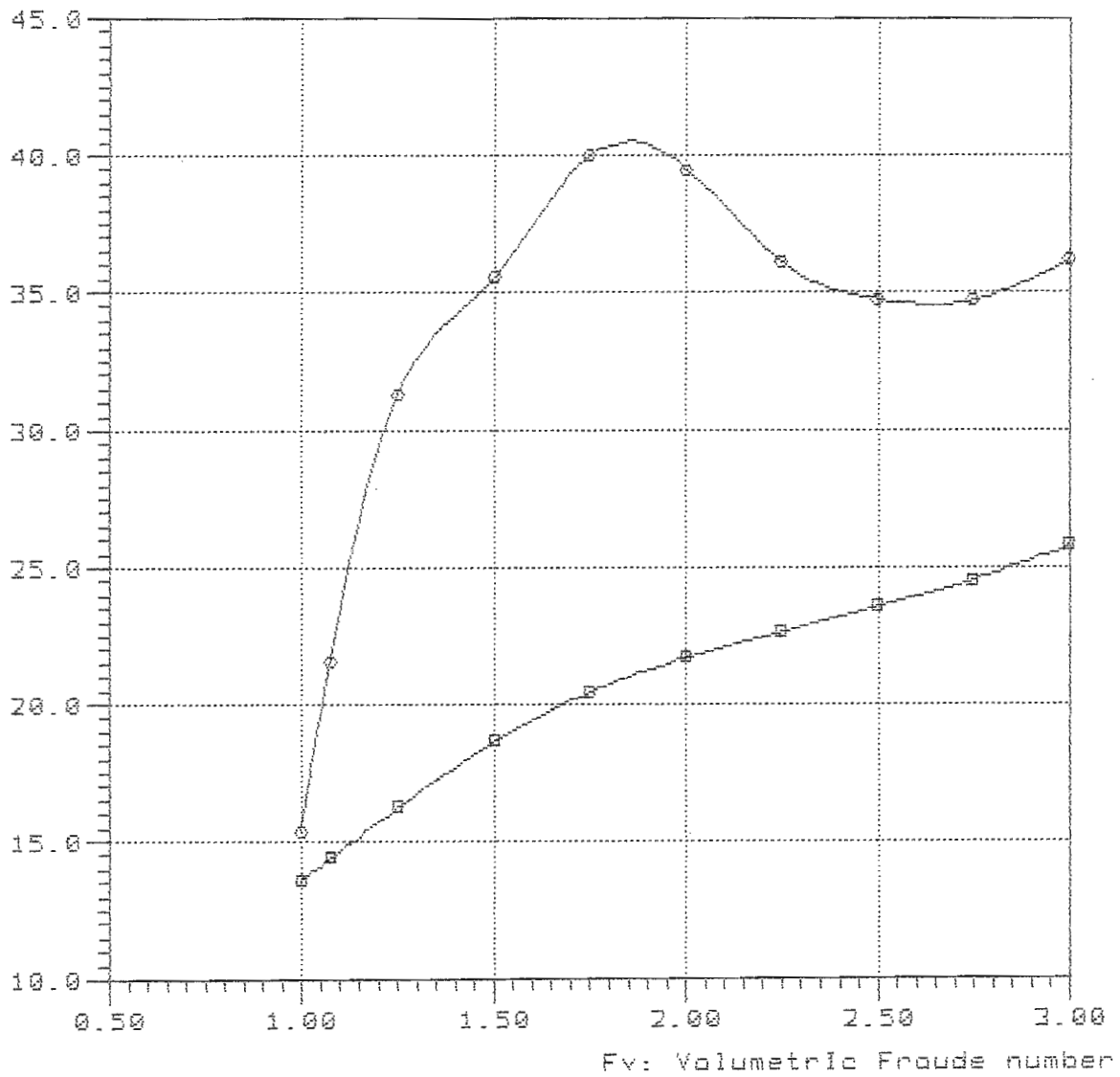


#### Curve legend

—■—

—●— Delft-186 Lpx/Bpx=2.0 Ap/Vol=7.00 Vol/Lpx=4.10 Lpx/Ap=2.33 Log/Lpx=0.431

Rbare: Bare-hull resistance (N)



—■—

—●— Delft-186 Lpx/Bpx=2.0 Ap/Val=7.00 Val/Lpx=4.10 Lpx/Ap=2.33 Log/Lpx=0.471

Model = 186  
Ref = DELFT  
Friction =ATTC Ca=0.0

Lpx = 10.00 dm  
Lwl = 9.75 dm  
Bpx = 5.00 dm  
Ap = 42.967 sqdm  
Disp = 111.44 N  
Deadrise = 25.00 degree  
Shaft Ang= 19.40 degree  
Vce = -46.00 dm

Lpx/Bpx = 2.000  
Lpx/Ap = 2.327  
Ap /Vol = 8.501  
Lpx/Vol = 4.498

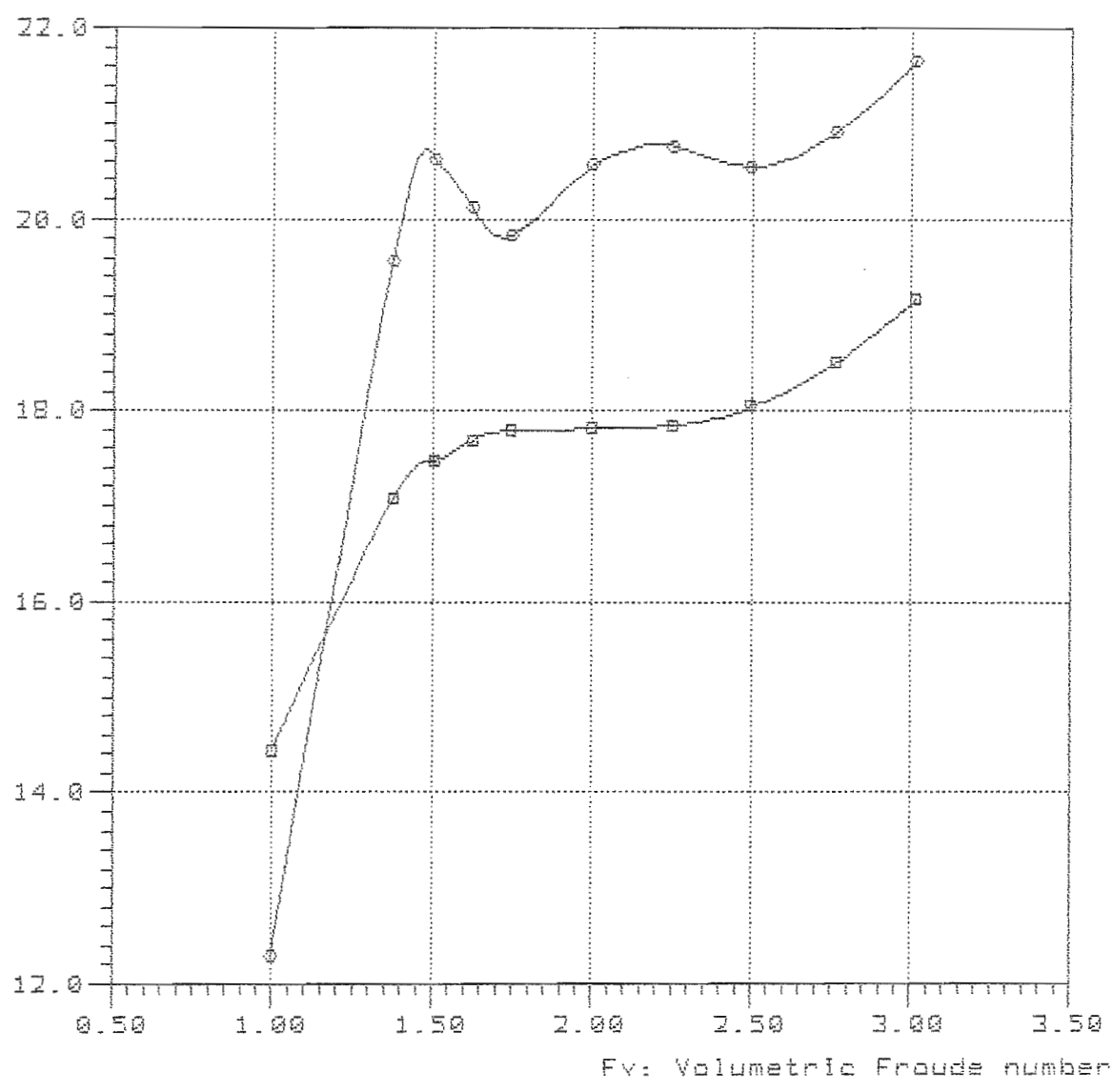


NavCad(tm) 3.1d  
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HydroComp, Inc.

**Bare-hull resistance**  
vs.  
**Volumetric Froude number**

File: 9-45-351.mdl  
Date: 23 Feb 88  
Time: 12:06

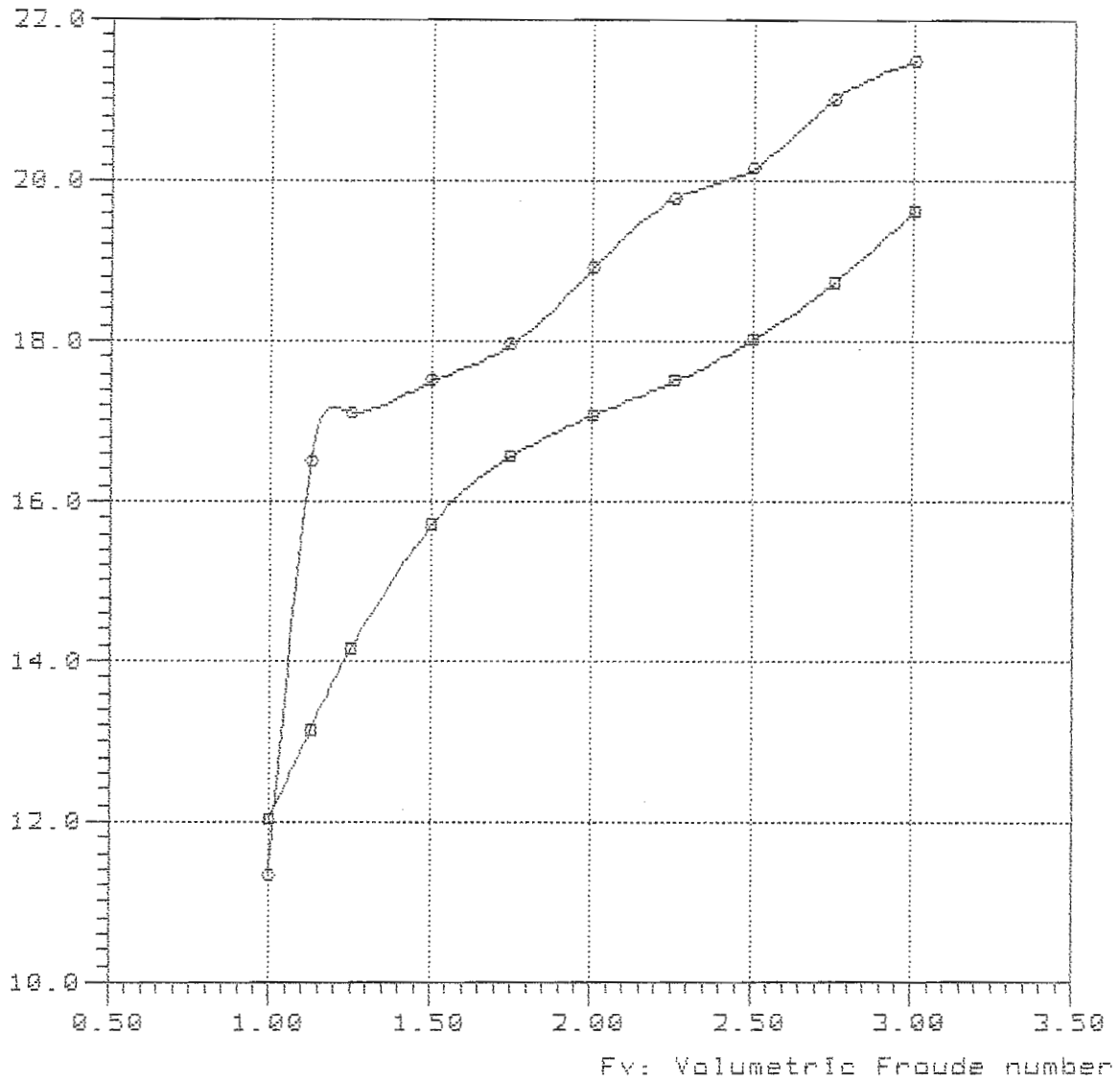
Rbare: Bare-hull resistance (N)



Curve legend

- 
- Delft-186 Lpx/Bpx=2.0 Ap/Vol=8.50 Vol/Lpx=4.50 Lpx/Ap=2.33 Log/Lpx=0.351

Rbare: Bare-hull resistance (N)



—■—

—○— Delft-186 Lpx/Bpx=2.0 Ap/Vol=8.50 Vol/Lpx=4.50 Lpx/Ap=2.33 Lcg/Lpx=0.391

NavCad(tm) 3.1d

(c) Copyright 1995

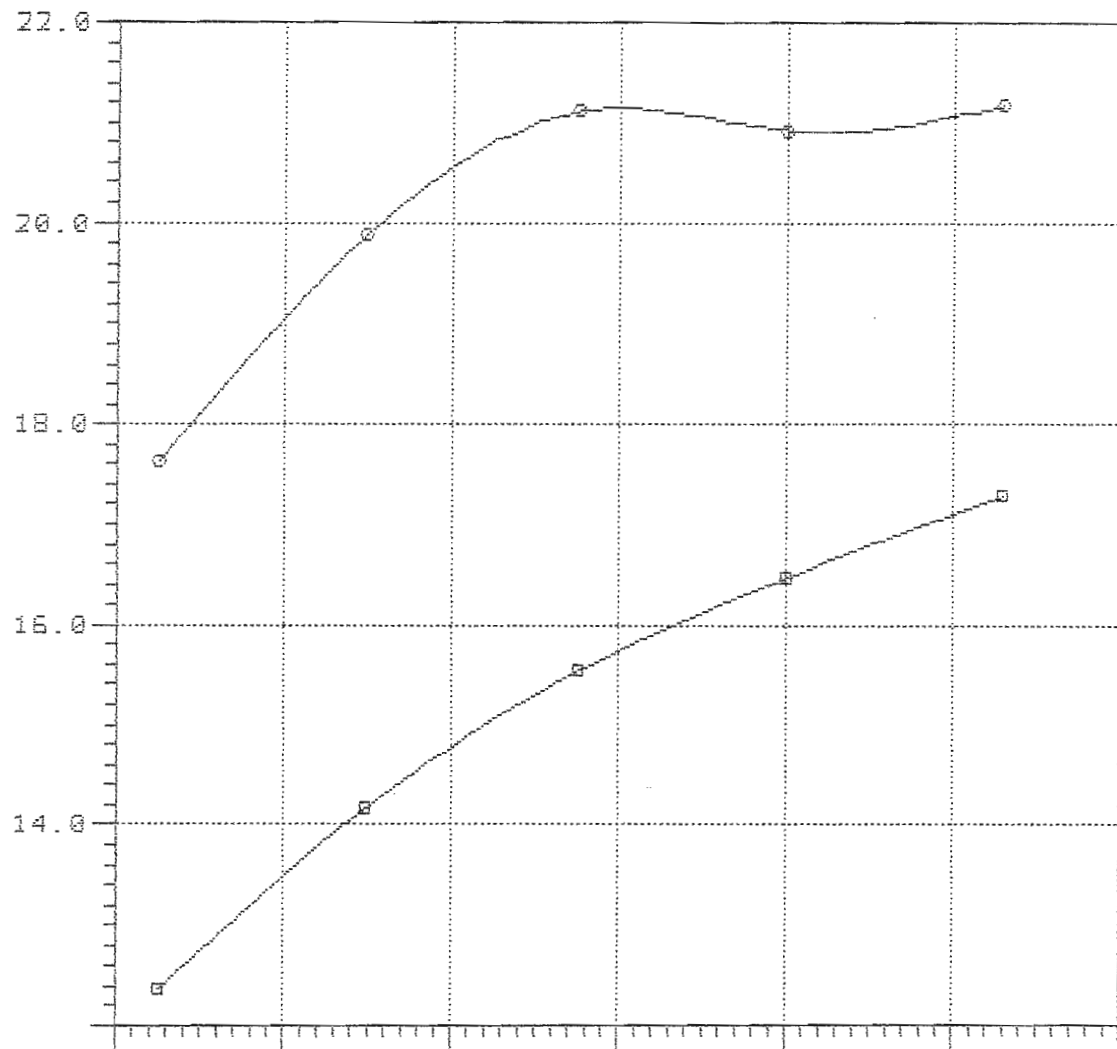
HydroComp, Inc.

File: 9-45-431.mdl

Date: 23 Feb 00

Time: 12:13

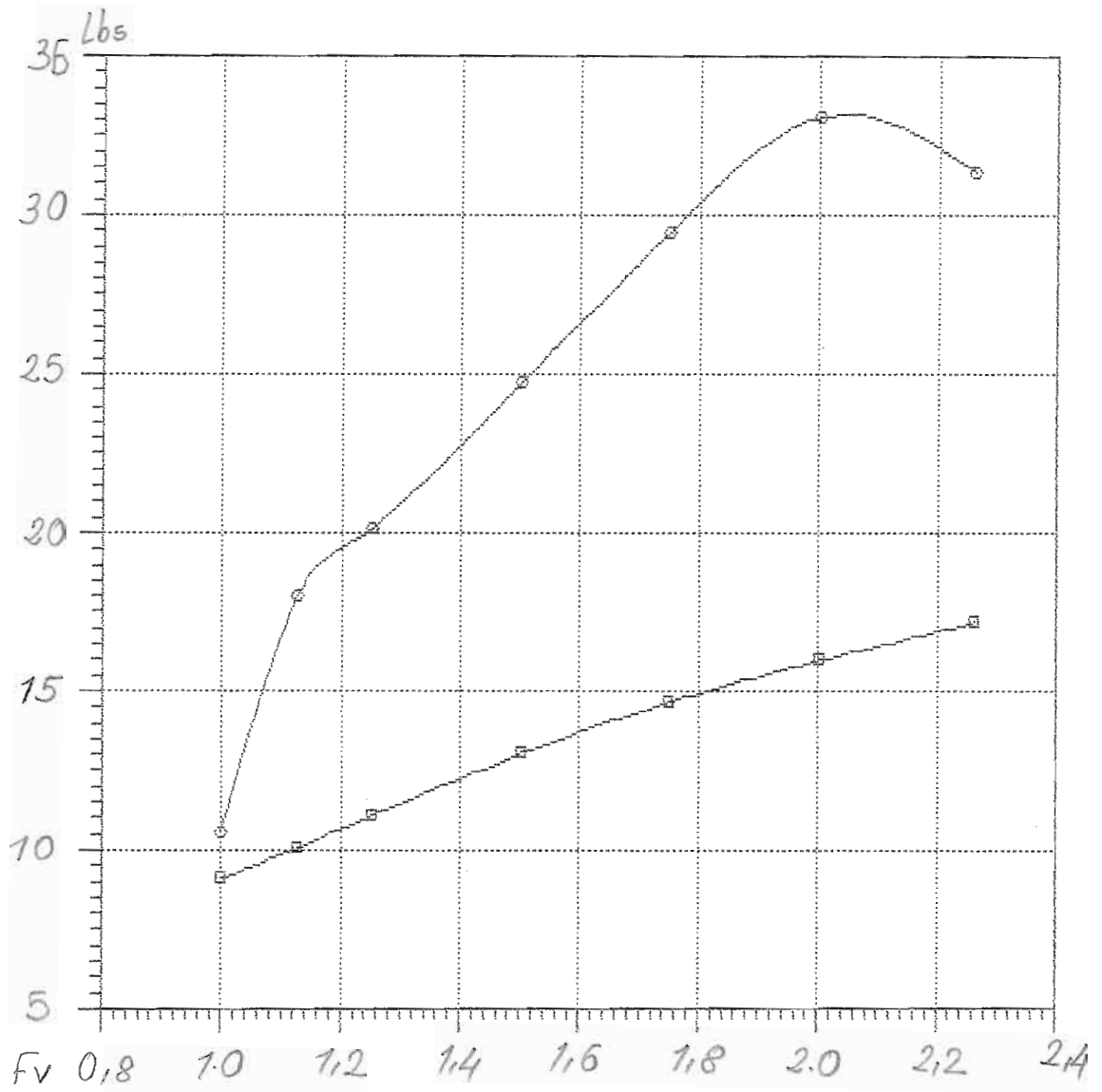
Rbare: Bare-hull resistance (N)



—■—

—○—

9-45-471



—□—  
—○—

Model = 187  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 12.50 dm  
Lwl = 12.19 dm  
Bpx = 4.08 dm  
Ap = 42.77 sqdm  
Disp = 343.06 N  
Deadrise = 25.00 degree  
Shaft Ang= 12.97 degree  
Vce = -37.40 mm

Lpx/Bpx = 3.064  
Lpx/Ap = 3.653  
Ap /Vol = 3.999  
Lpx/Vol = 3.865

NavCad(tm) 3.1d

(c) Copyright 1995

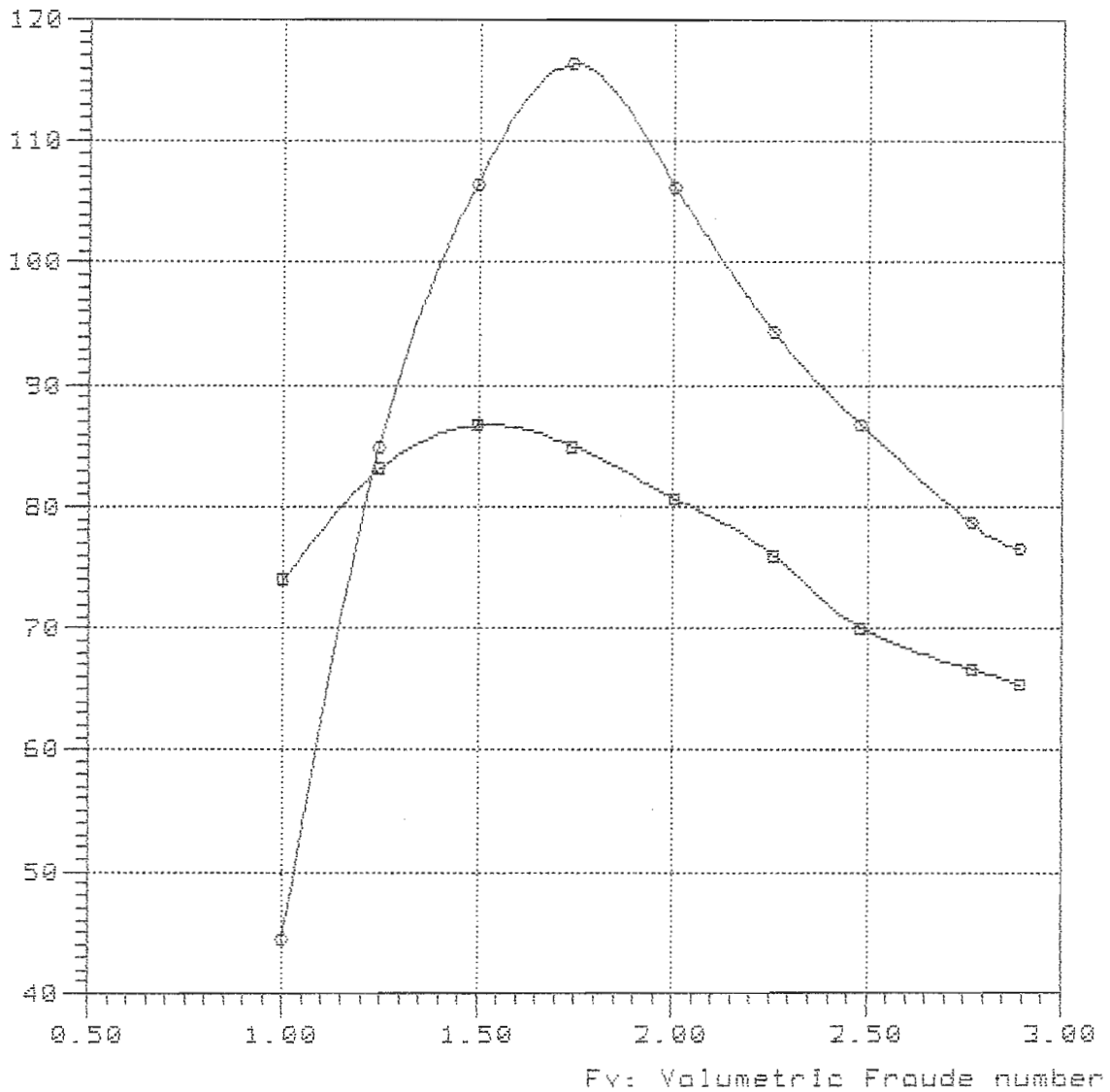
HydroComp, Inc.

File: 4-39-329.mdl

Date: 23 Feb 00

Time: 12:21

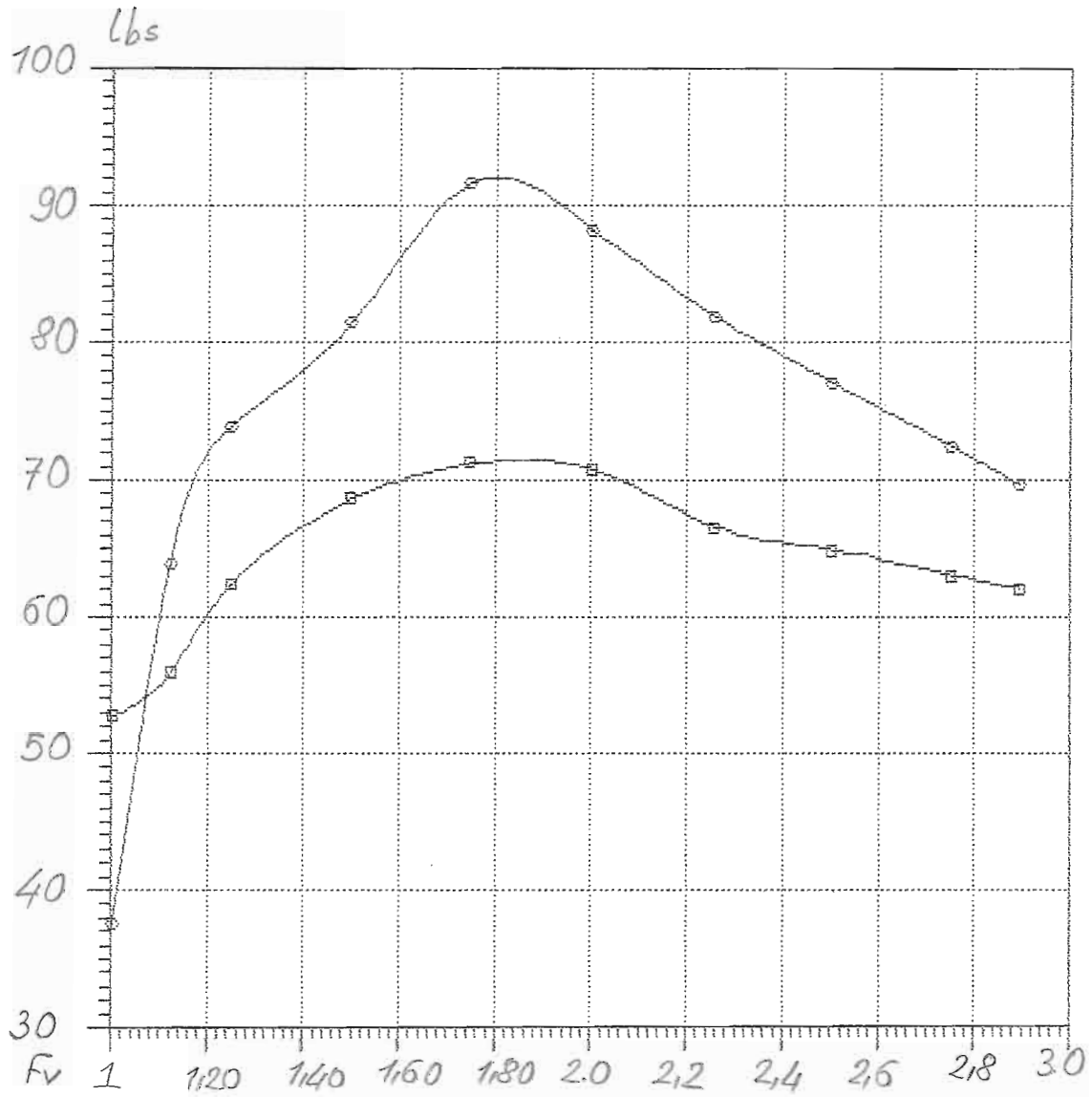
Rbare: Bare-hull resistance (N)



—■—

—○— Delft-187 Lpx/Bpx=3.06 Ap/Vol=4.00 Vol/Lpx=3.9 Lpx/Ap=3.65 Lcg/Lpx=0.329

4-39-379



—□—  
—□—

NavCad(tm) 3.1d

Bare-hull resistance

File: 4-39-429.mdl

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vs.

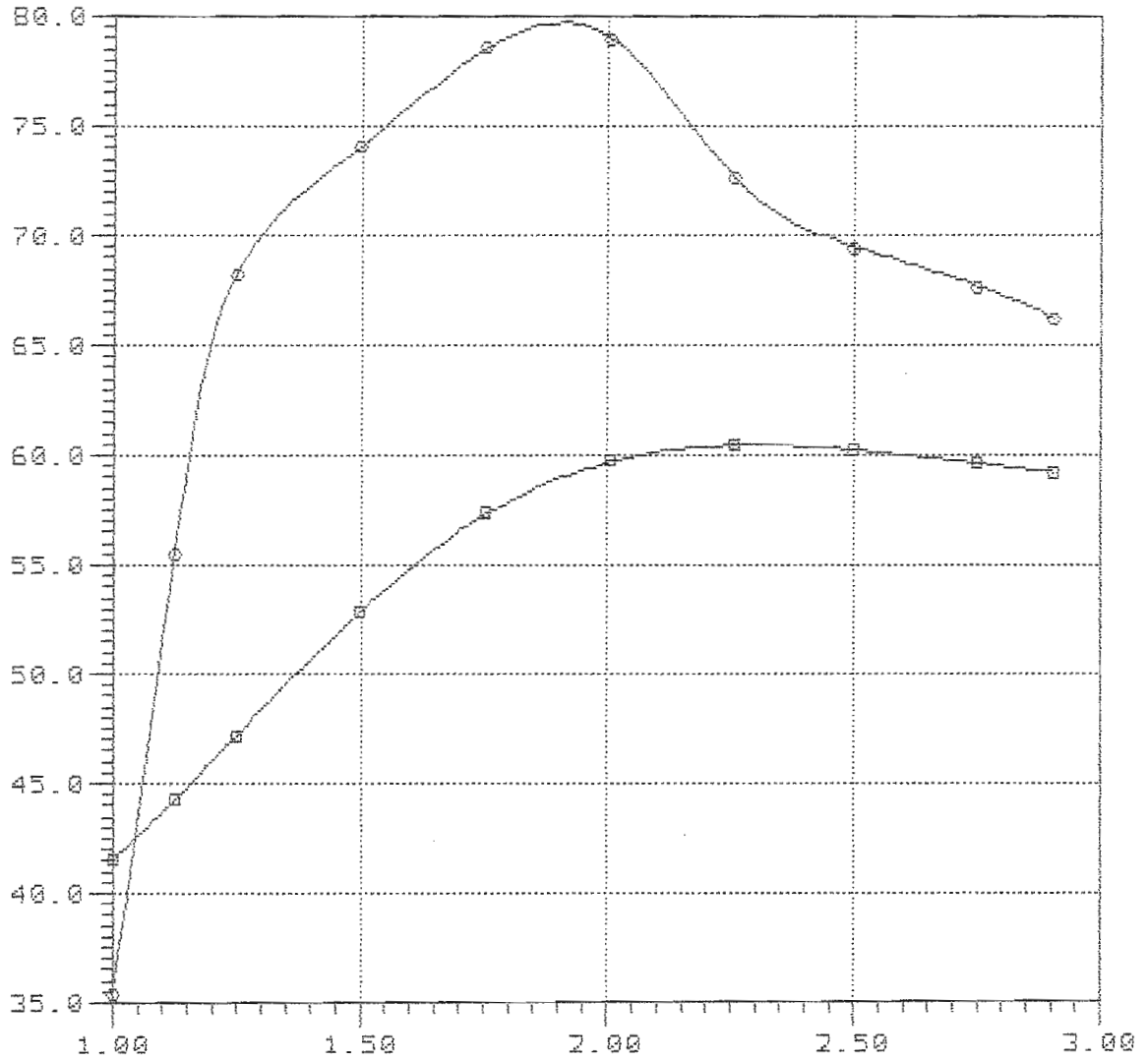
Date: 23 Feb 00

HydroComp, Inc.

Volumetric Froude number

Time: 12:27

Rbare: Bare-hull resistance (N)



Fv: Volumetric Froude number

Curve legend

—■—

—○— Delft-187 Lpx/Bpx=3.06 Ap/Vol=4.00 Vol/Lpx=3.9 Lpx/Ap=3.65 Lcg/Lpx=0.429



NavCad(tm) 3.1d

### Bare-hull resistance

File: 4-39-47a.mdl

(c) Copyright 1995

vs.

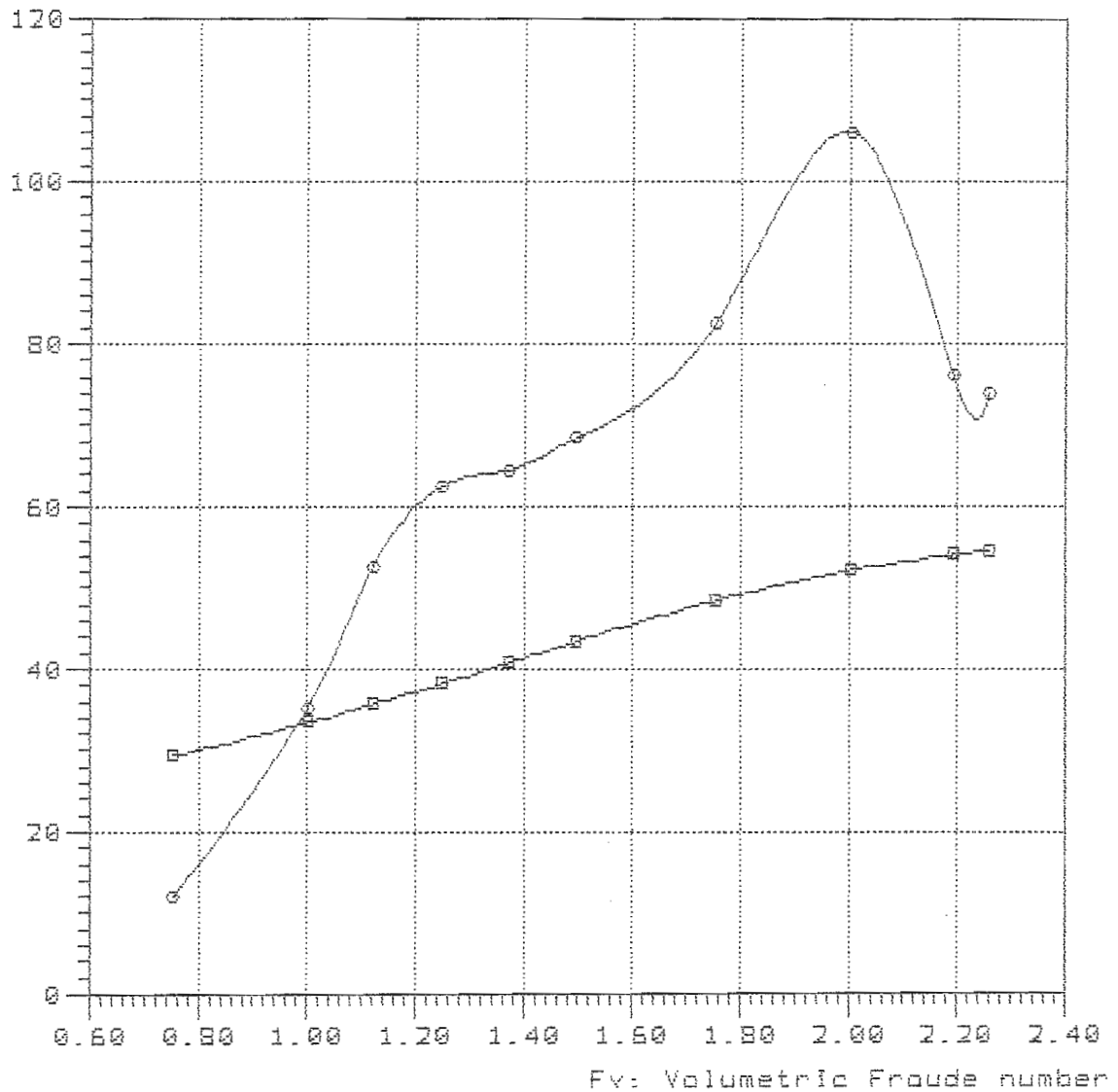
Date: 23 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 12:30

Rbare: Bare-hull resistance (N)

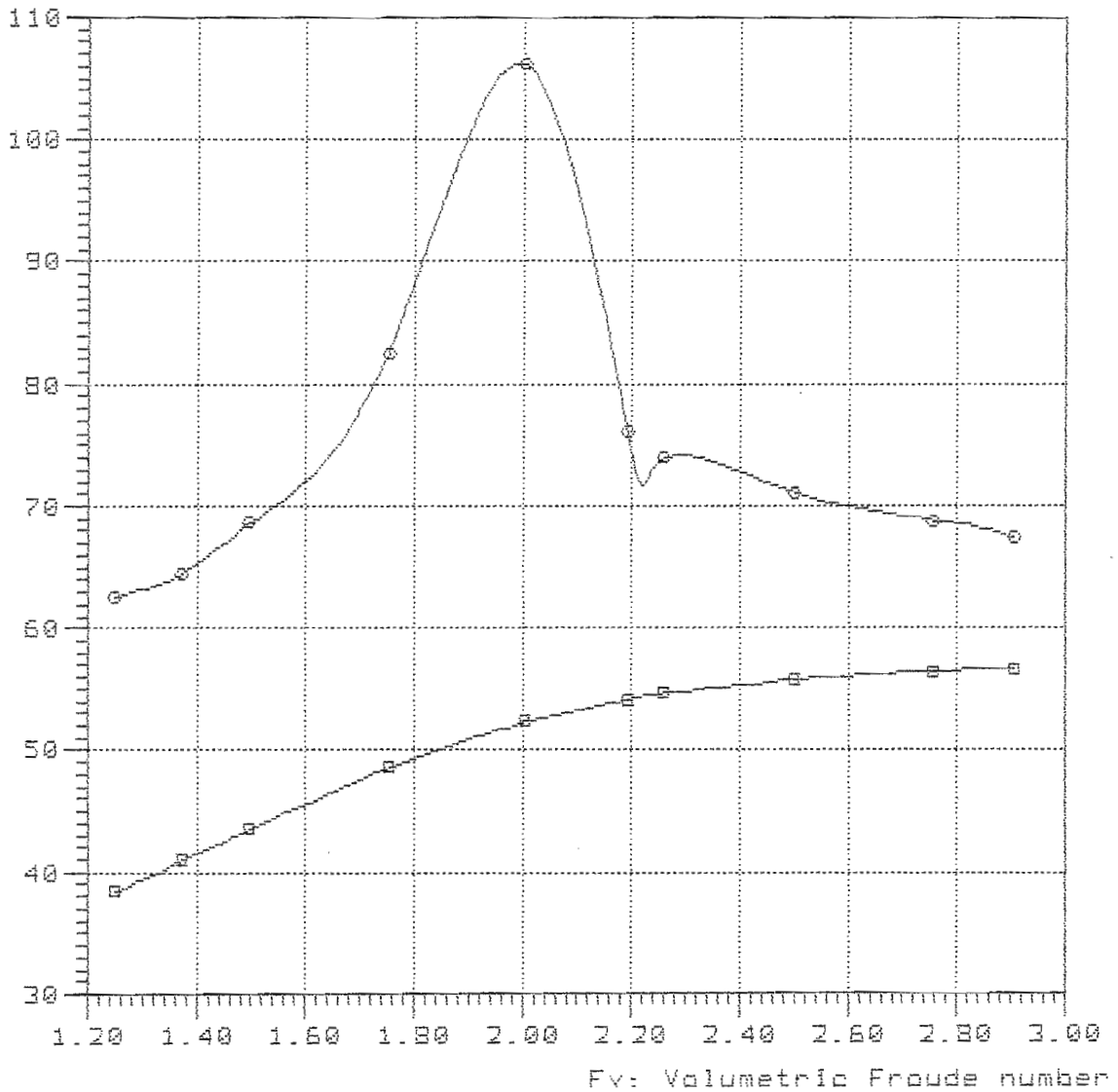


#### Curve legend

—■—

—●— Delft-187 Lpx/Bpx=3.06 Ap/Vol=4.00 Vol/Lpx=3.9 Lpx/Ap=3.65 Lcg/Lpx=0.479

Rbare: Bare-hull resistance (N)



—■—

—○— Delft-187 Lpx/Bpx=3.06 Ap/Val=4.00 Val/Lpx=3.9 Lpx/Ap=3.65 Lcg/Lpx=0.479

Model = 187  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 12.50 dm  
Lwl = 12.19 dm  
Bpx = 4.08 dm  
Ap = 42.77 sqdm  
Disp = 212.78 N  
Deadrise = 25.00 degree  
Shaft Ang= 12.97 degree  
Vce = -37.40 mm

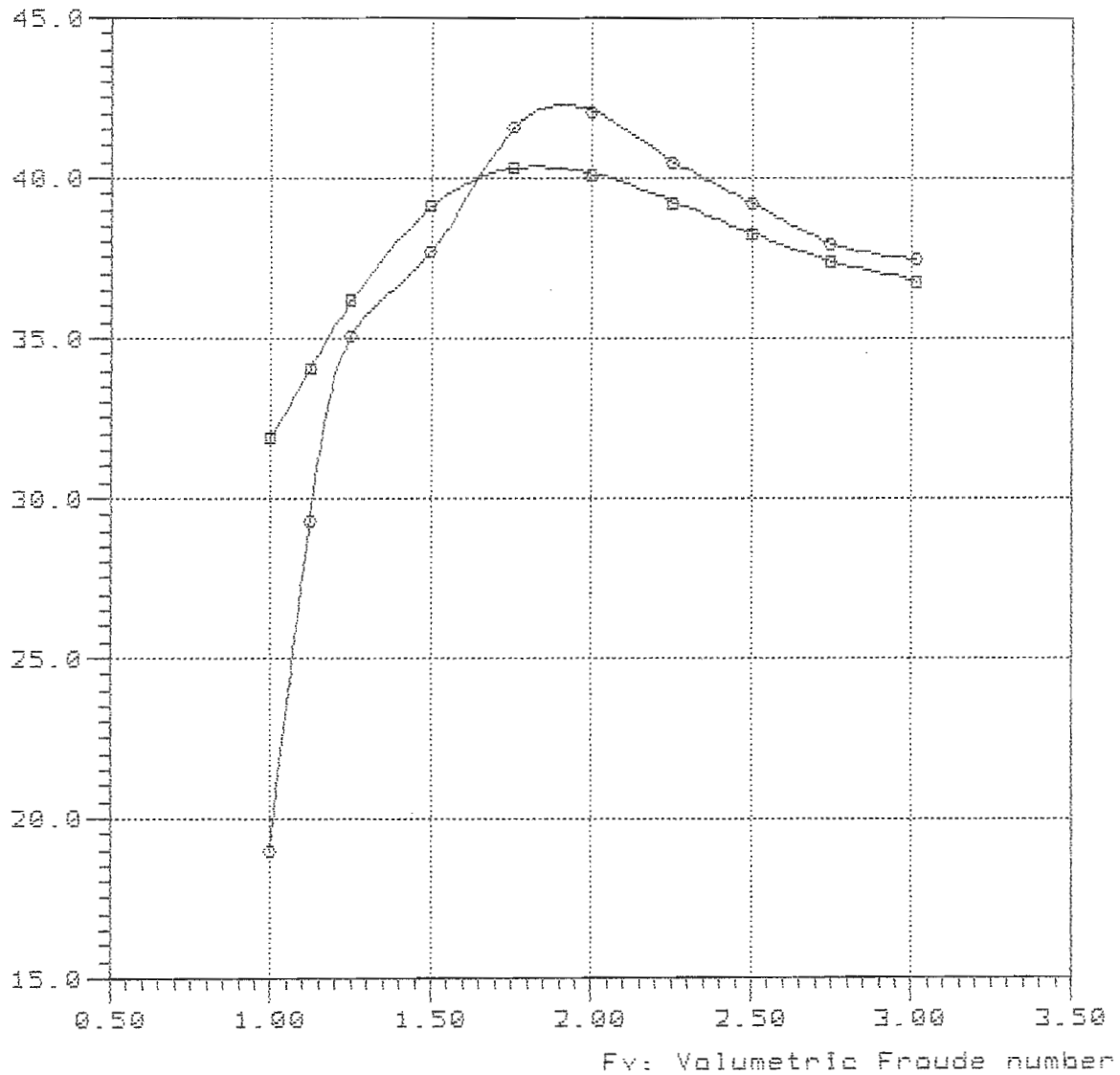
Lpx/Bpx = 3.064  
Lpx/Ap = 3.653  
Ap /Vol = 5.498  
Lpx/Vol = 4.532

NavCad(tm) 3.1d  
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HydroComp, Inc.

Bare-hull resistance  
vs.  
Volumetric Froude number

File: 6-45-329.mdl  
Date: 23 Feb 00  
Time: 12:37

Rbare: Bare-hull resistance (N)



Curve legend

- 
- Delft-187 Lpx/Bpx=3.06 Ap/Vol=5.50 Val/Lpx=4.5 Lpx/Ap=3.65 Log/Lpx=0.329

NavCad(tm) 3.1d

### Bare-hull resistance

File: 6-45-379.mdl

(c) Copyright 1995

vs.

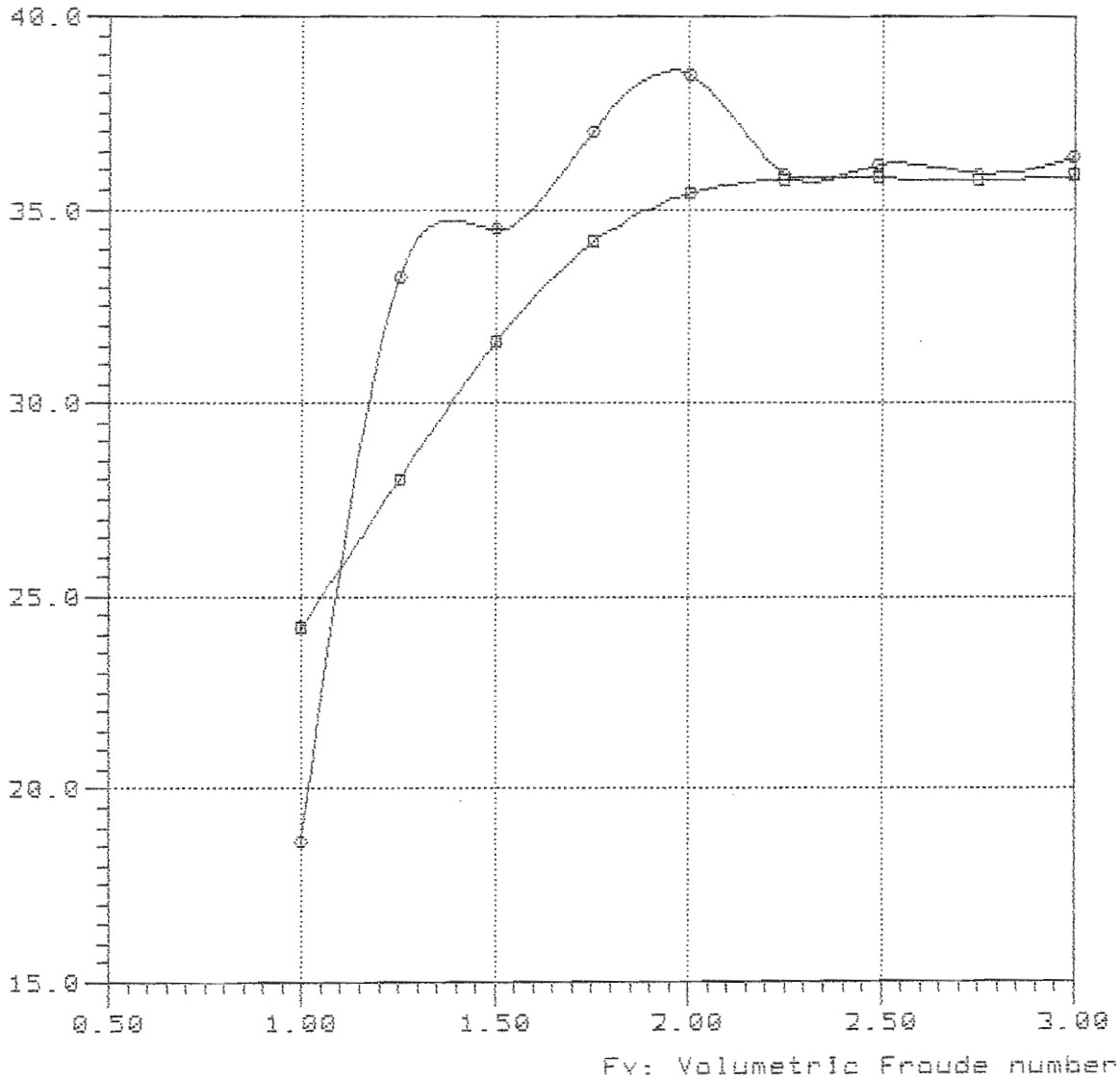
Date: 23 Feb 08

HydroComp, Inc.

### Volumetric Froude number

Time: 12:40

Rbare: Bare-hull resistance (N)



#### Curve legend

—■—

—○— Delft-187 Lpx/Bpx=3.06 Ap/Vol=5.50 Vol/Lpx=4.5 Lpx/Ap=3.65 Log/Lpx=0.379

NavCad(tm) 3.1d

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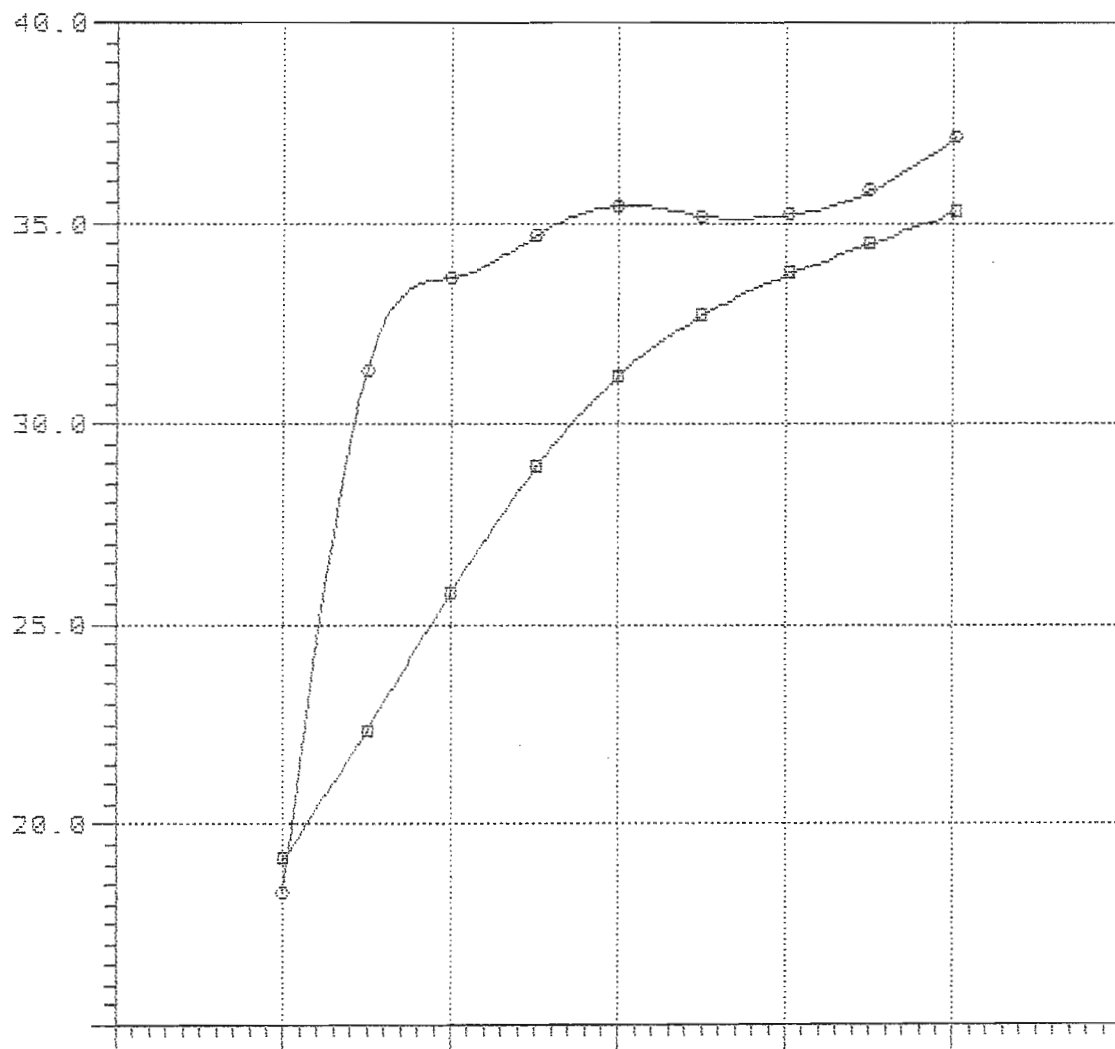
HydroComp, Inc.

File: 6-45-429.mdl

Date: 23 Feb 00

Time: 12:44

Rbare: Bare-hull resistance (N)



— □ —  
— ○ —

NavCad(tm) 3.1d

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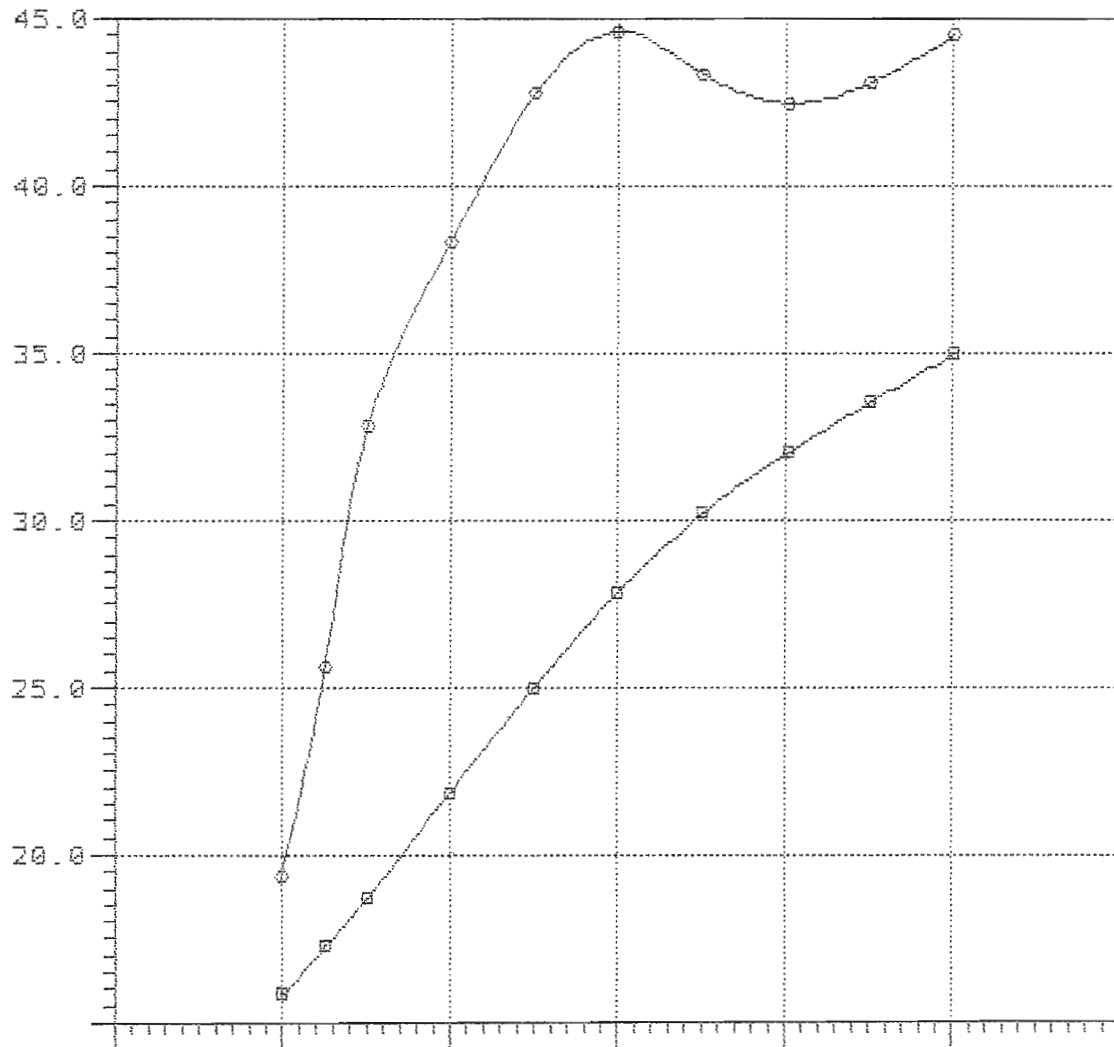
HydroComp, Inc.

File: 6-45-479.mdl

Date: 23 Feb 00

Time: 12:47

Rbare: Bare-hull resistance (N)



—■—

—○—

Model = 187  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 12.50 dm  
Lwl = 12.19 dm  
Bpx = 4.08 dm  
Ap = 42.77 sqdm  
Disp = 148.23 N  
Deadrise = 25.00 degree  
Shaft Ang= 12.97 degree  
Vce = -37.40 mm

Lpx/Bpx = 3.064  
Lpx/Ap = 3.653  
Ap /Vol = 6.996  
Lpx/Vol = 5.112



NavCad(tm) 3.1d

(c) Copyright 1995

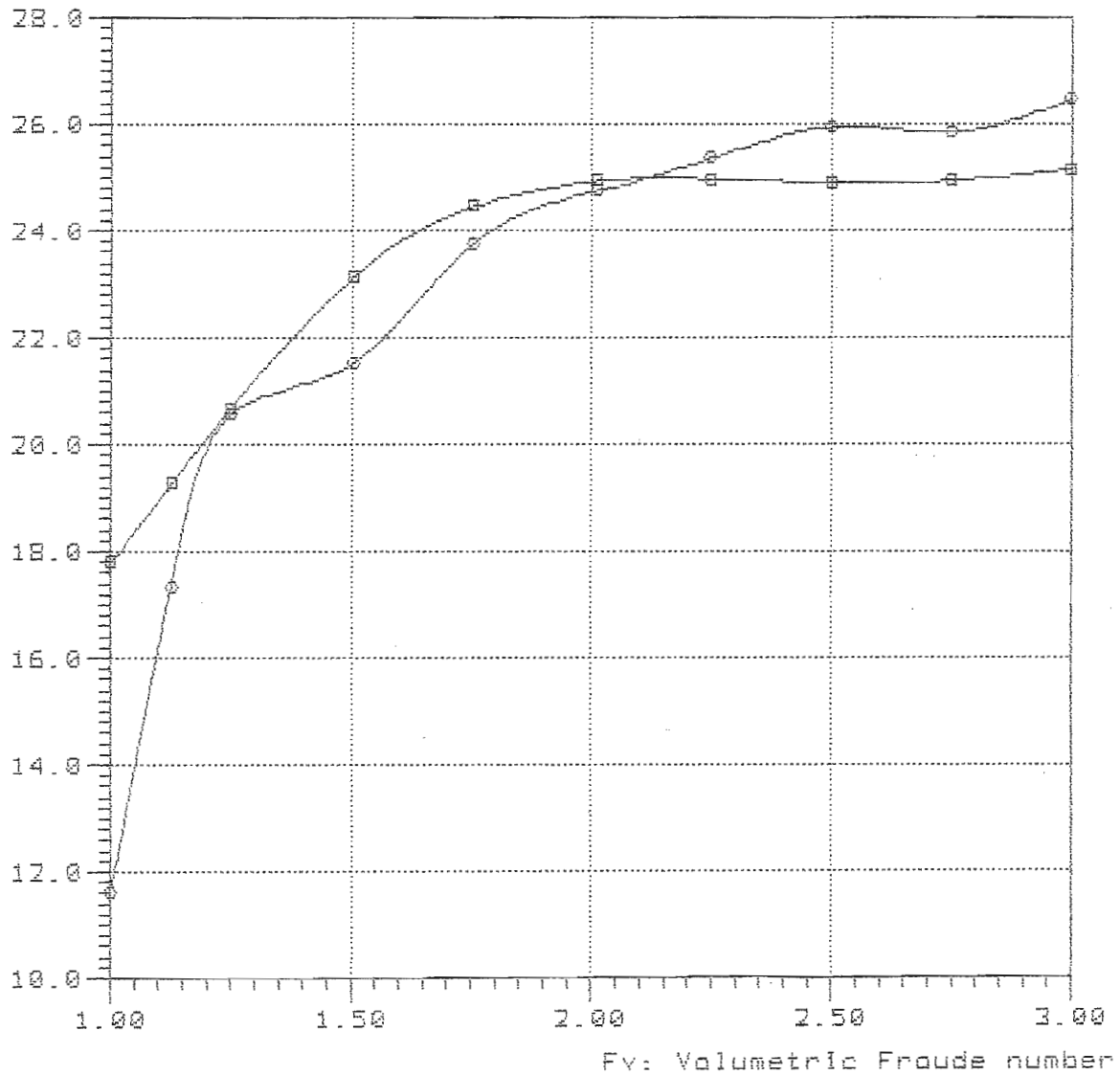
HydroComp, Inc.

File: 7-51-329.mdl

Date: 23 Feb 00

Time: 13:08

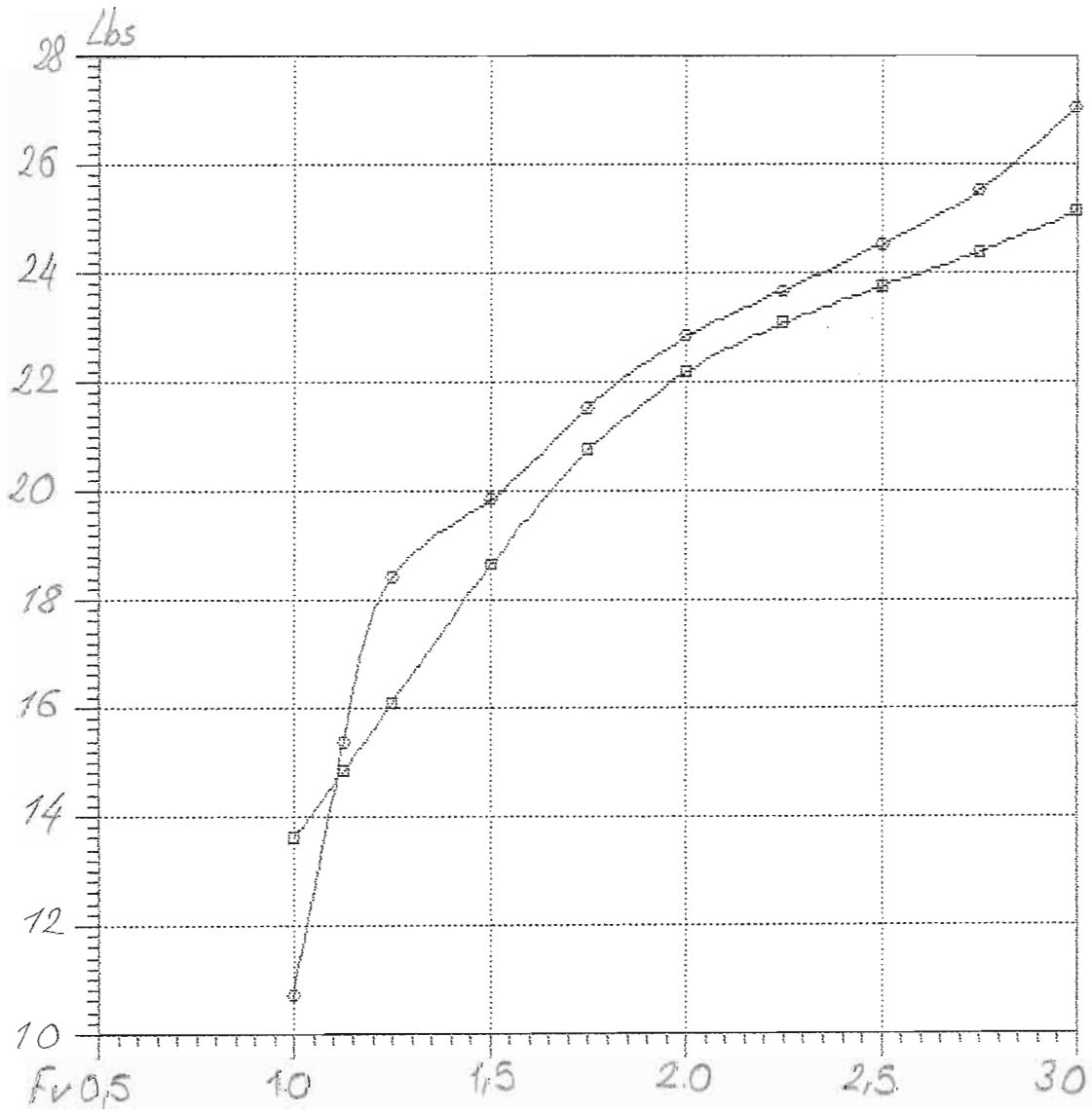
Rbare: Bare-hull resistance (N)



—■—

—○— Delft-187 Lpx/Bpx=3.06 Ap/Val=7.00 Val/Lpx=5.1 Lpx/Ap=3.65 Log/Lpx=0.329

7-51-379



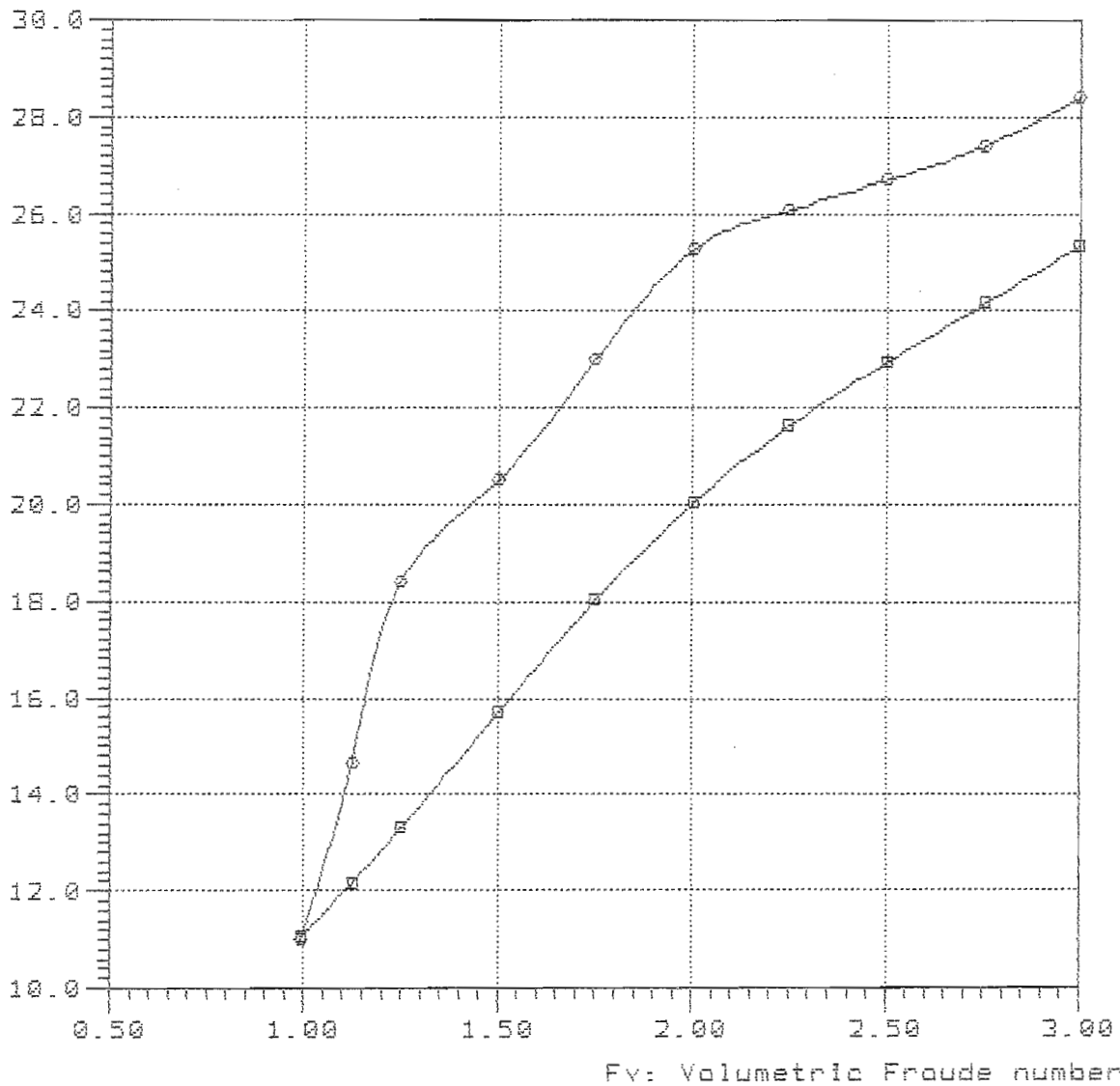
—□—  
—○—

NavCad(tm) 3.1d  
(c) Copyright 1995  
HydroComp, Inc.

Bare-hull resistance  
vs.  
Volumetric Froude number

File: 7-51-429.mdl  
Date: 23 Feb 00  
Time: 13:14

Rbare: Bare-hull resistance (N)



Curve legend

- 
- Delft-187 Lpx/Bpx=3.06 Ap/Vol=7.00 Vol/Lpx=5.1 Lpx/Ap=3.65 Log/Lpx=0.429

NavCad(tm) 3.1d

### Bare-hull resistance

File: 7-51-479.mdl

(c) Copyright 1995

vs.

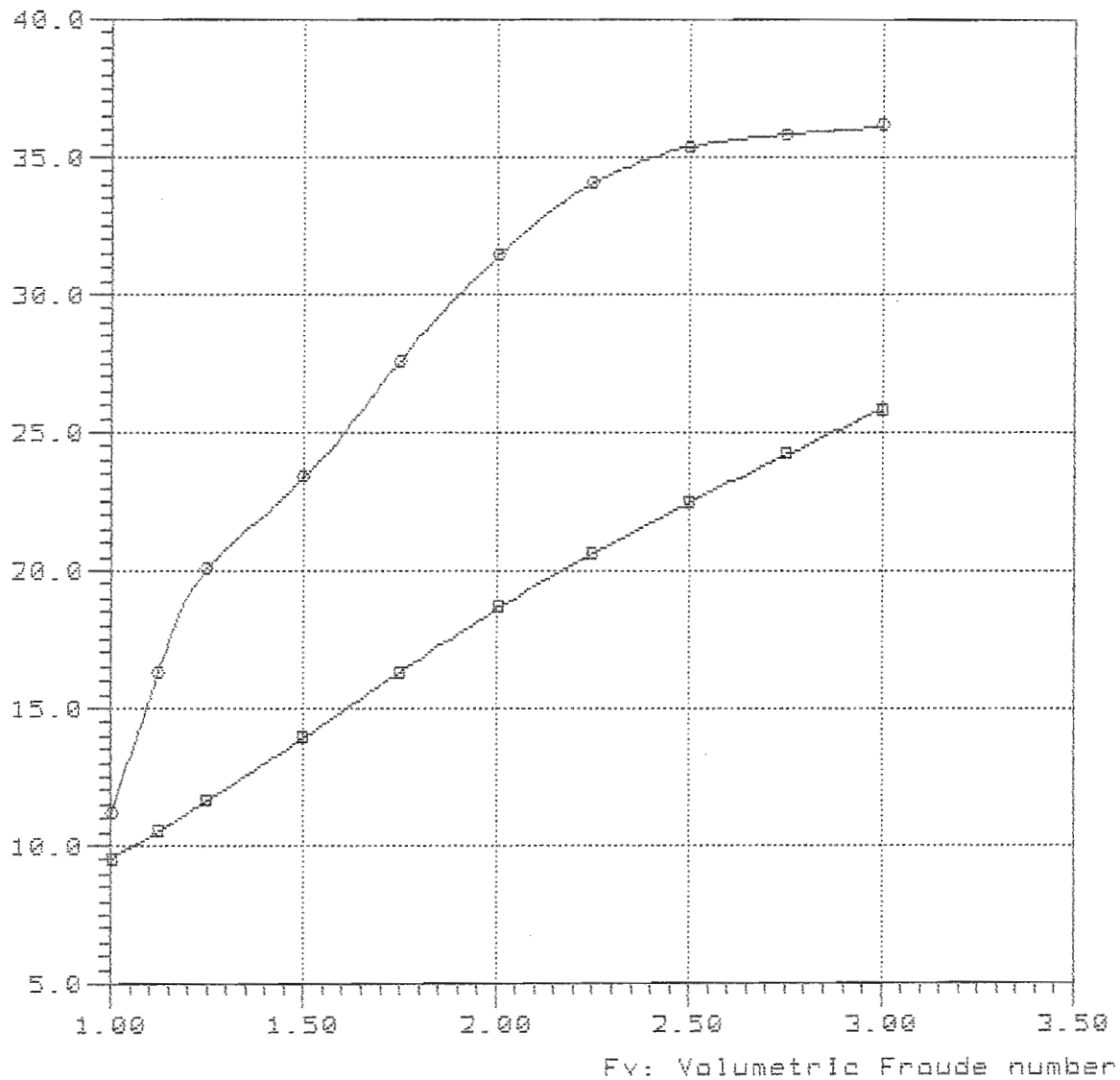
Date: 23 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 13:18

Rbare: Bare-hull resistance (N)



#### Curve legend

—□—

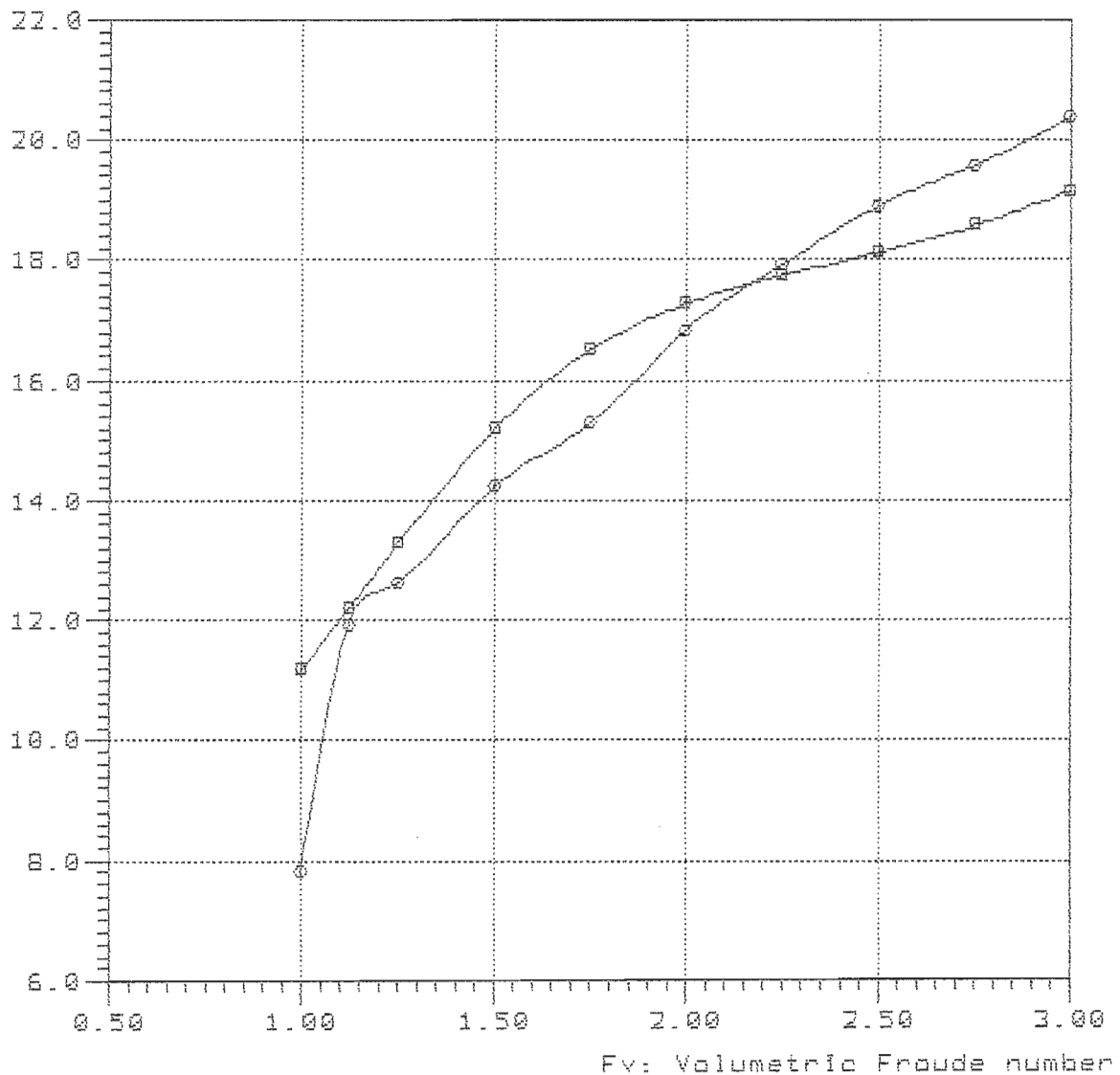
—○— Delft-187 Lpx/Bpx=3.06 Ap/Vol=7.00 Vol/Lpx=5.1 Lpx/Ap=3.65 Lcg/Lpx=0.479

Model = 187  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 12.50 dm  
Lwl = 12.19 dm  
Bpx = 4.08 dm  
Ap = 42.77 sqdm  
Disp = 110.76 N  
Deadrise = 25.00 degree  
Shaft Ang = 12.97 degree  
Vce = -37.40 mm

Lpx/Bpx = 3.064  
Lpx/Ap = 3.653  
Ap /Vol = 8.496  
Lpx/Vol = 5.634

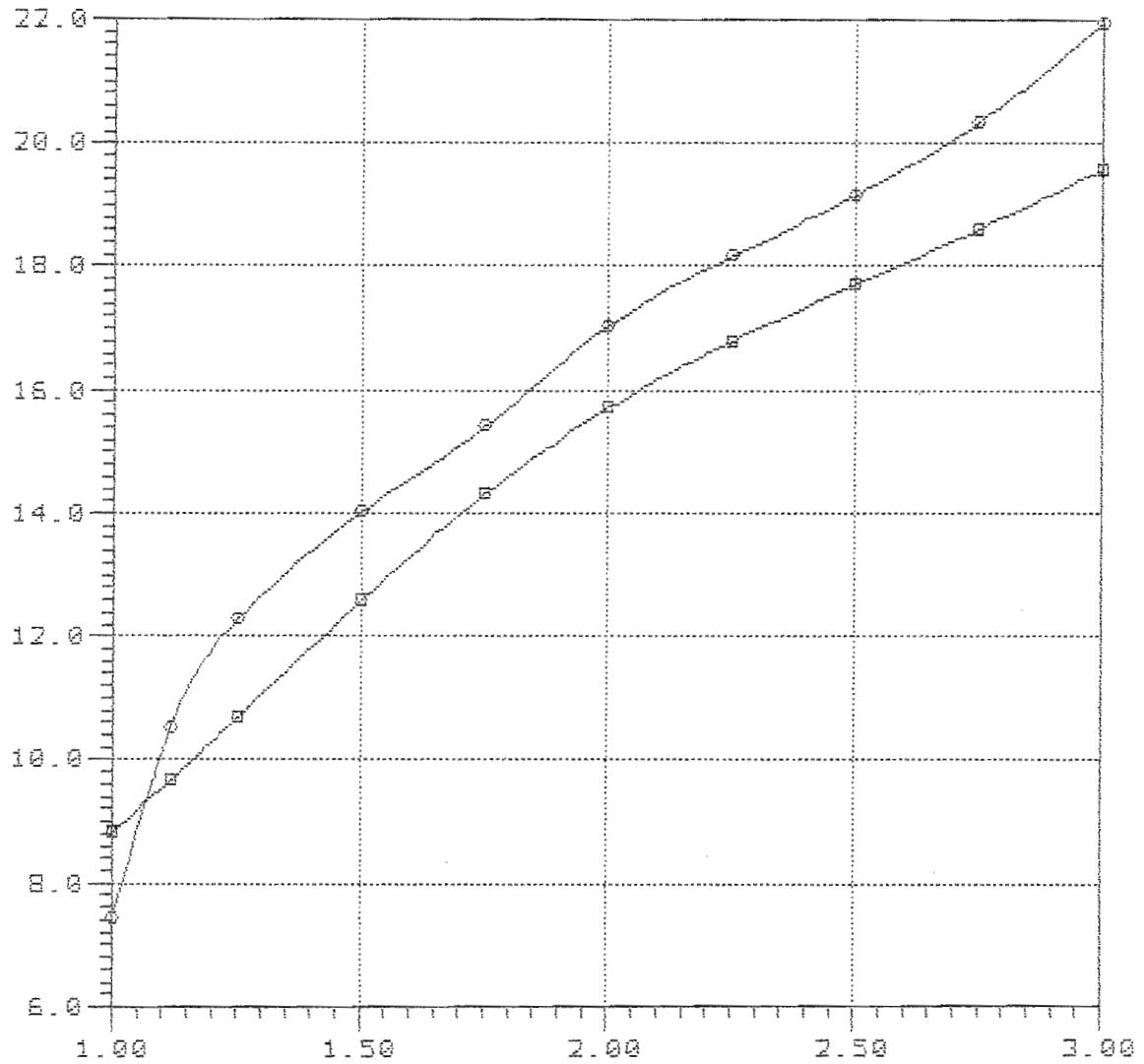
Rbare: Bare-hull resistance (N)



—■—

—●— Delft-187 Lpx/Bpx=3.06 Ap/Vol=8.50 Vol/Lpx=5.6 Lpx/Ap=3.65 Log/Lpx=0.329

Rbare: Bare-hull resistance (N)



Fv: Volumetric Froude number

—■—

—○— Delft-187 Lpx/Bpx=3.06 Ap/Vol=8.50 Vol/Lpx=5.6 Lpx/Ap=3.65 Lcg/Lpx=0.379

NavCad(tm) 3.1d

(c) Copyright 1995

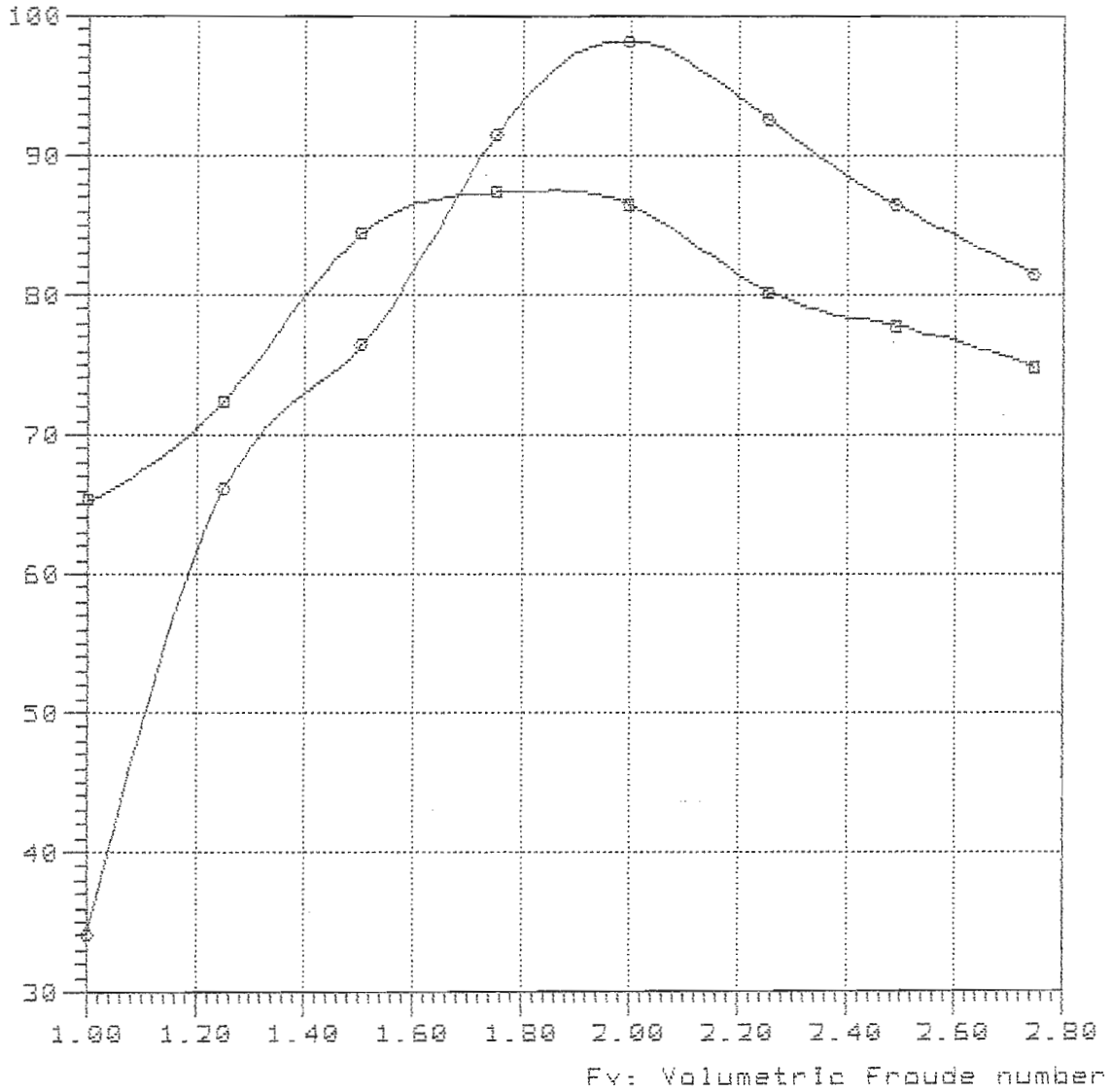
HydroComp, Inc.

File: 4-45-308.mdl

Date: 23 Feb 00

Time: 13:40

Rbare: Bare-hull resistance (N)



—■—

—○— Delft-188 Lpx/Bpx=4.09 Ap/Vol=4.00 Vol/Lpx=4.5 Lpx/Ap=5.00 Lcg/Lpx=0.308



Model = 188  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 3.67 dm  
Ap = 45.00 sqdm  
Disp = 370.13 N-  
Deadrise = 25.00 degree  
Shaft Ang = 10.00 degree  
Vce = -34.00 mm

Lpx/Bpx = 4.087  
Lpx/Ap = 5.000  
Ap /Vol = 3.999  
Lpx/Vol = 4.522

NavCad(tm) 3.1d

(c) Copyright 1995

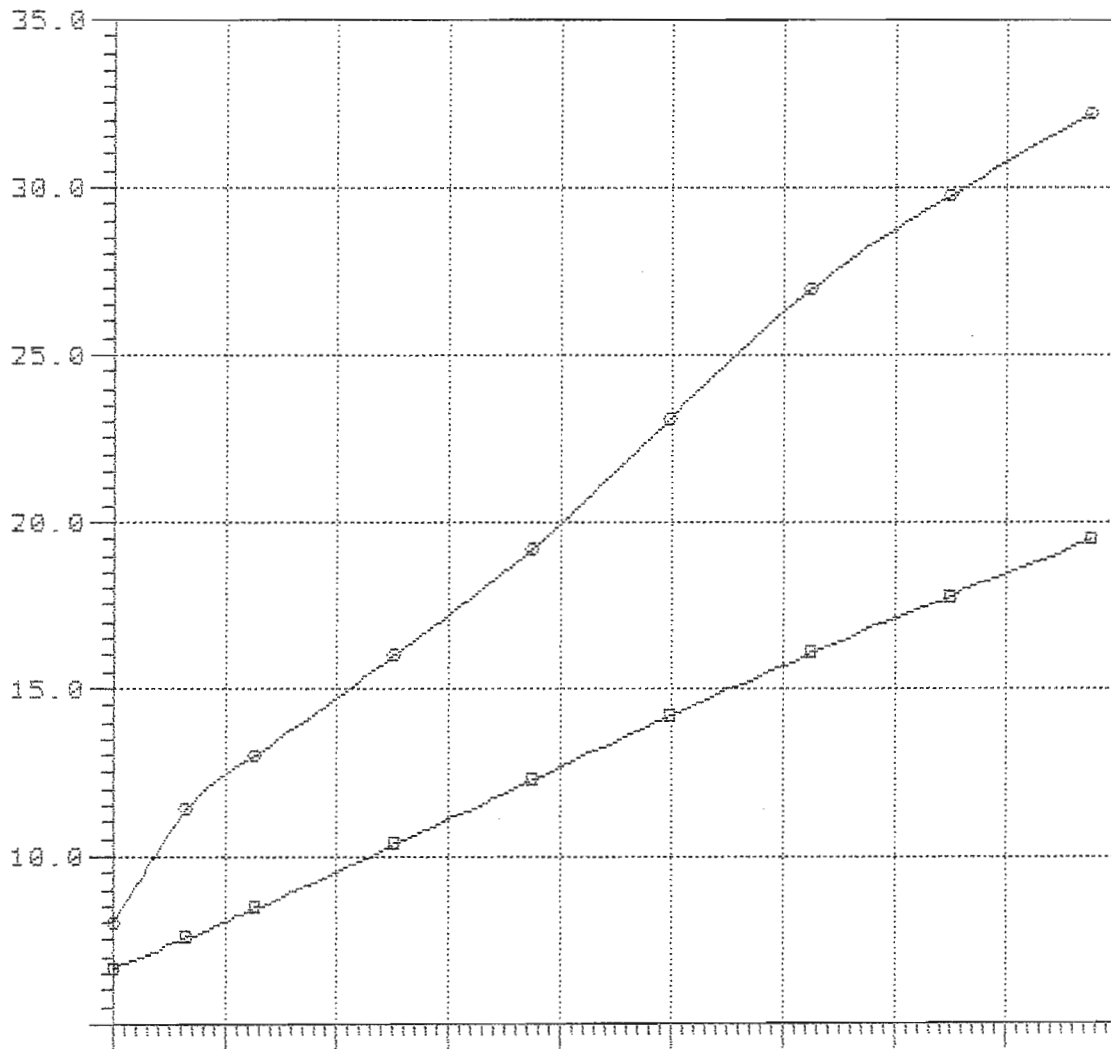
HydroComp, Inc.

File: 9-56-479.mdl

Date: 23 Feb 00

Time: 13:31

Rbare: Bare-hull resistance (N)



—□—

—○—

NavCad(tm) 3.1d

(c) Copyright 1995

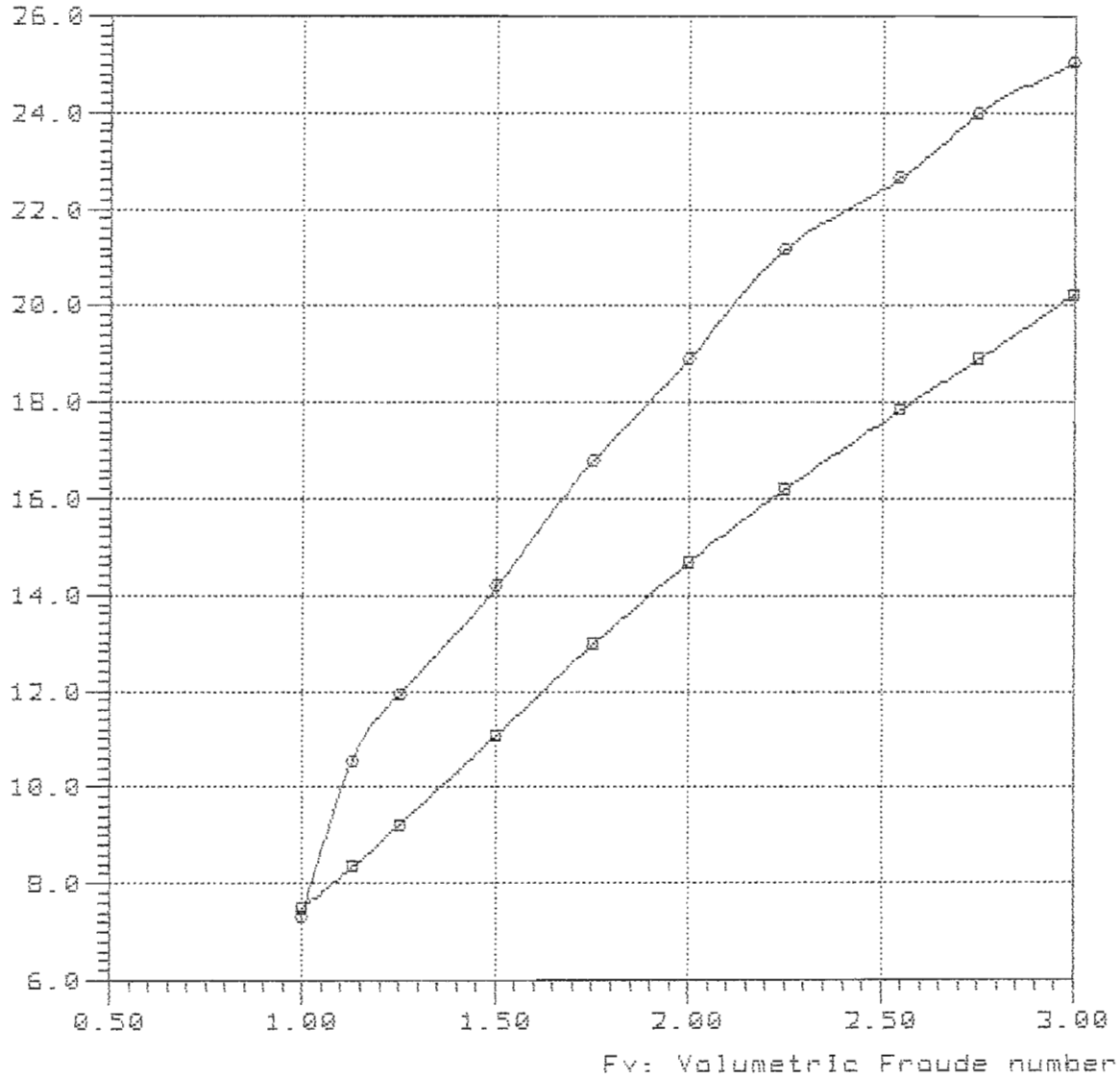
HydroComp, Inc.

File: 9-56-429.mdl

Date: 23 Feb 00

Time: 13:28

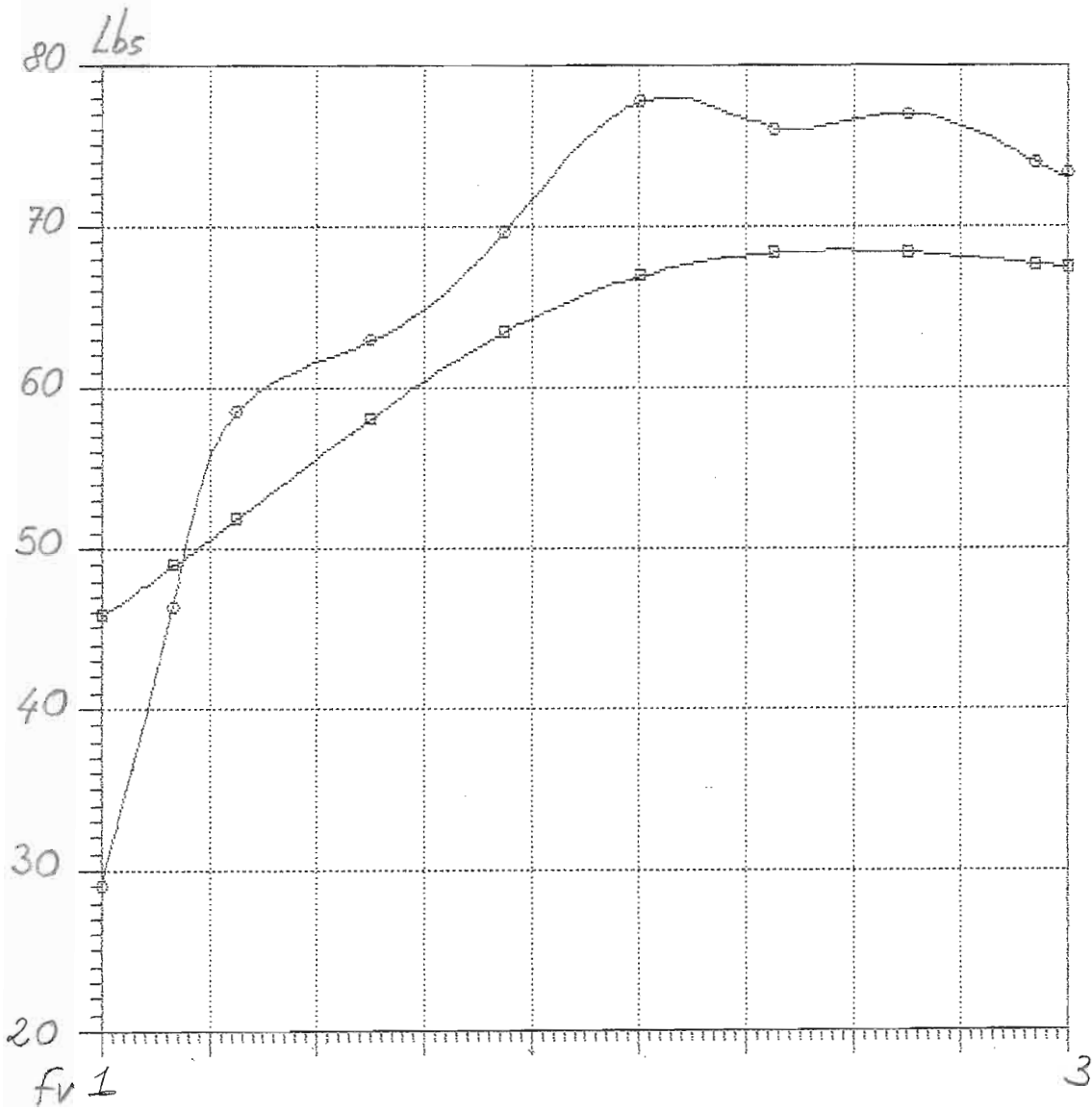
Rbare: Bare-hull resistance (N)



—■—

—○— Delft-187 Lpx/Bpx=3.06 Ap/Vol=8.50 Vol/Lpx=5.6 Lpx/Ap=3.65 Lcg/Lpx=0.429

4-45-368



—□—  
—○—

NavCad(tm) 3.1d

### Bare-hull resistance

File: 4-45-428.mdl

(c) Copyright 1995

vs.

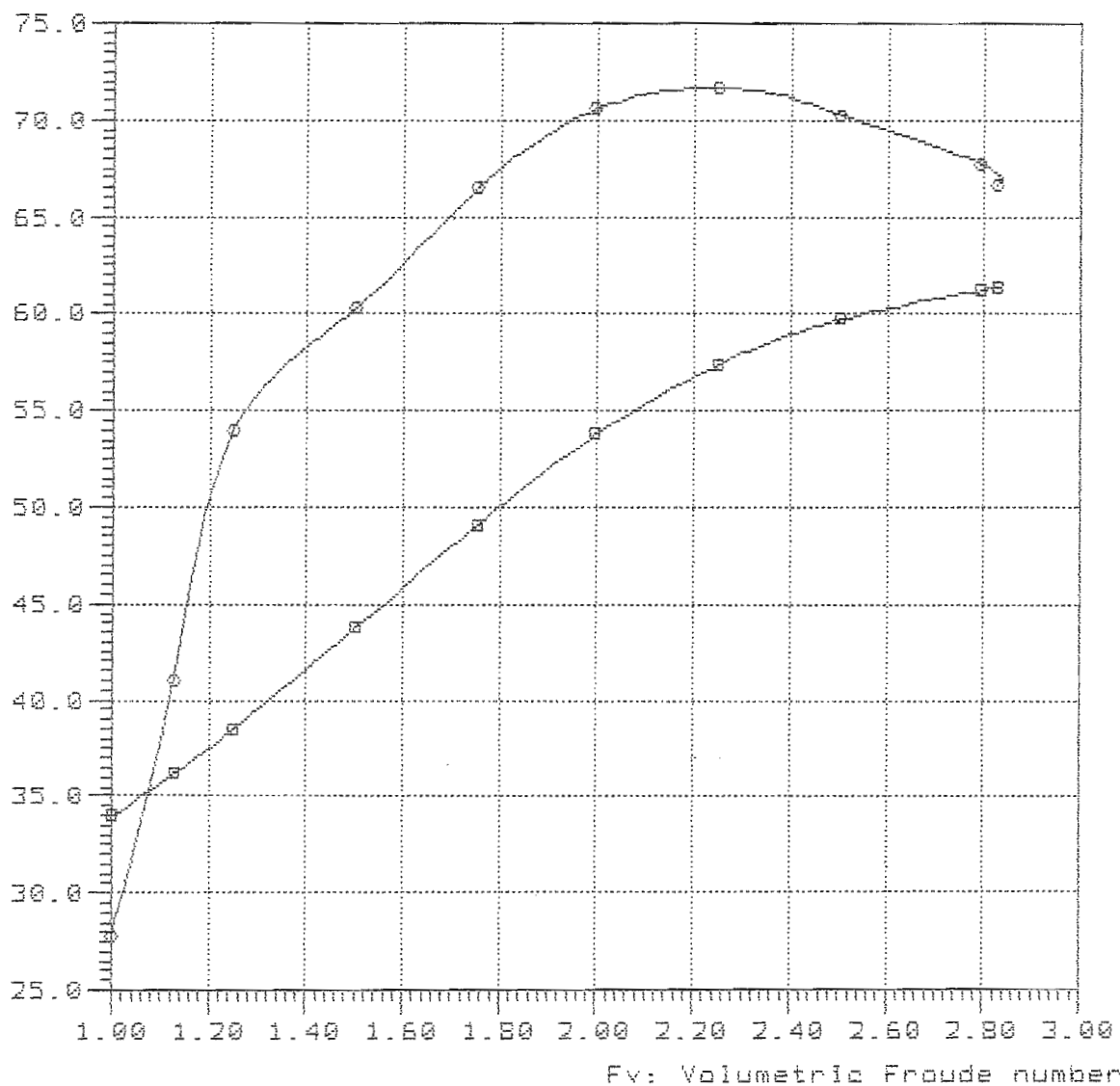
Date: 23 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 13:46

Rbare: Bare-hull resistance (N)



#### Curve legend

—■—

—○— Delft-188 Lpx/Bpx=4.09 Ap/Vol=4.00 Vol/Lpx=4.5 Lpx/Ap=5.00 Log/Lpx=0.428

NavCad(tm) 3.1d

(c) Copyright 1995

HydroComp, Inc.

### Bare-hull resistance

vs.

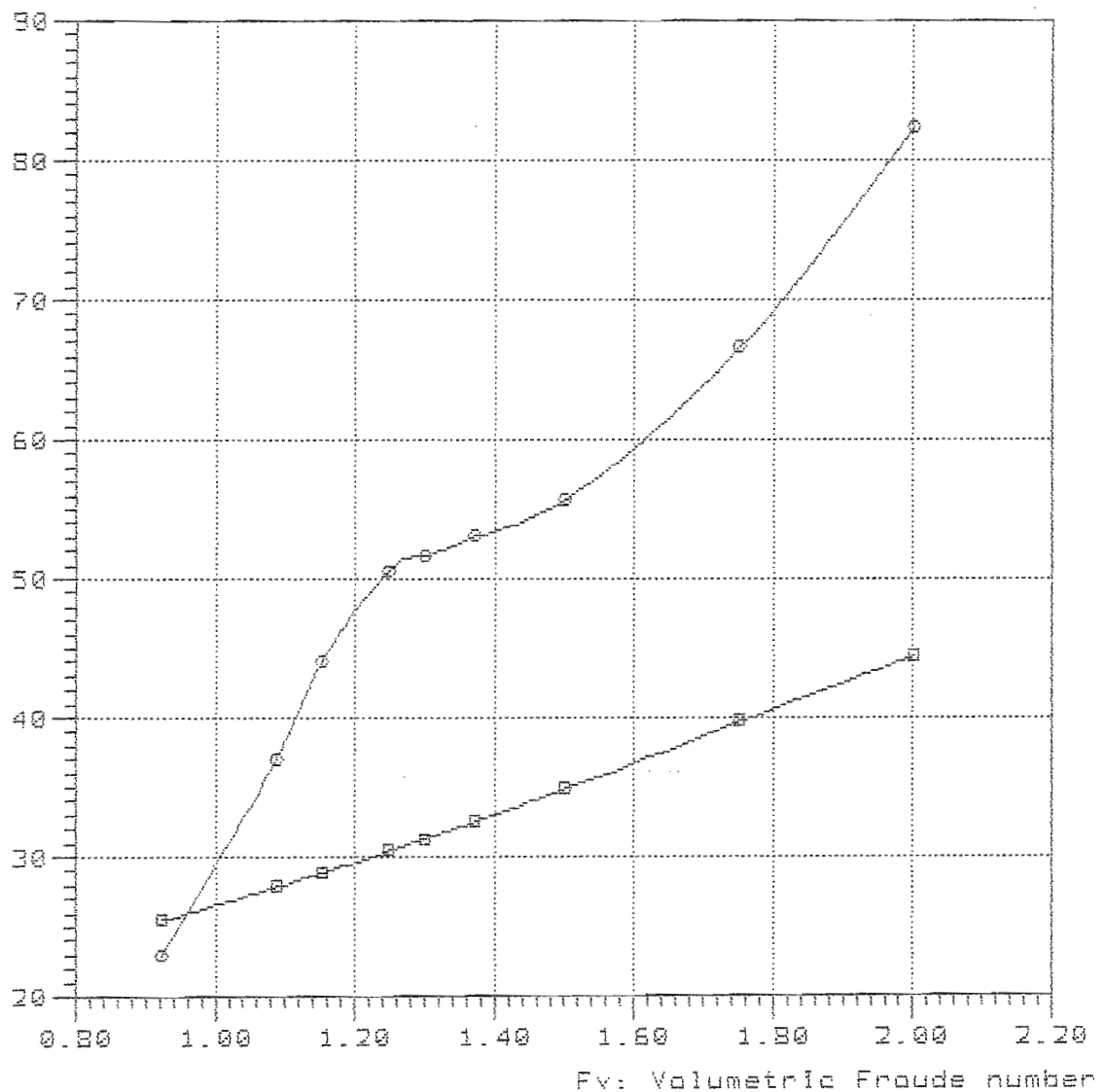
### Volumetric Froude number

File: 4-45-488.mdl

Date: 23 Feb 00

Time: 13:50

Rbare: Bare-hull resistance (N)



#### Curve legend

—○—

—□— Delft-188 Lpx/Bpx=4.09 Ap/Vol=4.00 Vol/Lpx=4.5 Lpx/Ap=5.00 Log/Lpx=0.488

Model = 188  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 3.67 dm  
Ap = 45.00 sqdm  
Disp = 229.55 N  
Deadrise = 25.00 degree  
Shaft Ang= 10.00 degree  
Vce = -34.00 mm

Lpx/Bpx = 4.087  
Lpx/Ap = 5.000  
Ap /Vol = 5.499  
Lpx/Vol = 5.303

NavCad(tm) 3.1d

(c) Copyright 1995

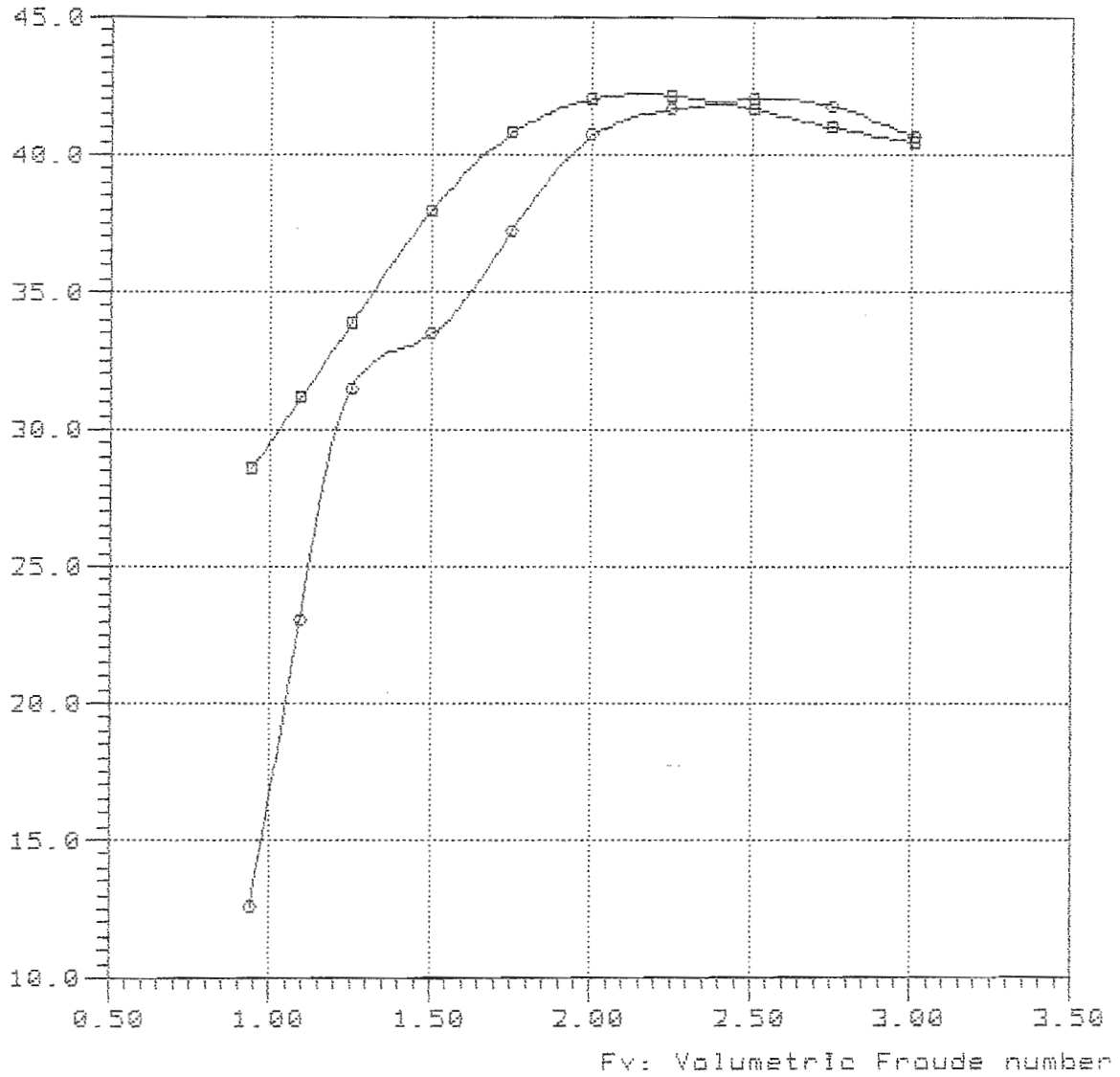
HydroComp, Inc.

File: 6-53-308.mdl

Date: 23 Feb 00

Time: 13:53

Rbare: Bare-hull resistance (N)



—■—

—○— Delft-168 Lpx/Bpx=4.09 Ap/Vol=5.50 Vol/Lpx=5.3 Lpx/Ap=5.00 Lcg/Lpx=0.308



NavCad(tm) 3.1d

(c) Copyright 1995

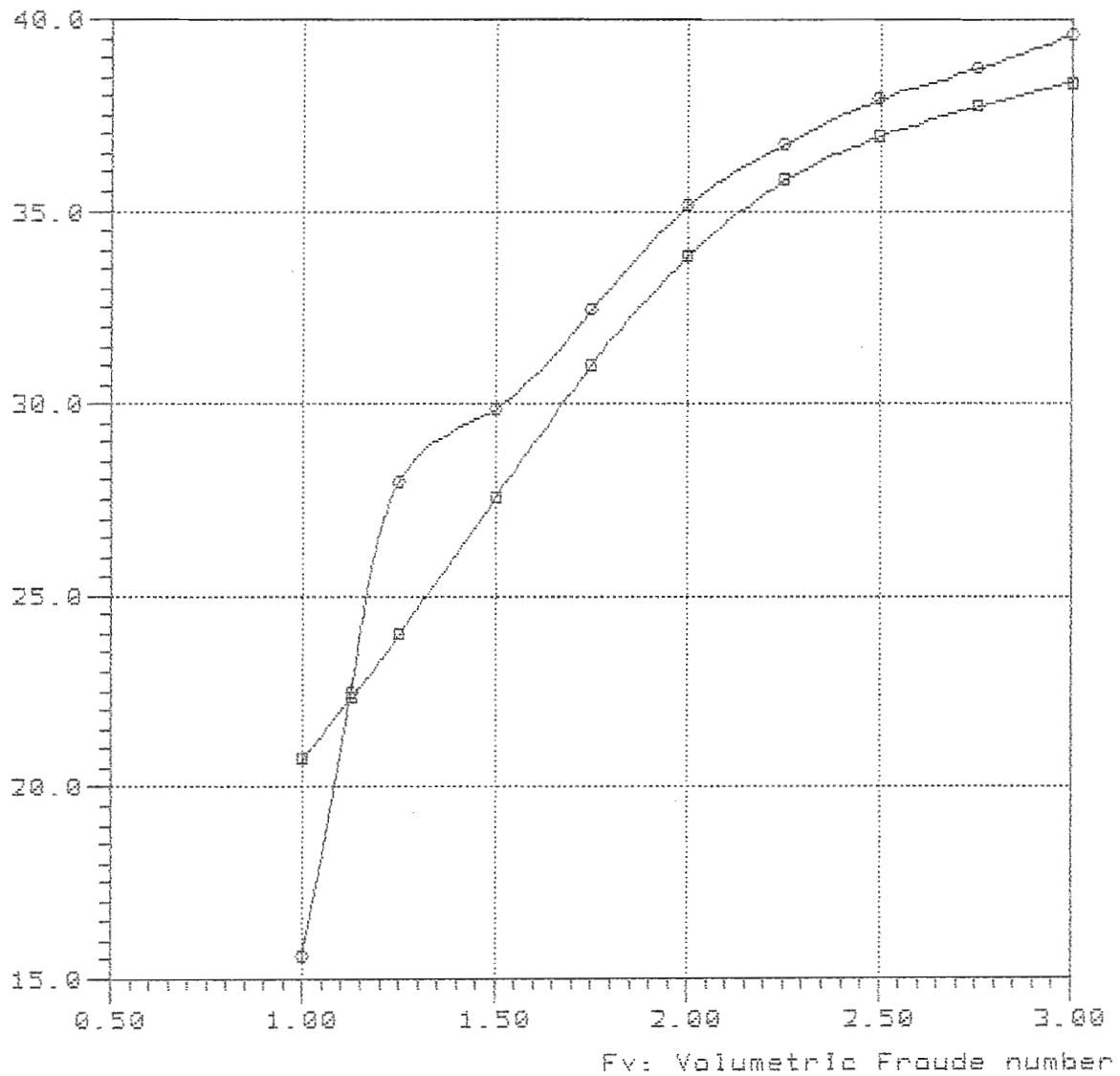
HydroComp, Inc.

File: 6-53-368.mdl

Date: 23 Feb 00

Time: 13:56

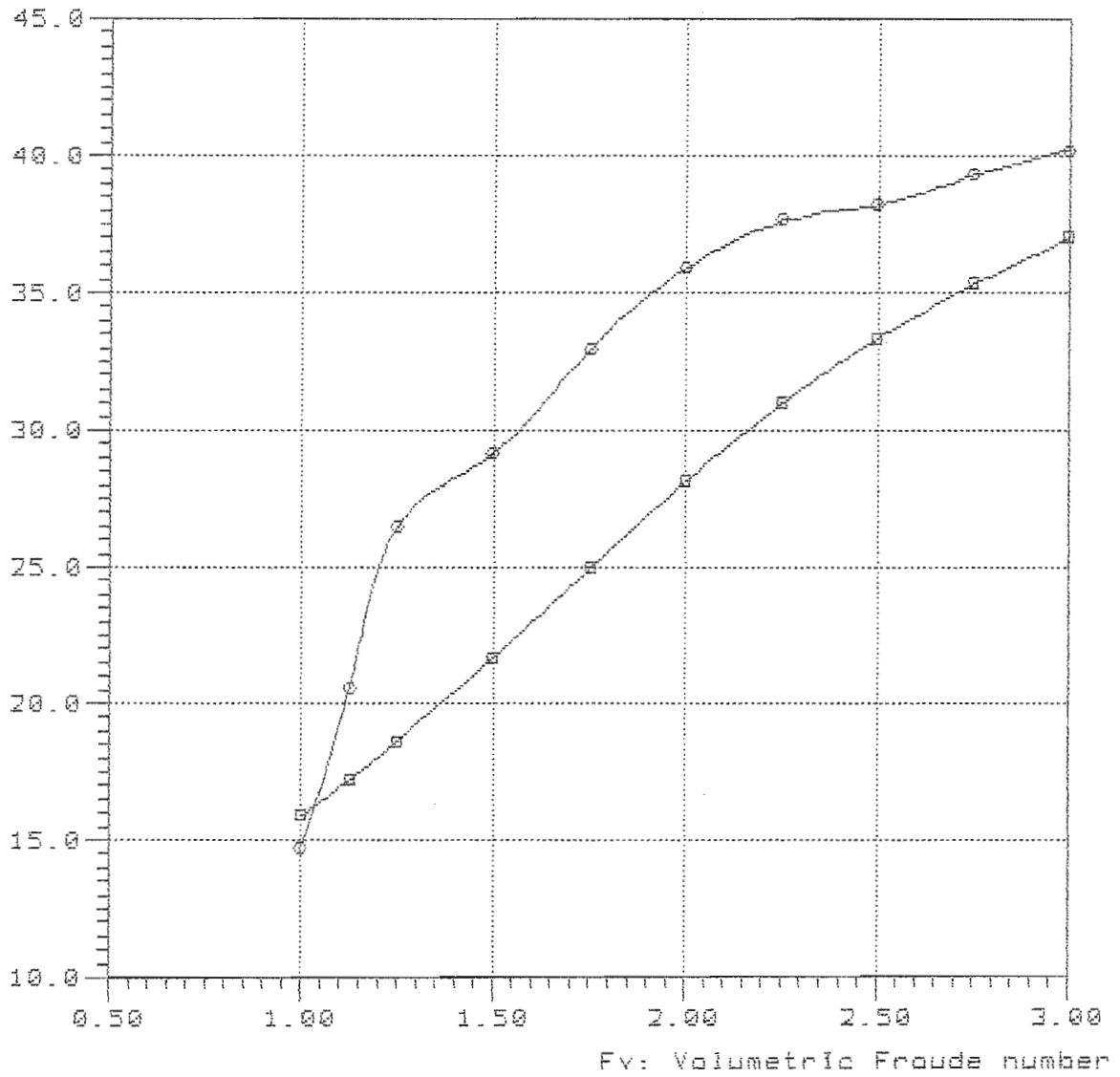
Rbare: Bare-hull resistance (N)



—□—

—○— Delft-188 Lpx/Bpx=4.09 Ap/Val=5.50 Val/Lpx=5.3 Lpx/Ap=5.00 Leg/Lpx=0.368

Rbare: Bare-hull resistance (N)



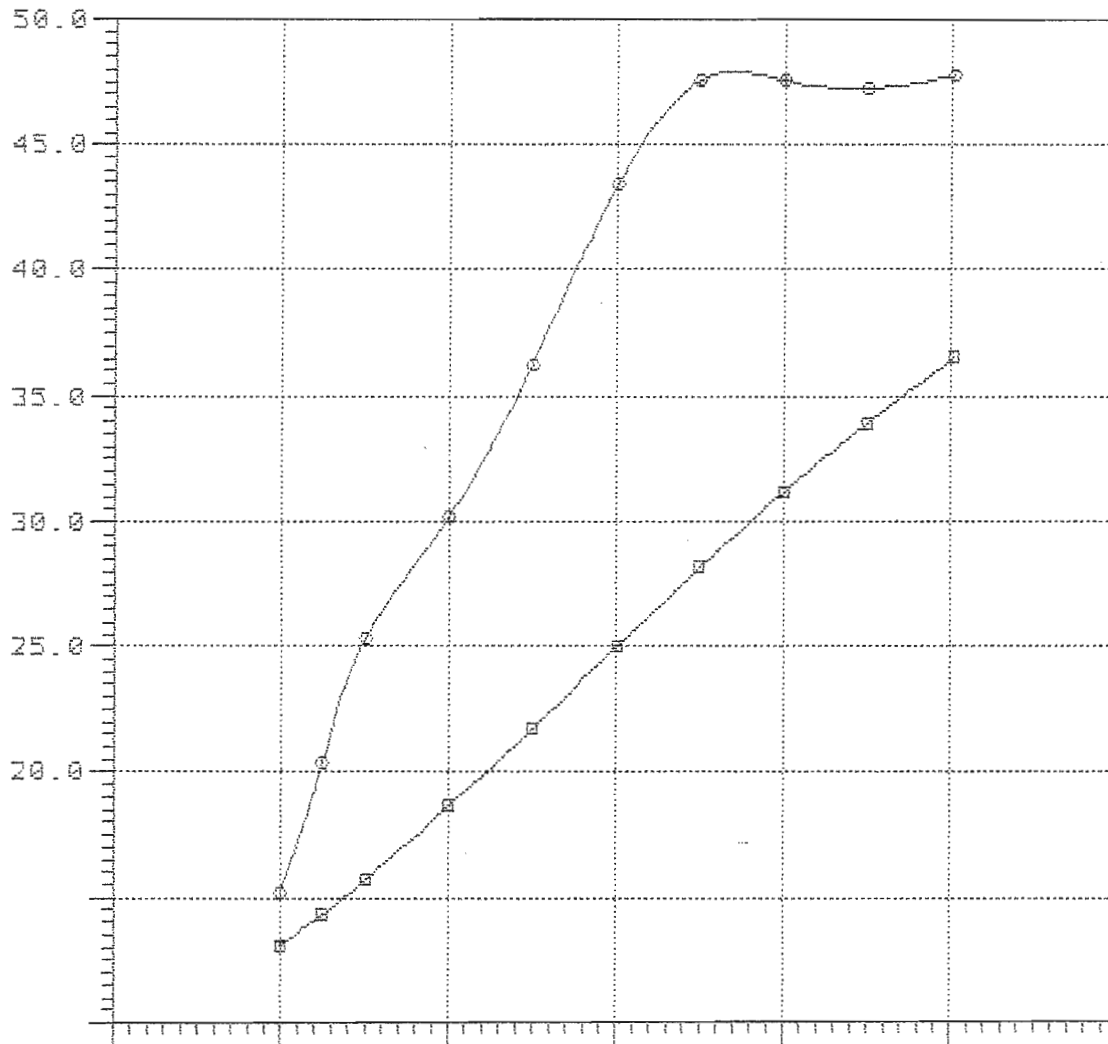
—■—

—●— Delft-188 Lpx/Bpx=4.09 Ap/Val=5.50 Val/Lpx=5.3 Lpx/Ap=5.00 Lcg/Lpx=0.428

NavCad(tm) 3.1d  
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HydroComp, Inc.

File: 6-53-488.mdl  
Date: 23 Feb 00  
Time: 14:03

Rbare: Bare-hull resistance (N)



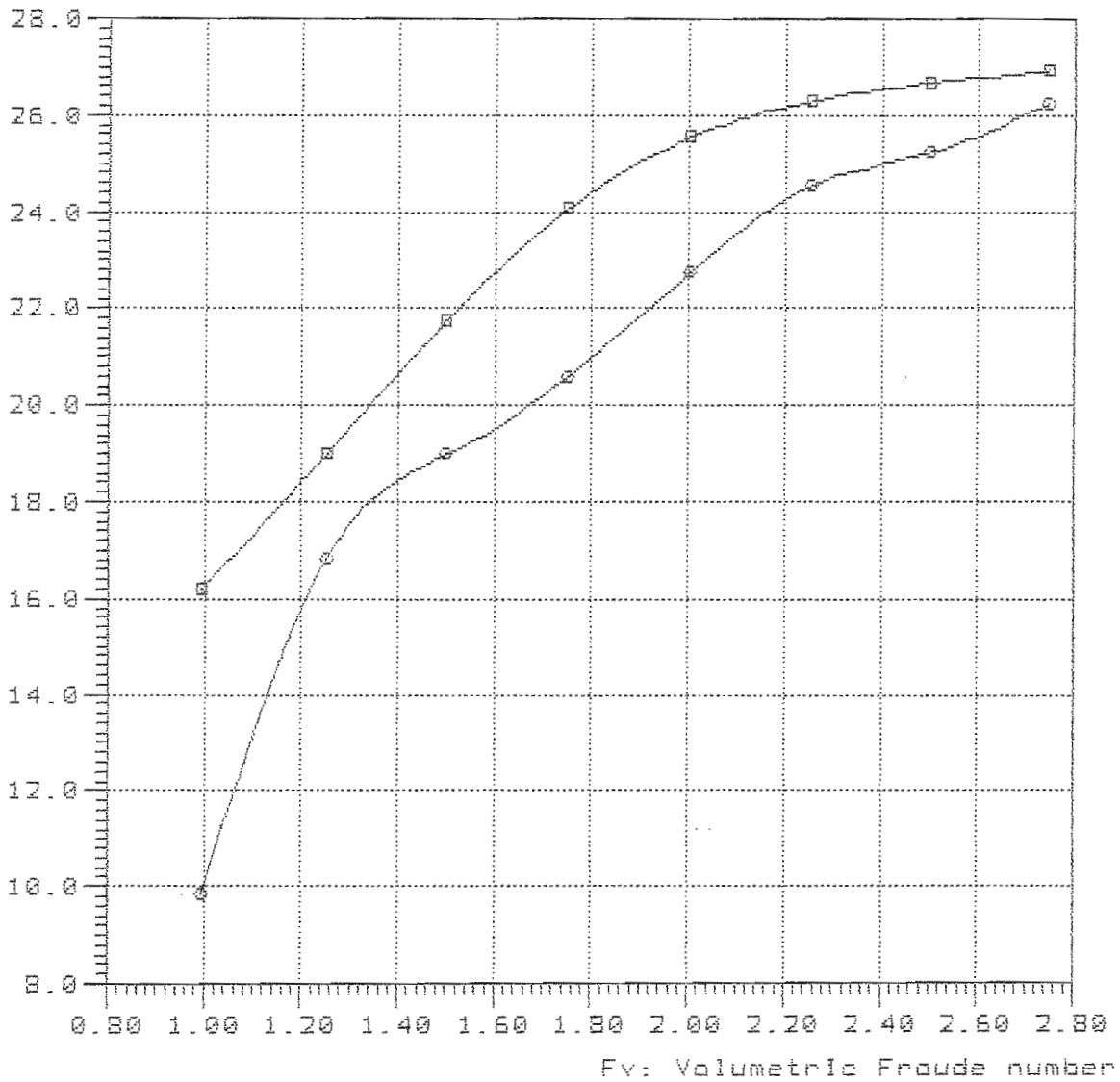
— □ —  
— ○ —

Model = 188  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 3.67 dm  
Ap = 45.00 sqdm  
Disp = 159.90 N  
Deadrise = 25.00 degree  
Shaft Ang= 10.00 degree  
Vce = -34.00 mm

Lpx/Bpx = 4.087  
Lpx/Ap = 5.000  
Ap /Vol = 6.998  
Lpx/Vol = 5.982

Rbare: Bare-hull resistance (N)



—■—

—○— Delft-188 Lpx/Bpx=4.09 Ap/Val=7.00 Val/Lpx=6.0 Lpx/Ap=5.00 Log/Lpx=0.308

NavCad(tm) 3.1d

Bare-hull resistance

File: 7-60-368.mdl

(c) Copyright 1995

vs.

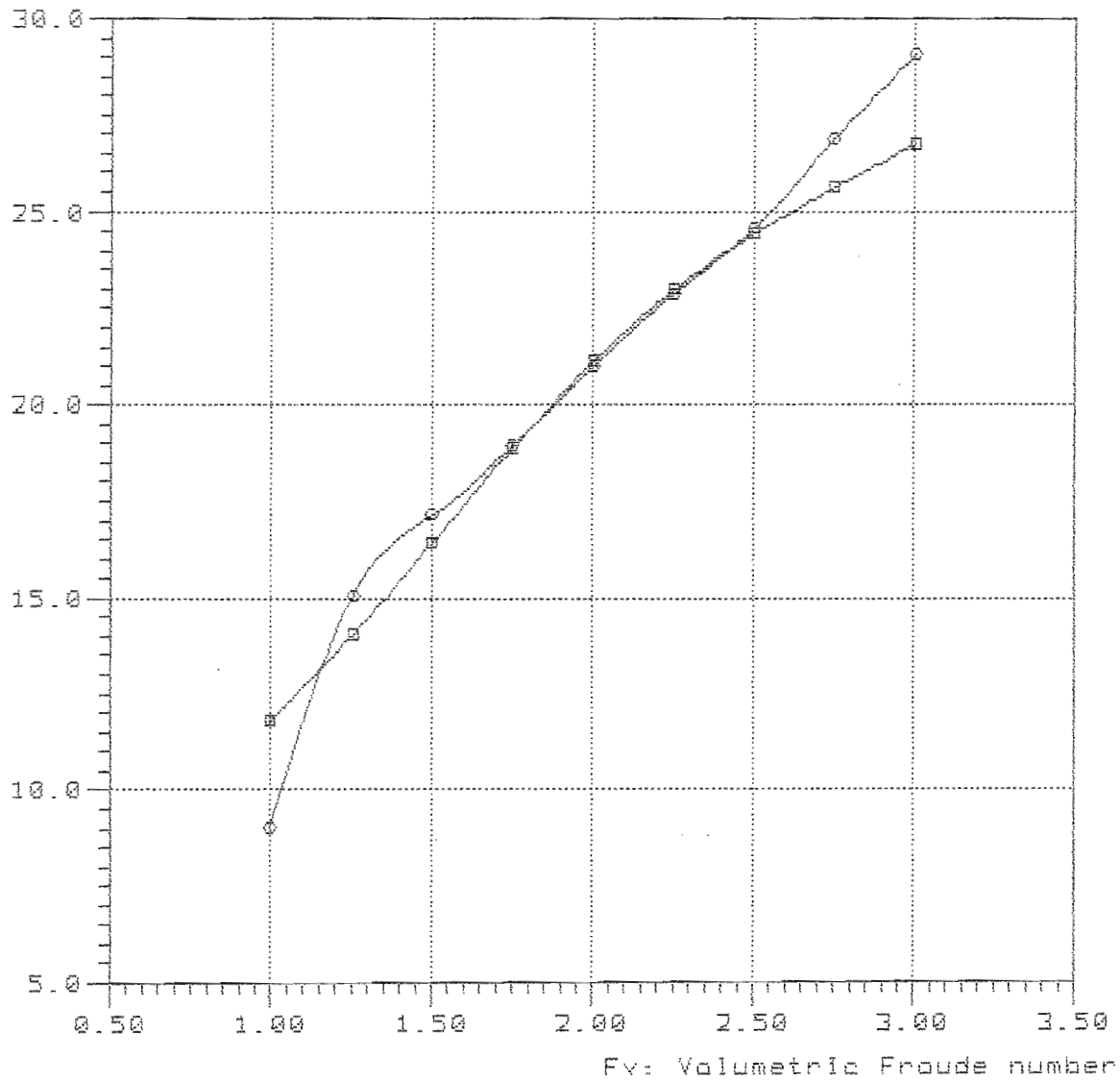
Date: 23 Feb 00

HydroComp, Inc.

Volumetric Froude number

Time: 14:17

Rbare: Bare-hull resistance (N)



Curve legend

—■—

—○— Delft-188 Lpx/Bpx=4.09 Ap/Val=7.00 Val/Lpx=6.0 Lpx/Ap=5.00 Lcg/Lpx=0.368

NavCad(tm) 3.1d

Bare-hull resistance

File: 7-60-428.mdl

(c) Copyright 1995

vs.

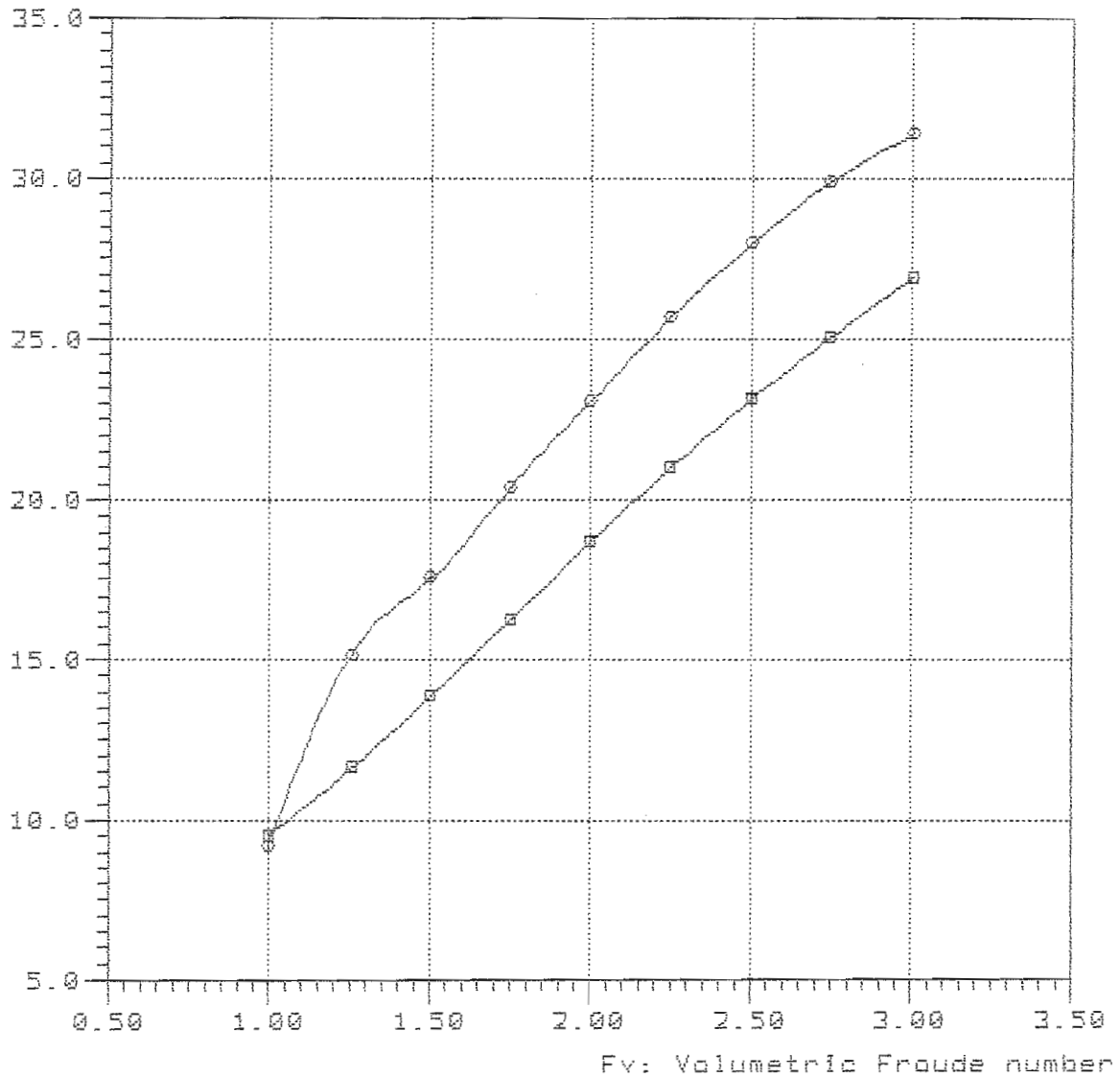
Date: 23 Feb 00

HydroComp, Inc.

Volumetric Froude number

Time: 14:20

Rbare: Bare-hull resistance (N)



Curve legend

—■—

—○— Delft-188 Lpx/Bpx=4.09 Ap/Vol=7.00 Vol/Lpx=6.0 Lpx/Ap=5.00 Lcg/Lpx=0.428

NavCad(tm) 3.1d

(c) Copyright 1995

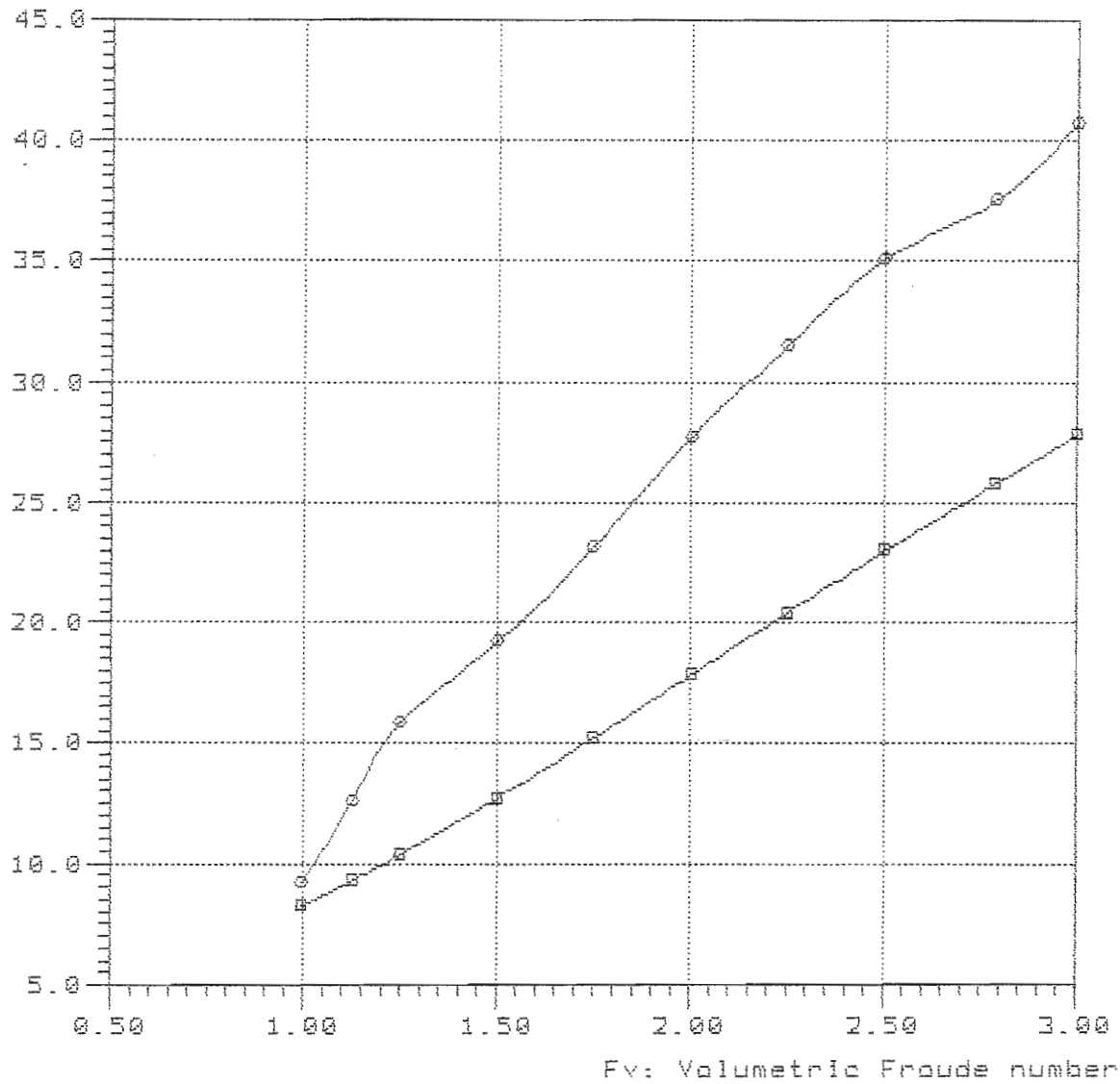
HydroComp, Inc.

File: 7-60-488.mdl

Date: 23 Feb 00

Time: 14:24

Rbare: Bare-hull resistance (N)



—■—

—○— Delft-188 Lpx/Bpx=4.09 Ap/Vol=7.00 Val/Lpx=6.0 Lpx/Ap=5.00 Leg/Lpx=0.488



NavCad(tm) 3.1d

(c) Copyright 1995

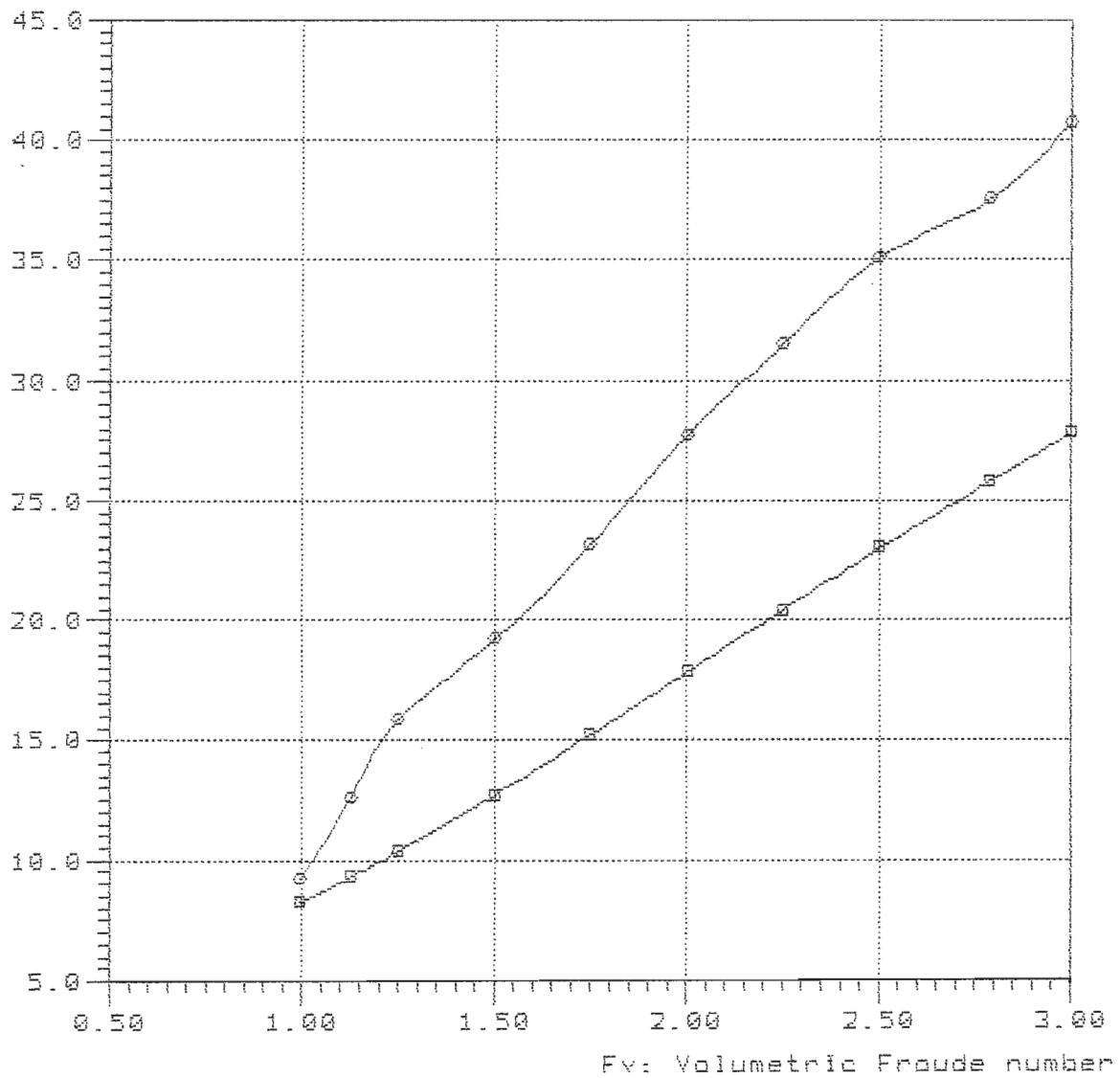
HydroComp, Inc.

File: 7-60-488.mdl

Date: 23 Feb 00

Time: 14:24

Rbare: Bare-hull resistance (N)



—■—

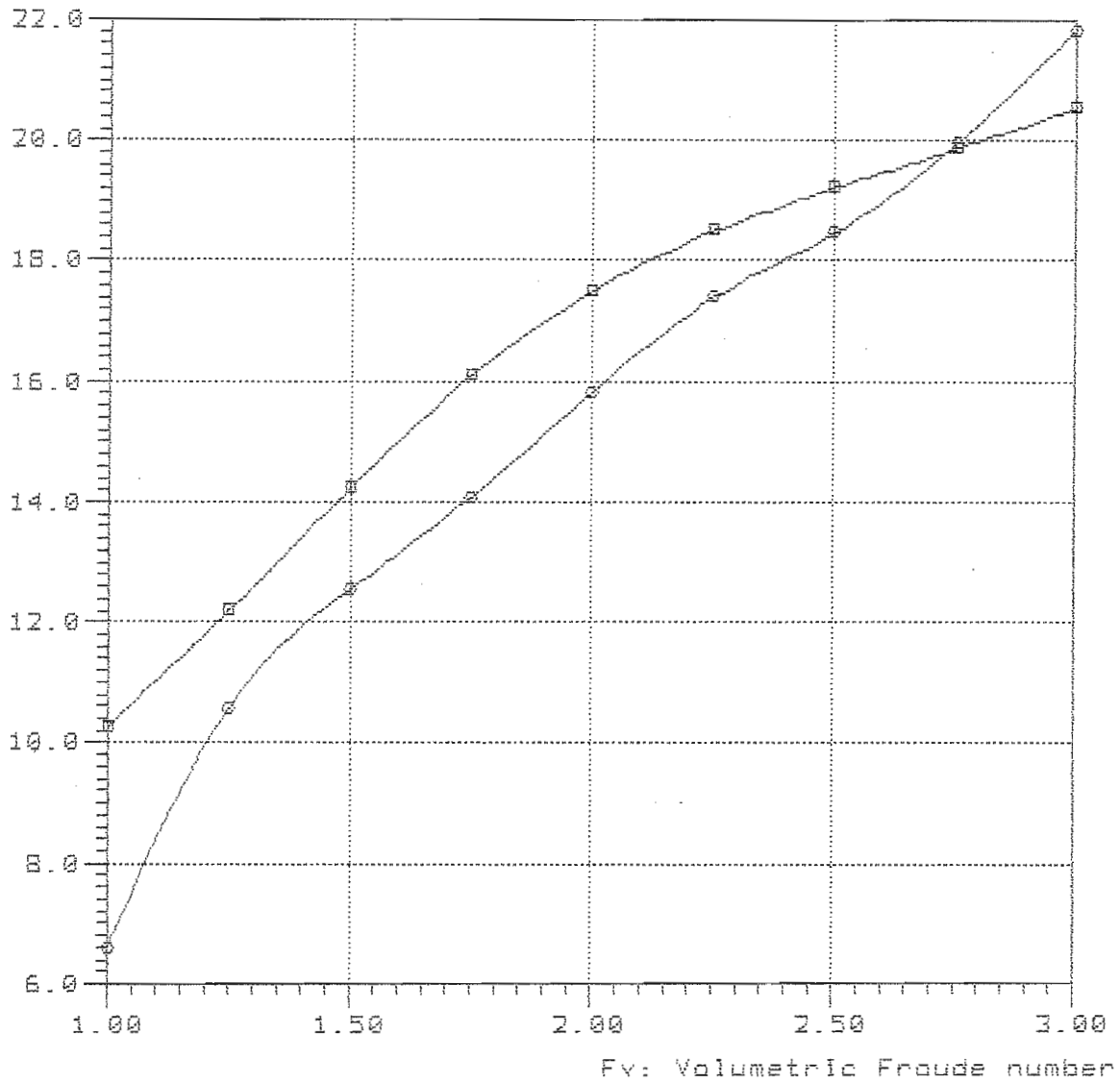
—●— Delft-188 Lpx/Bpx=4.09 Ap/Val=7.00 Val/Lpx=6.0 Lpx/Rp=5.00 Lcg/Lpx=0.488

Model = 188  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 14.63 dm  
Lwl = 15.00 dm  
Bpx = 3.67 dm  
Ap = 45 sqdm  
Disp = 119.49 N  
Deadrise = 25.00 degree  
Shaft Ang= 10.00 degree  
Vce = -34.00 mm

Lpx/Bpx = 3.986  
Lpx/Ap = 4.756  
Ap /Vol = 8.498  
Lpx/Vol = 6.429

Rbare: Bare-hull resistance (N)



—■—

—○— Delft-188 Lpx/Bpx=4.09 Ap/Vol=8.50 Vol/Lpx=6.6 Lpx/Ap=5.00 Lcg/Lpx=0.308

NavCad(tm) 3.1d

(c) Copyright 1995

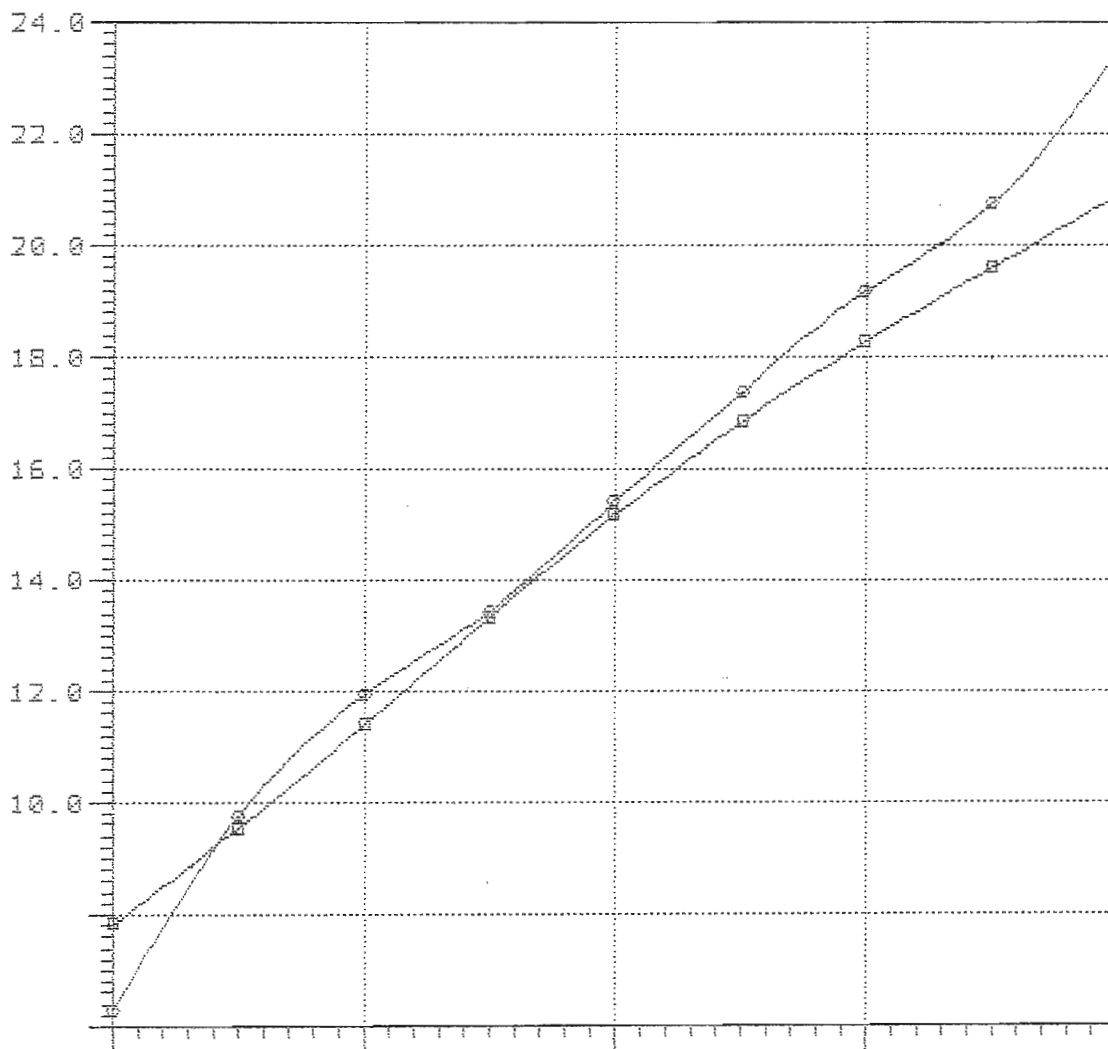
HydroComp, Inc.

File: 9-66-368.mdl

Date: 23 Feb 00

Time: 14:31

Rbare: Bare-hull resistance (N)



—□—  
—○—

NavCad(tm) 3.1d

(c) Copyright 1995

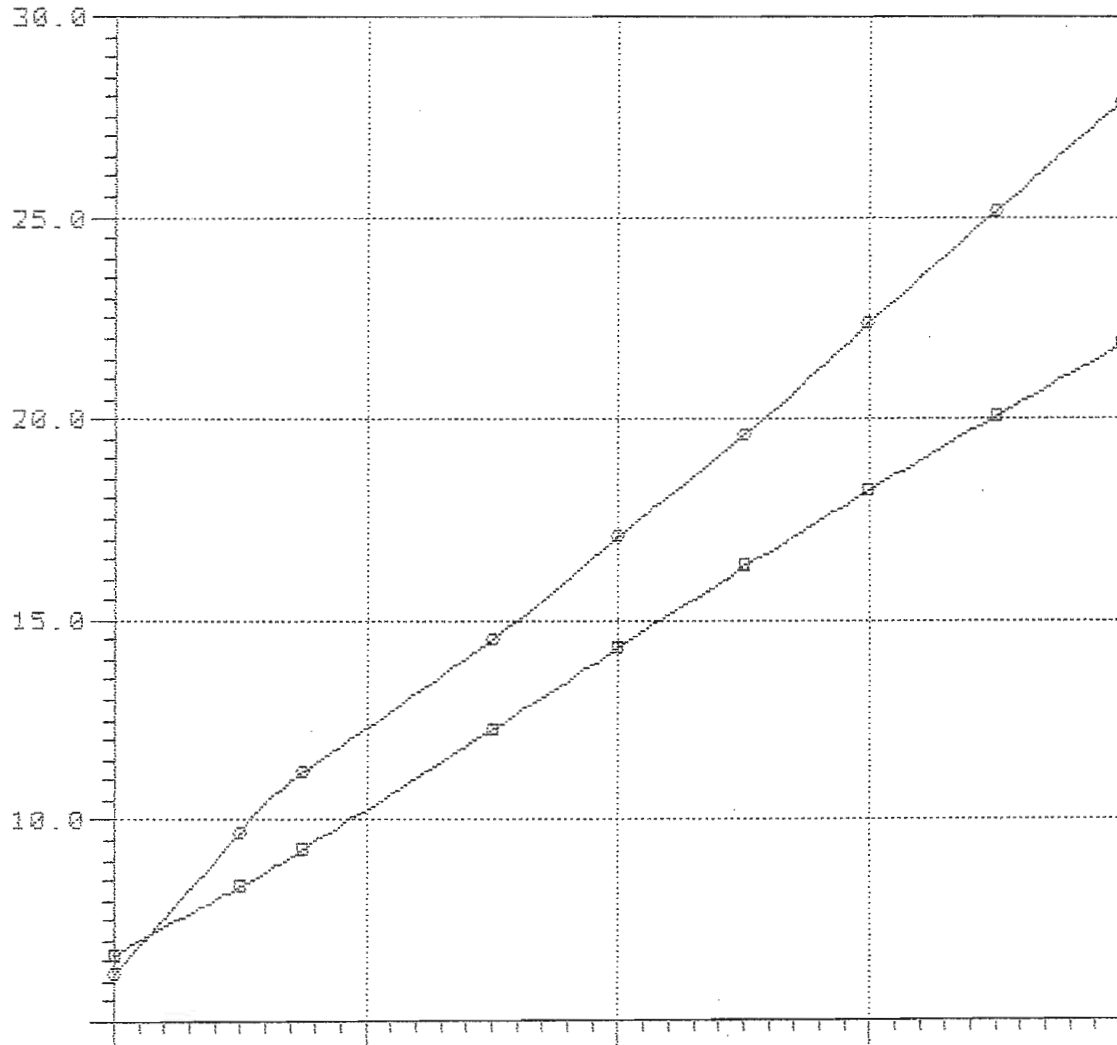
HydroComp, Inc.

File: 9-66-428.mdl

Date: 23 Feb 00

Time: 14:35

Rbare: Bare-hull resistance (N)



—■—

—○—

NavCad(tm) 3.1d

(c) Copyright 1995

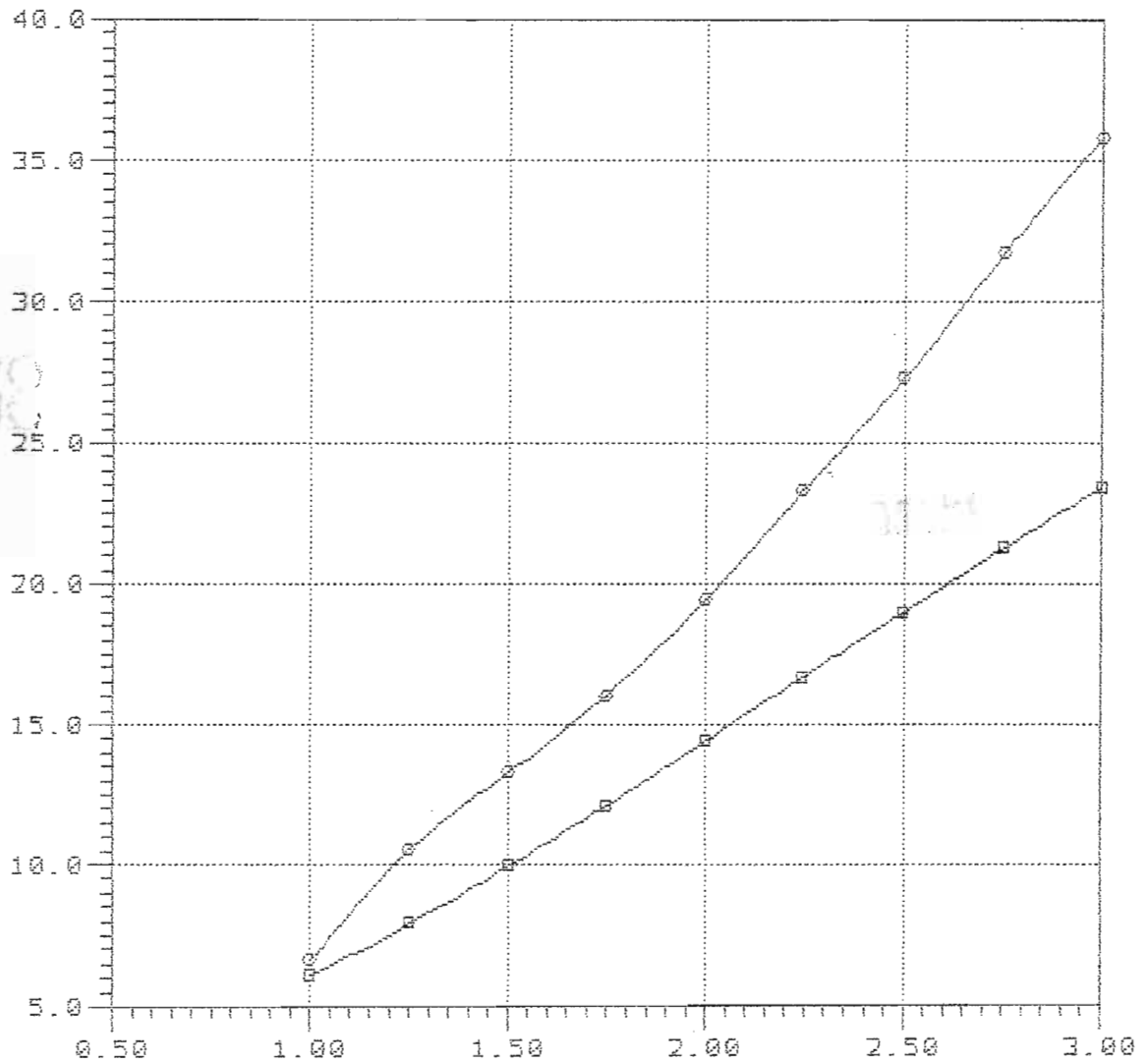
HydroComp, Inc.

File: 9-66-488.mdl

Date: 23 Feb 00

Time: 14:43

Rbare: Bare-hull resistance (N)



Fv: Volumetric Froude number

—■—

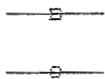
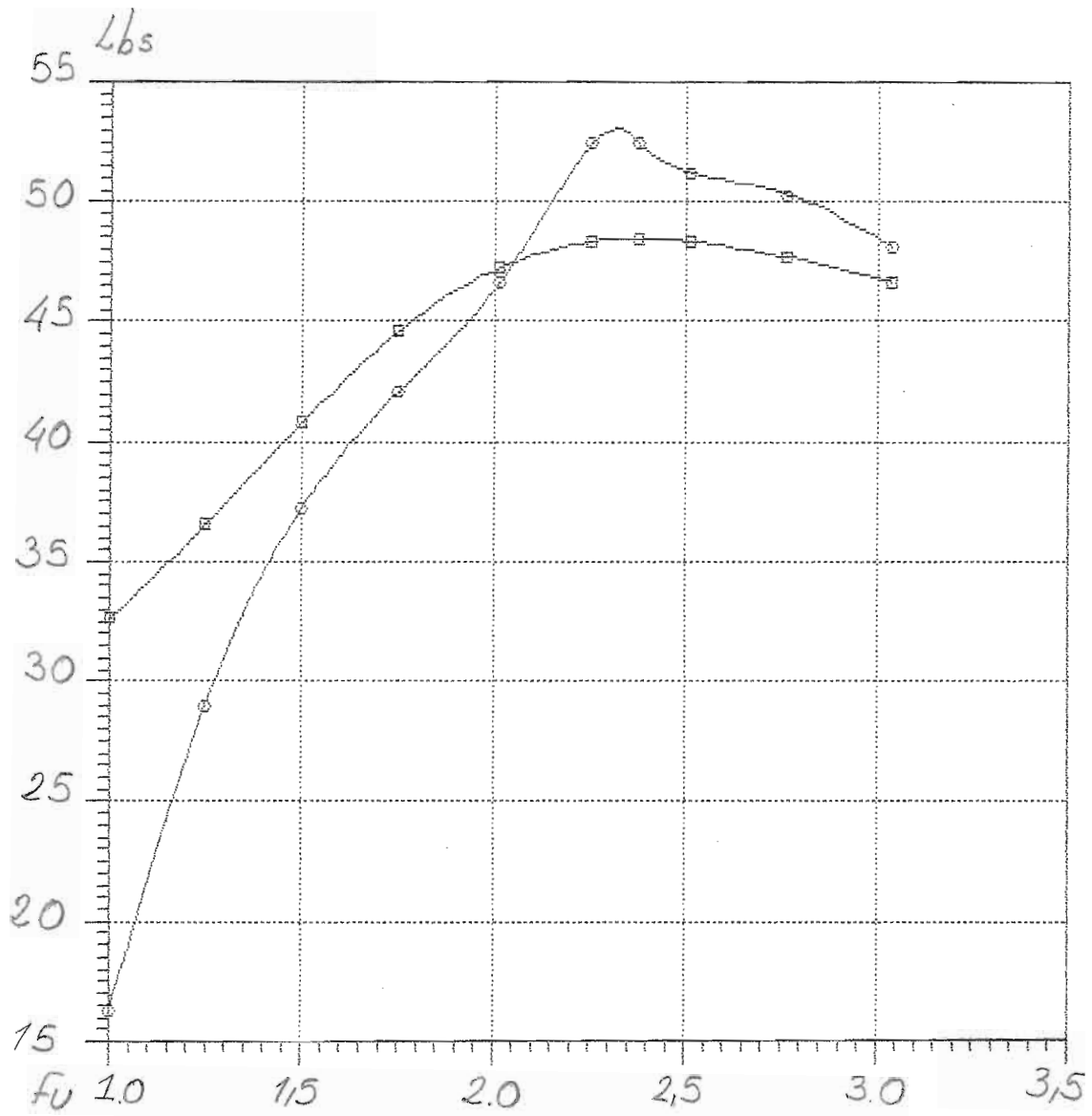
—○— Delft-188 Lpx/Bpx=4.09 Ap/Vol=8.50 Vol/Lpx=6.6 Lpx/Ap=5.00 Log/Lpx=0.488

Model = 189  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.73 dm  
Ap = 33.47 sqdm  
Disp = 237.40 N  
Deadrise = 25.00 degree  
Shaft Ang= 7.30 degree  
Vce = -25.40 mm

Lpx/Bpx = 5.495  
Lpx/Ap = 6.722  
Ap /Vol = 4.000  
Lpx/Vol = 5.244

4-52-308





NavCad(tm) 3.1d

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HydroComp, Inc.

### Bare-hull resistance

vs.

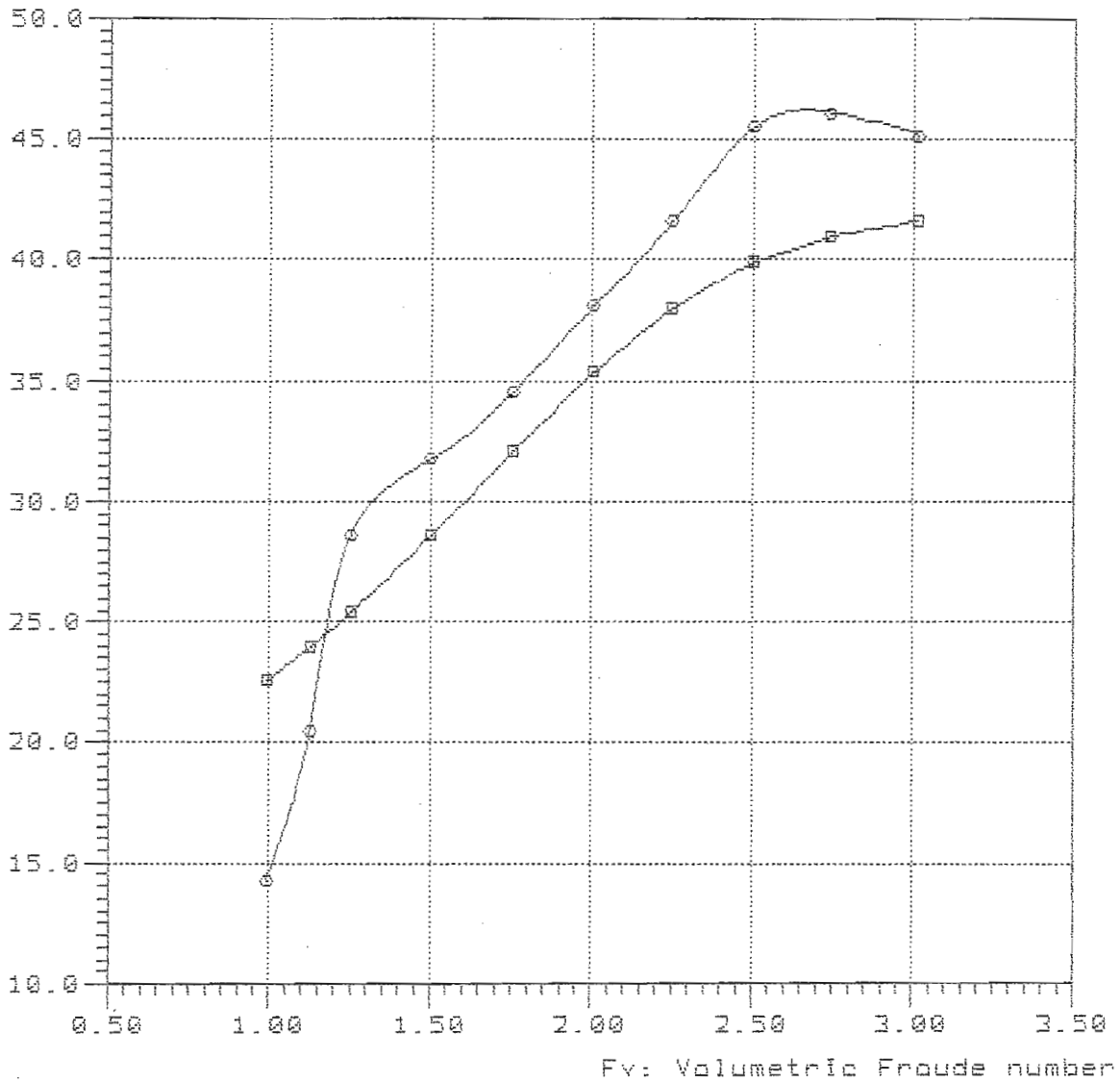
### Volumetric Froude number

File: 4-52-368.mdl

Date: 23 Feb 00

Time: 14:53

Rbare: Bare-hull resistance (N)

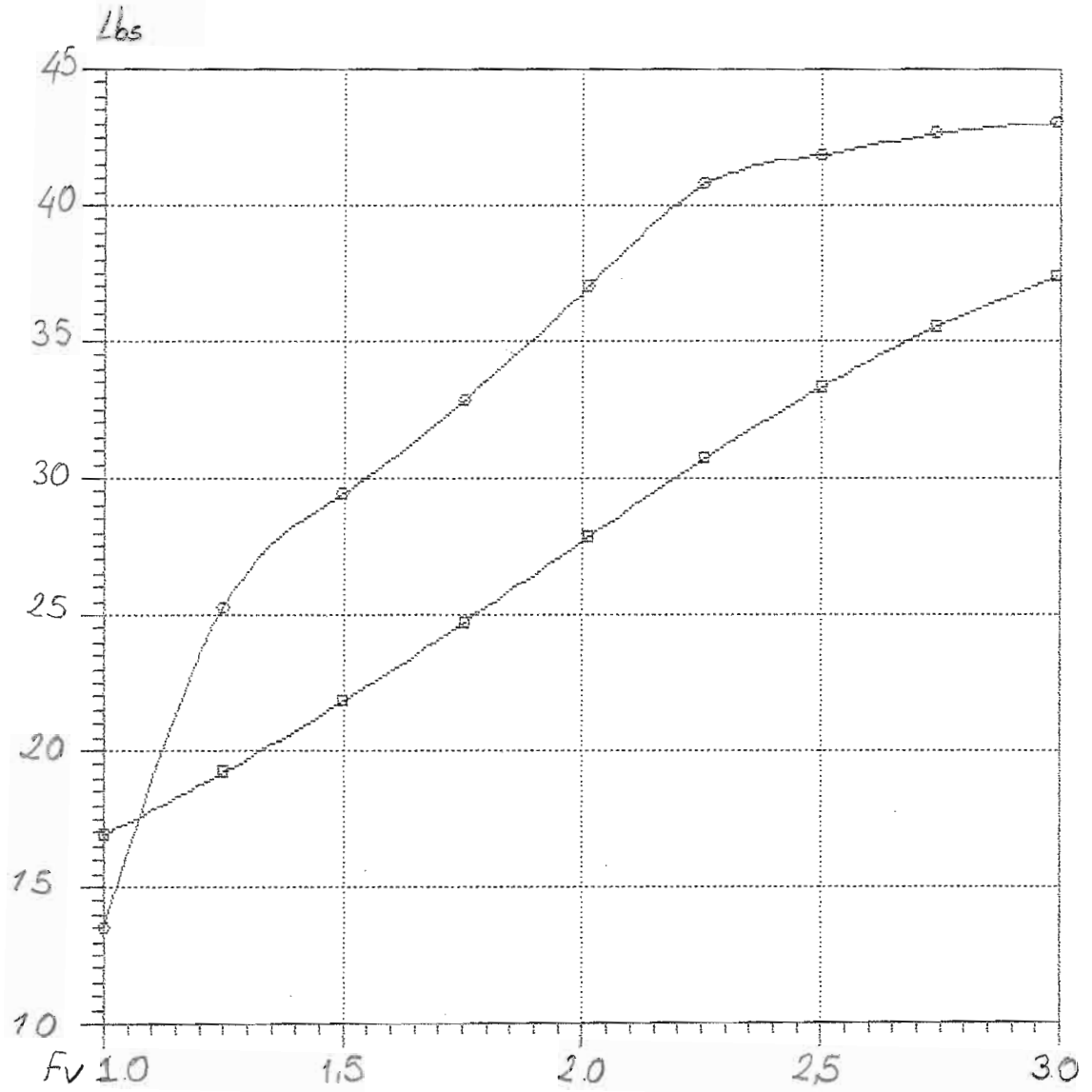


#### Curve legend

—■—

—○— Delft-189 Lpx/Bpx=5.50 Ap/Val=4.00 Val/Lpx=5.2 Lpx/Ap=6.72 Log/Lpx=0.368

4-52-428



—□—  
—○—

NavCad(tm) 3.1d

(c) Copyright 1995

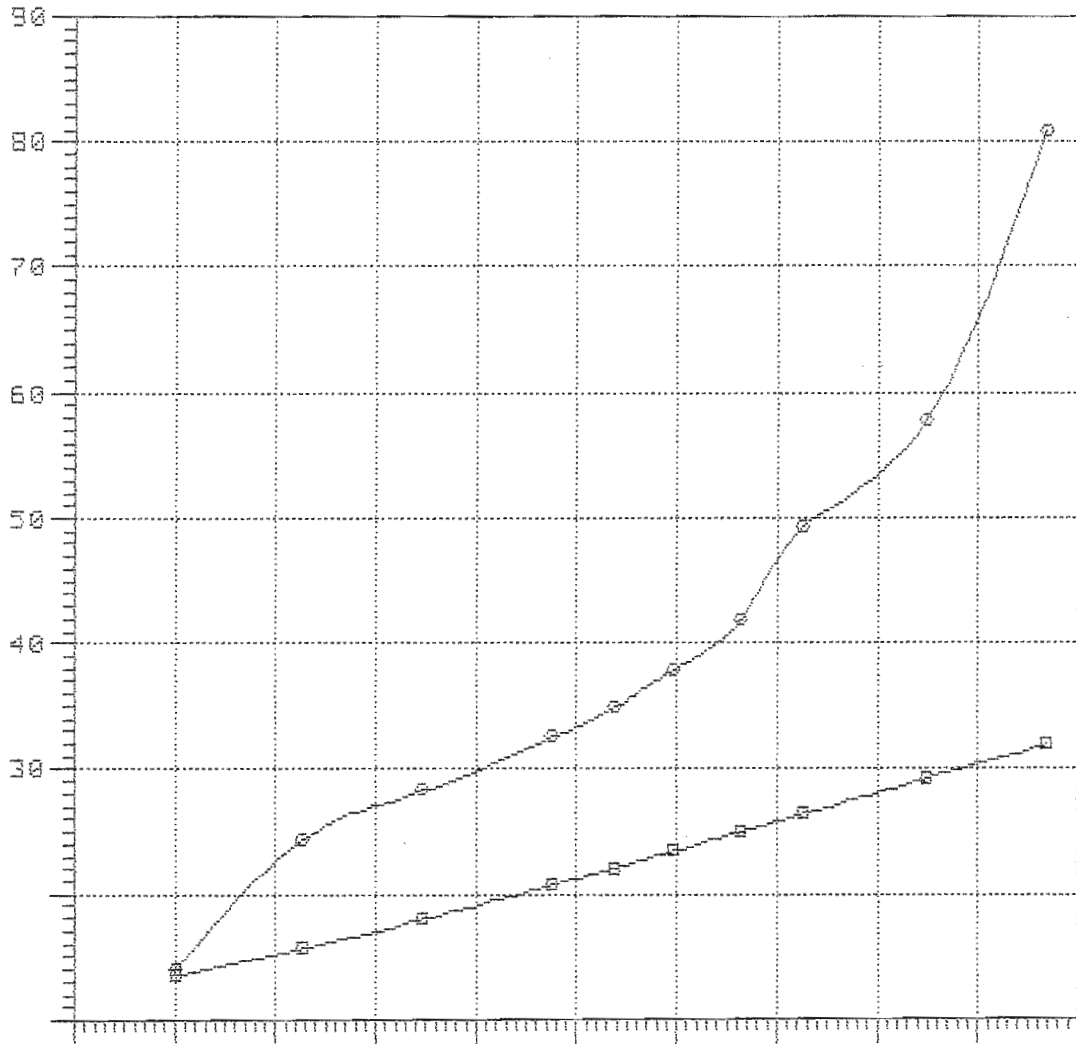
HydroComp, Inc.

File: 4-52-488.mdl

Date: 23 Feb 00

Time: 15:04

Rbare: Bare-hull resistance (N)



—■—

—○—

Model = 189  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.73 dm  
Ap = 33.47 sqdm  
Disp = 147.25 N  
Deadrise = 25.00 degree  
Shaft Ang = 7.30 degree  
Vce = -25.40 mm

Lpx/Bpx = 5.495  
Lpx/Ap = 6.722  
Ap /Vol = 5.499  
Lpx/Vol = 6.149

NavCad(tm) 3.1d

(c) Copyright 1995

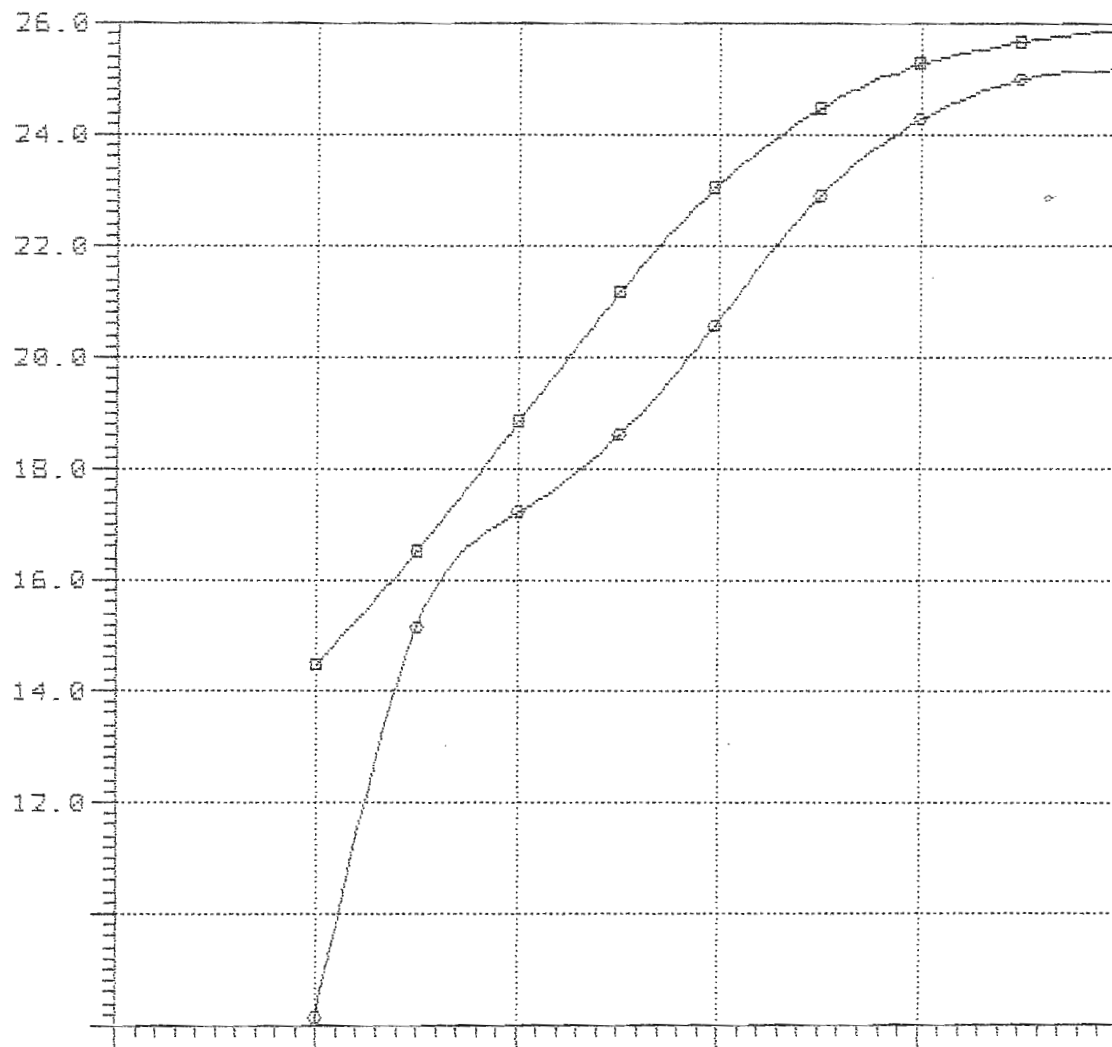
HydroComp, Inc.

File: 6-61-308.mdl

Date: 23 Feb 00

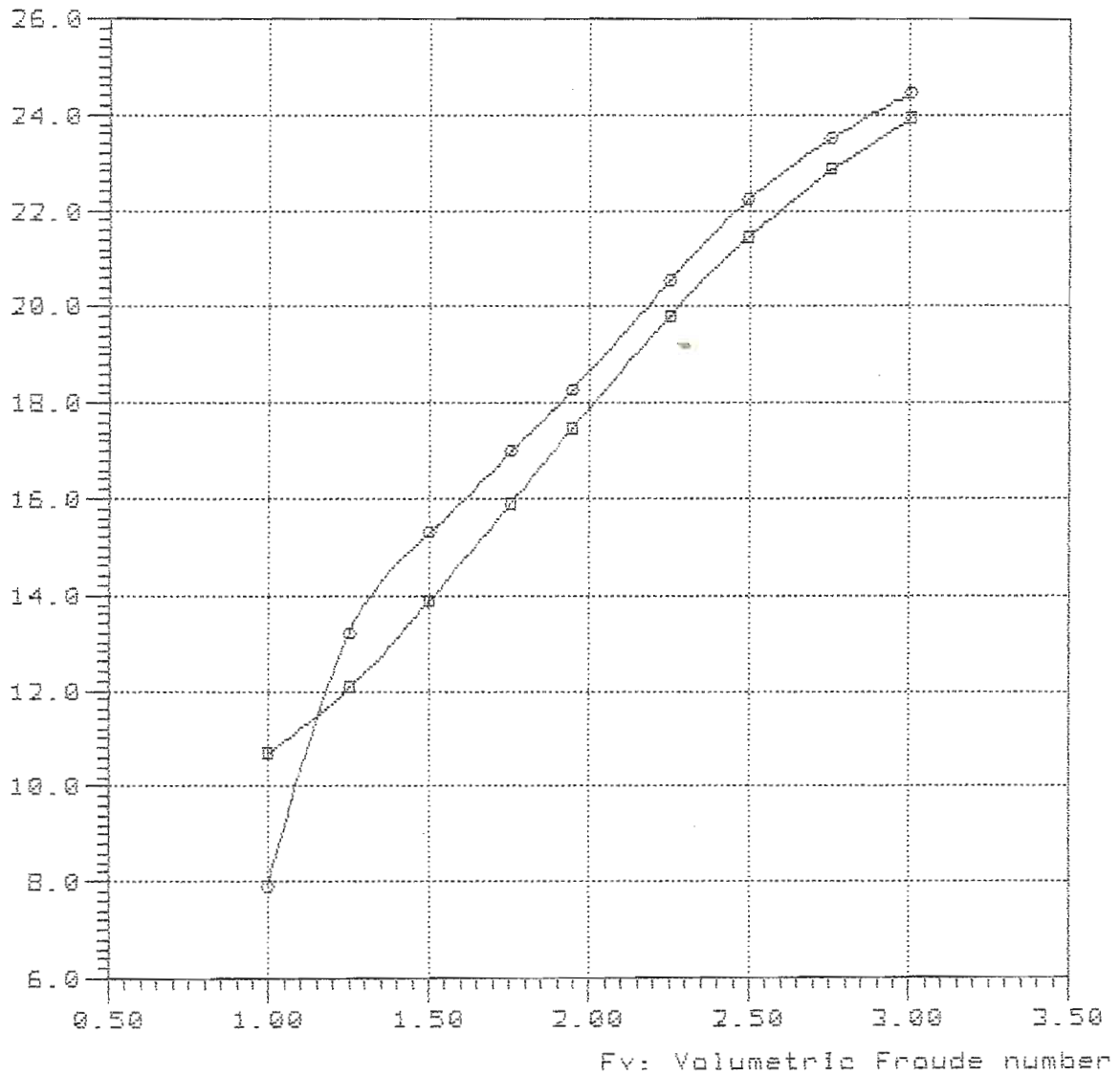
Time: 15:07

Rbare: Bare-hull resistance (N)



—■—  
—○—

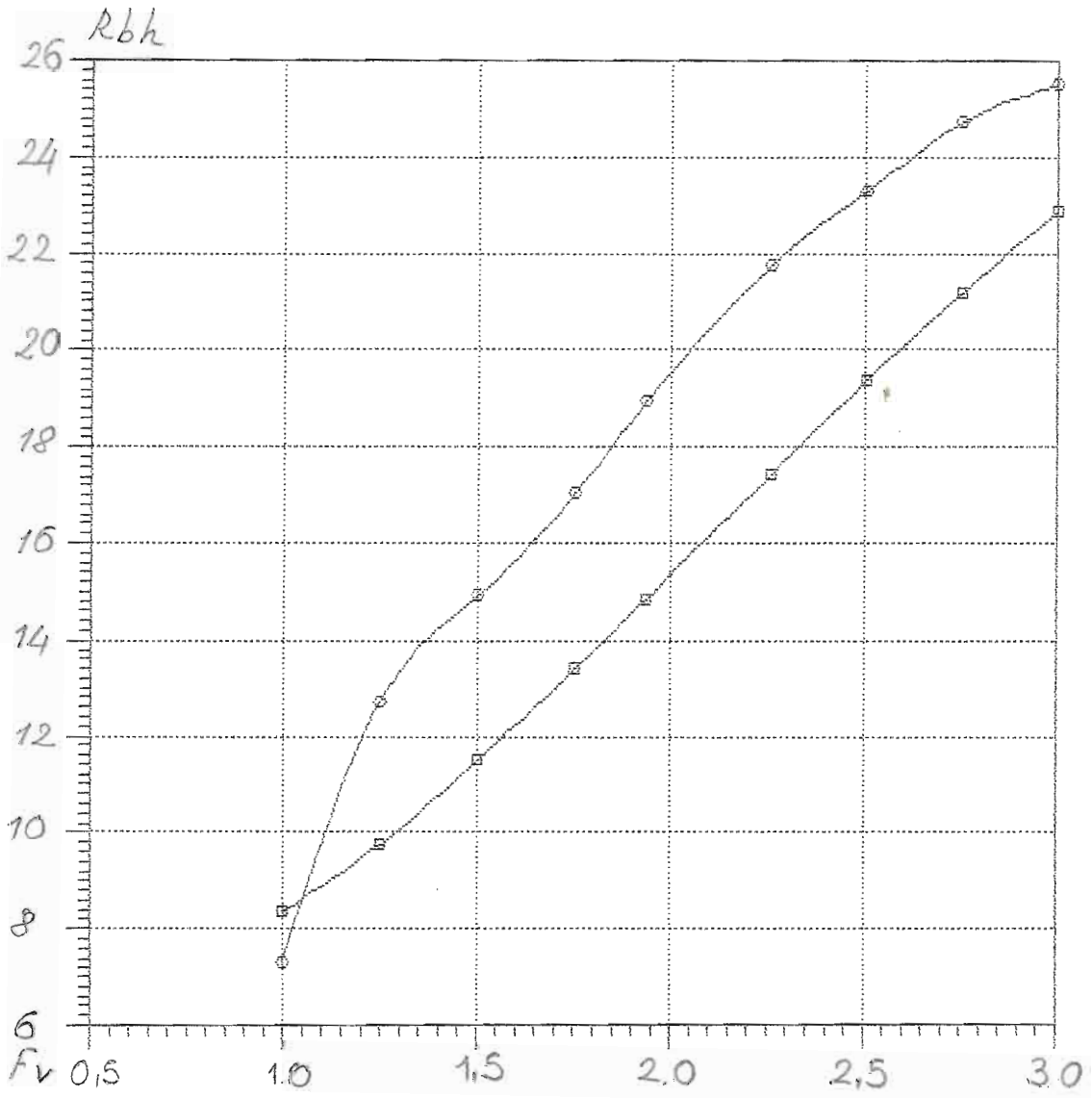
Rbare: Bare-hull resistance (N)



—■—

—●— Deift-189 Lpx/Bpx=5.50 Ap/Vol=5.50 Vol/Lpx=6.1 Lpx/Ap=6.72 Log/Lpx=0.368

6-61-428



—□—

—○—

NavCad(tm) 3.1d

### Bare-hull resistance

File: 6-61-488.mdl

(c) Copyright 1995

vs.

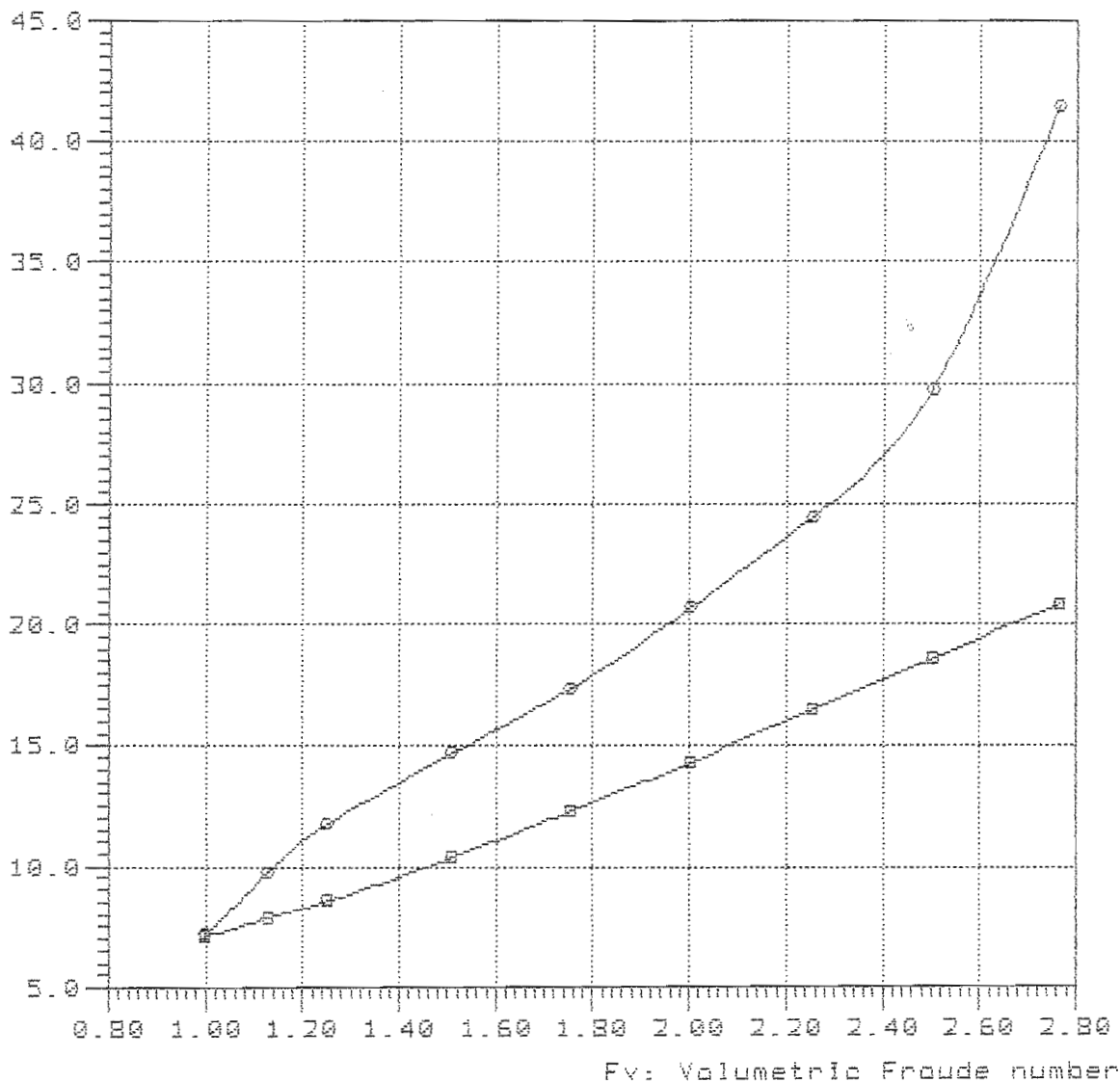
Date: 23 Feb 88

HydroComp, Inc.

### Volumetric Froude number

Time: 15:19

Rbare: Bare-hull resistance (N)



#### Curve Legend

—□—

—○— Delft-189 Lpx/Bpx=5.50 Ap/Val=5.50 Val/Lpx=6.1 Lpx/Ap=6.72 Lcg/Lpx=0.488



Model = 189  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.73 dm  
Ap = 33.47 sqdm  
Disp = 102.61 N  
Deadrise = 25.00 degree  
Shaft Ang = 7.30 degree  
Vce = -25.40 mm

Lpx/Bpx = 5.495  
Lpx/Ap = 6.722  
Ap /Vol = 6.996  
Lpx/Vol = 6.935

NavCad(tm) 3.1d

(c) Copyright 1995

HydroComp, Inc.

Bare-hull resistance

vs.

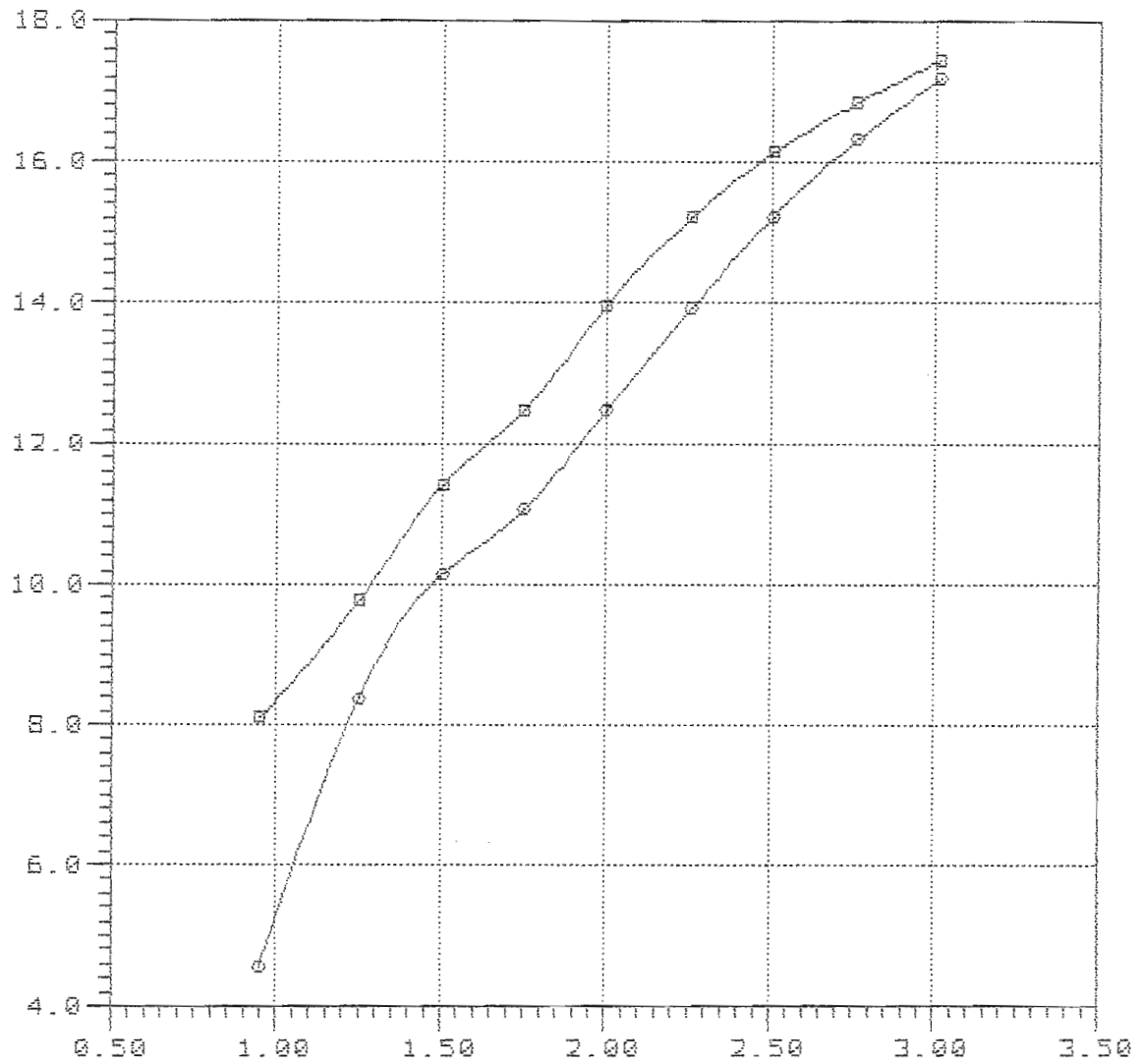
Volumetric Froude number

File: 7-89-308.mdl

Date: 23 Feb 00

Time: 15:22

Rbare: Bare-hull resistance (N)



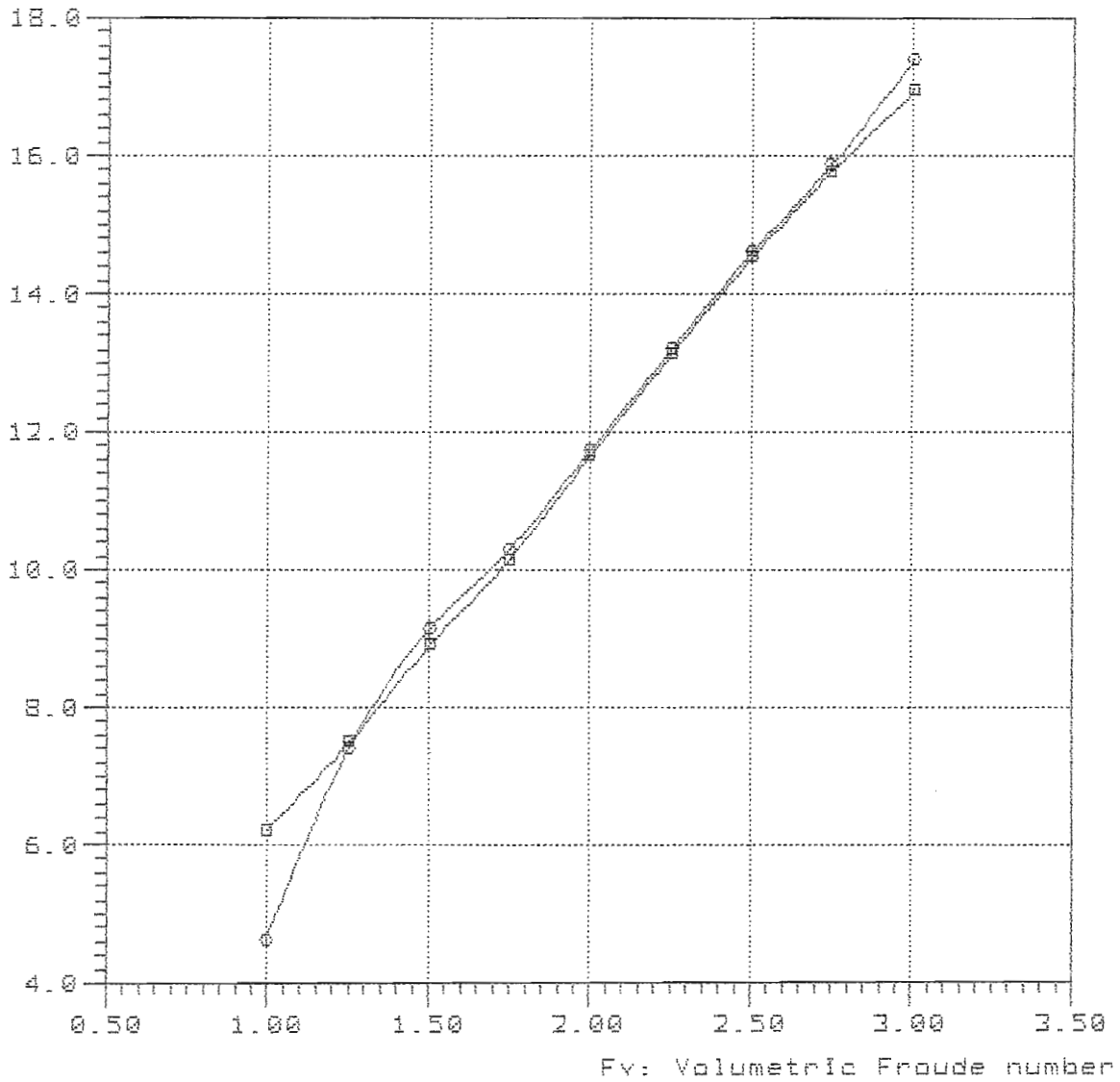
Fv: Volumetric Froude number

Curve legend

—□—

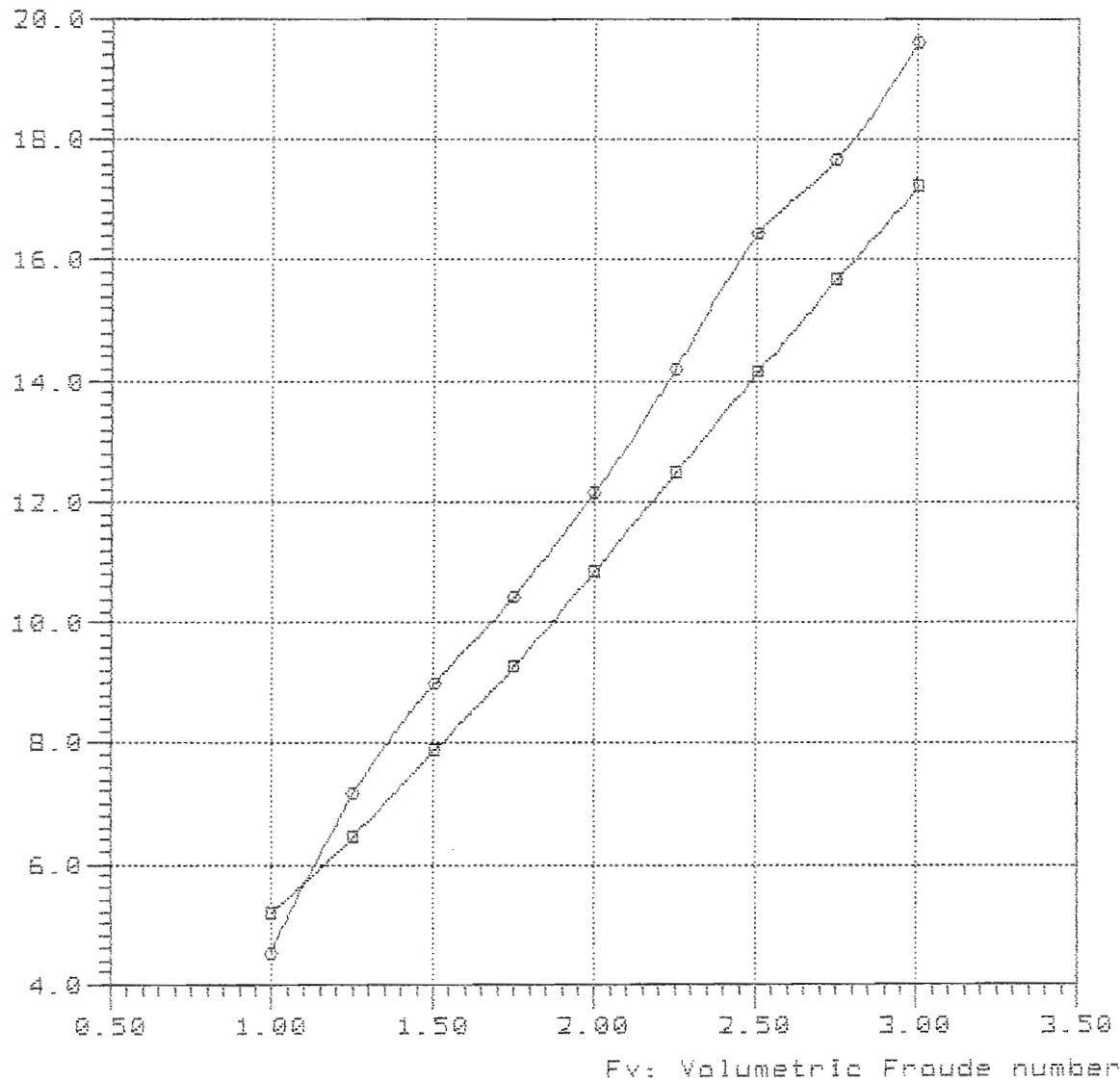
—○— Delft-189 Lpx/Bpx=5.50 Ap/Val=7.00 Val/Lpx=6.9 Lpx/Ap=6.72 Lcg/Lpx=0.308

Rbare: Bare-hull resistance (N)



—■—  
—○— Delft-189 Lpx/Bpx=5.50 Ap/Val=7.00 Val/Lpx=6.9 Lpx/Ap=6.72 Log/Lpx=0.368

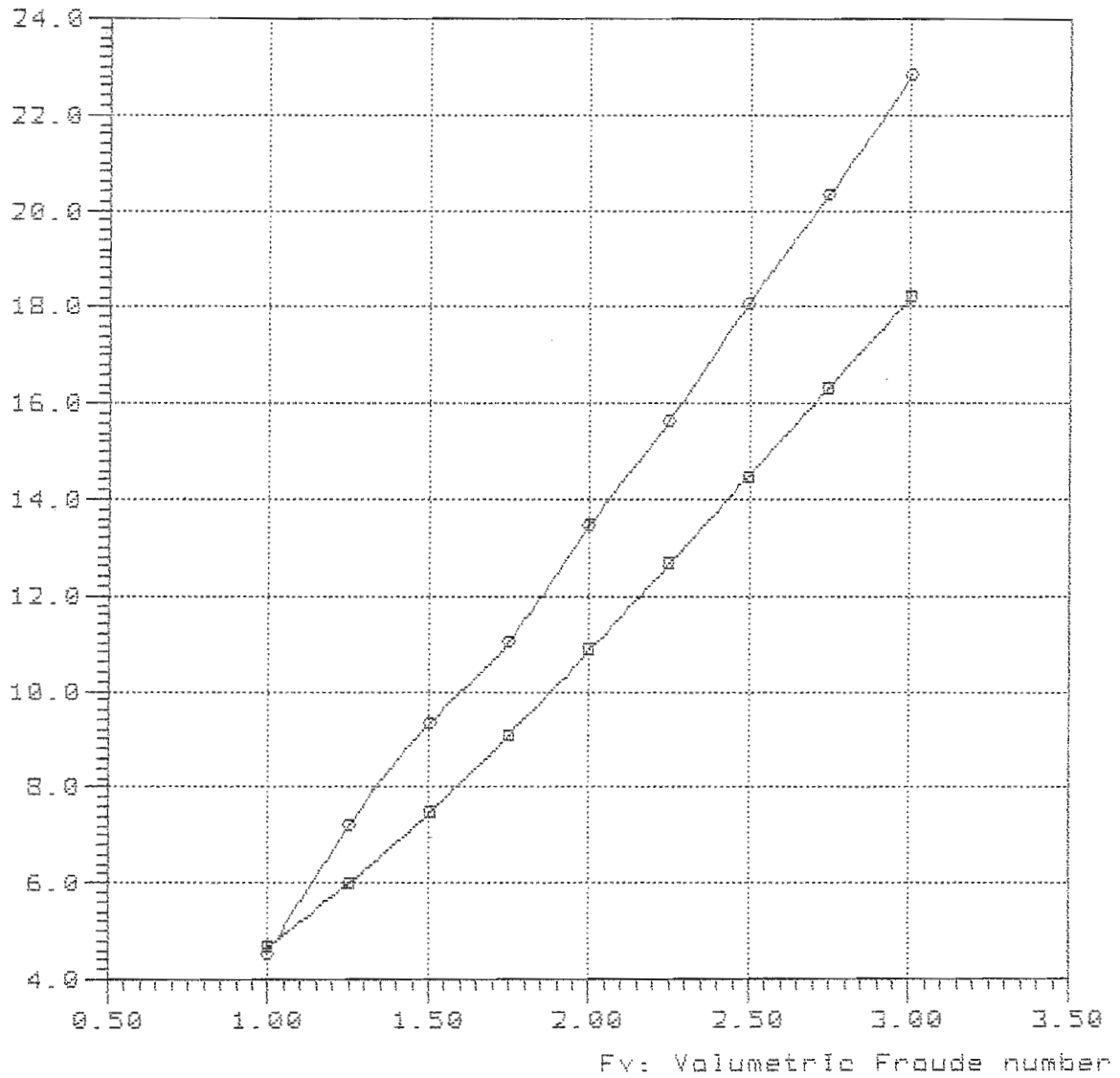
Rbare: Bare-hull resistance (N)



—■—

—○— Delft-189 Lpx/Bpx=5.50 Ap/Val=7.00 Val/Lpx=6.9 Lpx/Ap=6.72 Lcg/Lpx=0.428

Rbare: Bare-hull resistance (N)



—■—

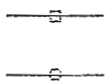
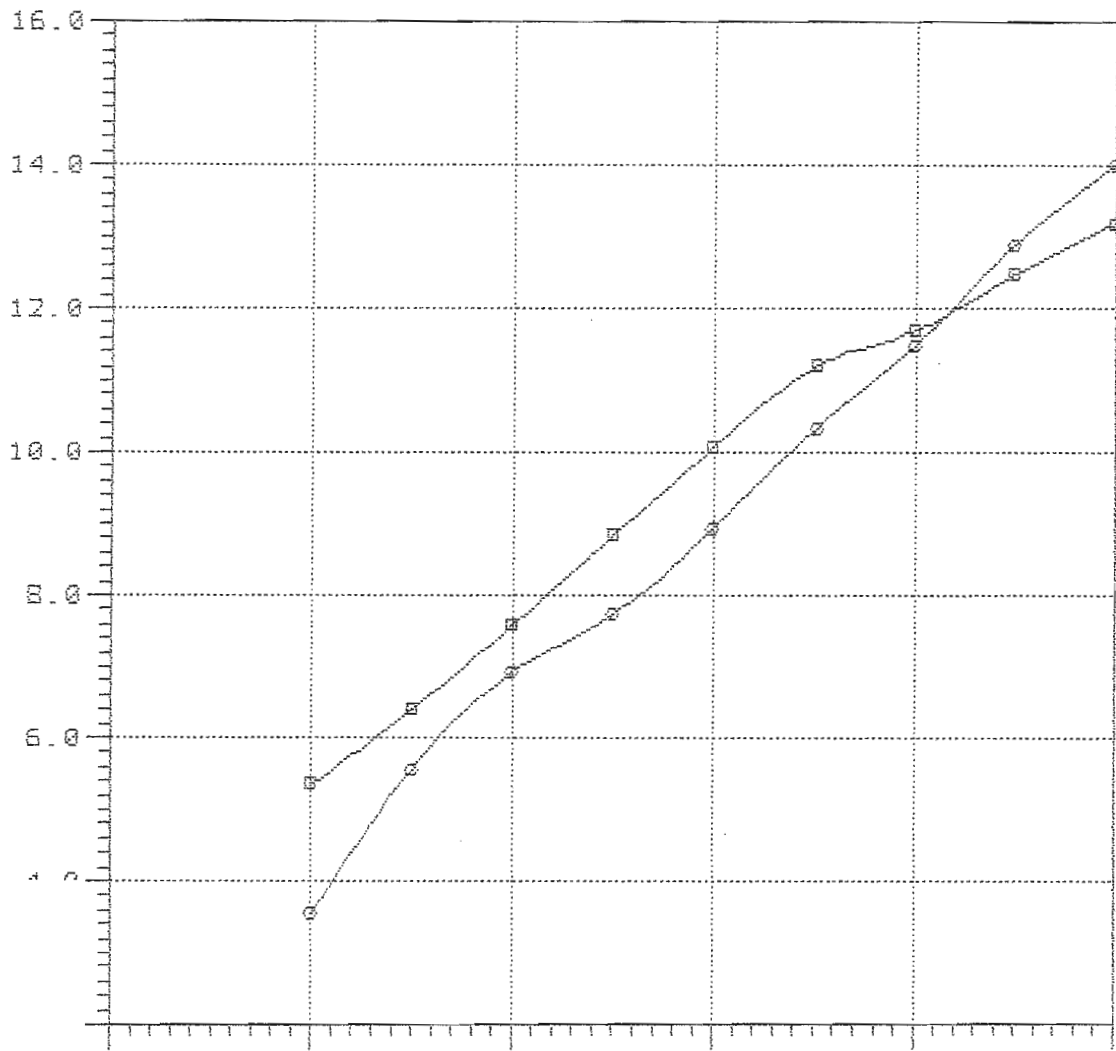
—○— Delft-189 Lpx/Bpx=5.50 Ap/Val=7.00 Val/Lpx=6.9 Lpx/Ap=6.72 Lcg/Lpx=0.488z

Model = 189  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.73 dm  
Ap = 33.47 sqdm  
Disp = 76.62 N  
Deadrise = 25.00 degree  
Shaft Ang= 7.30 degree  
Vce = -25.40 mm

Lpx/Bpx = 5.495  
Lpx/Ap = 6.722  
Ap /Vol = 8.500  
Lpx/Vol = 7.644

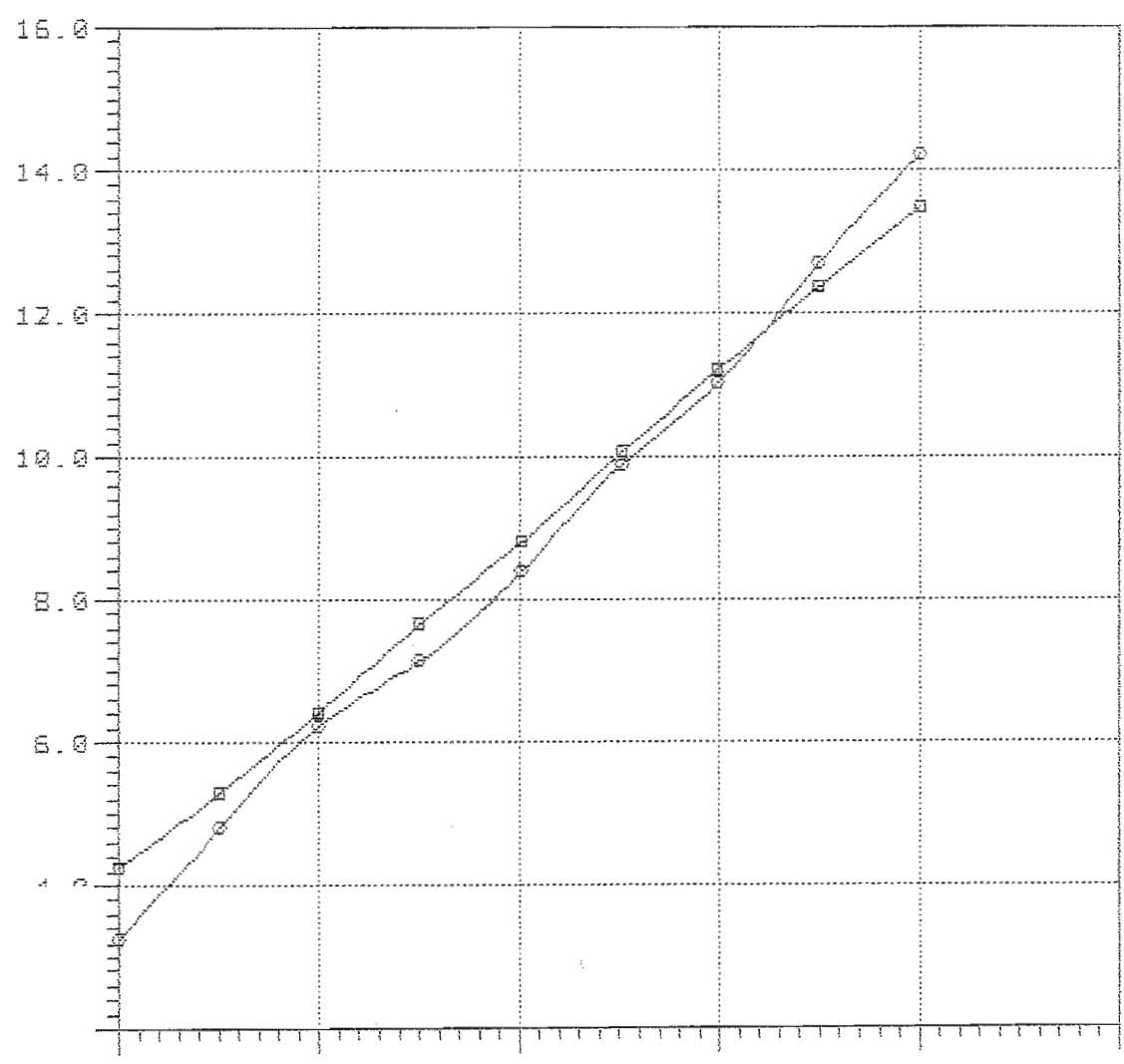
Rbare: Bare-hull resistance (N)



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File: 9-76-368.mdl  
Date: 23 Feb 00  
Time: 15:39

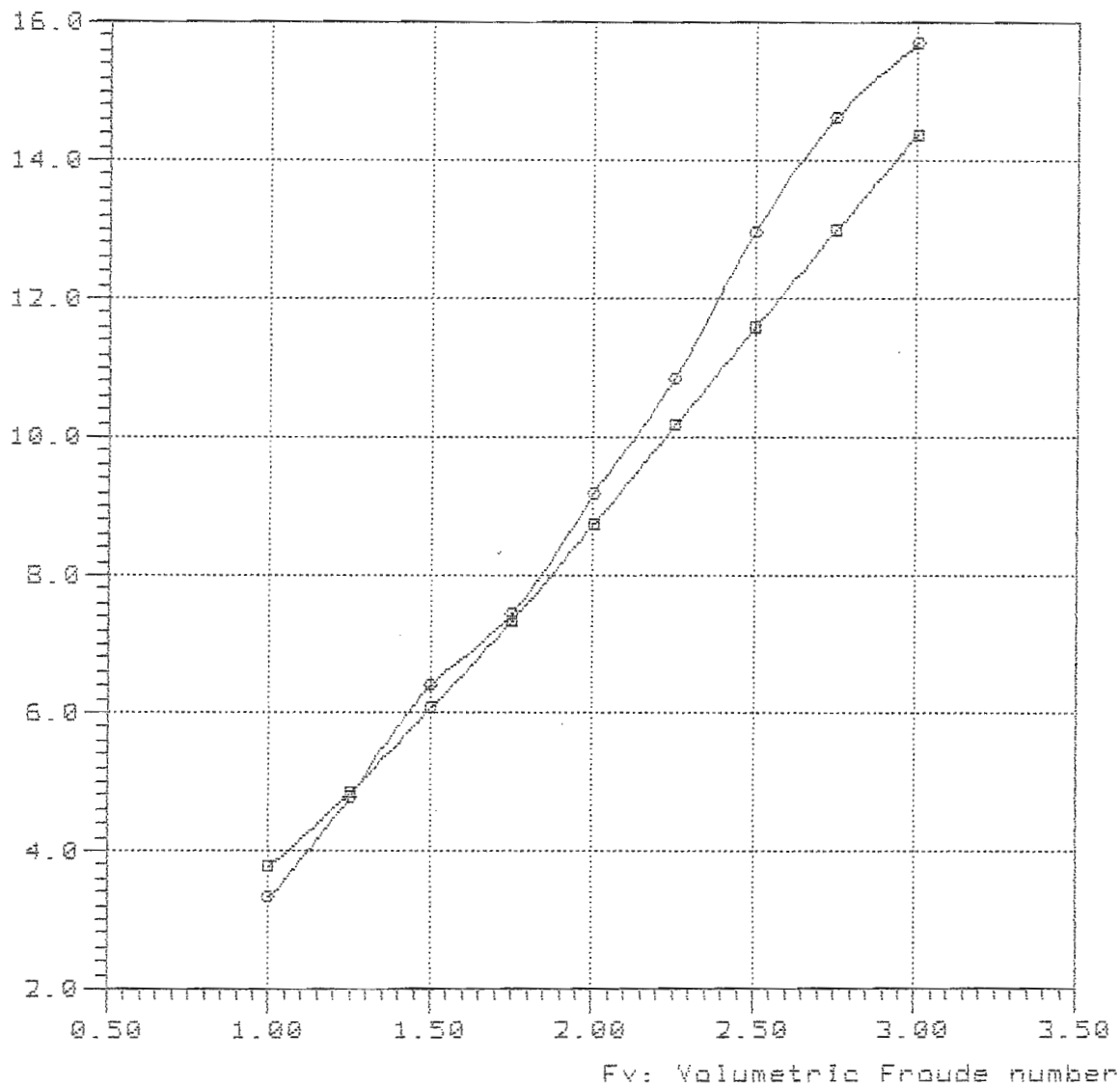
Rbare: Bare-hull resistance (N)



—□—  
—○—



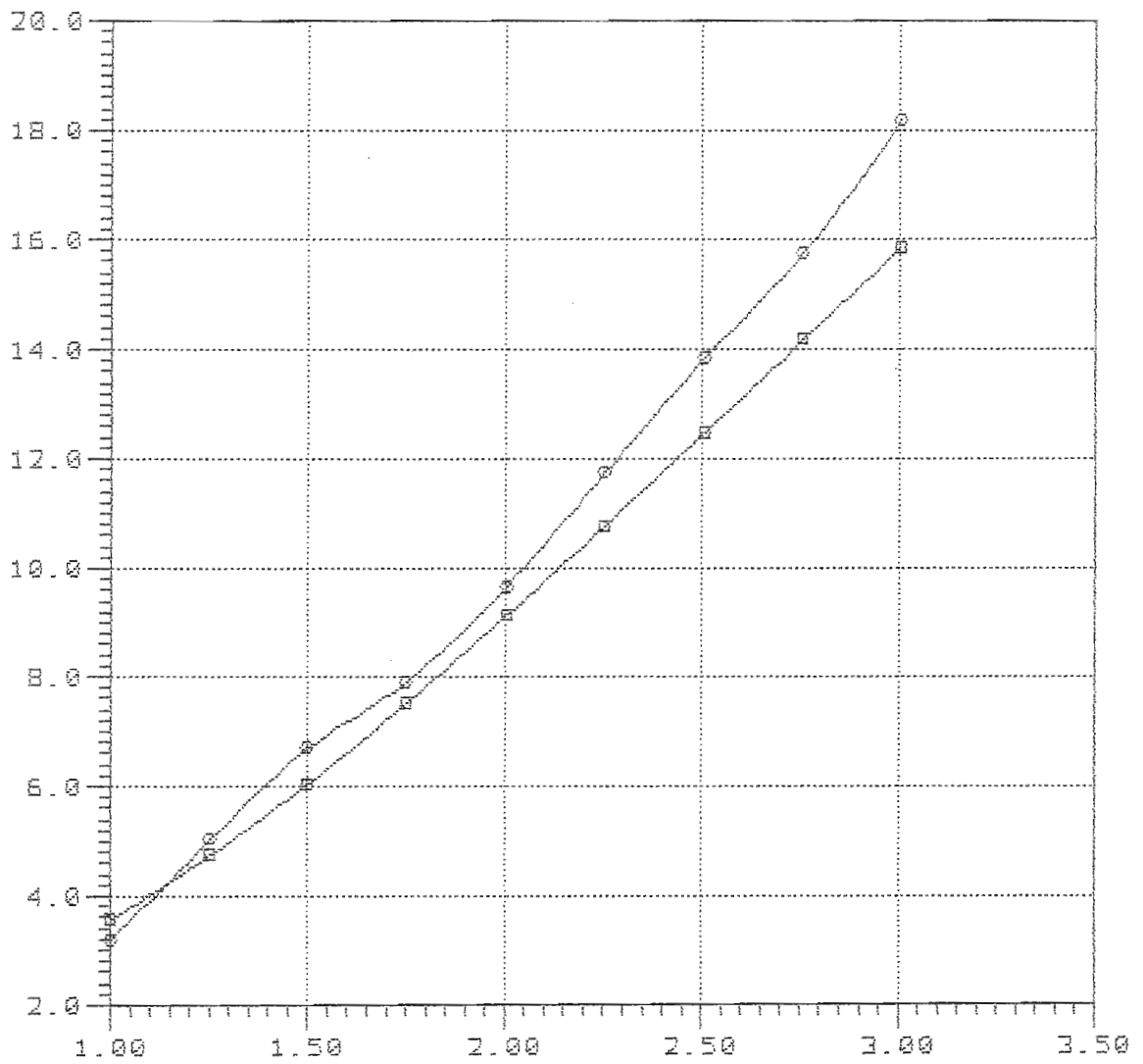
Rbare: Bare-hull resistance (N)



—■—

—○— Delft-189 Lpx/Bpx=5.50 Ap/Vol=8.50 Vol/Lpx=7.6 Lpx/Ap=6.72 Log/Lpx=0.428

Rbare: Bare-hull resistance (N)



Fv: Volumetric Froude number

—■—

—○— Delft-189 Lpx/Bpx=5.50 Ap/Val=8.50 Val/Lpx=7.6 Lpx/Ap=6.72 Log/Lpx=0.488

Model = 190  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.14 dm  
Ap = 26.28 sqdm  
Disp = 165.20 N  
Deadrise = 25.00 degree  
Shaft Ang = 5.75 degree  
Vce = -19.80 mm

Lpx/Bpx = 7.009  
Lpx/Ap = 8.562  
Ap /Vol = 3.999  
Lpx/Vol = 5.917

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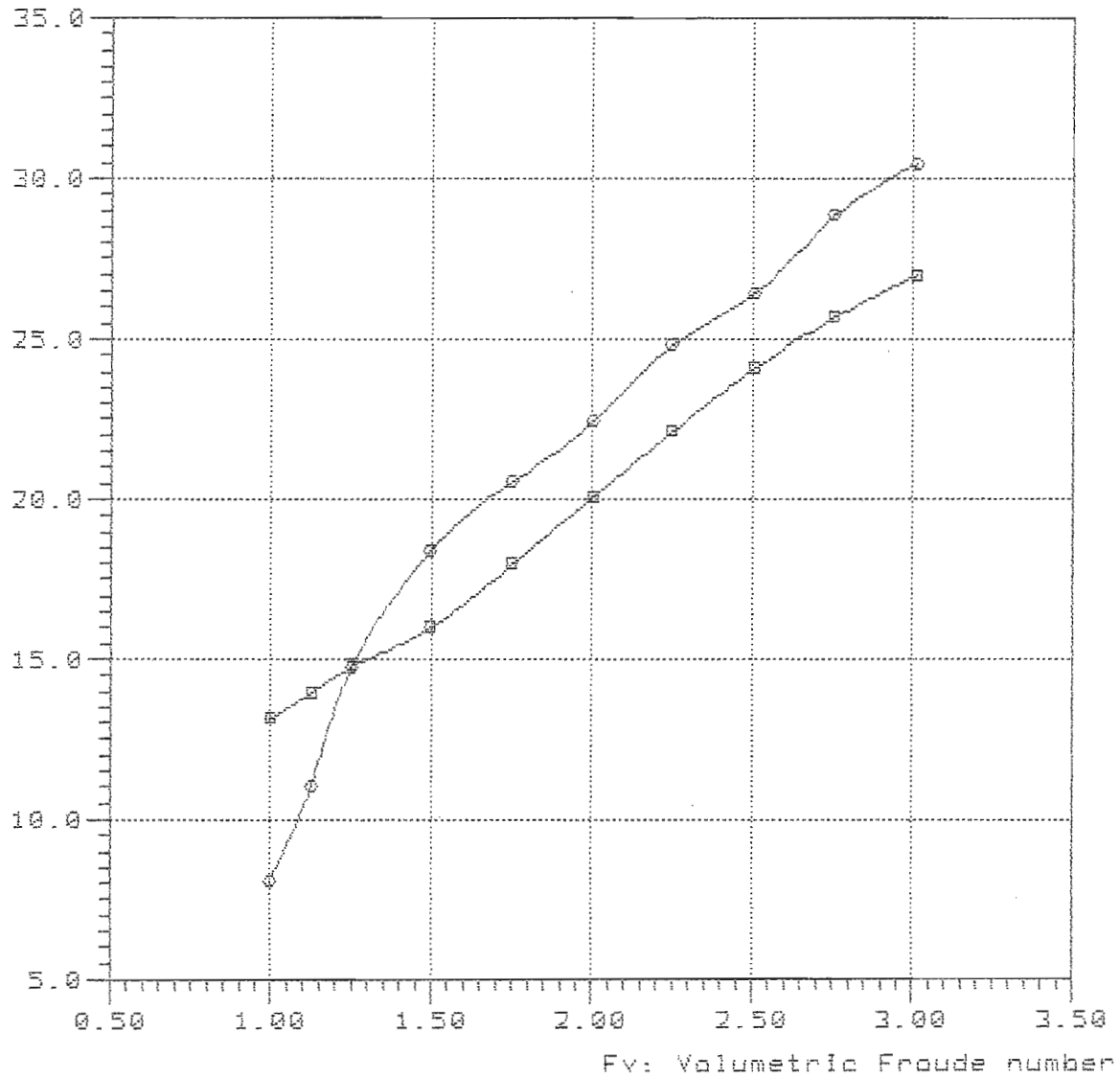
HydroComp, Inc.

File: 4-59-368.mdl

Date: 23 Feb 00

Time: 15:50

Rbare: Bare-hull resistance (N)



—■—

—○— Delft-190 Lpx/Bpx=7.00 Ap/Val=4.0 Val/Lpx=5.9 Lpx/Ap=8.56 Lcg/Lpx=0.368

NavCad(tm) 3.1d

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Bare-hull resistance

vs.

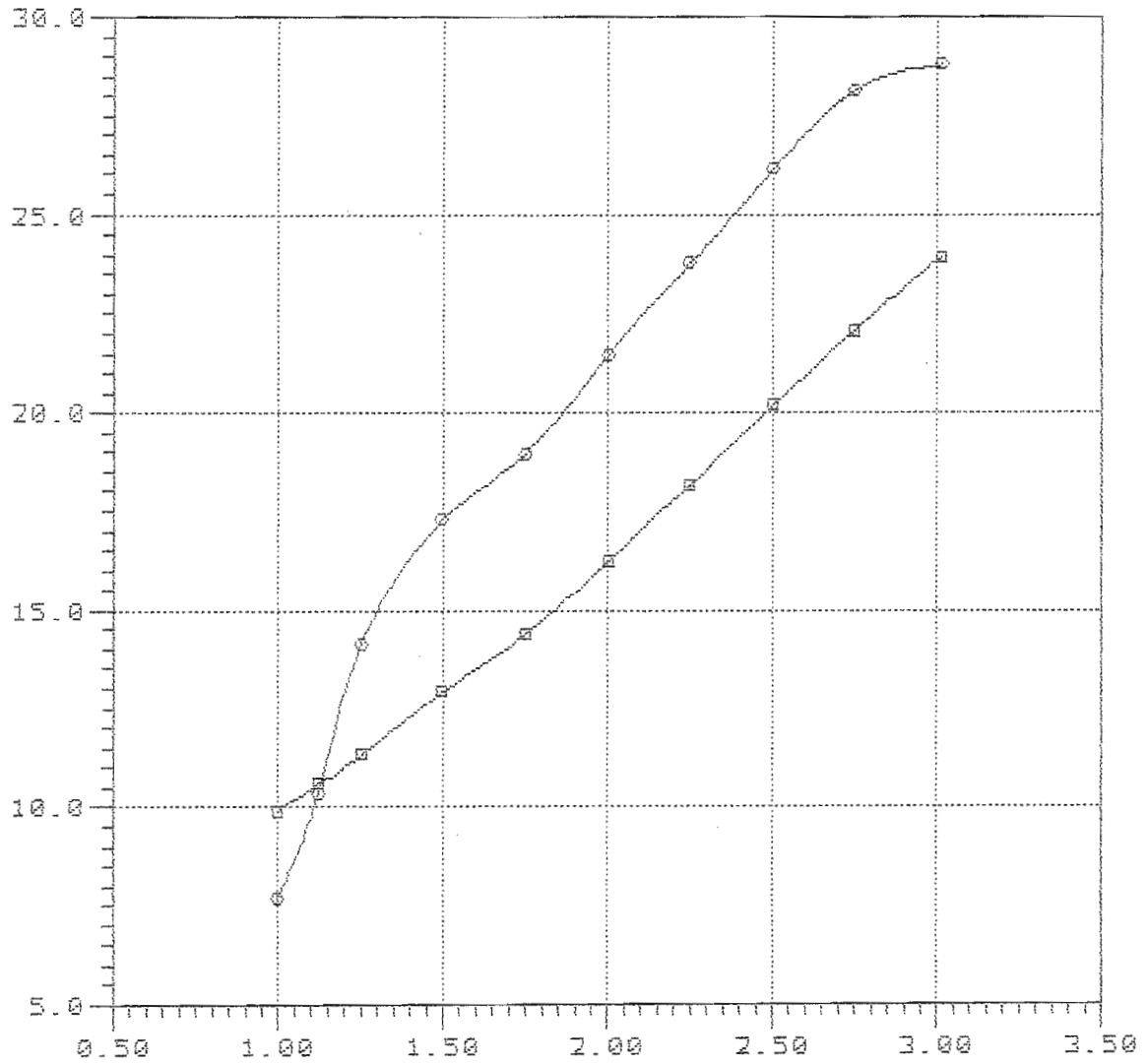
Volumetric Froude number

File: 4-59-428.mdl

Date: 23 Feb 00

Time: 15:53

Rbare: Bare-hull resistance (N)



Fv: Volumetric Froude number

Curve legend

—■—

—○— Delft-190 Lpx/Bpx=7.00 Ap/Val=4.0 Val/Lpx=5.9 Lpx/Ap=8.56 Lcg/Lpx=0.428

NavCad(tm) 3.1d

### Bare-hull resistance

File: 4-59-488.mdl

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vs.

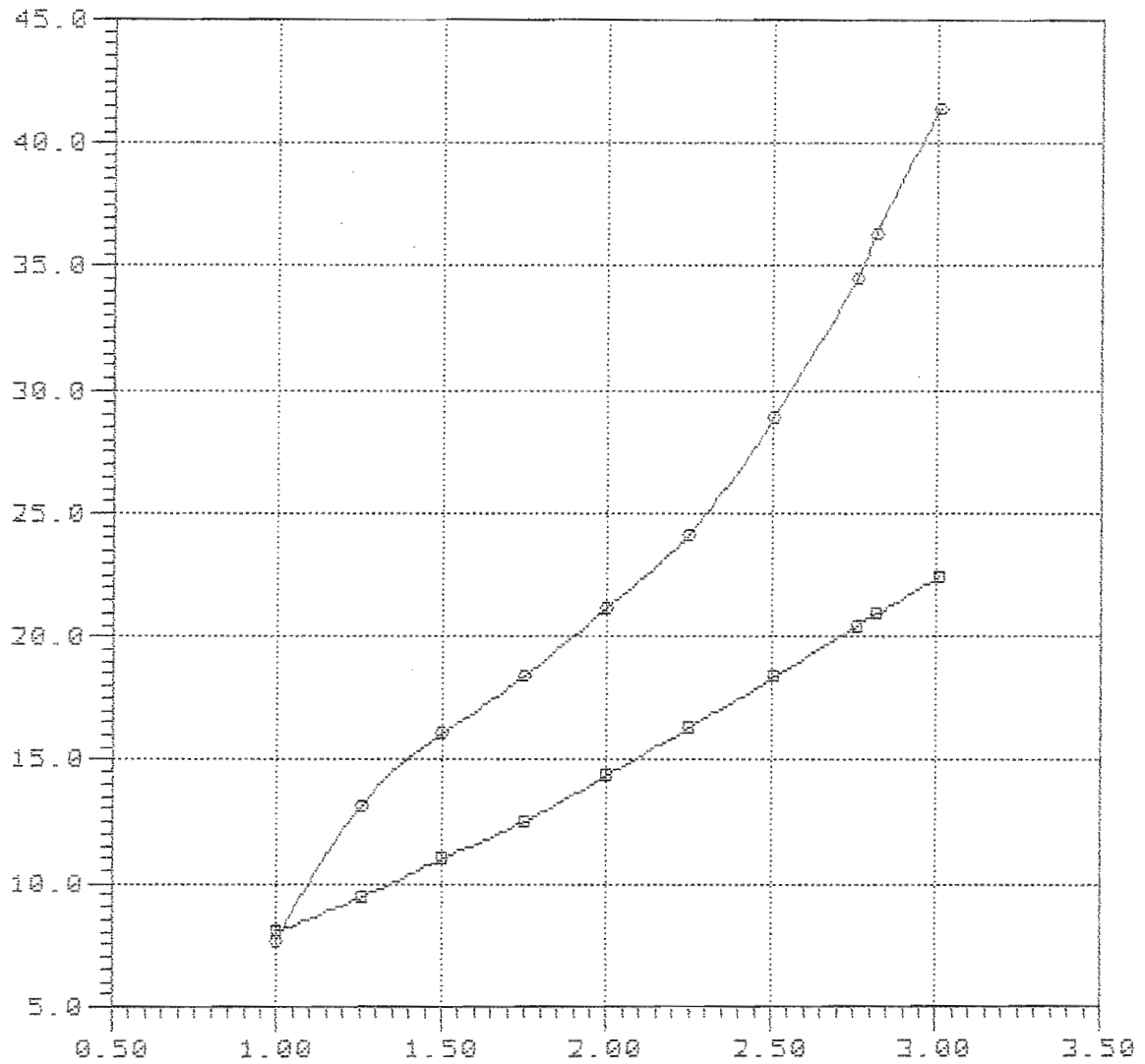
Date: 23 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 16:23

Rbare: Bare-hull resistance (N)



Fv: Volumetric Froude number

#### Curve legend

—■—

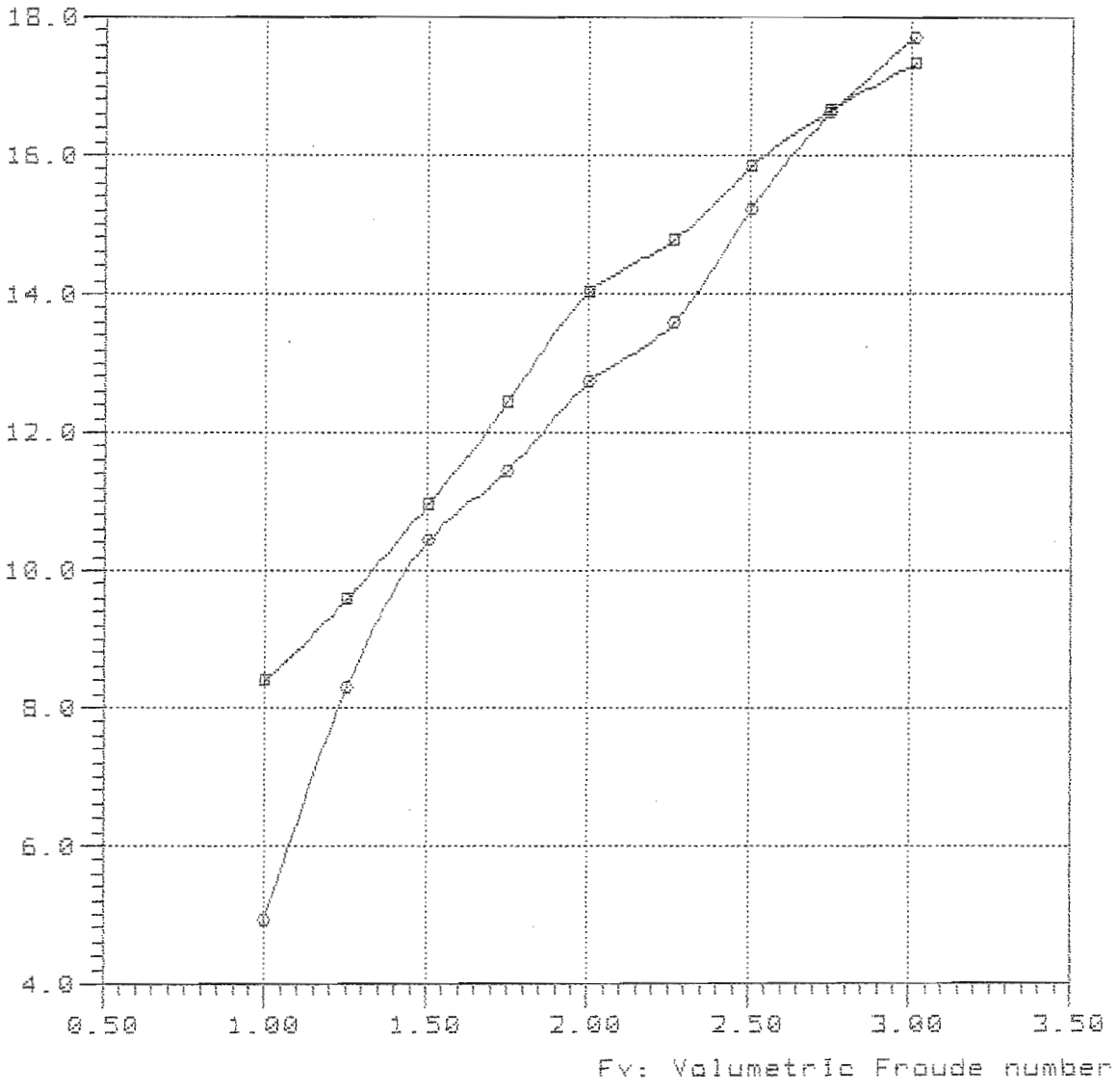
—○— Delft-190 Lpx/Bpx=7.00 Ap/Vol=4.0 Vol/Lpx=5.9 Lpx/Ap=8.56 Lcg/Lpx=0.488

Model = 190  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.14 dm  
Ap = 26.28 sqdm  
Disp = 102.42 N  
Deadrise = 25.00 degree  
Shaft Ang= 5.75 degree  
Vce = -19.80 mm

Lpx/Bpx = 7.009  
Lpx/Ap = 8.562  
Ap /Vol = 5.500  
Lpx/Vol = 6.939

Rbare: Bare-hull resistance (N)



—□—  
—○— Delft-198 Lpx/Bpx=7.00 Ap/Vol=5.50 Val/Lpx=6.9 Lpx/Ap=8.56 Log/Lpx=0.308



NavCad(tm) 3.1d

(c) Copyright 1995

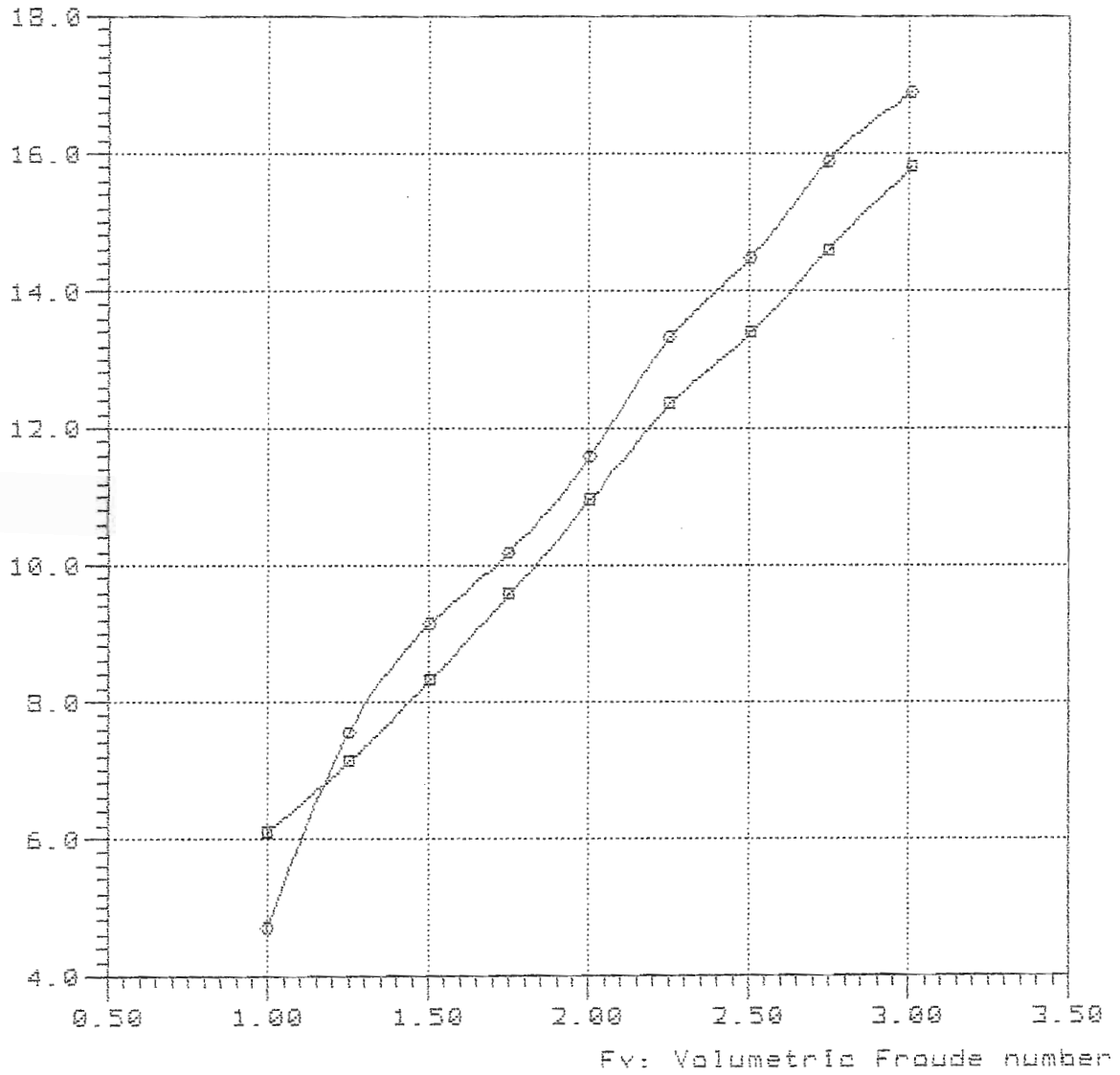
HydroComp, Inc.

File: 6-69-368.mdl

Date: 23 Feb 00

Time: 16:30

Rbare: Bare-hull resistance (N)



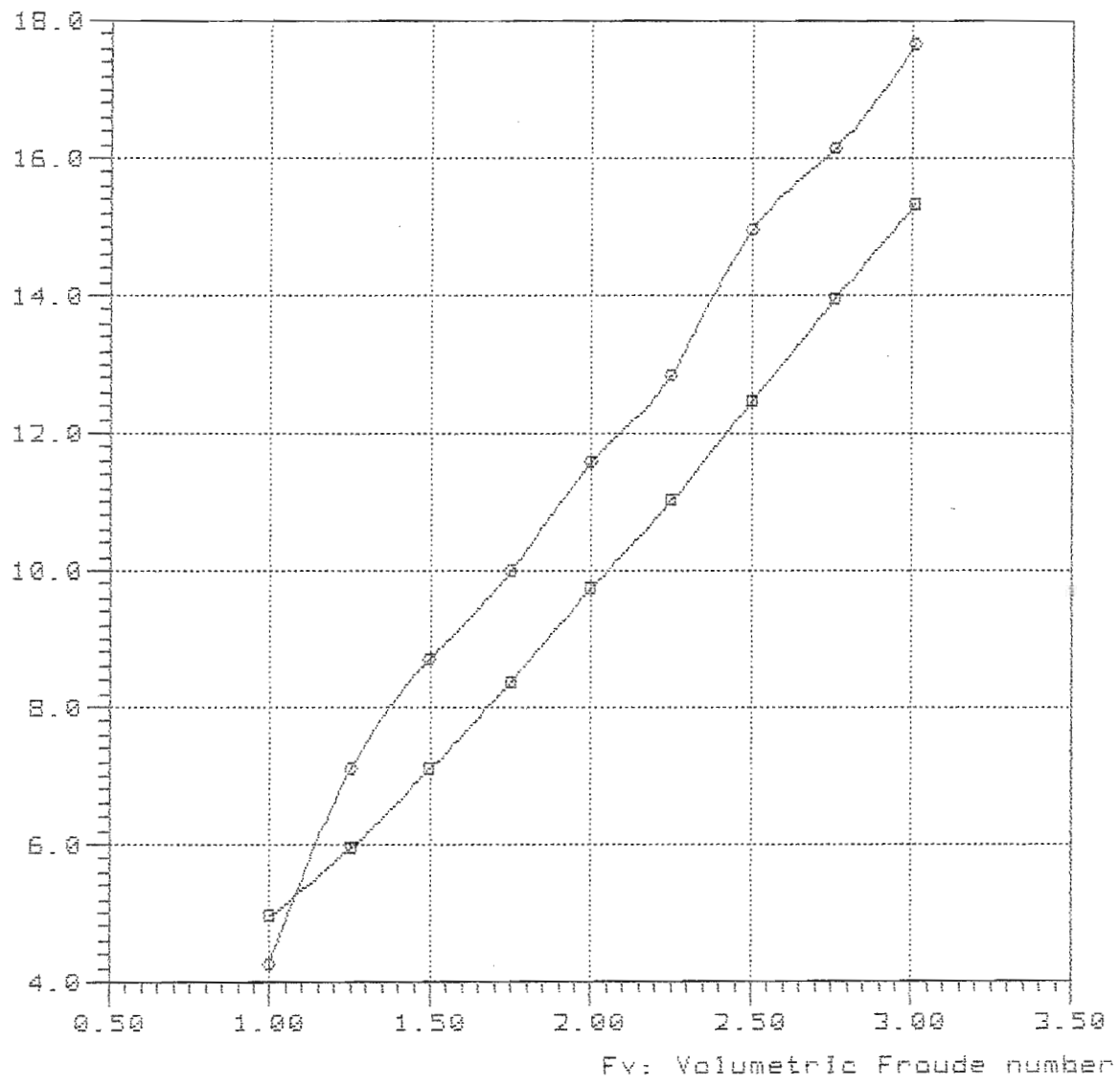
—■—

—○— Delft-190 Lpx/Bpx=7.00 Ap/Vol=5.50 Vol/Lpx=6.9 Lpx/Ap=8.56 Lcg/Lpx=0.368

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File: 6-69-428.mdl  
Date: 23 Feb 90  
Time: 16:33

Rbare: Bare-hull resistance (N)



—■—  
—○— Delft-190 Lpx/Bpx=7.00 Ap/Vol=5.50 Vol/Lpx=6.9 Lpx/Ap=8.56 Lcg/Lpx=0.428

NavCad(tm) 3.1d

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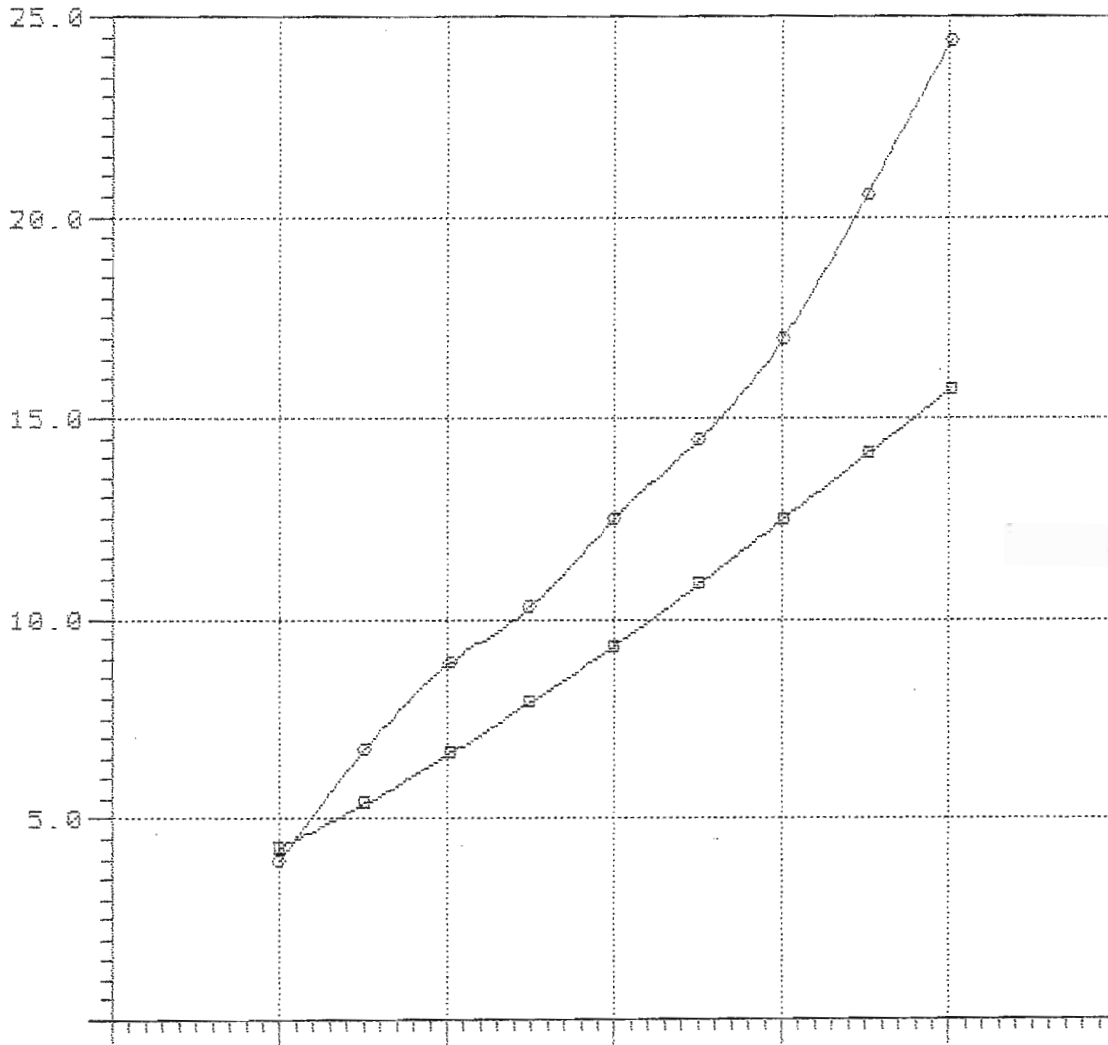
HydroComp, Inc.

File: 6-69-488.mdl

Date: 23 Feb 00

Time: 16:37

Rbare: Bare-hull resistance (N)



—■—

—○—

Model = 190  
Ref = DELFT  
Friction = ATTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.14 dm  
Ap = 26.28 sqdm  
Disp = 71.32 N  
Deadrise = 25.00 degree  
Shaft Ang = 5.75 degree  
Vce = -19.80 mm

Lpx/Bpx = 7.009  
Lpx/Ap = 8.562  
Ap /Vol = 7.001  
Lpx/Vol = 7.829

NavCad(tm) 3.1d

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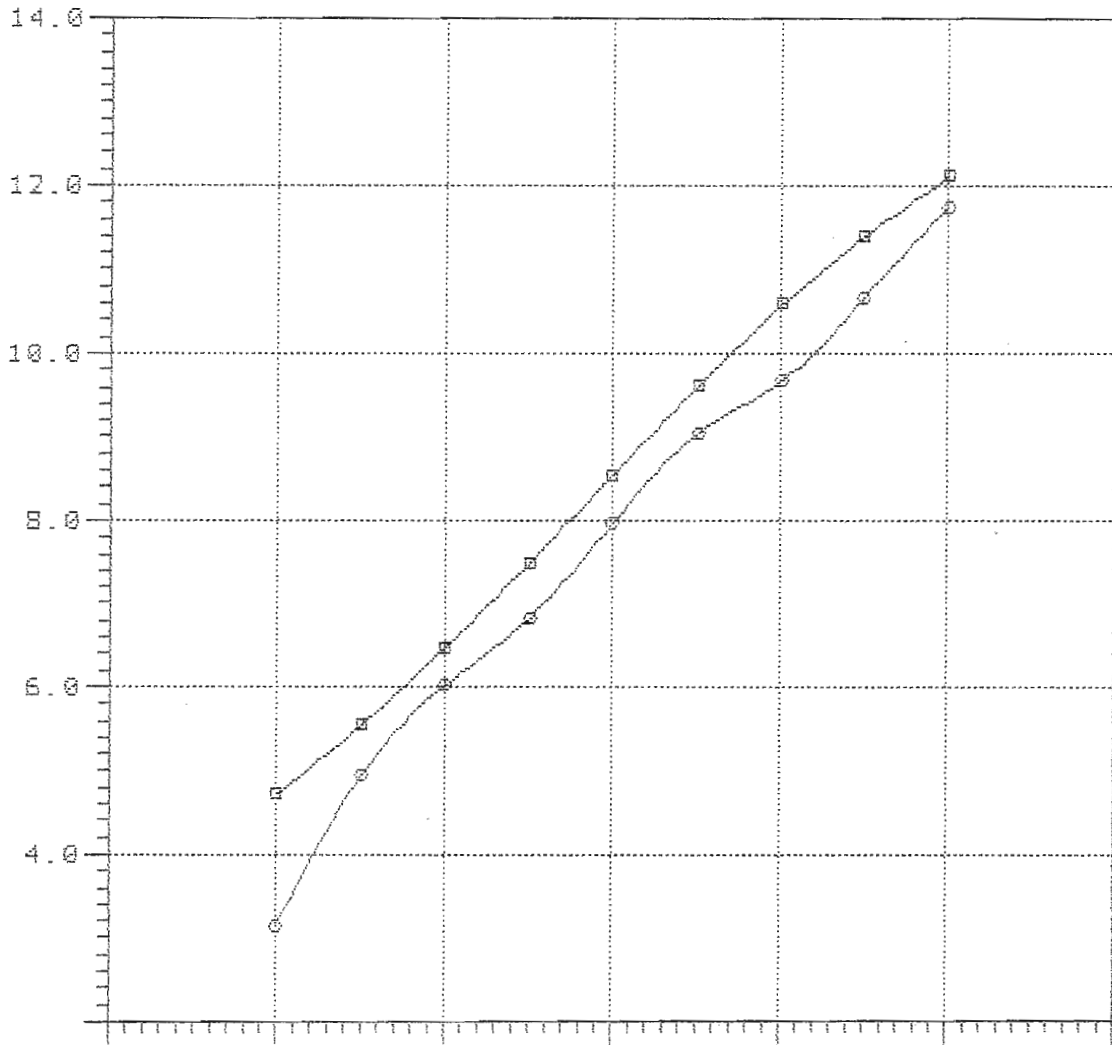
HydroComp, Inc.

File: 7-78-308.mdl

Date: 23 Feb 00

Time: 16:40

Rbare: Bare-hull resistance (N)



—■—

—○—

NavCad(tm) 3.1d

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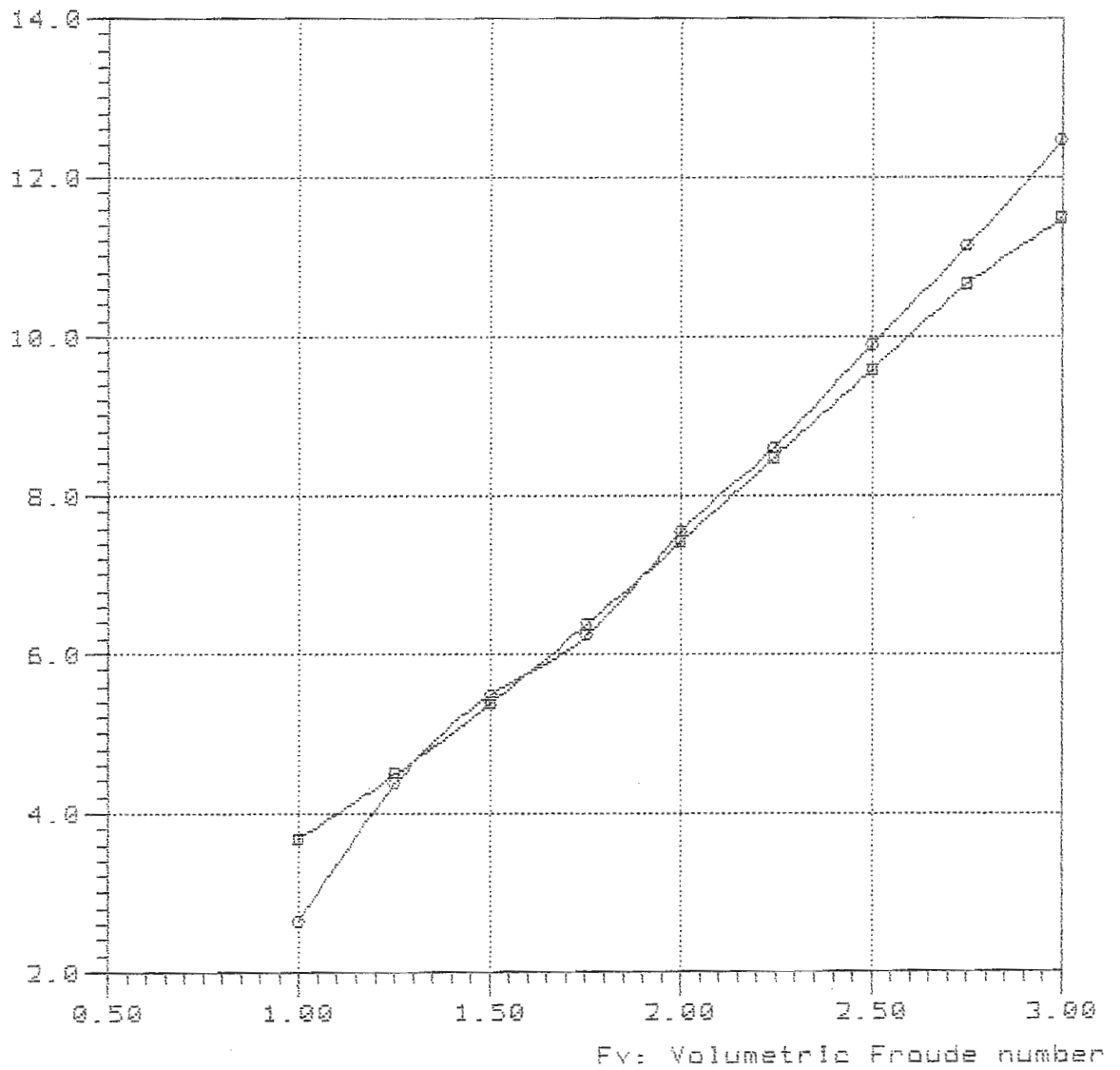
HydroComp, Inc.

File: 7-78-369.mdl

Date: 23 Feb 88

Time: 16:45

Rbare: Bare-hull resistance (N)



—■—

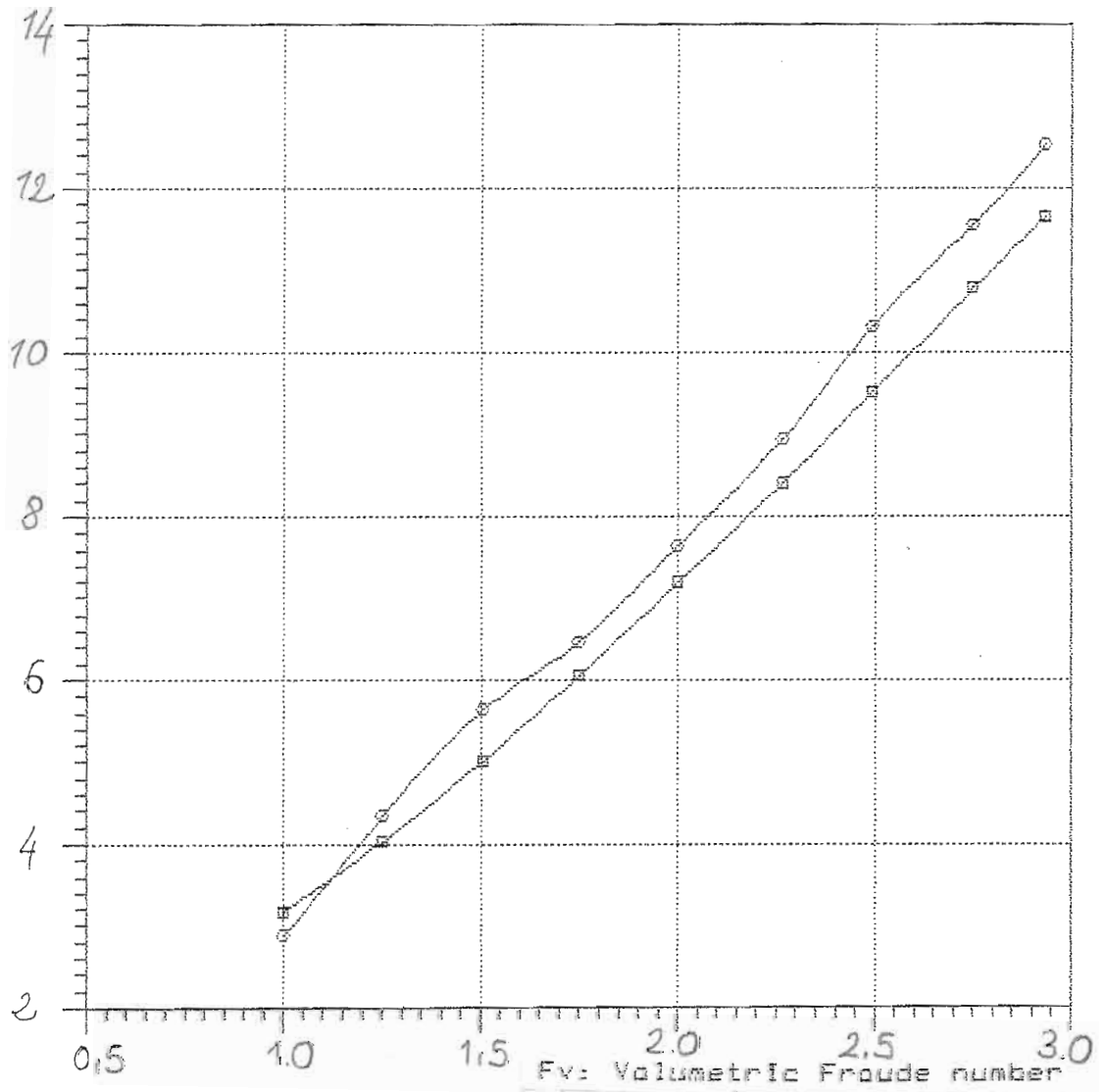
—●— Delft-190 Lpx/Bpx=7.00 Ap/Vol=7.00 Vol/Lpx=7.8 Lpx/Ap=8.56 Lcg/Lpx=0.368

Bare-hull resistance

vs.

Volumetric Froude number

7-78-428



—□—  
—○—

NavCad(tm) 3.1d

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Bare-hull resistance

vs.

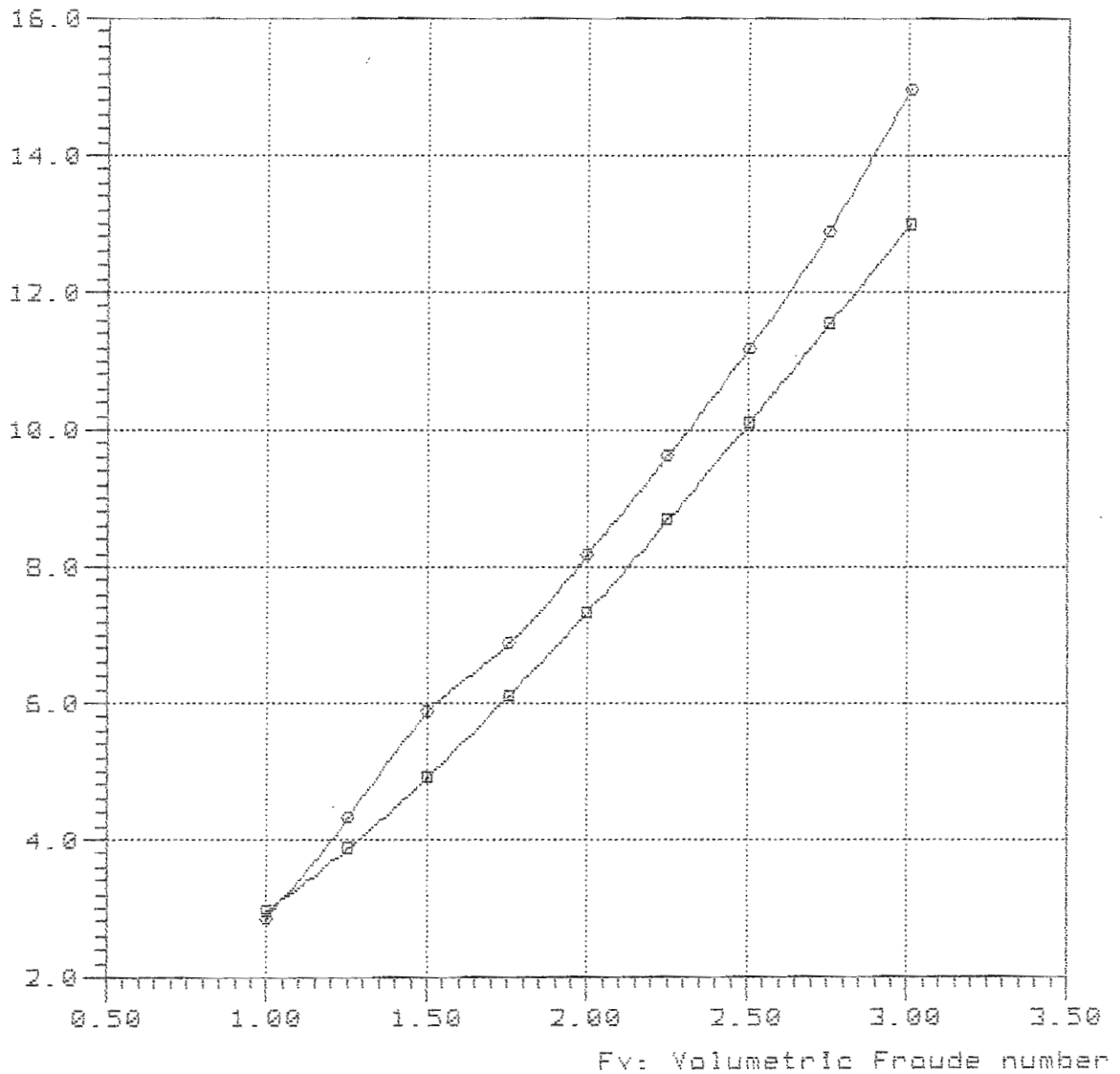
Volumetric Froude number

File: 7-78-488.mdl

Date: 23 Feb 88

Time: 16:54

Rbare: Bare-hull resistance (N)



Curve legend

—■—

—●— Delft-190 Lpx/Bpx=7.00 Ap/Vol=7.00 Vol/Lpx=7.8 Lpx/Ap=8.56 Lcg/Lpx=0.488



Model = 190  
Ref = DELFT  
Friction =ATTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.14 dm  
Ap = 26.28 sqdm  
Disp = 53.37 N  
Deadrise = 25.00 degree  
Shaft Ang= 5.75 degree  
Vce = -19.80 mm

Lpx/Bpx = 7.009  
Lpx/Ap = 8.562  
Ap /Vol = 8.494  
Lpx/Vol = 8.623

NavCad(tm) 3.1d

### Bare-hull resistance

File: 9-86-368.mdl

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vs.

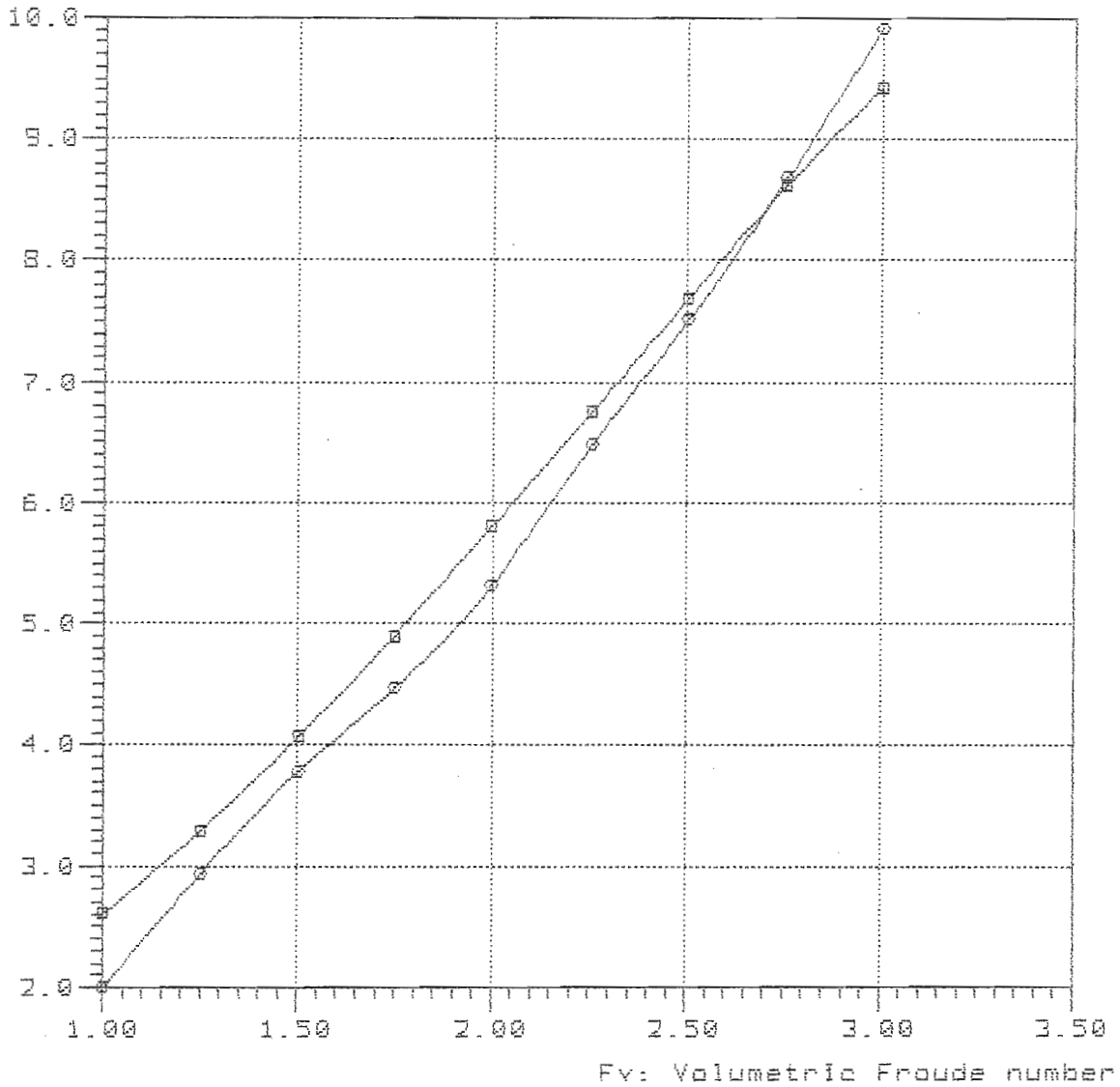
Date: 23 Feb 00

HydroComp, Inc.

### Volumetric Froude number

Time: 16:58

Rbare: Bare-hull resistance (N)



#### Curve legend

—■—

—○— Delft-190 Lpx/Bpx=7.00 Ap/Val=8.50 Val/Lpx=8.6 Lpx/Ap=8.56 Lcg/Lpx=0.368

NavCad(tm) 3.1d

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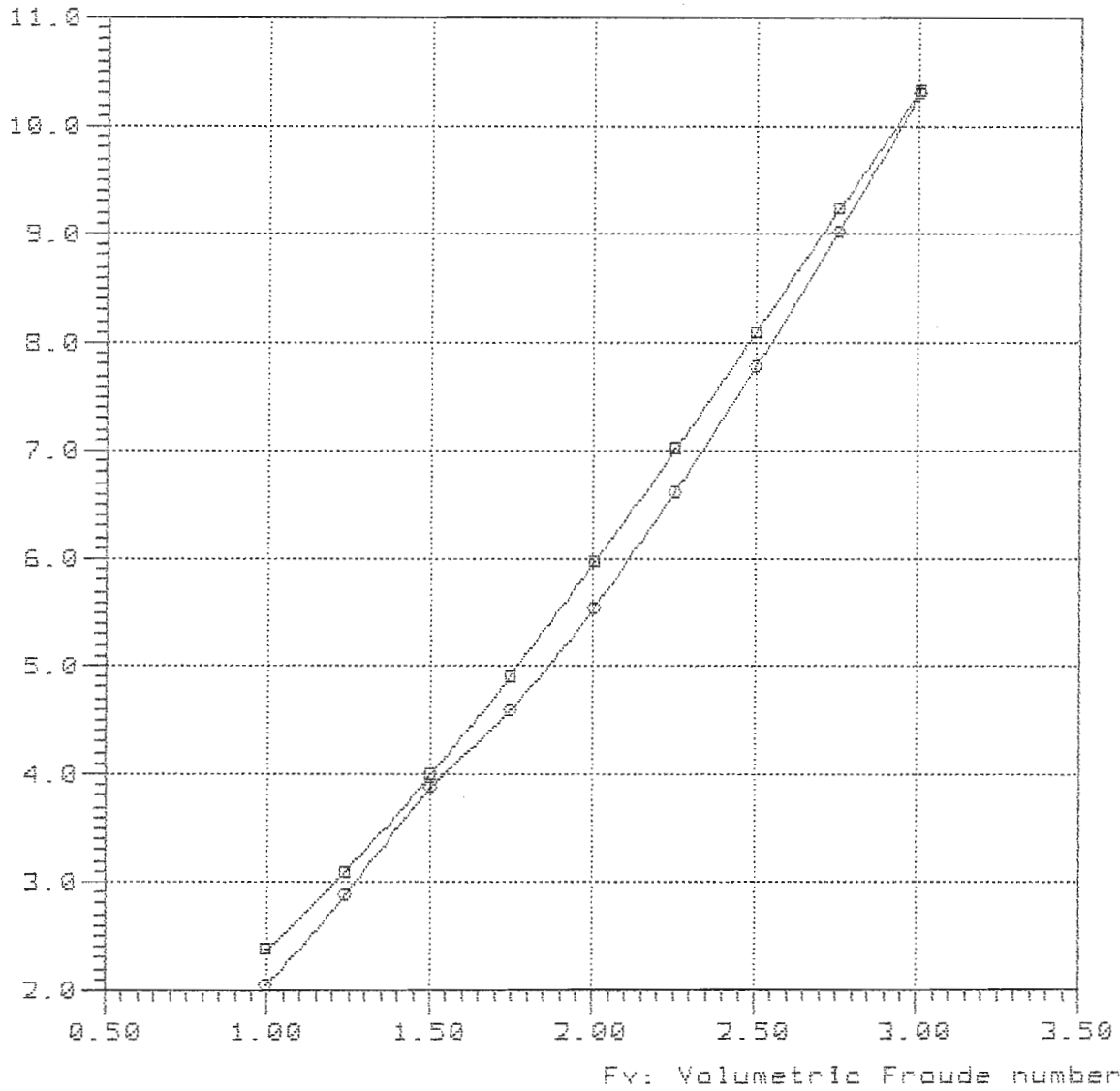
HydroComp, Inc.

File: 9-86-428.mdl

Date: 23 Feb 00

Time: 17:01

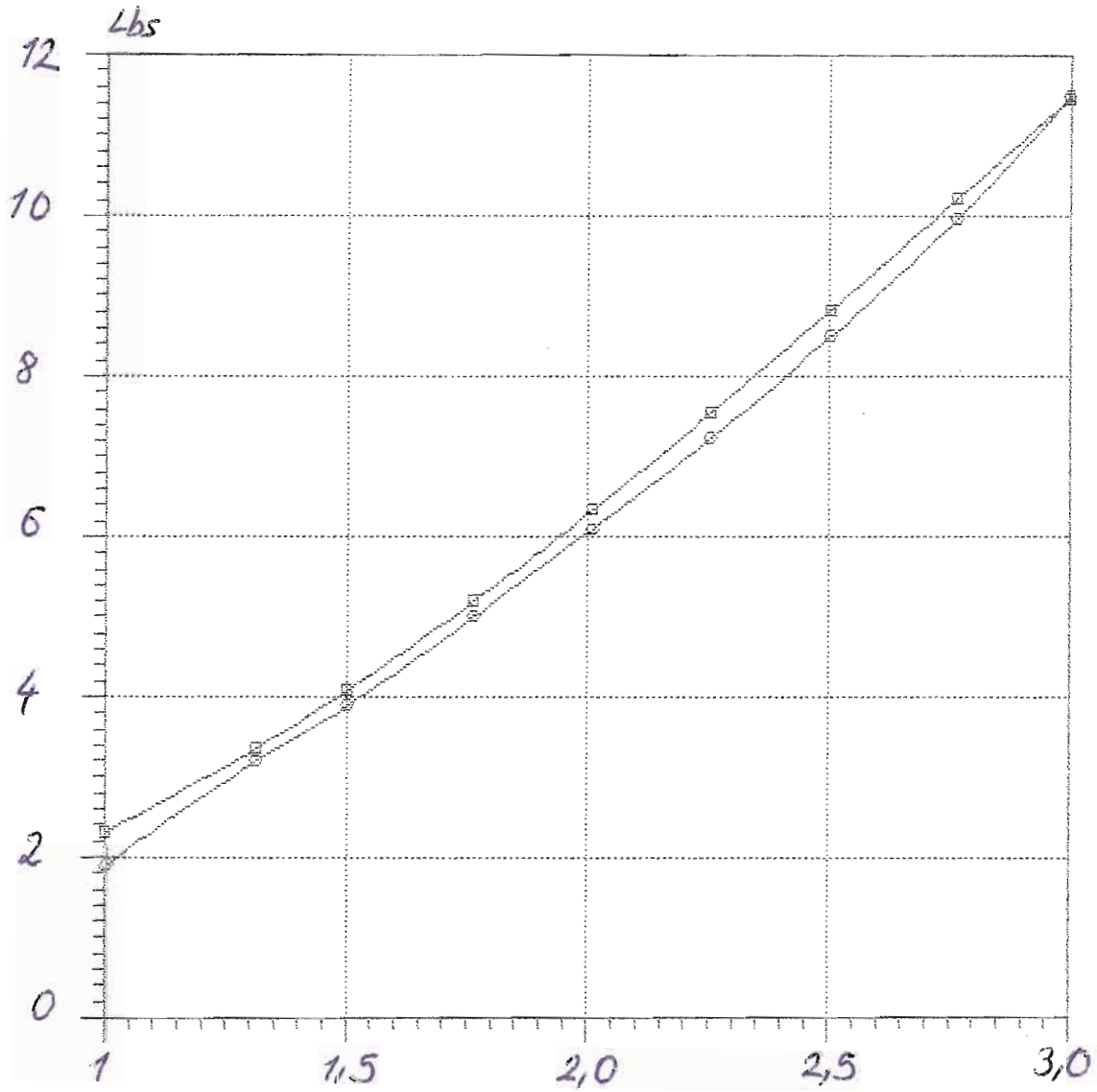
Rbare: Bare-hull resistance (N)



—■—

—○— Delft-190 Lpx/Bpx=7.00 Ap/Vol=8.50 Vol/Lpx=8.6 Lpx/Ap=8.56 Lcg/Lpx=0.428

9-86-488



—□—  
—○—

Delft

200 -232A

232B

300 -

400 -

500 -

200

**Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCI DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez. Teksir  
veya kopya edilemez ve her ne mak-  
sattı olursa olsun maksadı dışında  
izinsiz kullanılamaz.**

Model = 200  
Ref = DELFT  
Friction = ITTC Ca=0.0

Lpx = 12.50 dm  
Lwl = 12.00 dm  
Bpx = 3.67 dm  
Ap = 54.15 sqdm

Disp = 303.10 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 mm

Lpx/Bpx = 3.409  
Lpx/Ap = 2.886  
Ap /Vol = 5.498  
Lpx/Vol = 4.007  
Cvload = 0.621  
Lbload = 0.082  
~~Friction~~  
Disp-Lpx = 448.040

NavCad(tm) 3.1d

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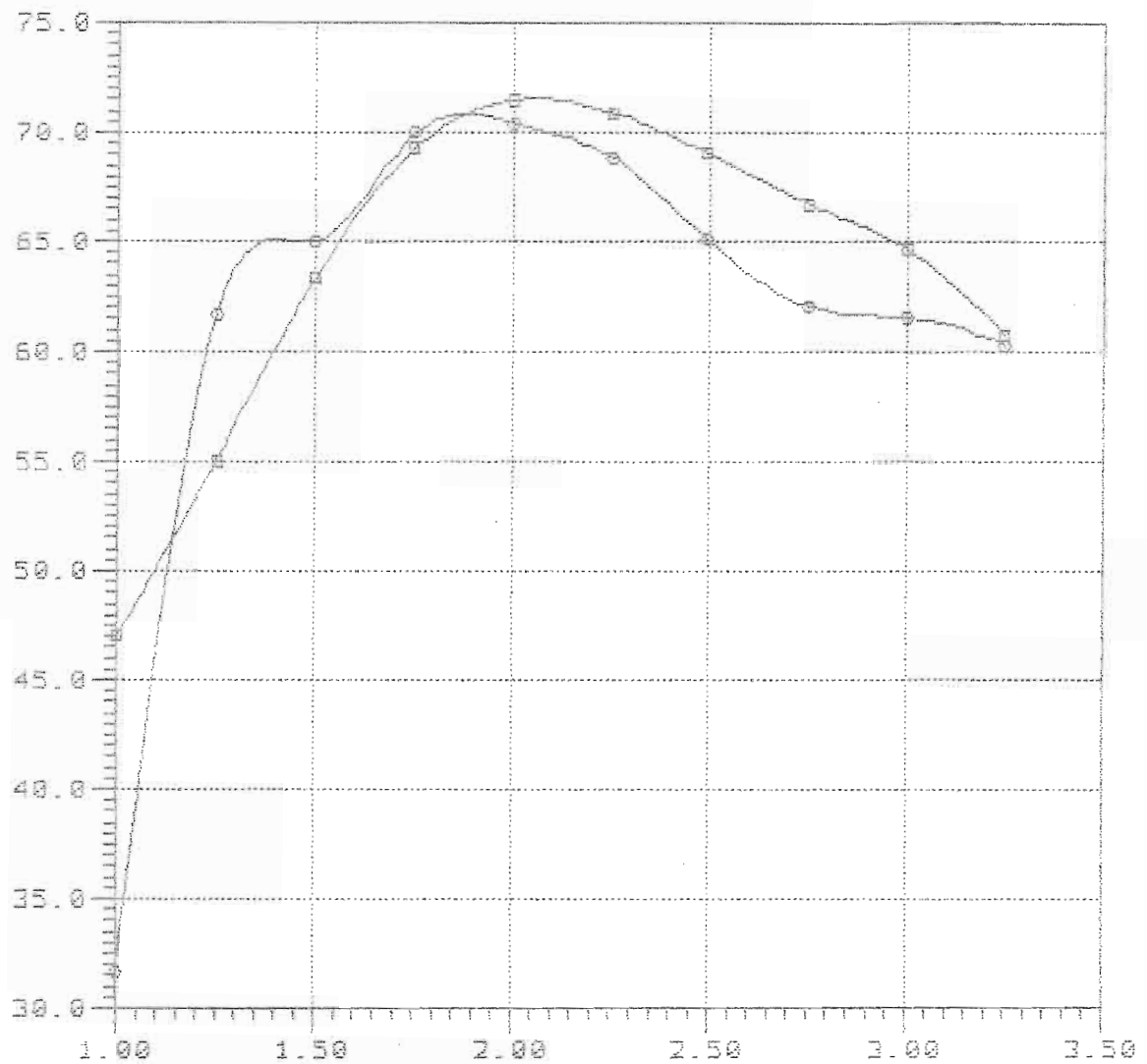
HydroComp, Inc.

File: 6-40-333.mdl

Date: 28 Feb 88

Time: 16:34

Rbare: Bare-hull resistance (ND)



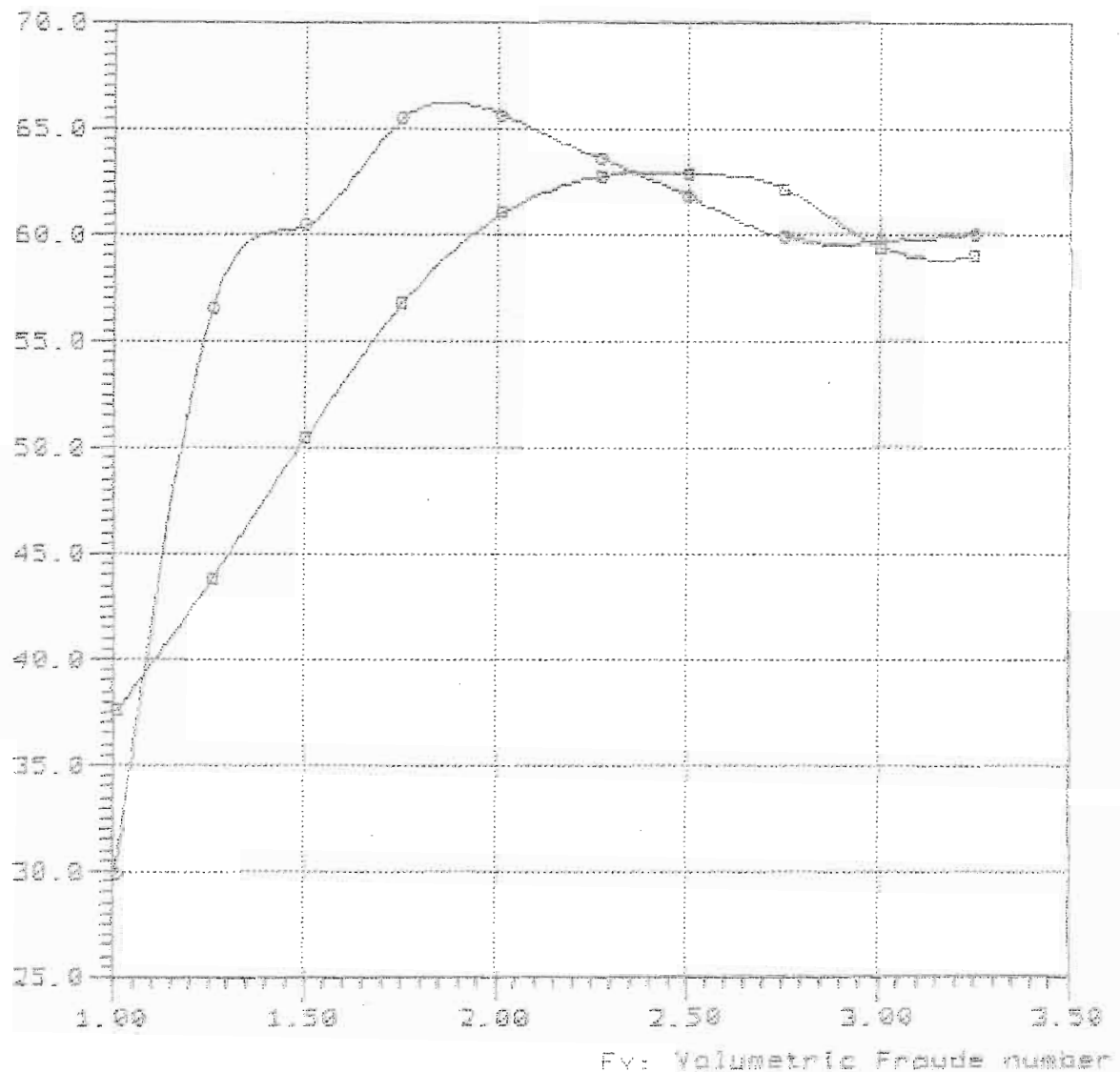
Fv: Volumetric Froude number

—■—

—○— Delft-233 Lpx/Bpx=3.41 Ap/Val=5.50 Val/Lpx=4.03 Lpx/Ap=2.88 Lcg/Lpx=0.399



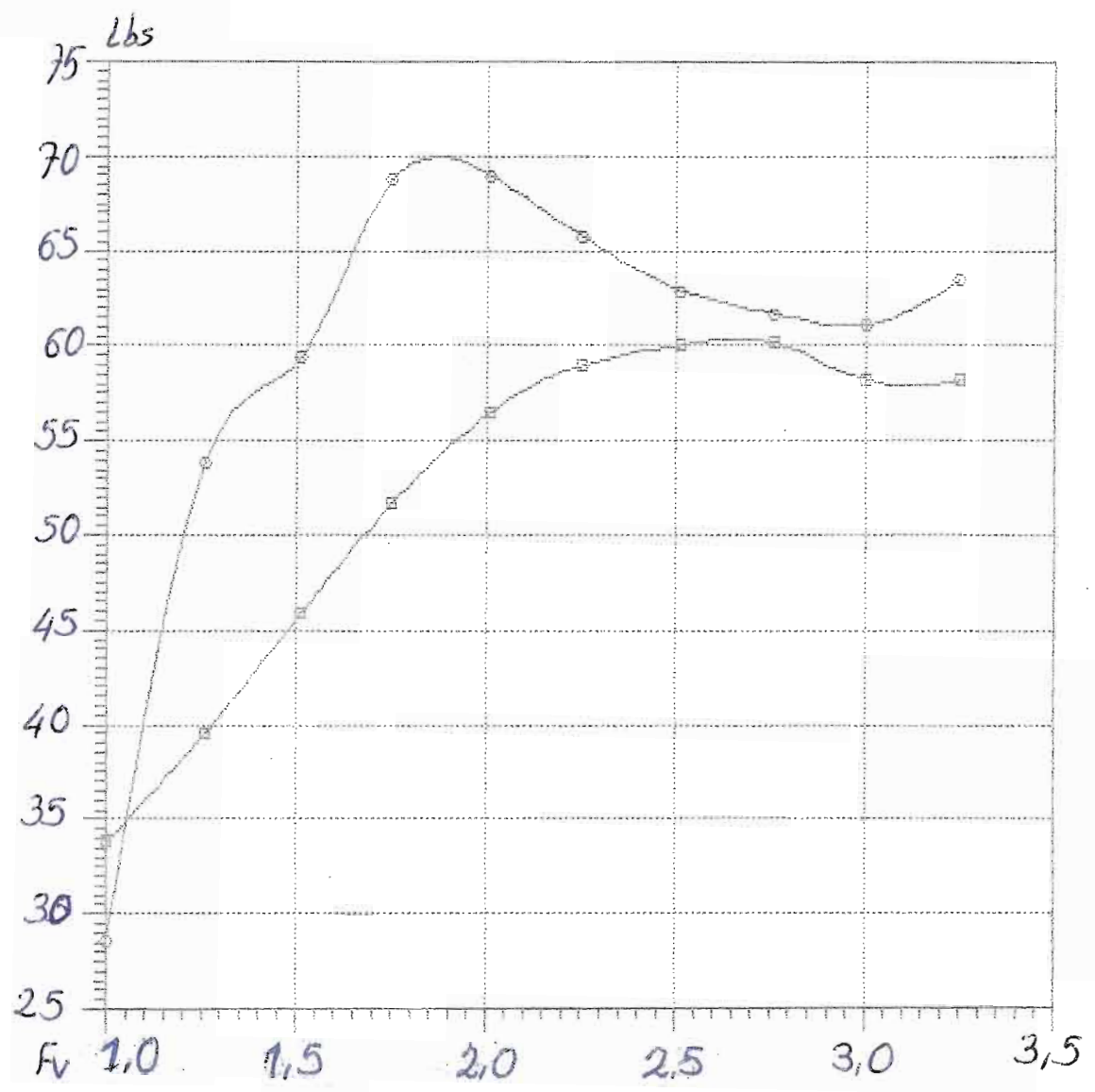
Rbare: Bare-hull resistance (N)



—■—

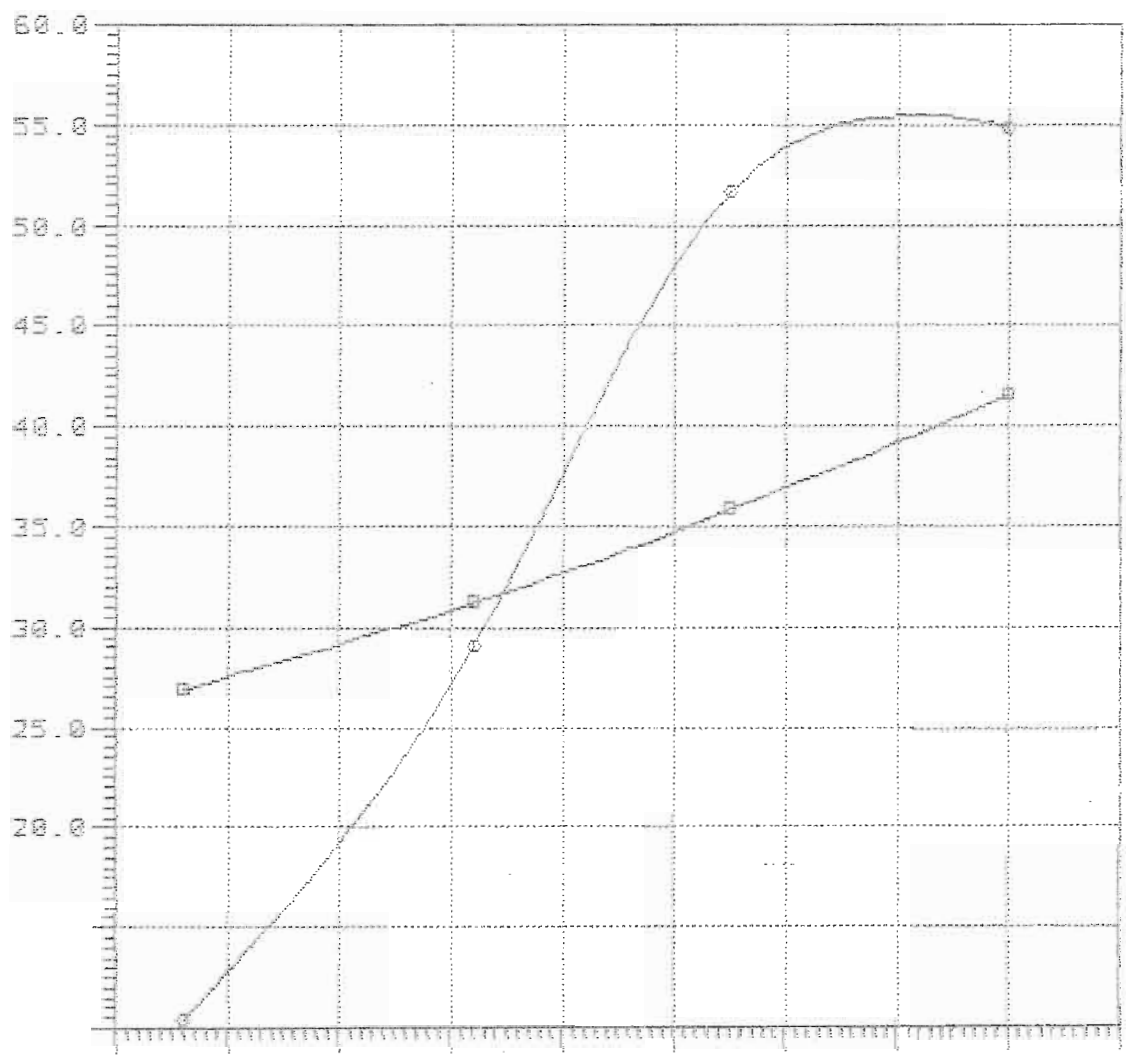
—●— Del.Ft-232 Lpx/Spx=3.41 Ap/Vol=3.58 Vol/Lpx=4.03 Lpw/Sp=2.88 Lcg/Lpx=0.439

6-40-459



—□—  
—○—

Rbare: Bare-hull resistance (N)



—■—  
—○—

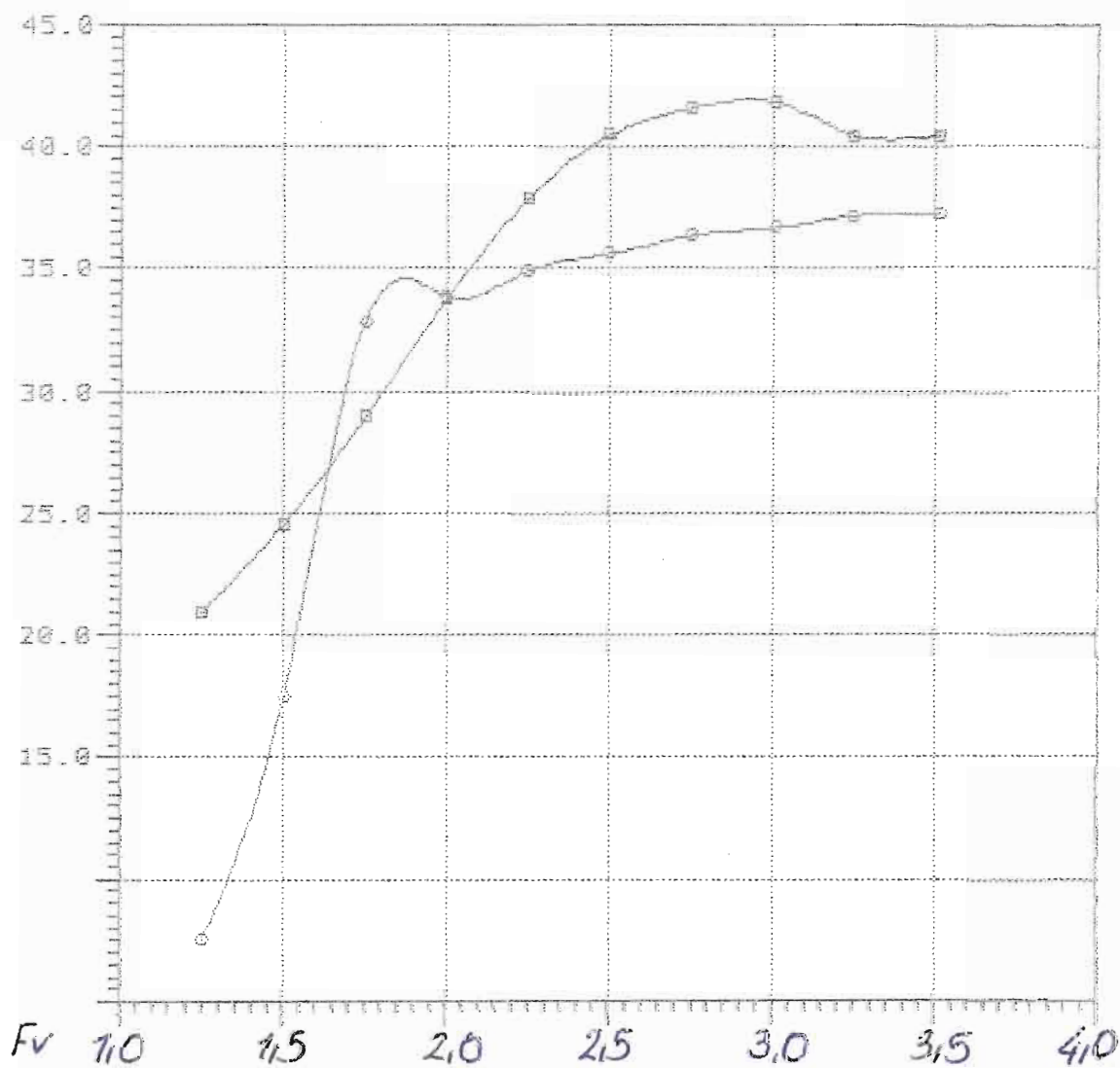
Model = 200  
Ref = DELFT  
Friction = ITTC Ca=0.0

Lpx = 12.50 dm  
Lwl = 12.00 dm  
Bpx = 3.67 dm  
Ap = 54.11 sqdm  
Disp = 210.90 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 0.00 degree  
Vce = 0.00 mm

Lpx/Bpx = 3.409  
Lpx/Ap = 2.888  
Ap /Vol = 6.997  
Lpx/Vol = 4.521  
Cvload = 0.432  
Lbload = 0.057

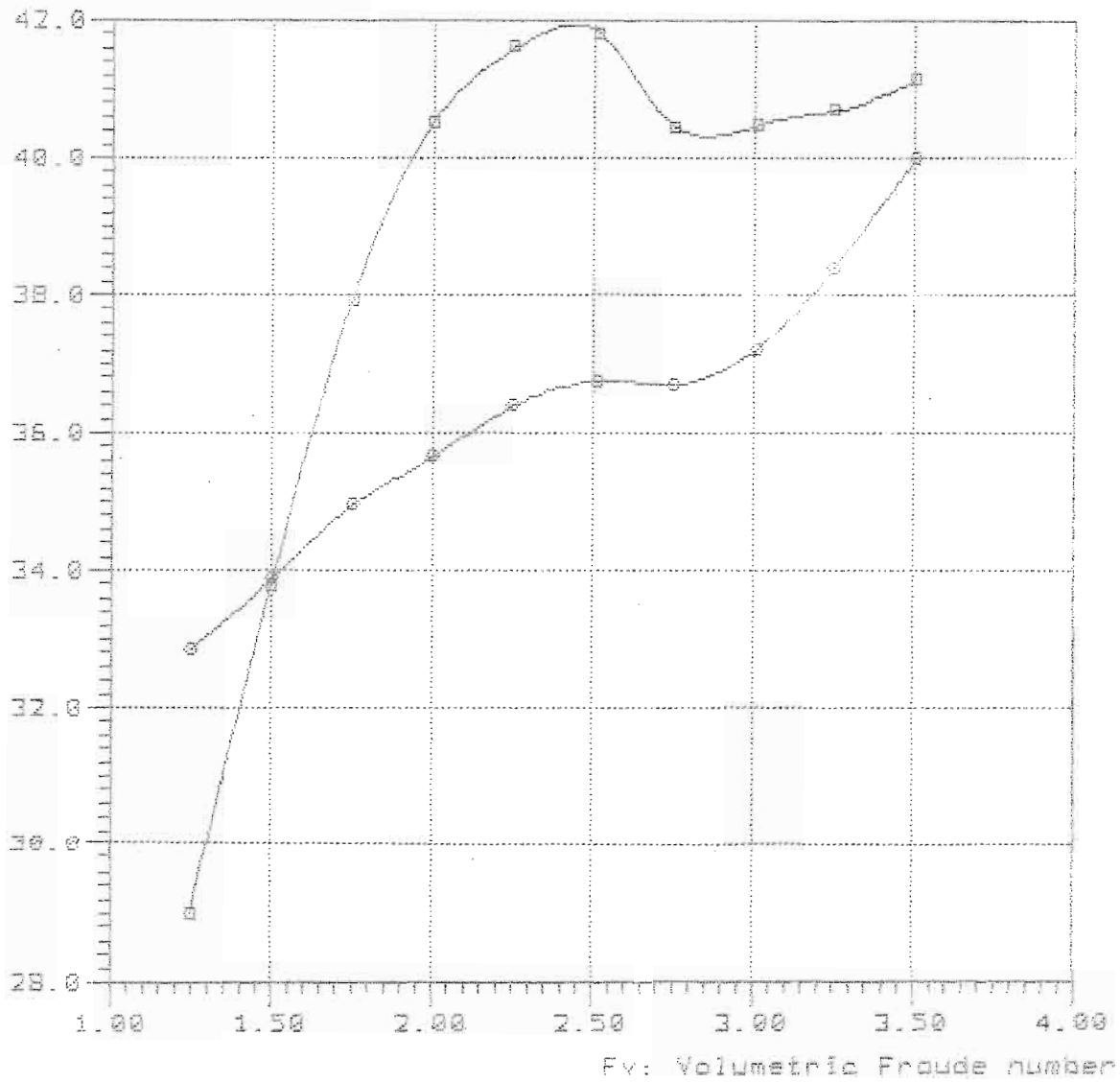
**XXXXXXXXXX**  
Disp-Lpx = 311.751

Rbare: Bare-hull resistance (N)



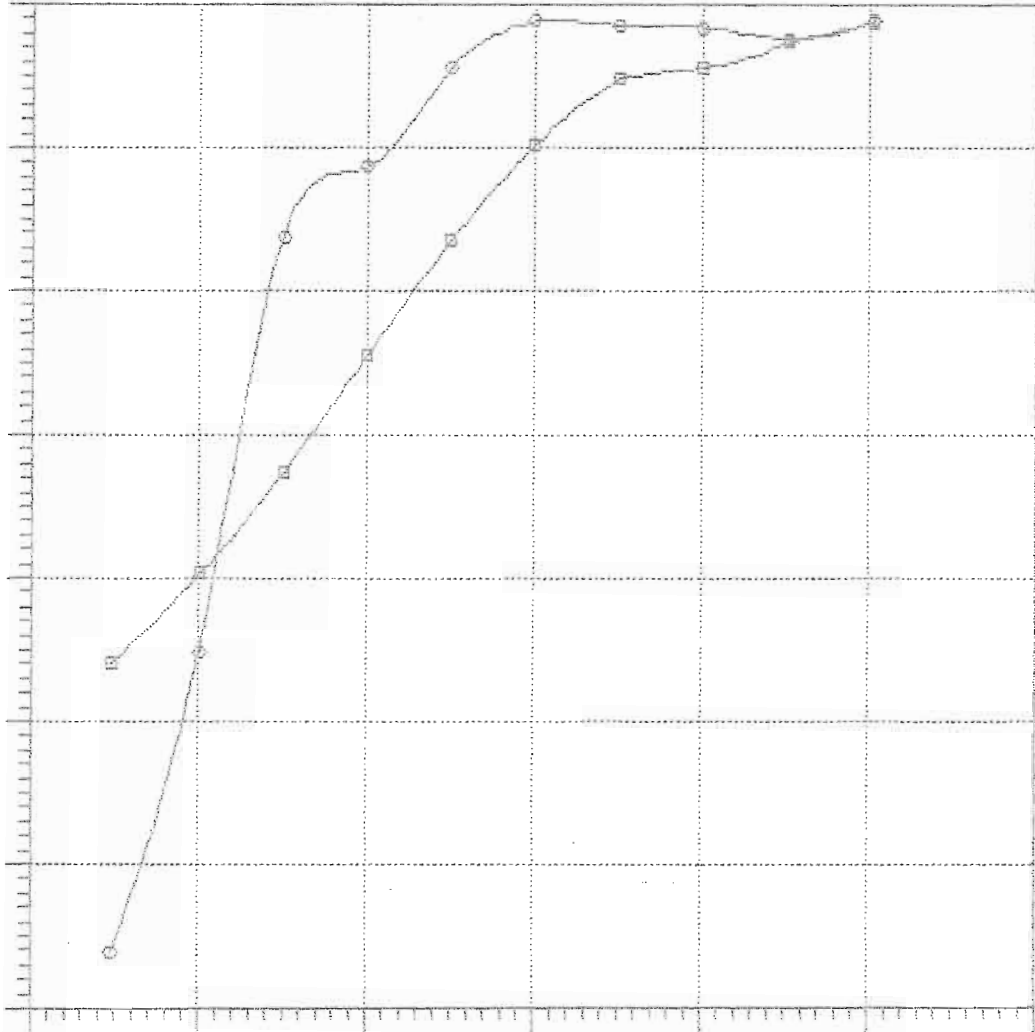
—■—  
—○—

Rbare: Bare-hull resistance (N)



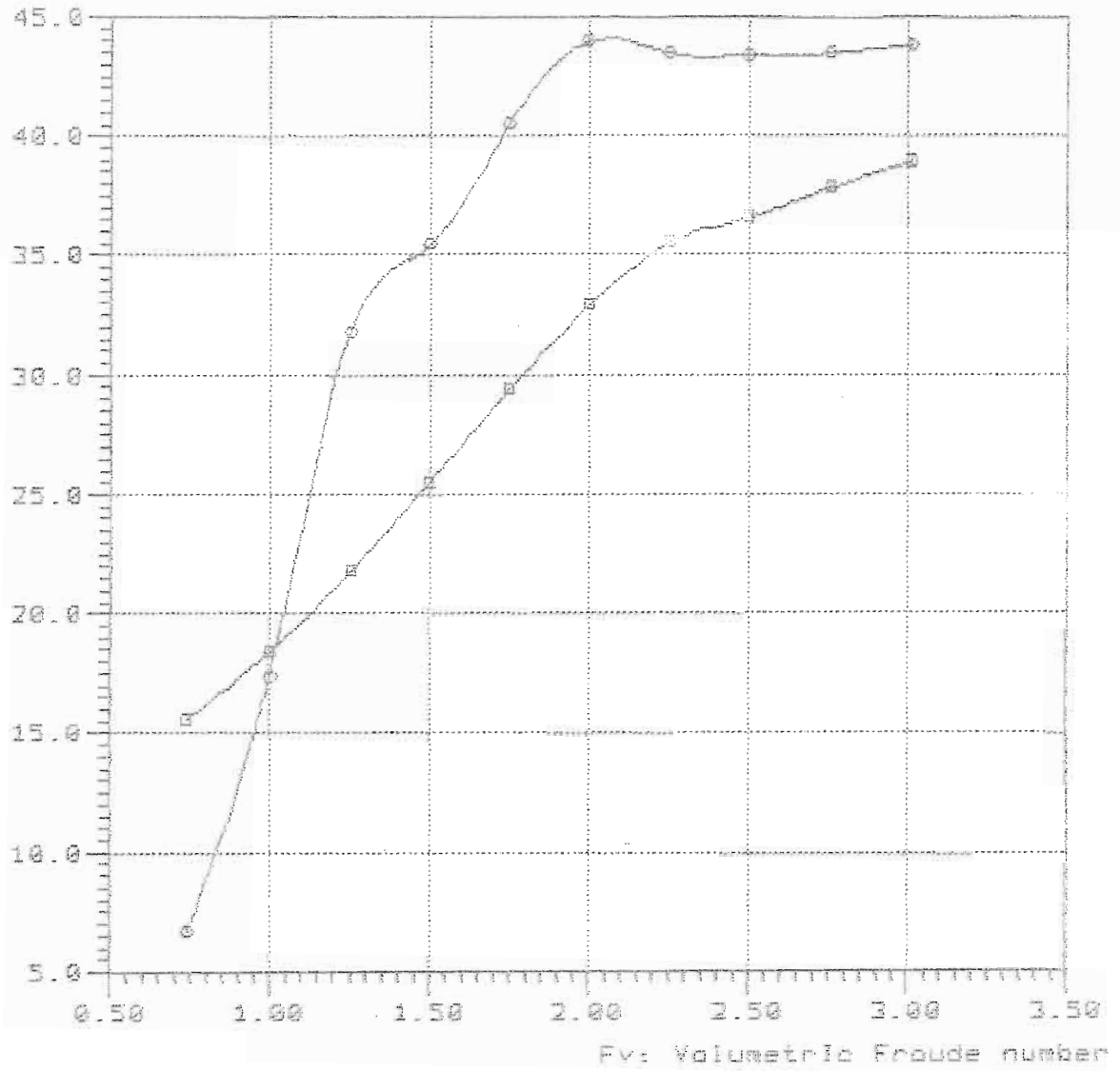
—■—  
—○— Delft-223 Lpx/Bpx=3.41 Ap/Vol=7.00 Vol/Lpx=4.54 Lpx/Rp=2.88 Lcg/Lpx=0.398

7-45-44a



—○—  
—□—

Rbare: Bare-hull resistance (N)



—■—

—●— Delft-Z26 Lpx/Bpx=3.41 Rp/Vol=7.00 Vol/Lpx=4.54 Lpx/Rp=2.88 Lcg/Lpx=0.459



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### Bare-hull resistance

vs.

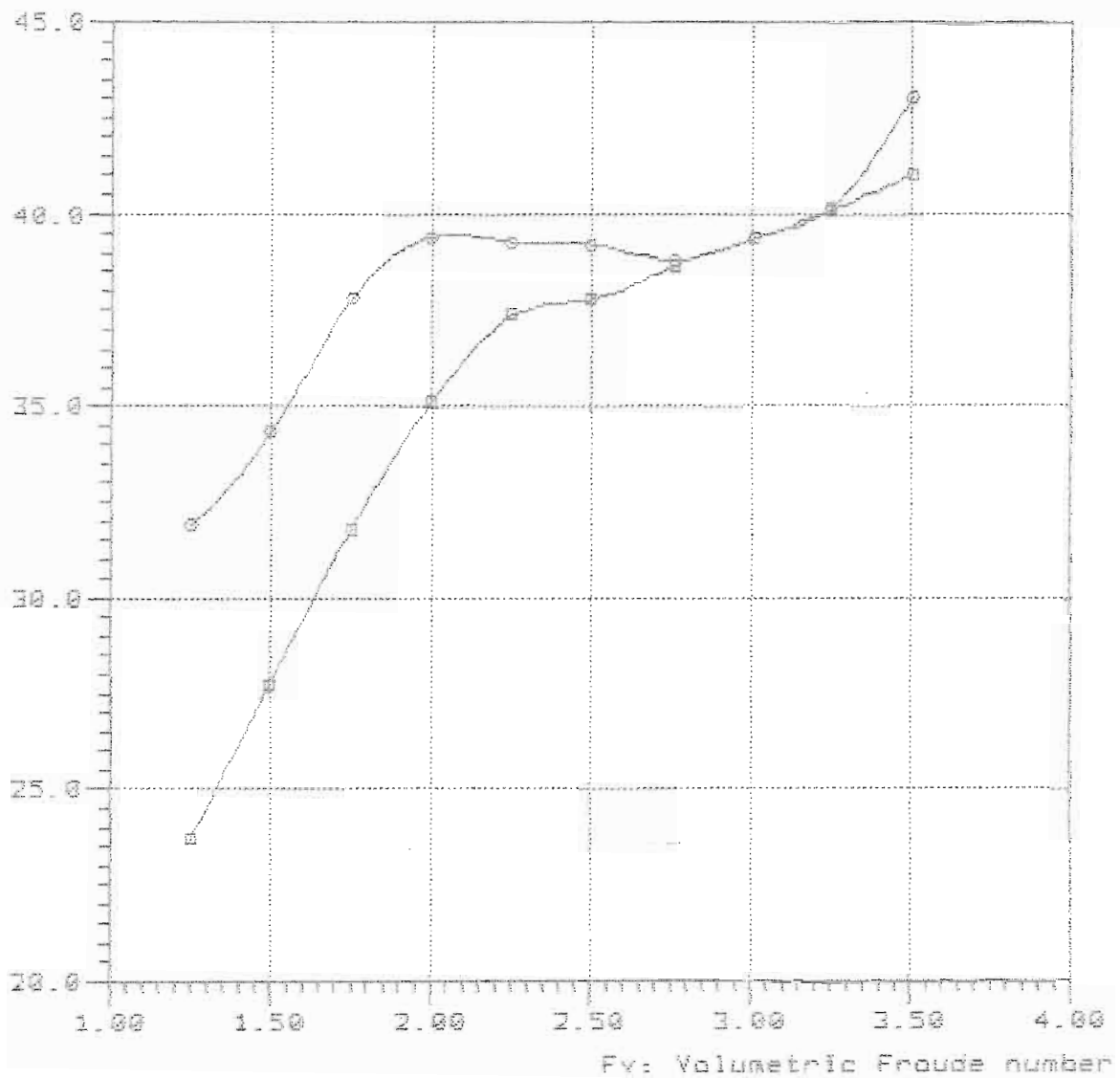
### Volumetric Froude number

File: 7-45-44b.mdl

Date: 28 Feb 00

Time: 16:56

Rbare: Bare-hull resistance (N)

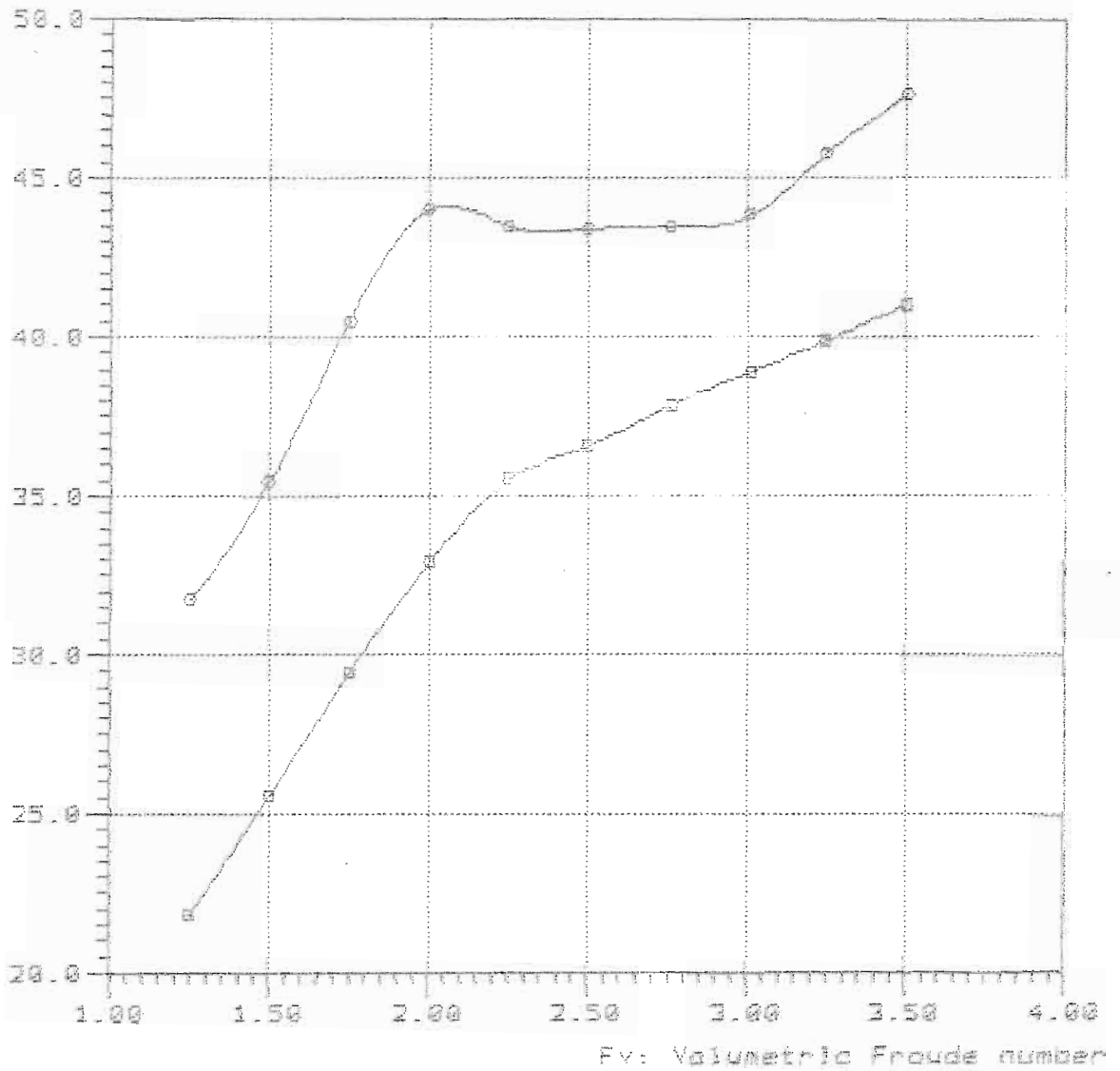


#### Curve legend

—■—

—○— Delft-222 Lpx/Bpx=3.41 Rp/Vol=7.00 Vol/Lpx=4.54 Lpx/Rp=2.88 Lcg/Lpx=0.439

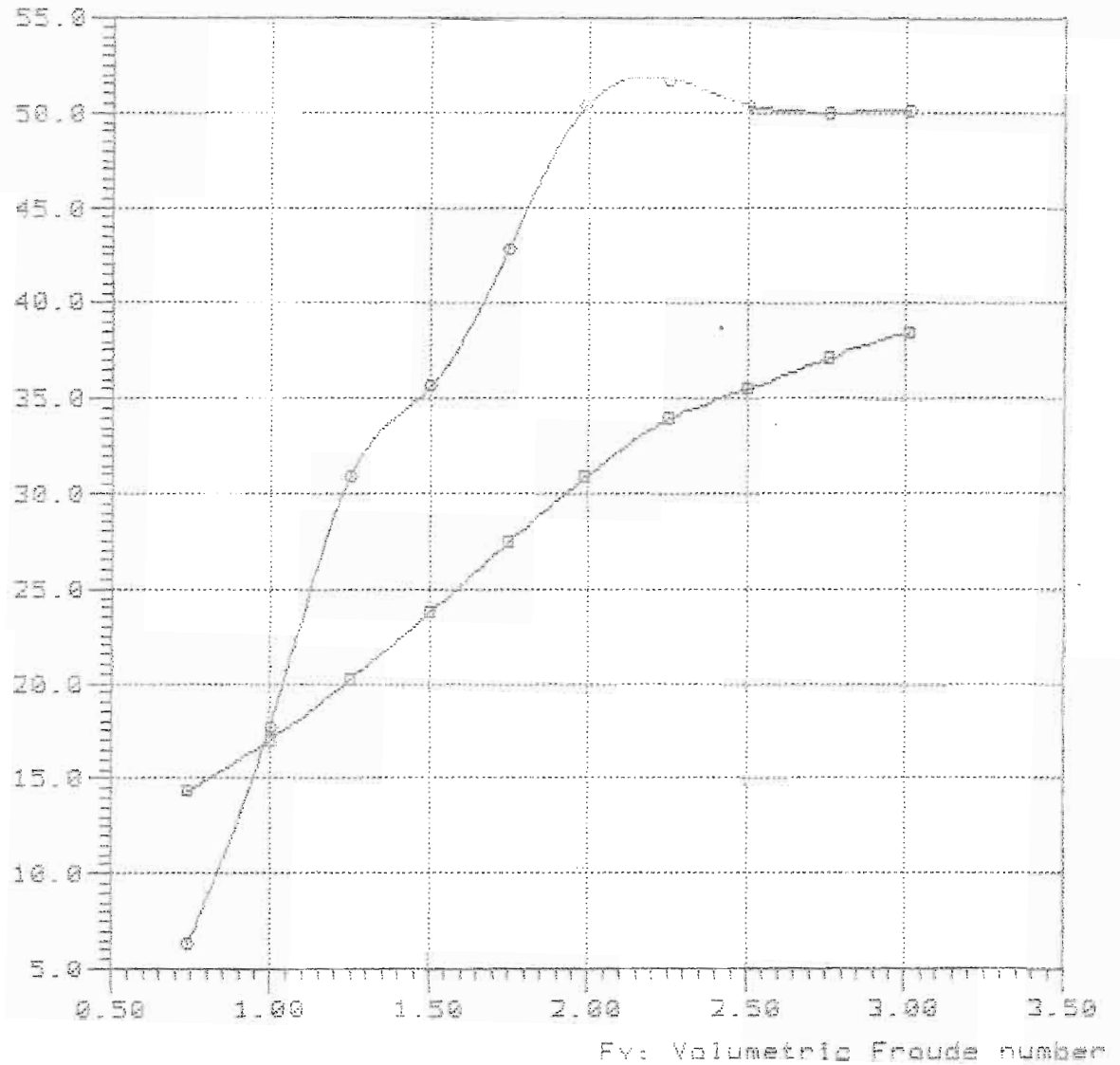
Rbare: Bare-hull resistance (N)



—□—

—○— Bellt-220 Lpx/Bpx=3.41 Ap/Val=7.88 Val/Lpx=4.54 Lpx/Op=2.88 Log/Lpx=0.439

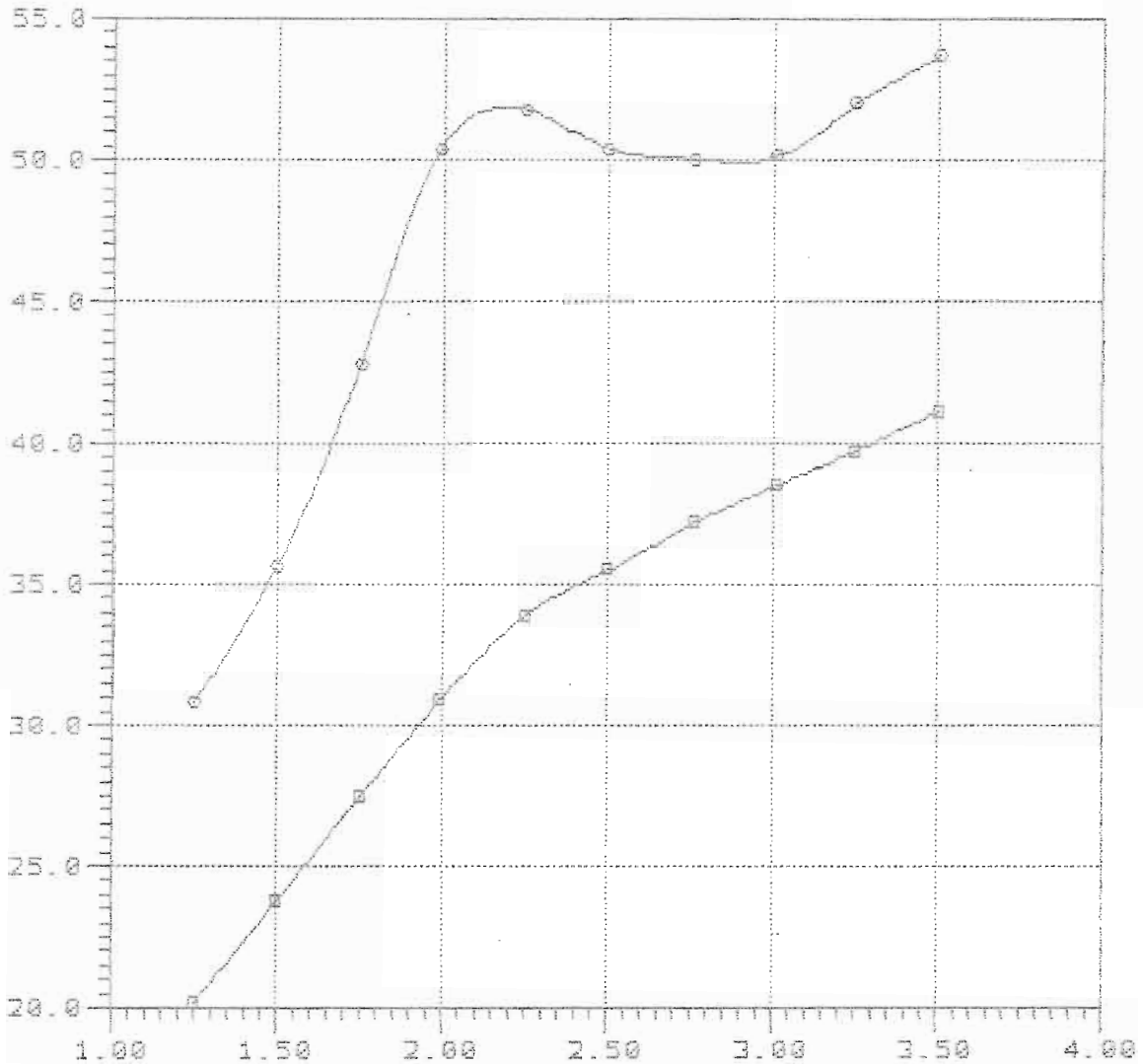
Rbare: Bare-hull resistance (N)



—■—

—●— Delft-221 Lpx/Bpx=3.41 Ap/Vol=7.00 Vol/Lpx=4.54 Lpx/Ap=2.88 Lcg/Lpx=0.479

Rbare: Bare-hull resistance (N)



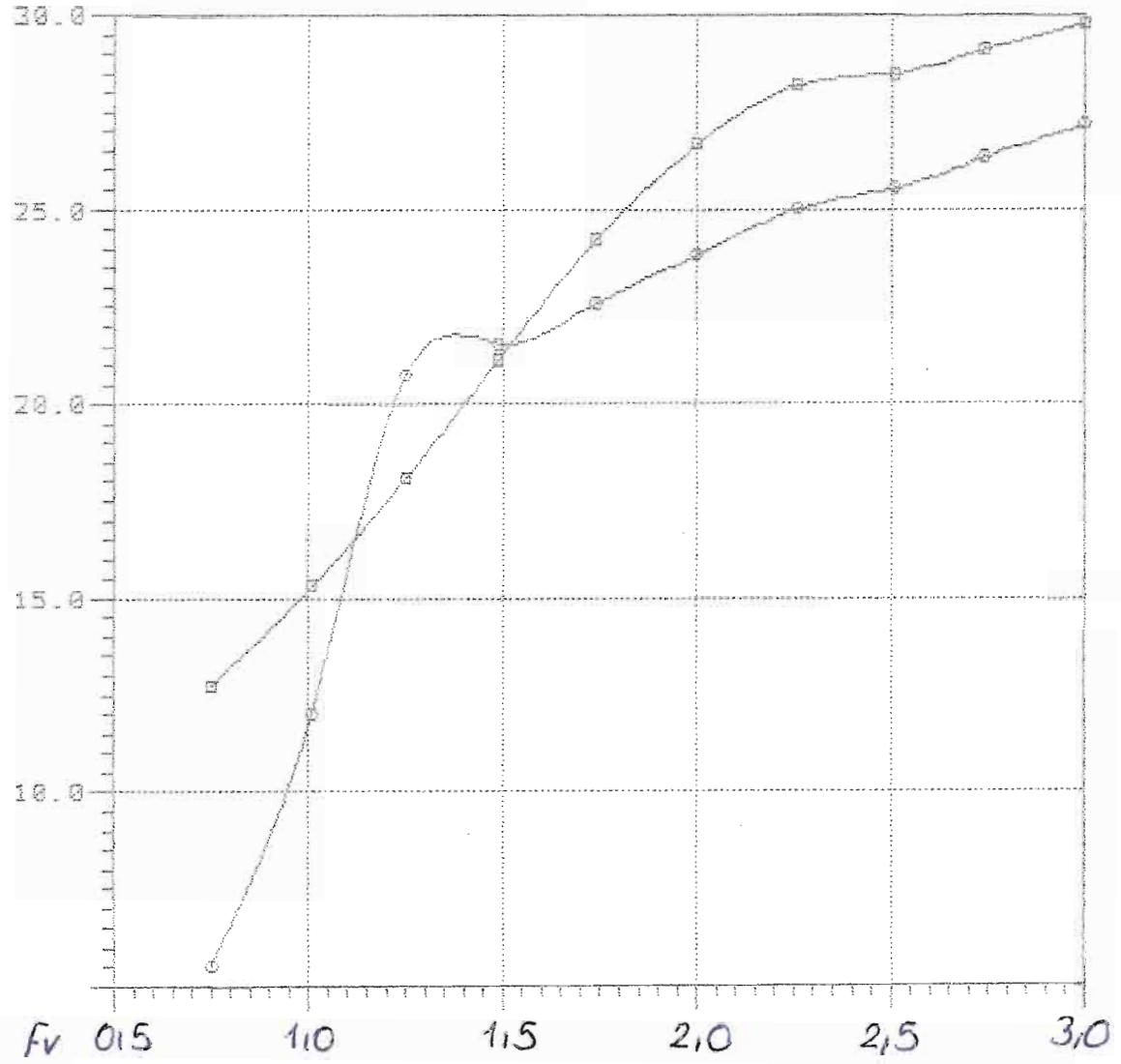
Fv: Volumetric Froude number

—■—

—○— Delft-221 Lpx/Bpx=3.41 Ap/Val=7.66 Val/Lpx=4.54 Lpx/Ap=2.88 Log/Lpx=0.479



Rbare: Bare-hull resistance (N)



—■—  
—○—

NavCad(tm) 3.1d

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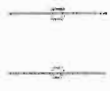
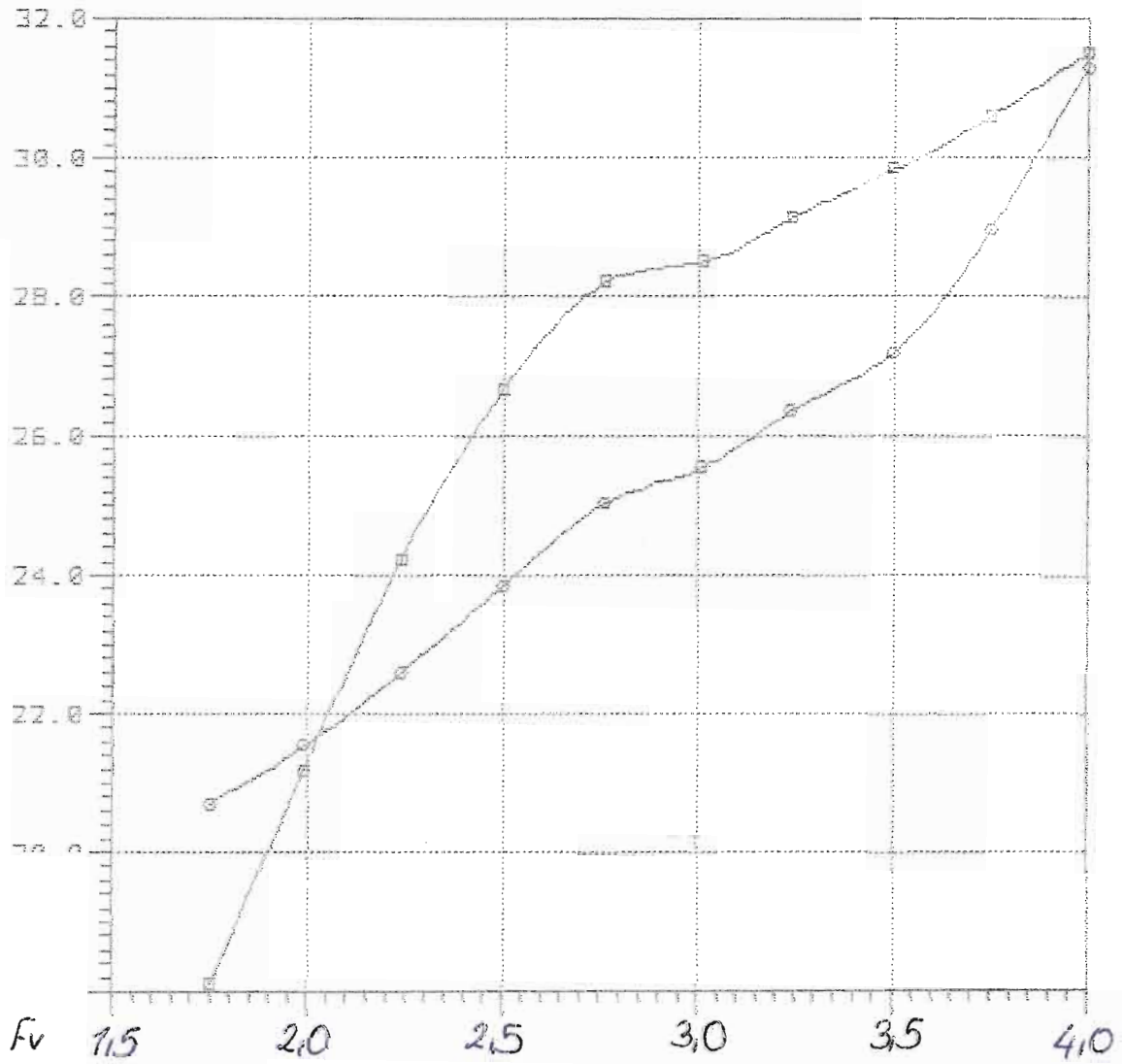
HydroComp, Inc.

File: 9-50-40b.md

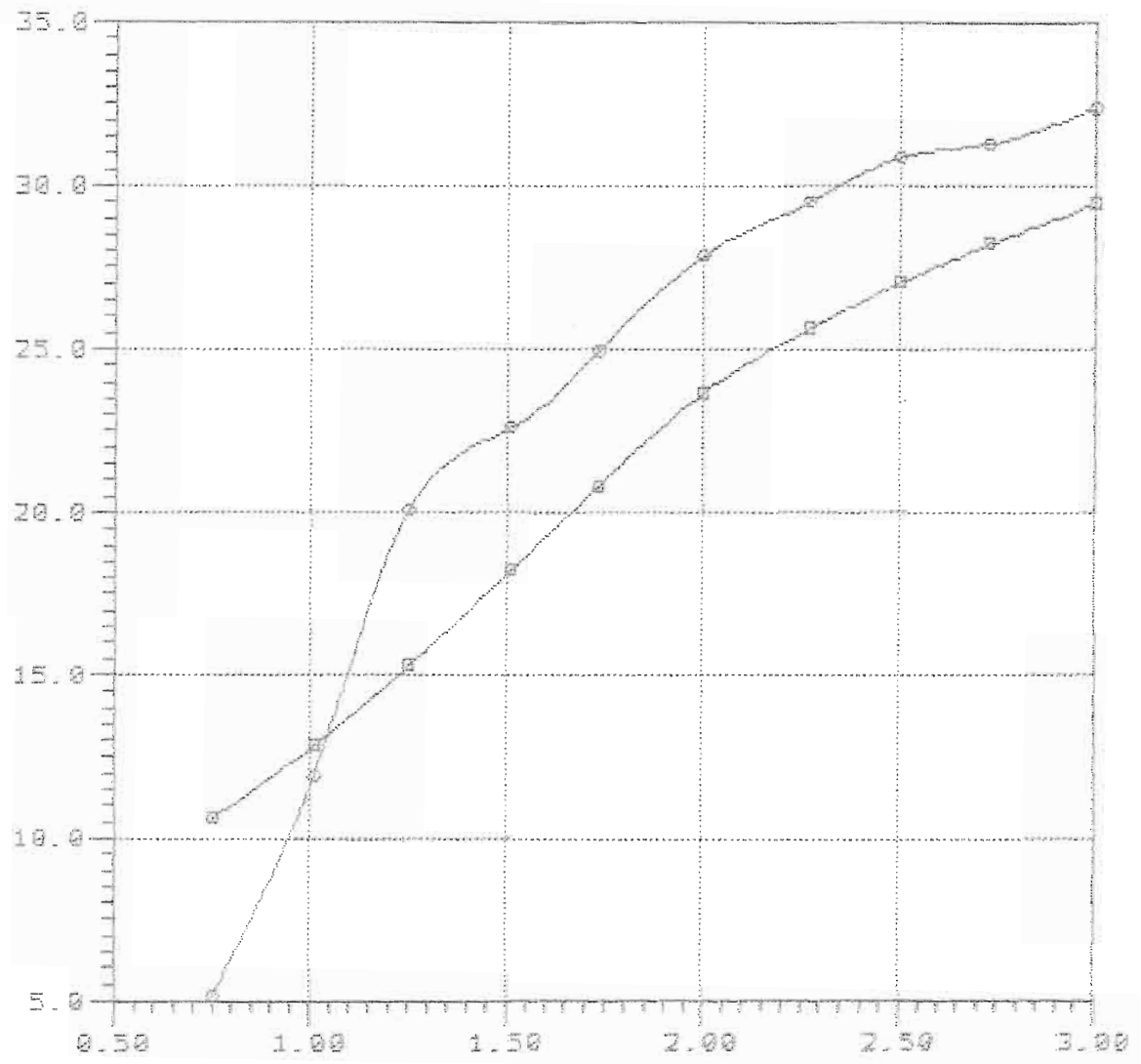
Date: 28 Feb 00

Time: 17:15

Rbare: Bare-hull resistance (N)



Rbare: Bare-hull resistance (N)



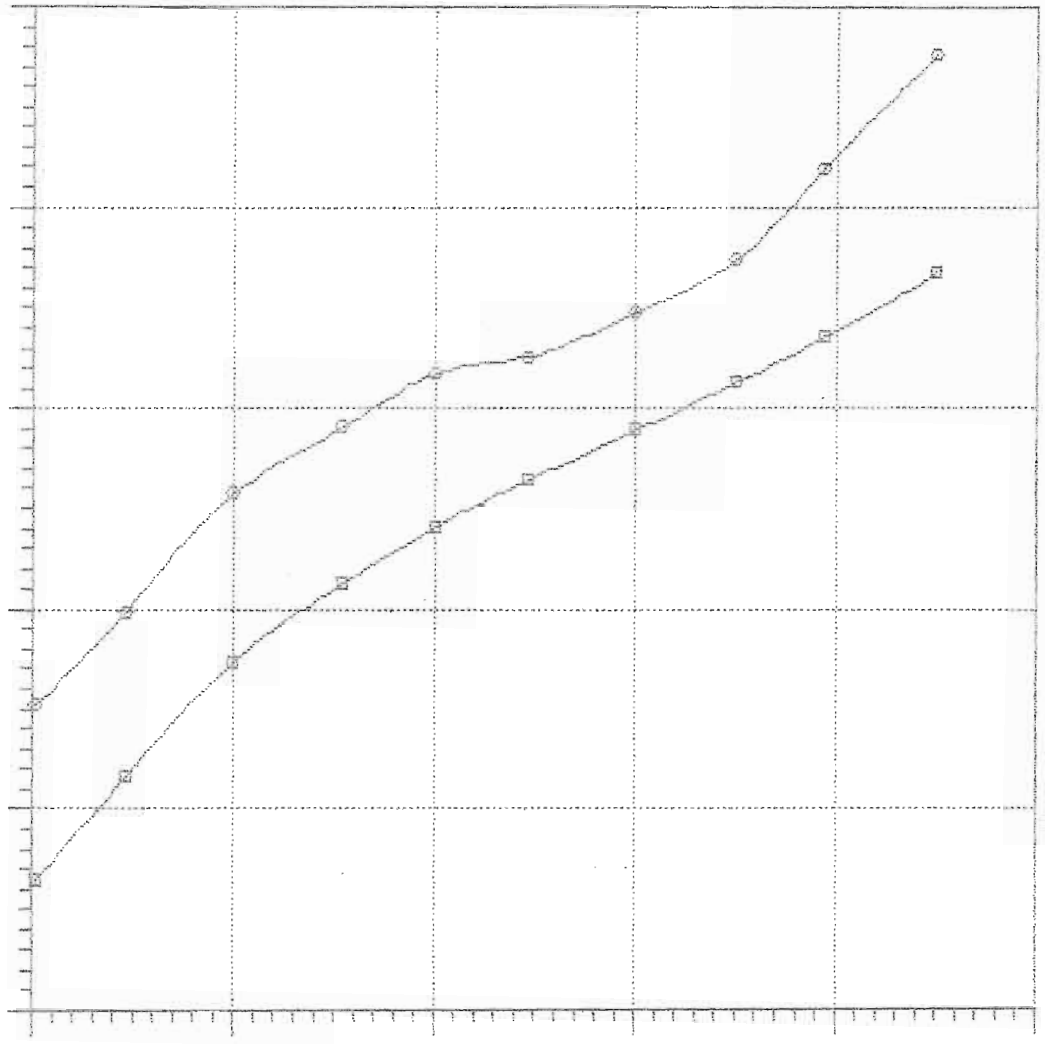
Fv: Volumetric Froude number

—■—

—●— Delft-213 Lpx/Bpx=3.41 Ap/Vol=8.50 Vol/Lpx=5.0 Lpx/As=2.88 Log/Lpx=0.459

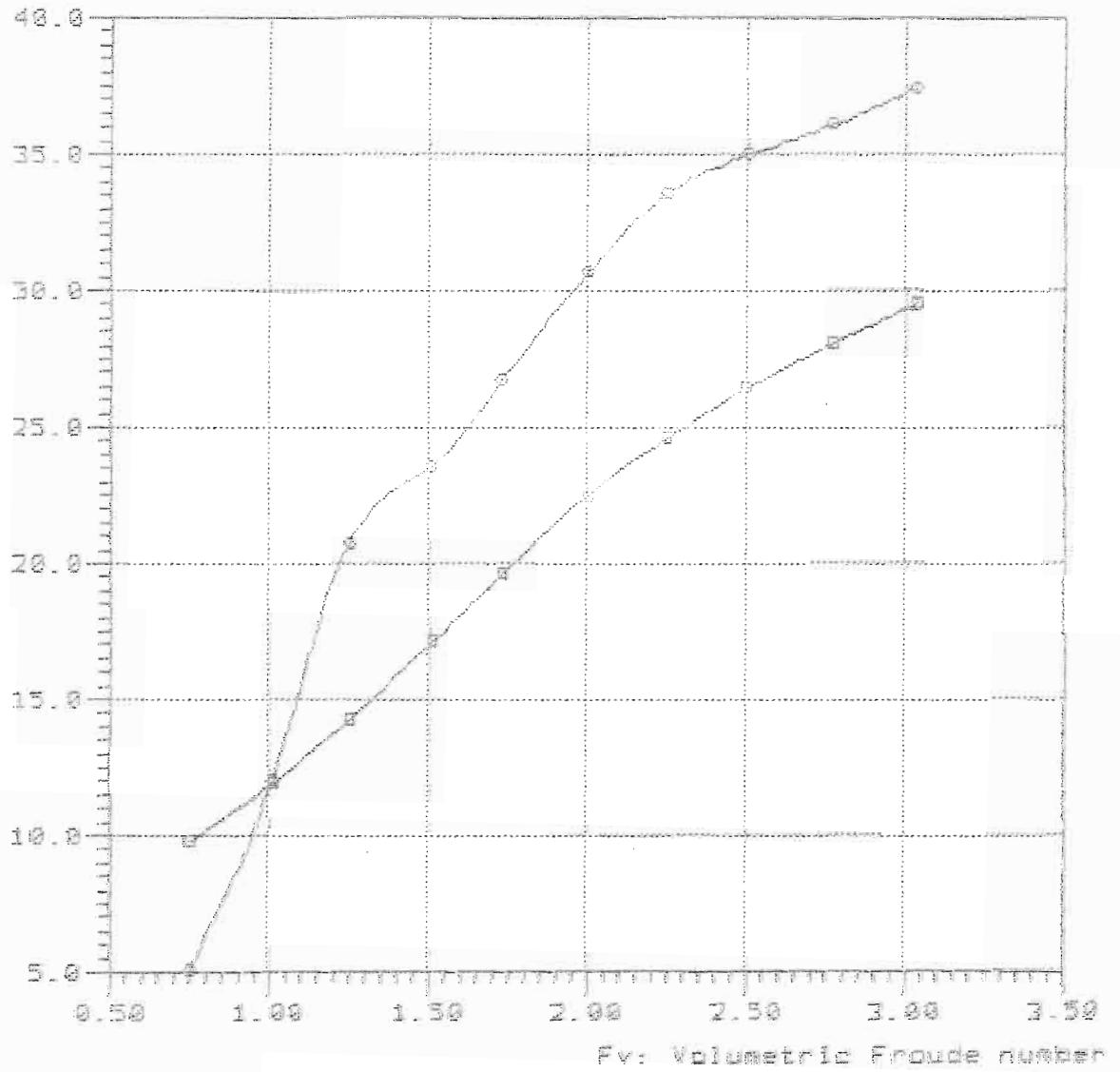


9-50-44b



—○—  
—□—

Rbare: Bare-hull resistance (N)

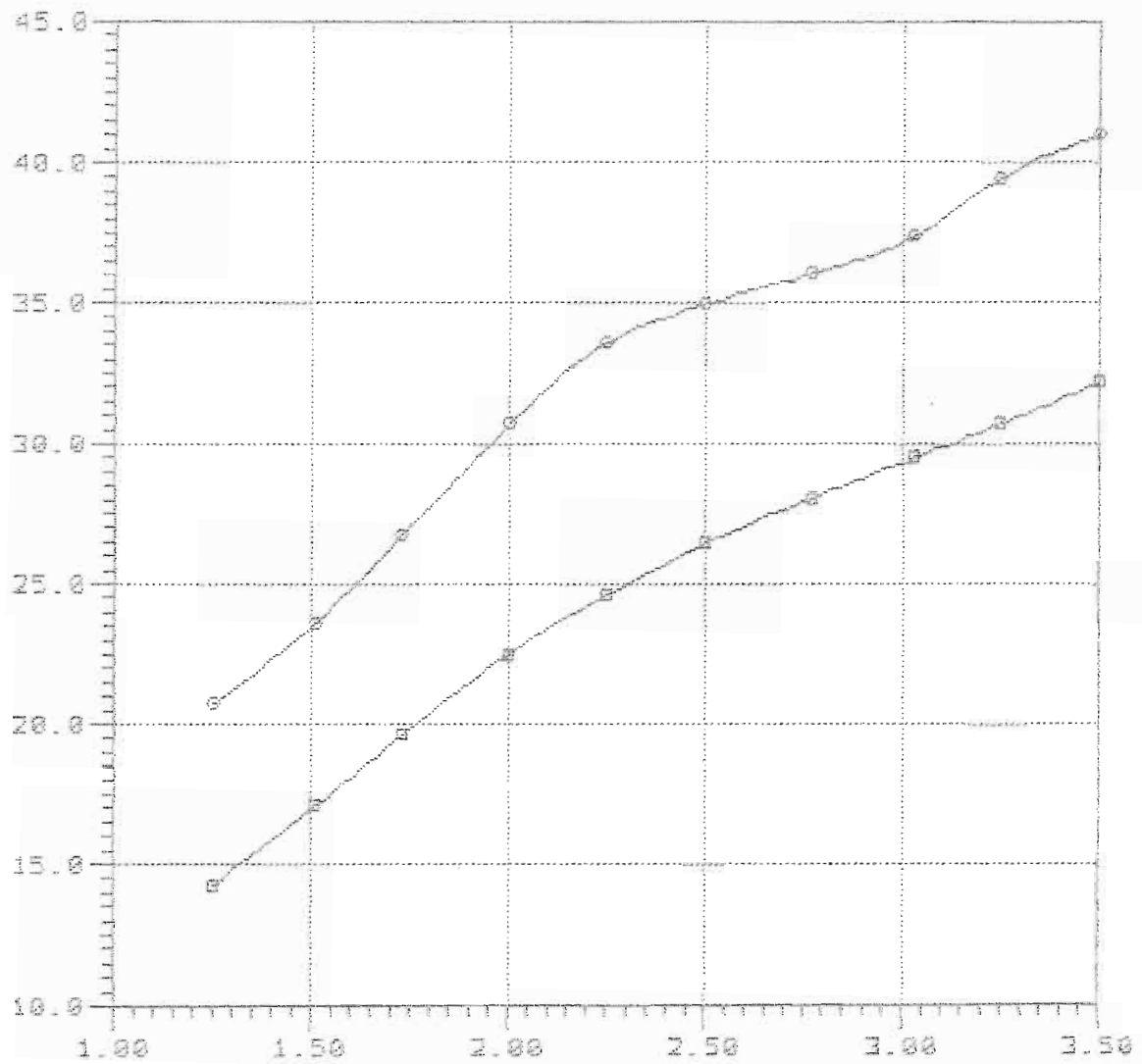


Curve legend

—■—

—●— Delft-213 (Lpw/Bpx=3.41 Ap/Va)=8.59 Val/Lpw=5.0 Lpw/Ap=2.88 Lvg/Lpw=0.459

Rbare: Bare-hull resistance (N)

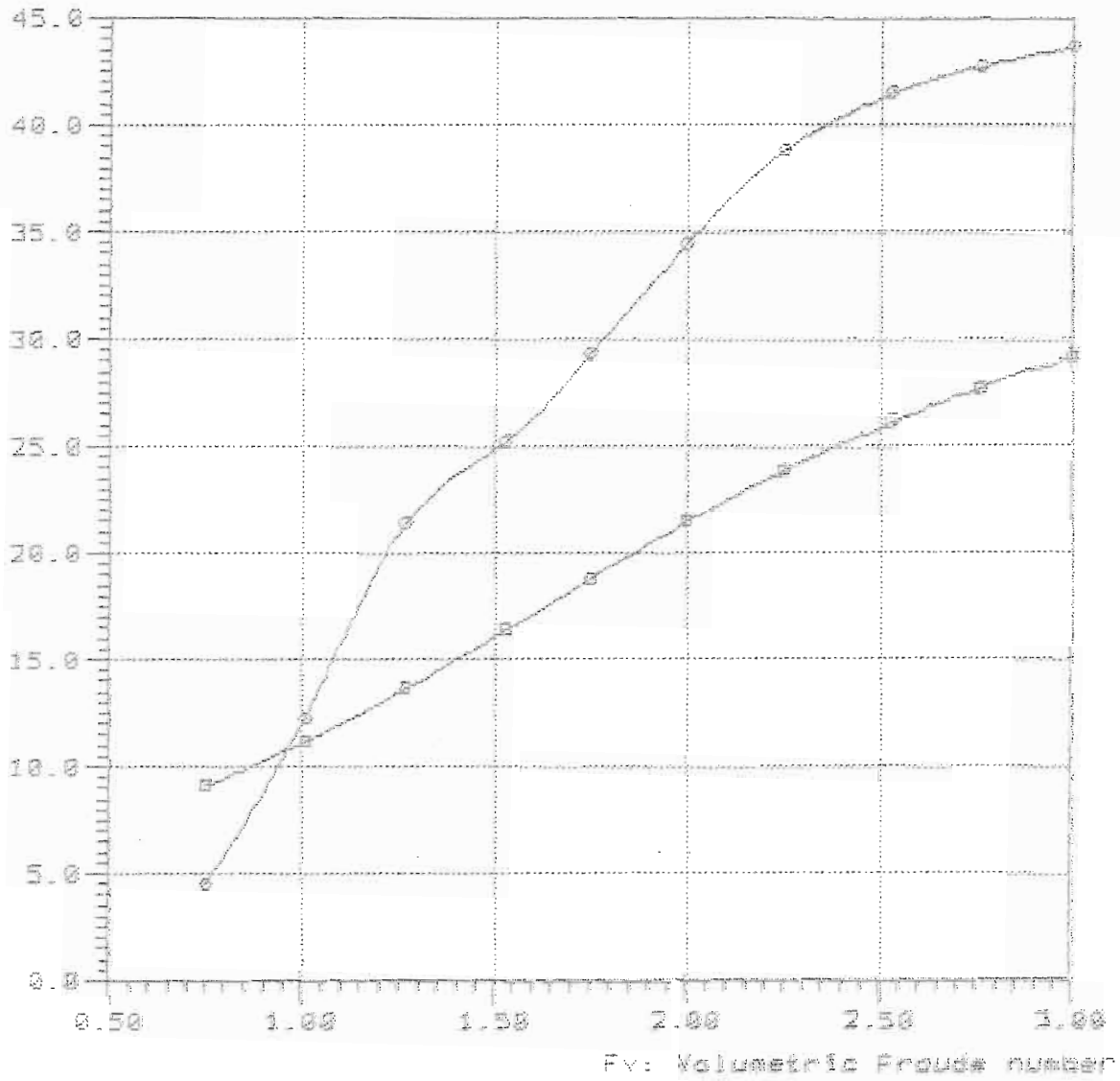


Fv: Volumetric Froude number

—○—

—□— Delft-213 Lpx/Bpx=3.41 Ap/Vol=8.50 Vol/Lpx=5.0 Lpx/Ap=2.88 Lcg/Lpx=0.459

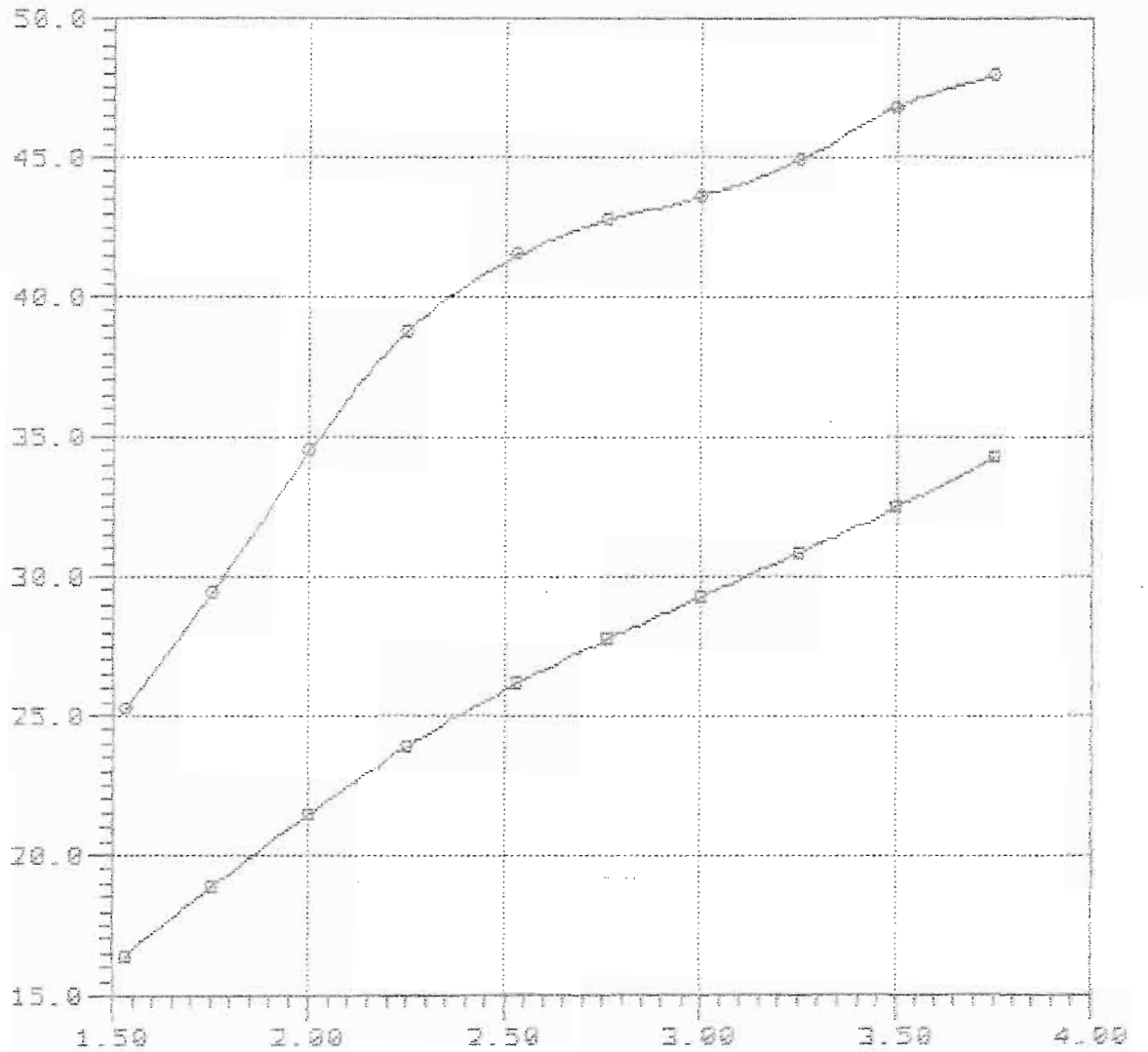
Rbare: Bare-hull resistance (N)



—■—

—●— Belt-211 Lax/Bpx=3.41 Ap/Vol=8.50 Vol/Lpx=5.0 Lpx/Ap=2.88 Log/Lpx=6.479

Rbare: Bare-hull resistance (N)



Fv: Volumetric Froude number

—■—

—○— Delft-Z11 Lpx/Bpx=3.41 Ap/Vol=8.50 Vol/Lpx=5.0 Lpx/Bpx=2.88 Lcg/Lpx=0.475

300

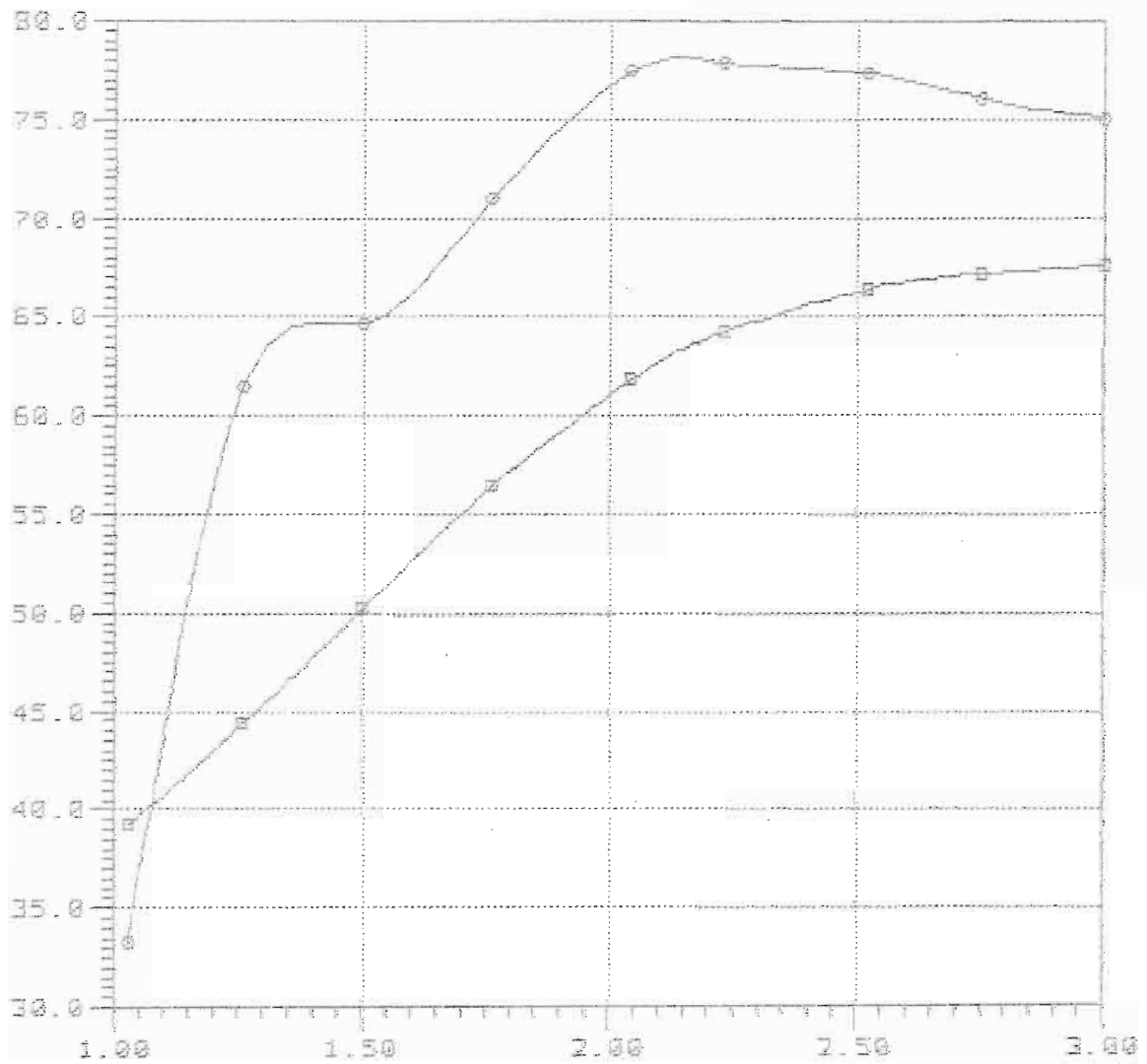
Model = 300  
Ref = DELFT  
Friction = ITTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 3.67 dm  
Ap = 44.98 sqdm  
Disp = 369.90 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 10.00 degree  
Vce = -34.00 mm

Lpx/Bpx = 4.091  
Lpx/Ap = 5.002  
Ap /Vol = 3.999  
Lpx/Vol = 4.523  
Cvload = 0.746  
Lbload = 0.075

**\_\_\_\_\_**  
Disp-Lpx = 311.43

Rbare: Bare-hull resistance (N)

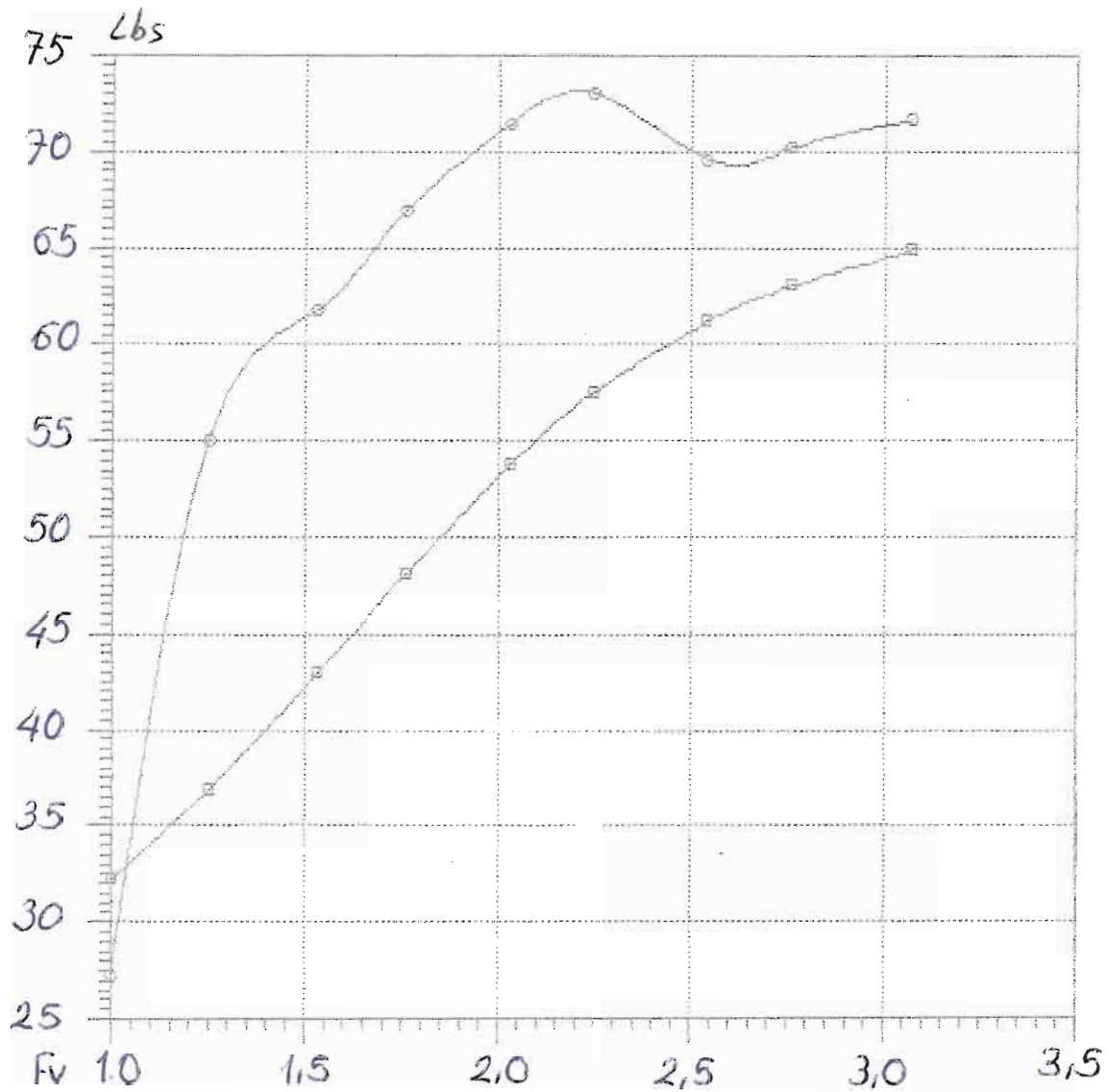


Fv: Volumetric Froude number

—□—  
—○— D=1ft-343 Lpx/Bpx=4.05 Ap/Vol=4.00 Vol/Lpx=4.52 Lpx/Ap=5.00 Ccg/Lpx=0.408



4-45-448



NavCad(tm) 3.1d

### Bare-hull resistance

File: 4-45-468.mdl

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vs.

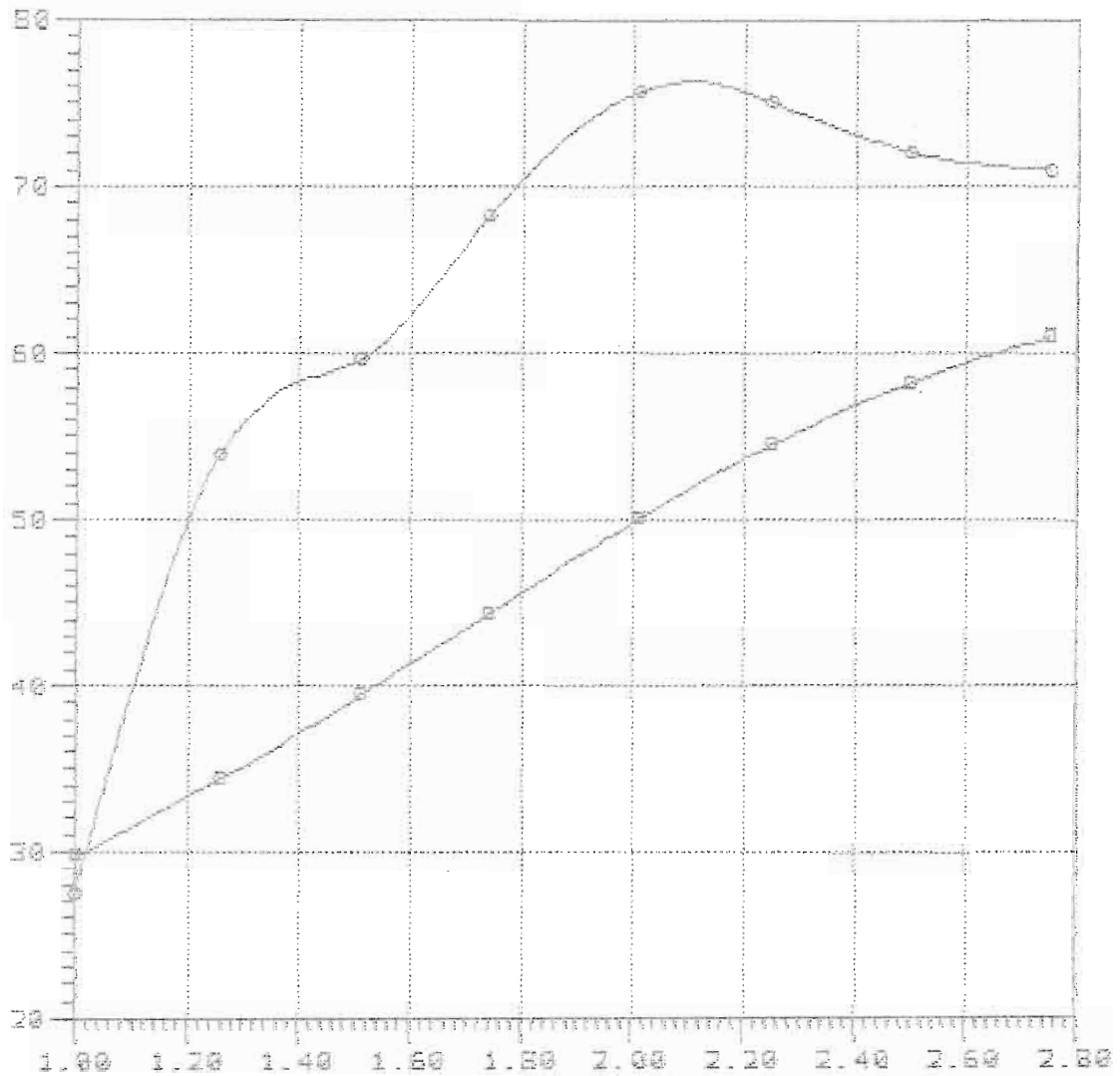
Date: 25 Feb 88

HydroComp, Inc.

### Volumetric Froude number

Time: 8:38

Rbare: Bare-hull resistance (N)



Fv: Volumetric Froude number

#### Curve legend

- 
- Delft-348 Lpx/Epv=4.85 Ap/Vol=4.89 Vol/Lpx=4.52 Lpx/Ap=5.06 Lcg/Lpx=0.468

NavCad(tm) 3.1d

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Bare-hull resistance

vs.

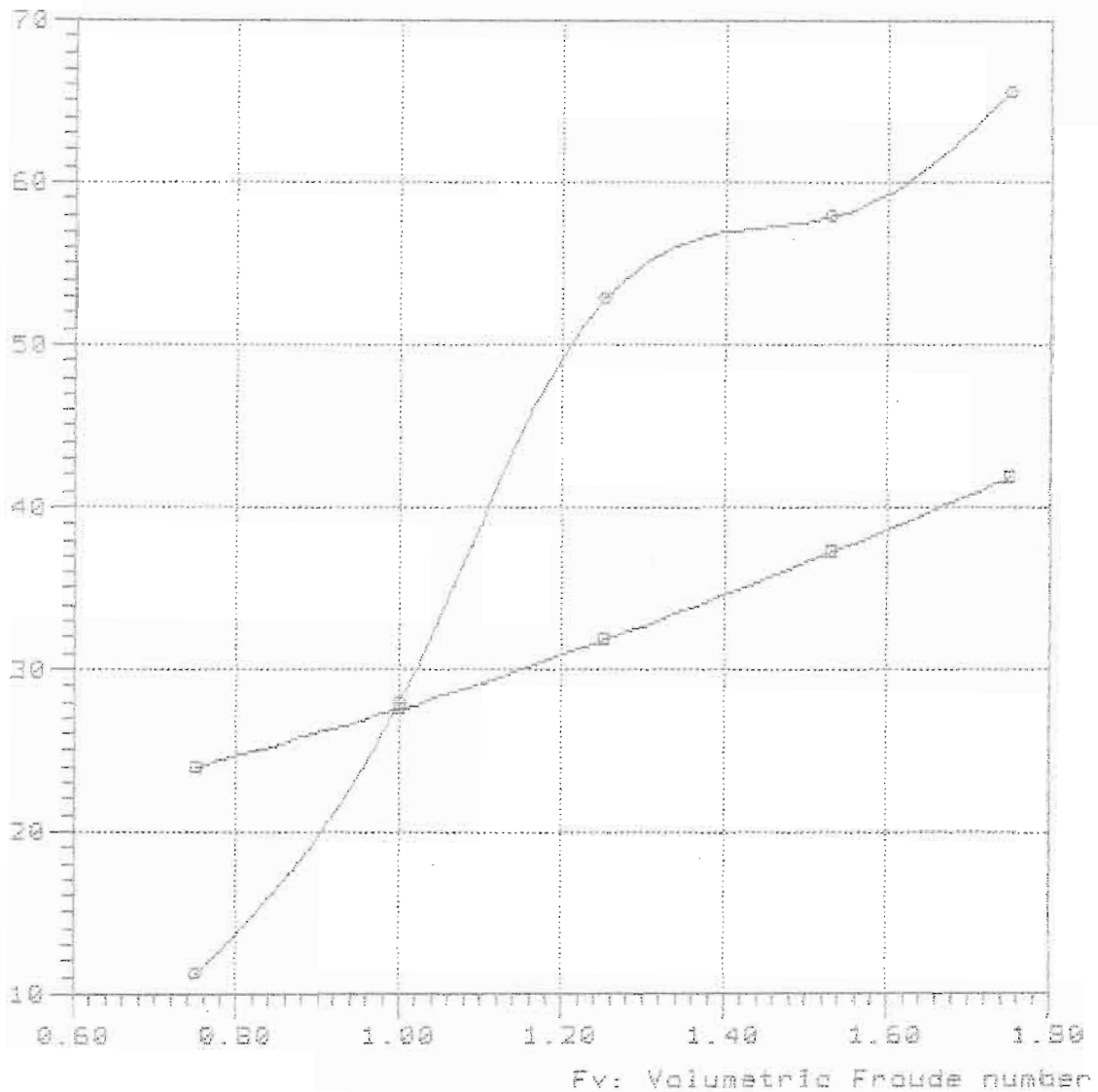
Volumetric Froude number

File: 4-45-488.mdl

Date: 29 Feb 00

Time: 8:31

Rbare: Bare-hull resistance (N)



Curve legend

—■—

—●— Delft-341 Lpx/Epx=4.09 Ap/Vol=4.00 Vol/Lpx=4.52 Lpx/Ap=5.00 Lcg/Lpx=0.488

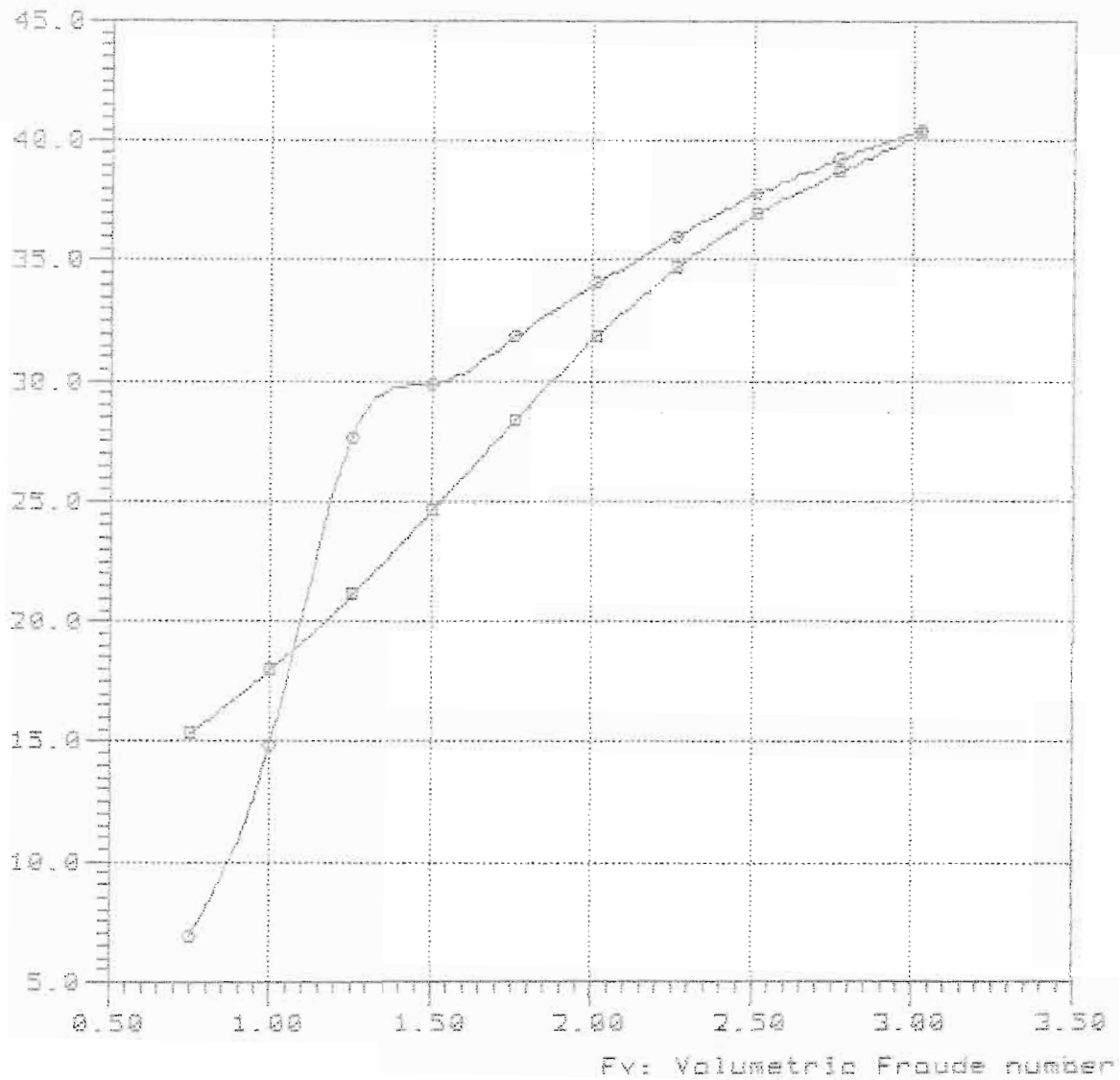
Model = 300  
Ref = DELFT  
Friction = ITTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 3.67 dm  
Ap = 44.98 sqdm  
Disp = 229.50 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 10.00 degree  
Vce = -34.00 mm

Lpx/Bpx = 4.091  
Lpx/Ap = 5.002  
Ap /Vol = 5.498  
Lpx/Vol = 5.303  
Cvload = 0.463  
Lbload = 0.046

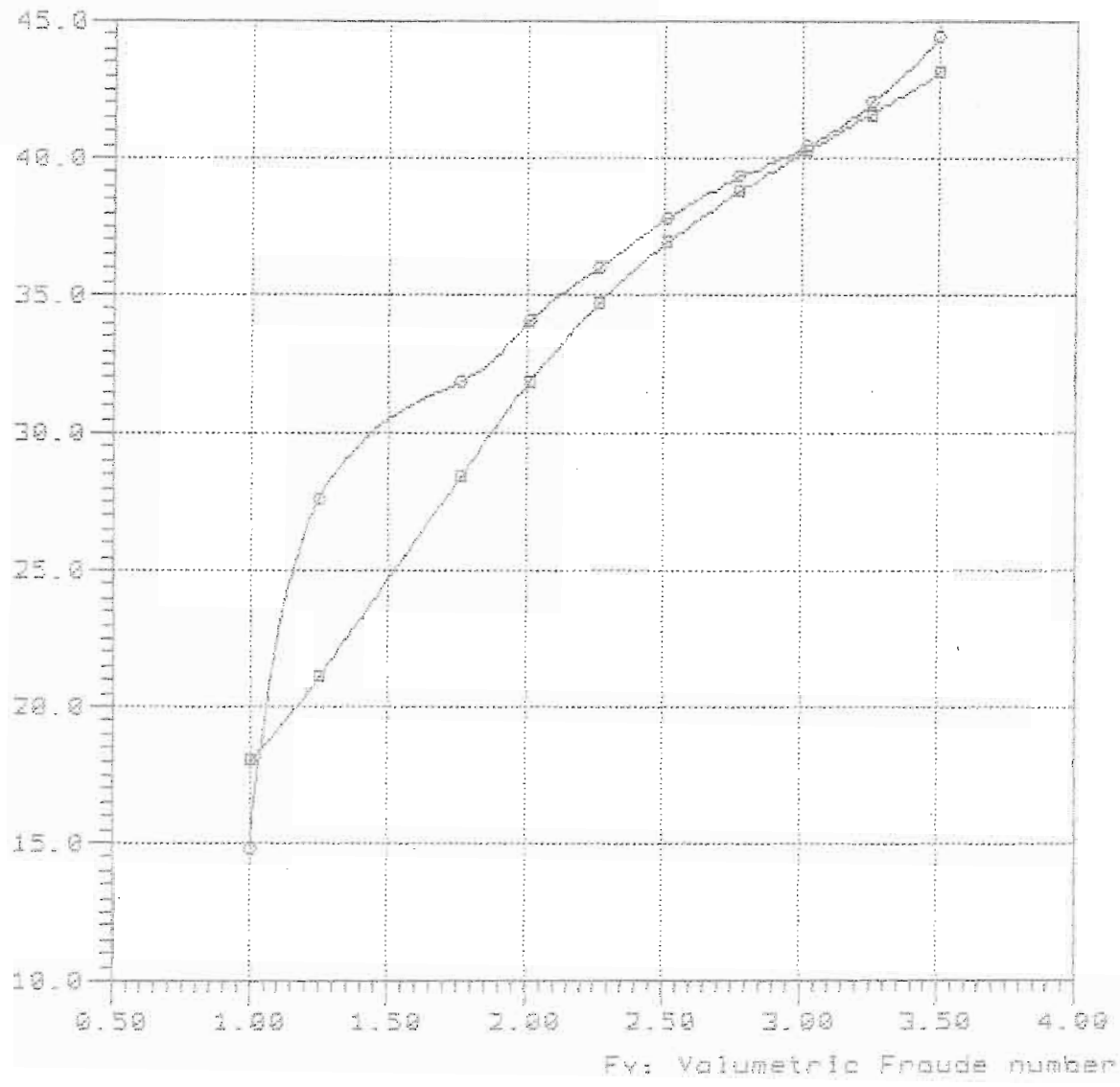
~~XXXXXXXXXX~~  
Disp-Lpx = 193.22

Rbare: Bare-hull resistance (N)



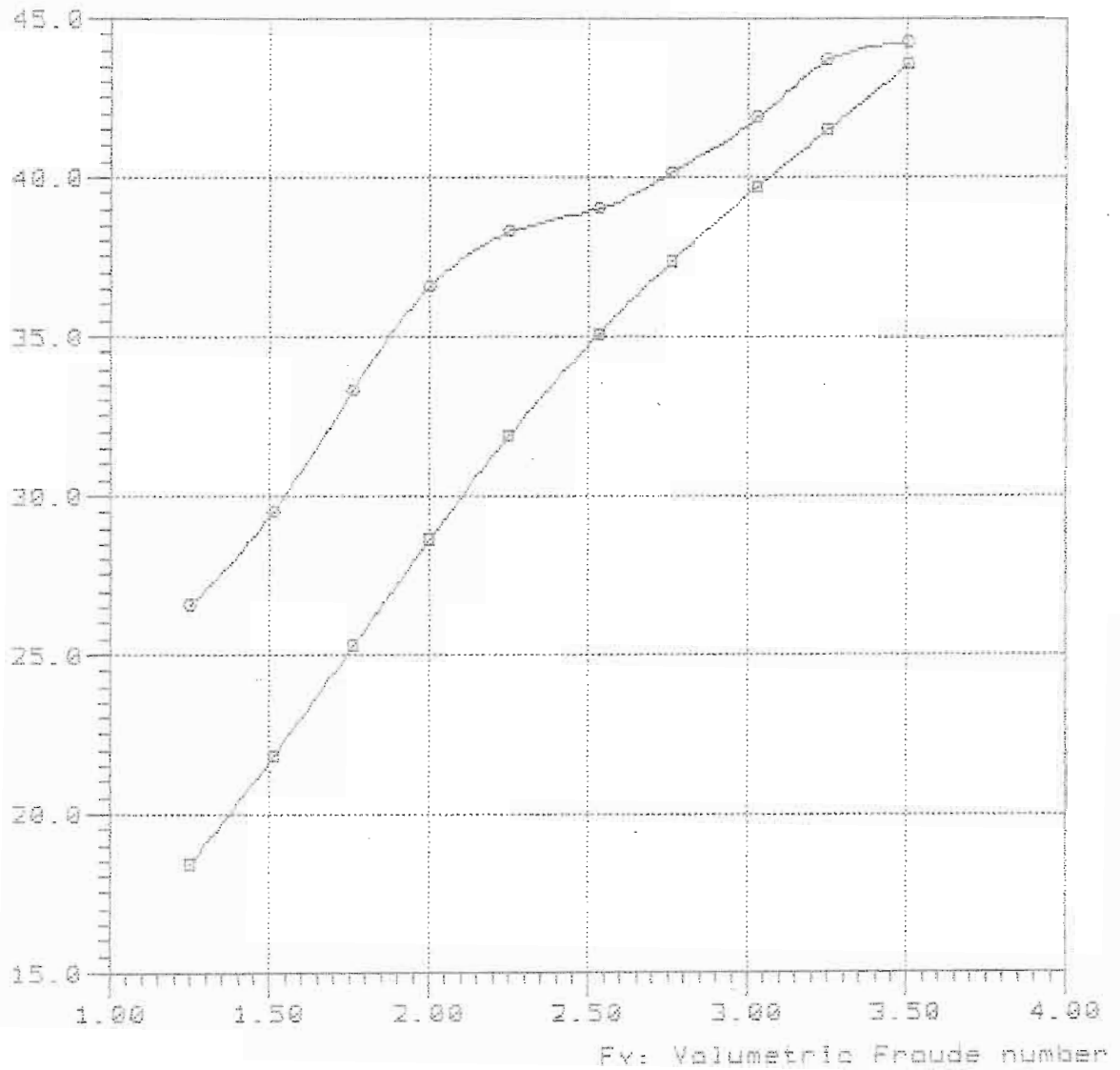
—■—  
—●— Delft-333 Lpx/Bpx=4.09 Ap/Vol=5.50 Vol/Lpx=5.30 Lpx/Ap=5.00 Lcg/Lpx=0.408

Rbare: Bare-hull resistance (N)



—□—  
—○— Delft-333 Lpx/Bpx=4.09 Ap/Vol=5.50 Vol/Lpx=5.30 Lpx/Ap=5.00 Log/Lpx=0.408

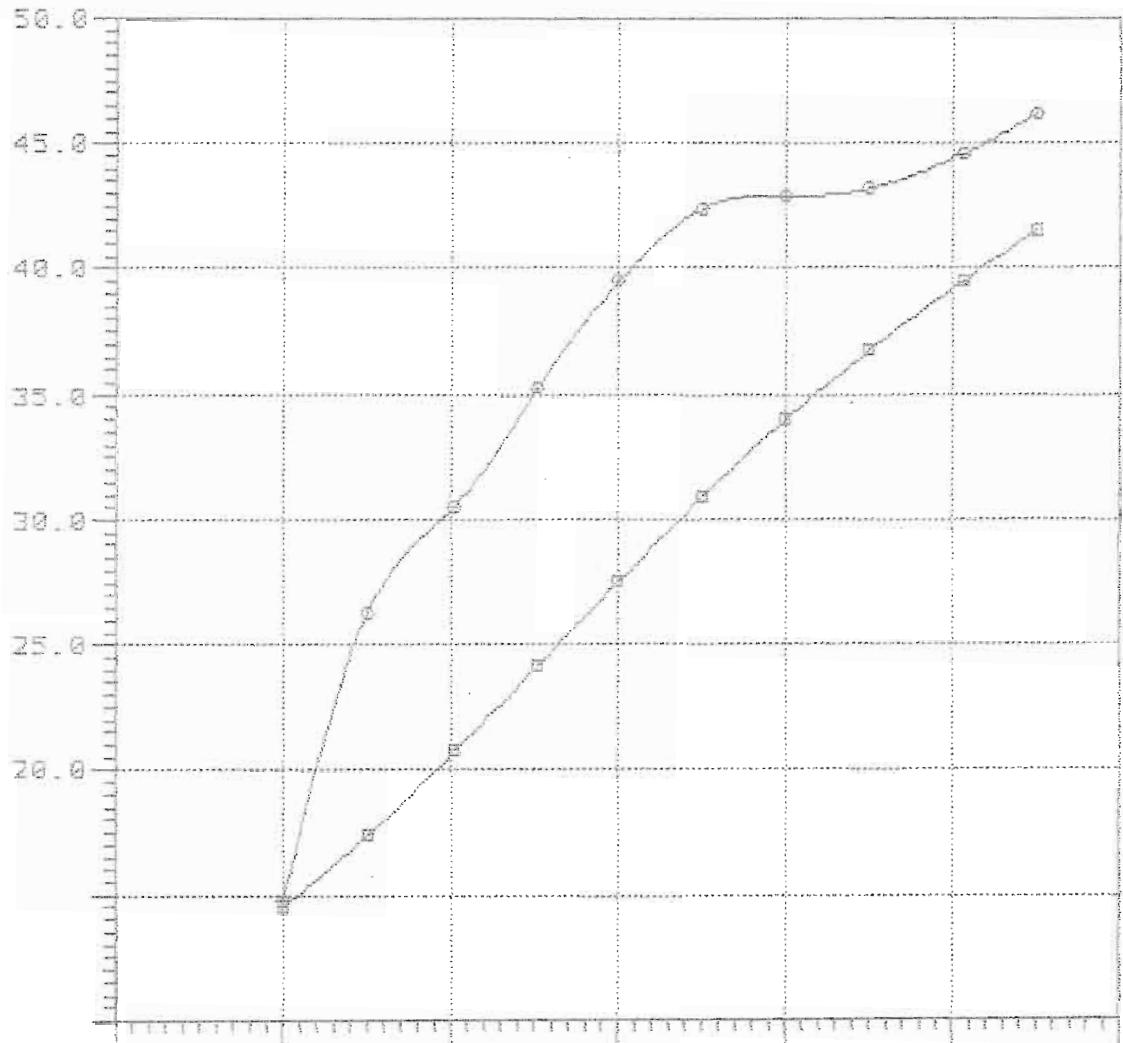
Rbare: Bare-hull resistance (N)



—■—

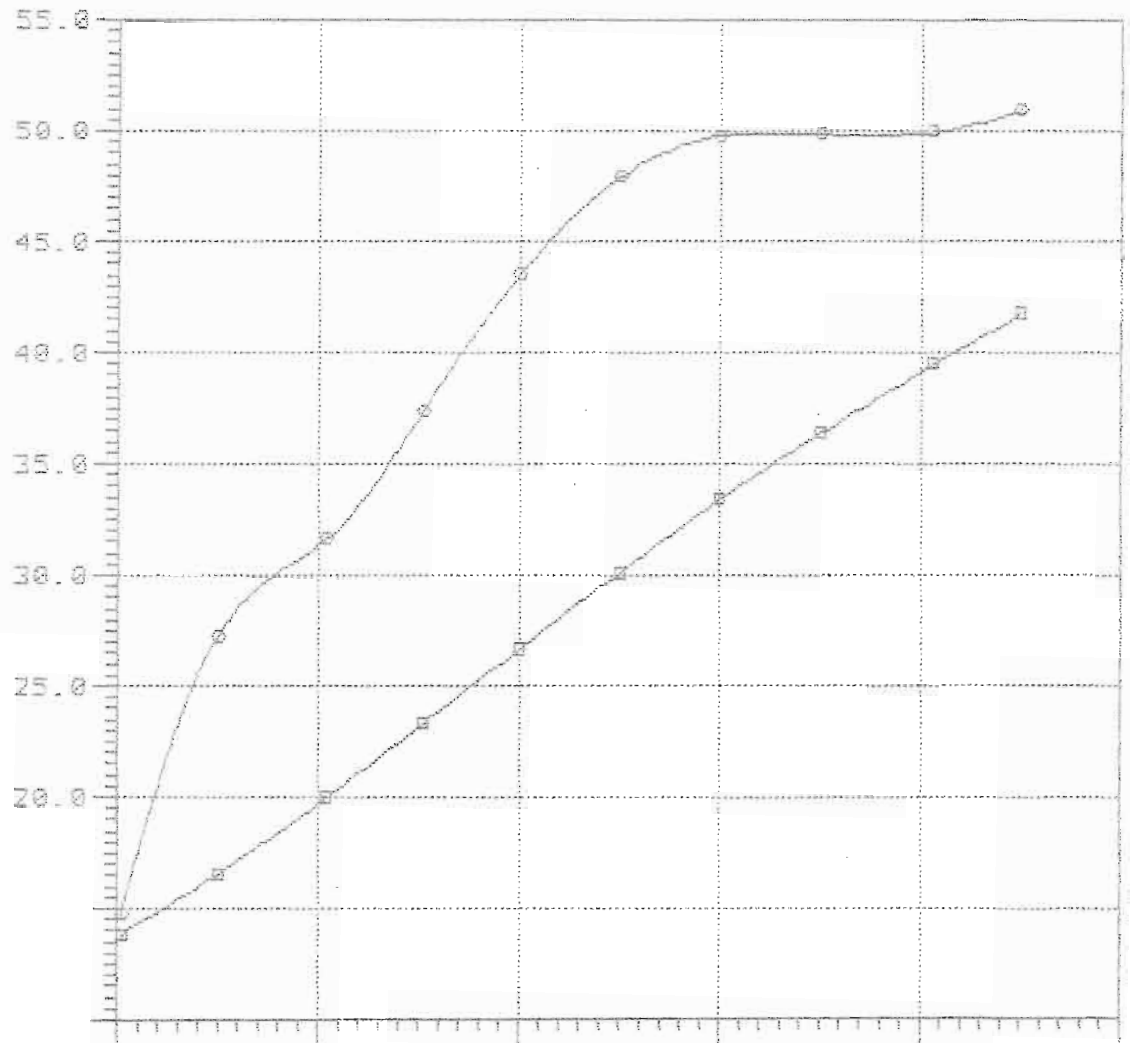
—●— Delft-332 Lpx/Bpx=4.09 Ap/Val=5.50 Val/Lpx=5.30 Lpx/Ap=5.00 Lcg/Lpx=0.448

Rbare: Bare-hull resistance (N)





Rbare: Bare-hull resistance (N)



—■—  
—●—

Model = 300  
Ref = DELFT  
Friction = ITTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 3.67 dm  
Ap = 44.98 sqdm

Disp = 159.80 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 10.00 degree  
Vce = -34.00 mm

Lpx/Bpx = 4.091  
Lpx/Ap = 5.002  
Ap /Vol = 6.998  
Lpx/Vol = 5.983  
Cvload = 0.322  
Lbload = 0.032

~~XXXXXXXXXX~~  
Disp-Lpx = 134.54

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

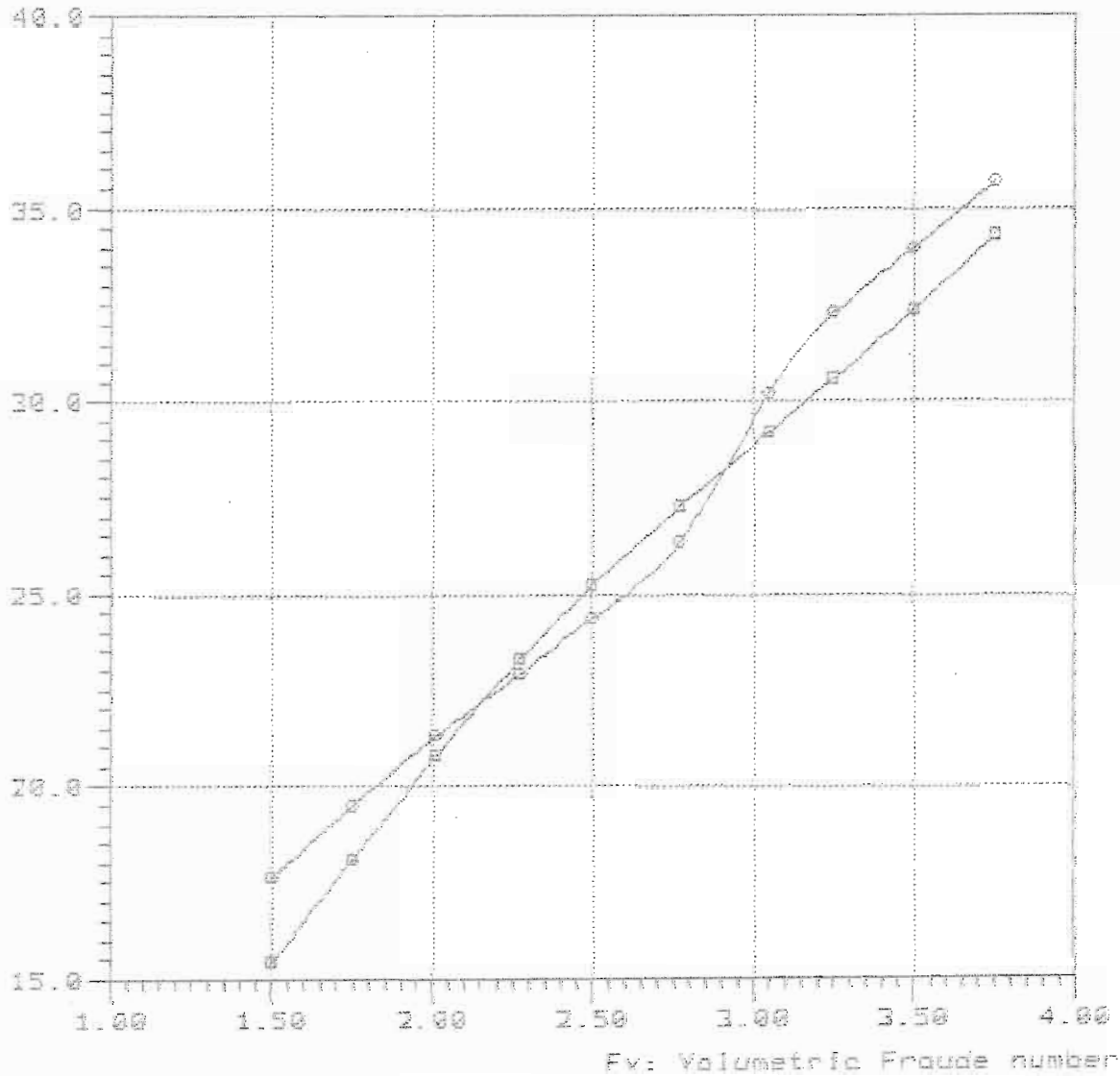
### Volumetric Froude number

File: 7-59-41b.mdl

Date: 29 Feb 88

Time: 9:33

Rbare: Bare-hull resistance (N)

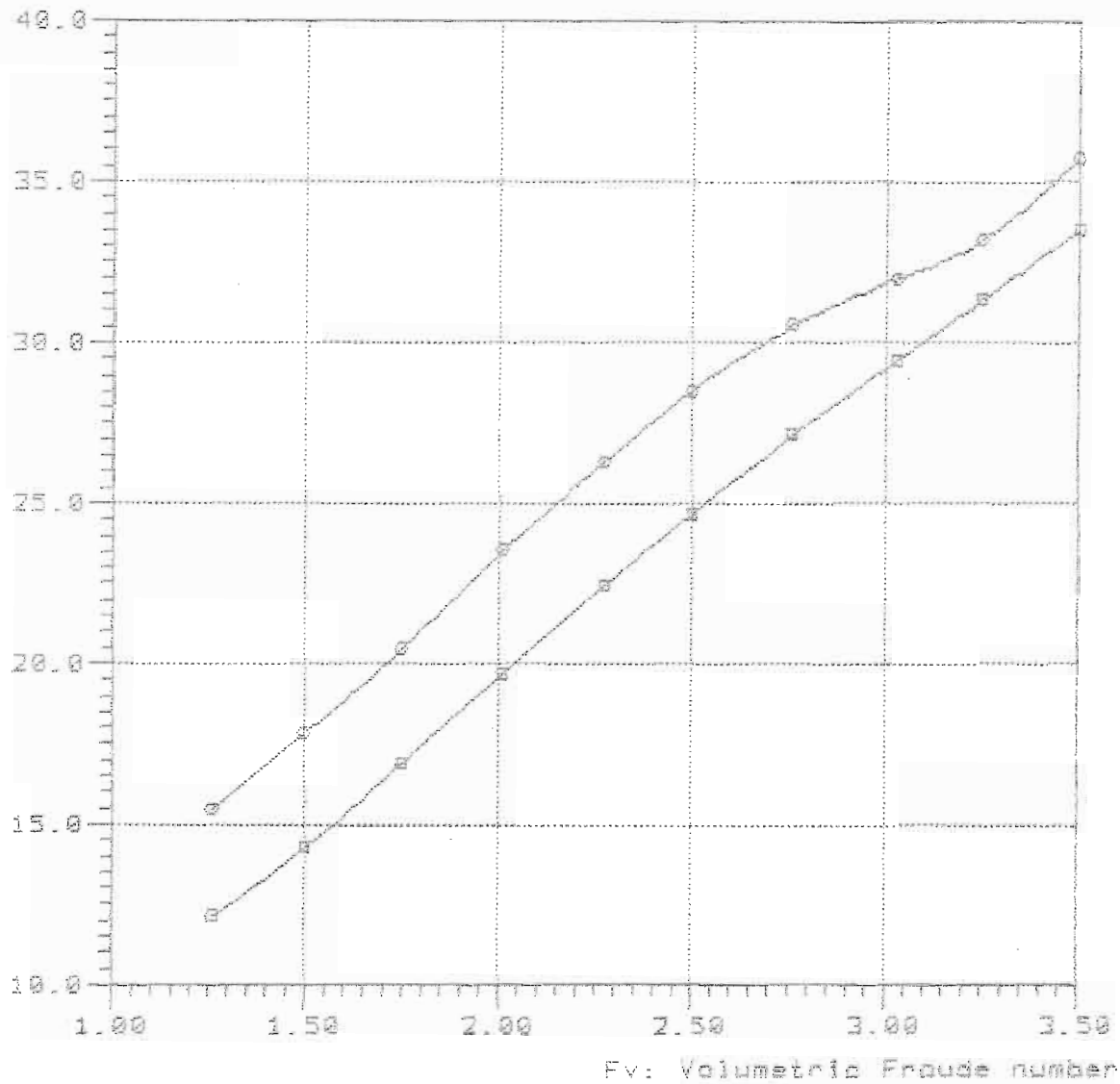


#### Curve legend

—□—

—○— Delft-323 Lpx/Rpx=4.69 Rp/Vol=7.88 Vol/Lpx=5.98 Lpx/Rp=3.00 Lcg/Lpx=0.488

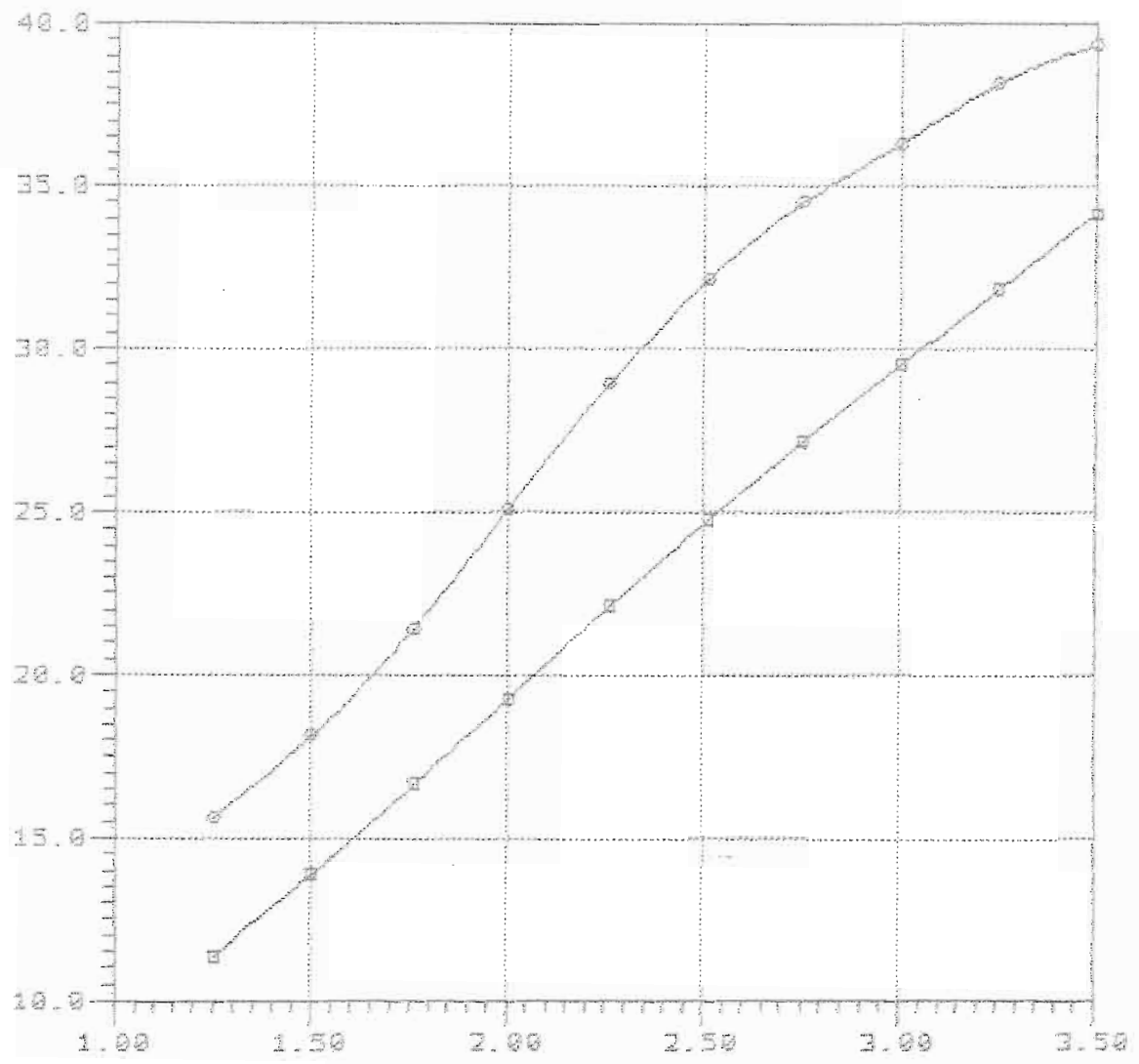
Rbare: Bare-hull resistance (N)



—■—

—●— Delft-322 Lpx/Bpx=4.09 Ap/Vol=7.08 Vol/Lpx=5.98 Lpx/Bpx=5.00 Log/Lpx=0.448

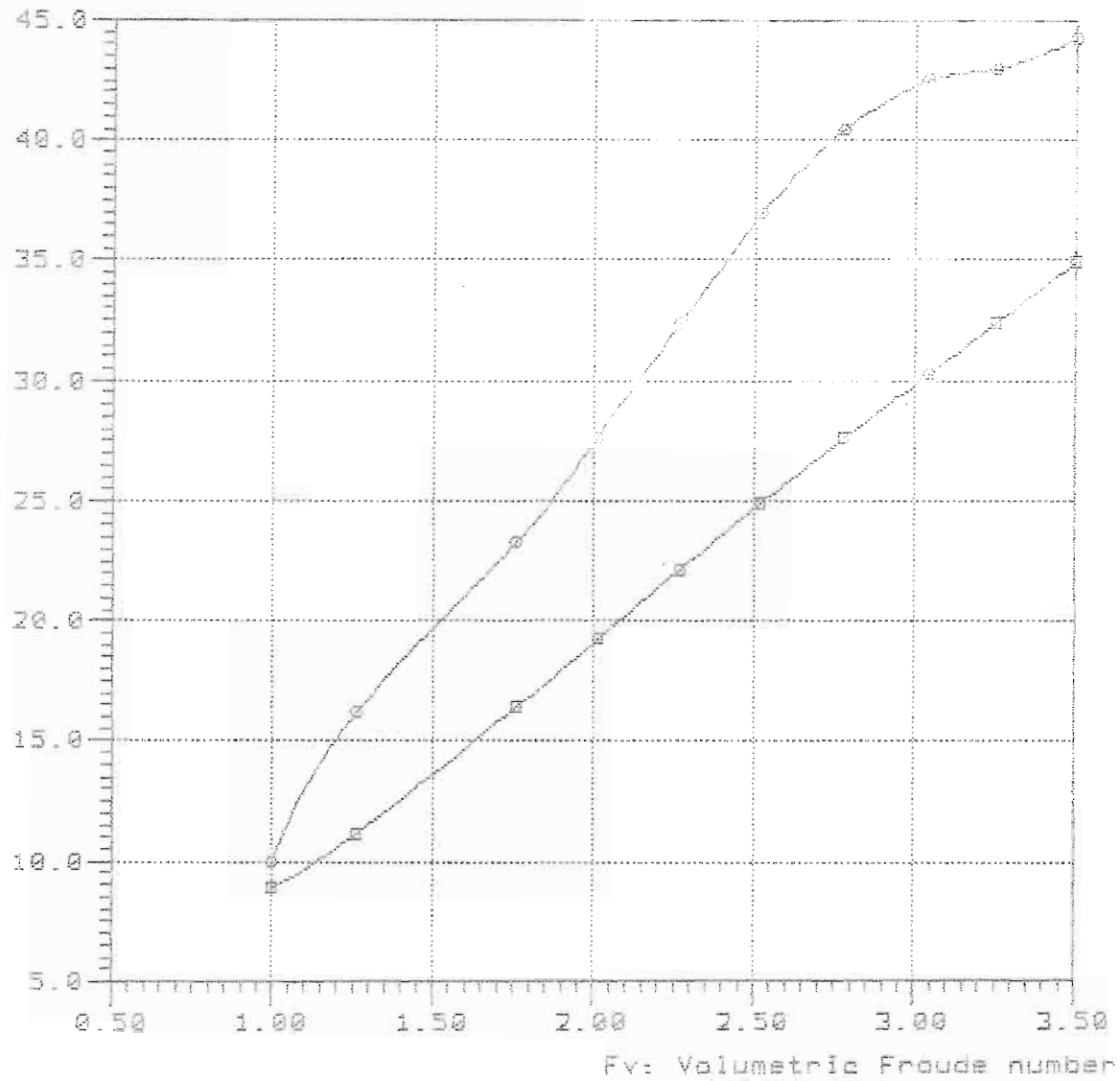
Rbare: Bare-hull resistance (N)



Fv: Volumetric Froude number

- 
- Delft-328 Lpx/Bpx=4.09 Ap/Val=7.00 Val/Lpx=3.98 Lpx/Ap=5.00 Log/Lpx=0.468

Rbare: Bare-hull resistance (N)



—■—

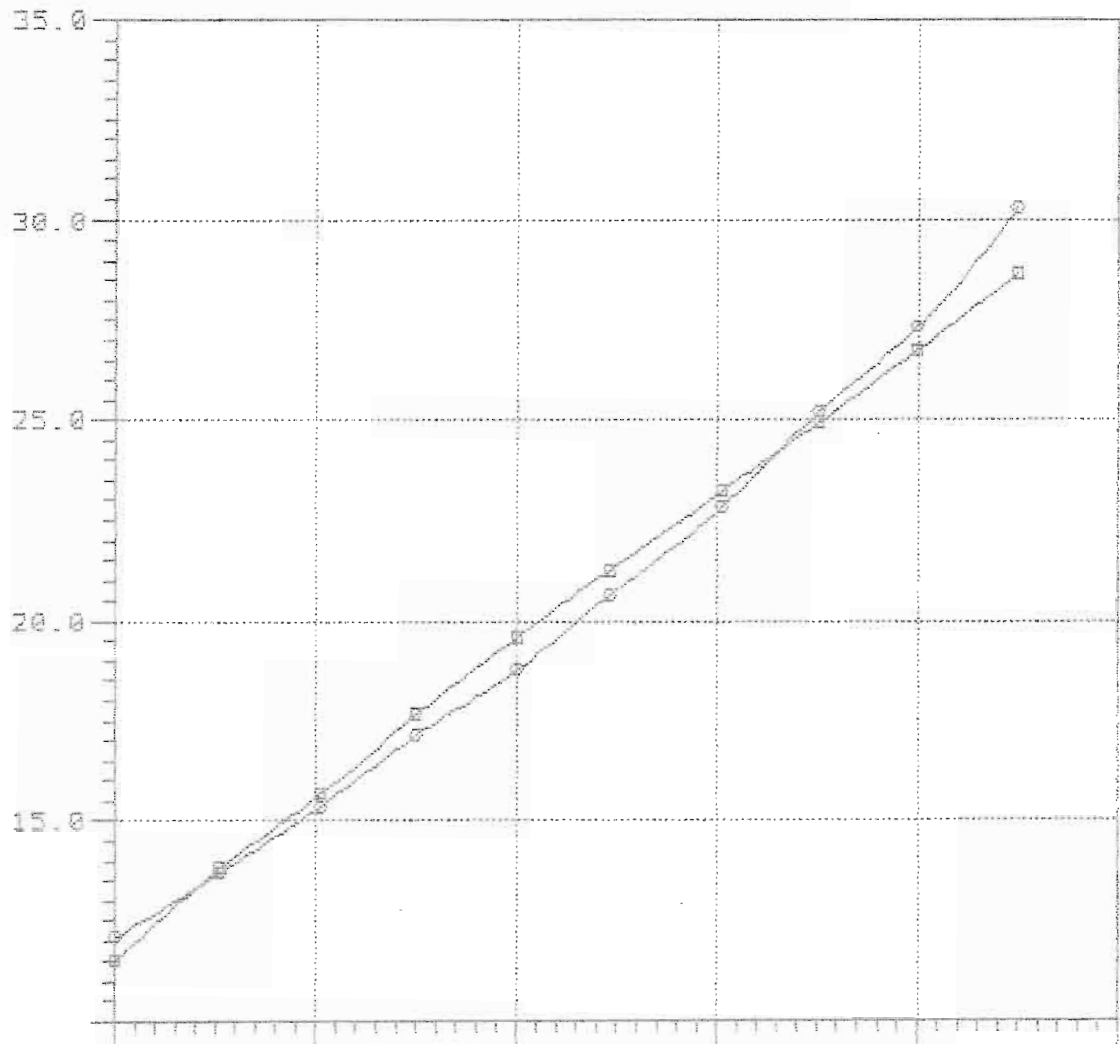
—●— Delft-321 Lpx/Bpx=4.09 Ap/Vol=7.00 Vol/Lpx=5.58 Lpx/Ap=5.00 Lcg/Lpx=0.488

Model = 300  
Ref = DELFT  
Friction = ITTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 3.67 dm  
Ap = 44.98 sqdm  
Disp = 119.50 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 10.00 degree  
Vce = -34.00 mm

Lpx/Bpx = 4.091  
Lpx/Ap = 5.002  
Ap /Vol = 8.494  
Lpx/Vol = 6.592  
Cvload = 0.241  
Lbload = 0.024  
~~XXXXXXXXXX~~  
Disp-Lpx = 100.61

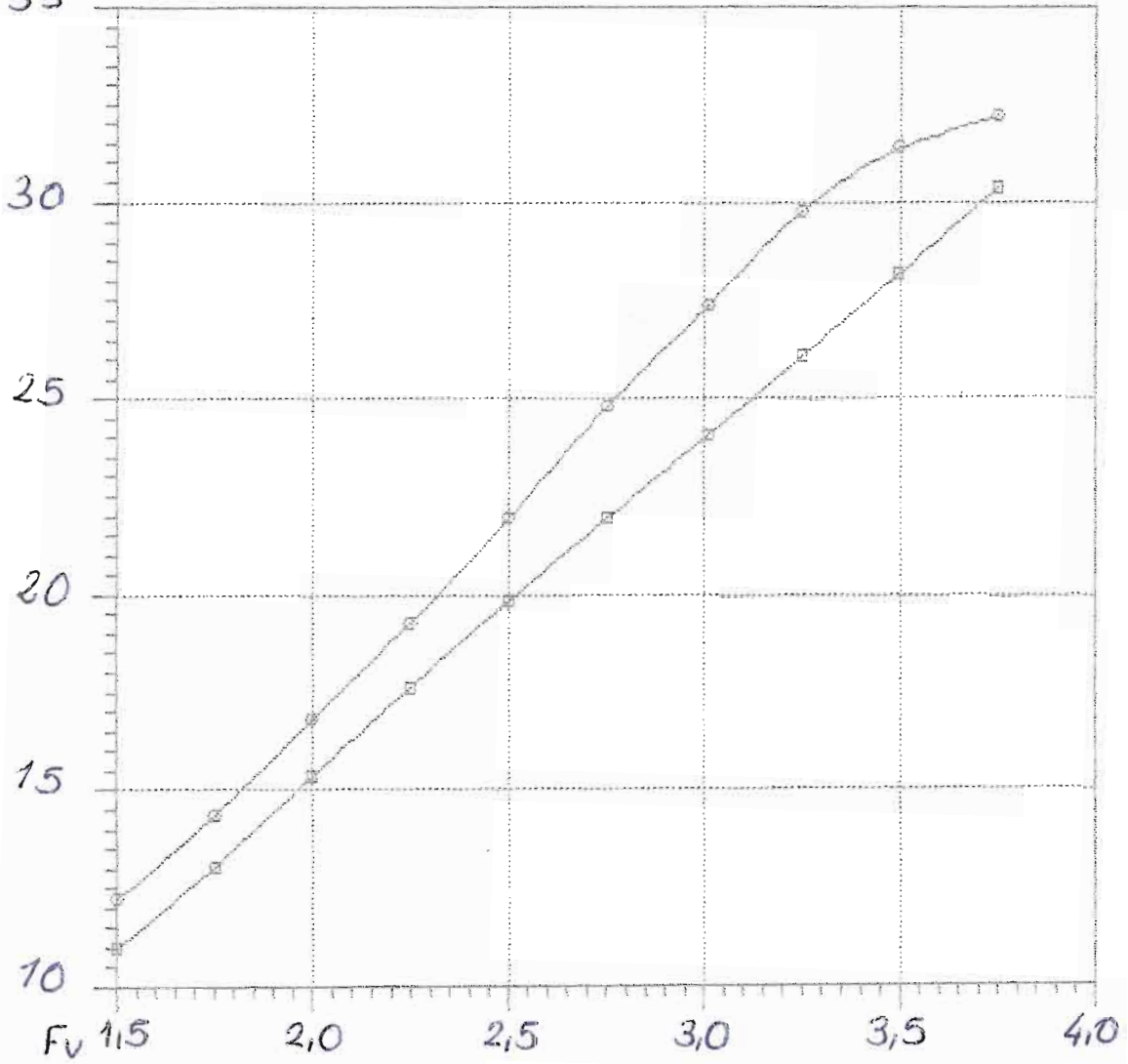
Rbare: Bare-hull resistance (N)



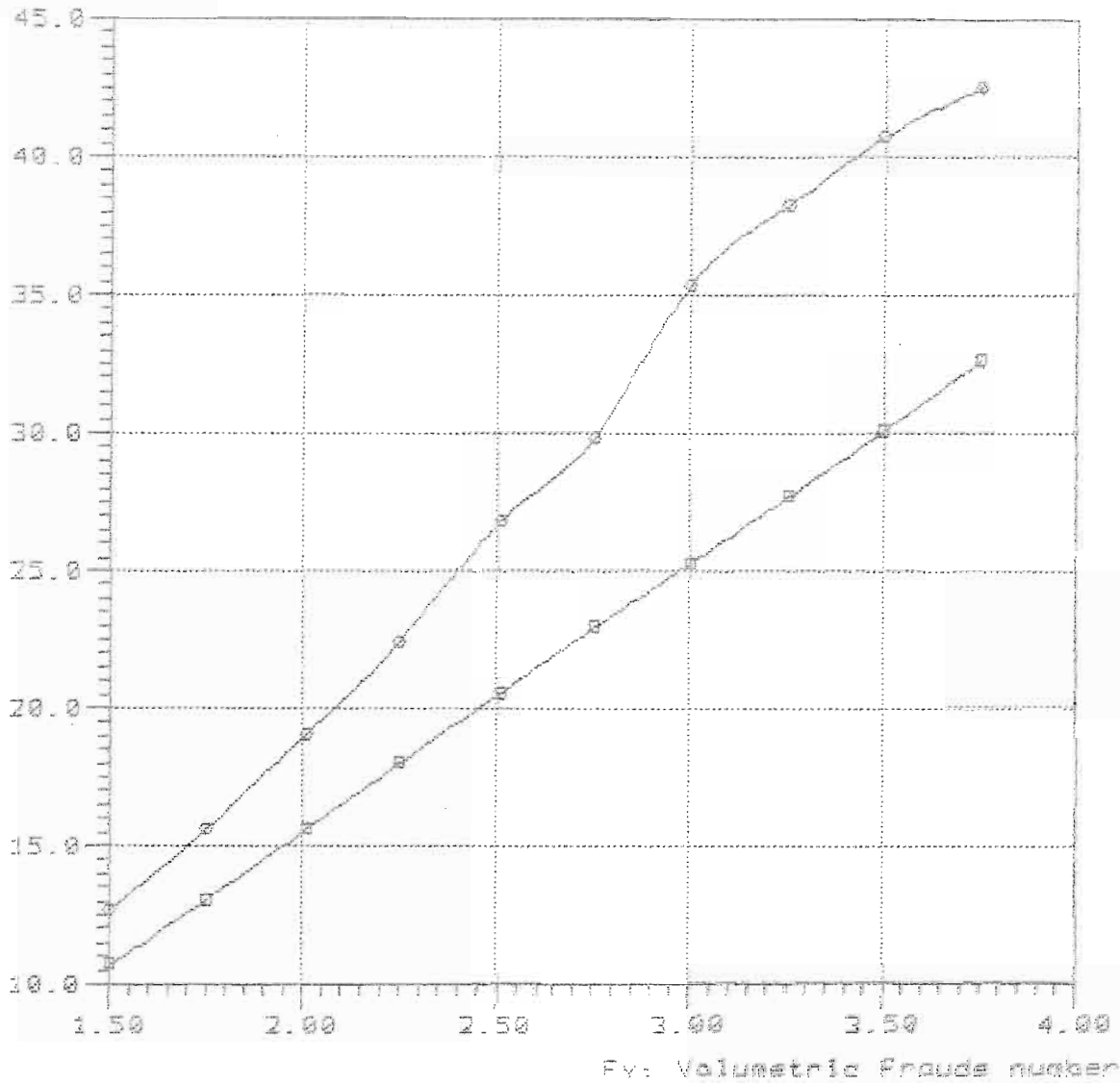


9-66-45b

35 Lbs



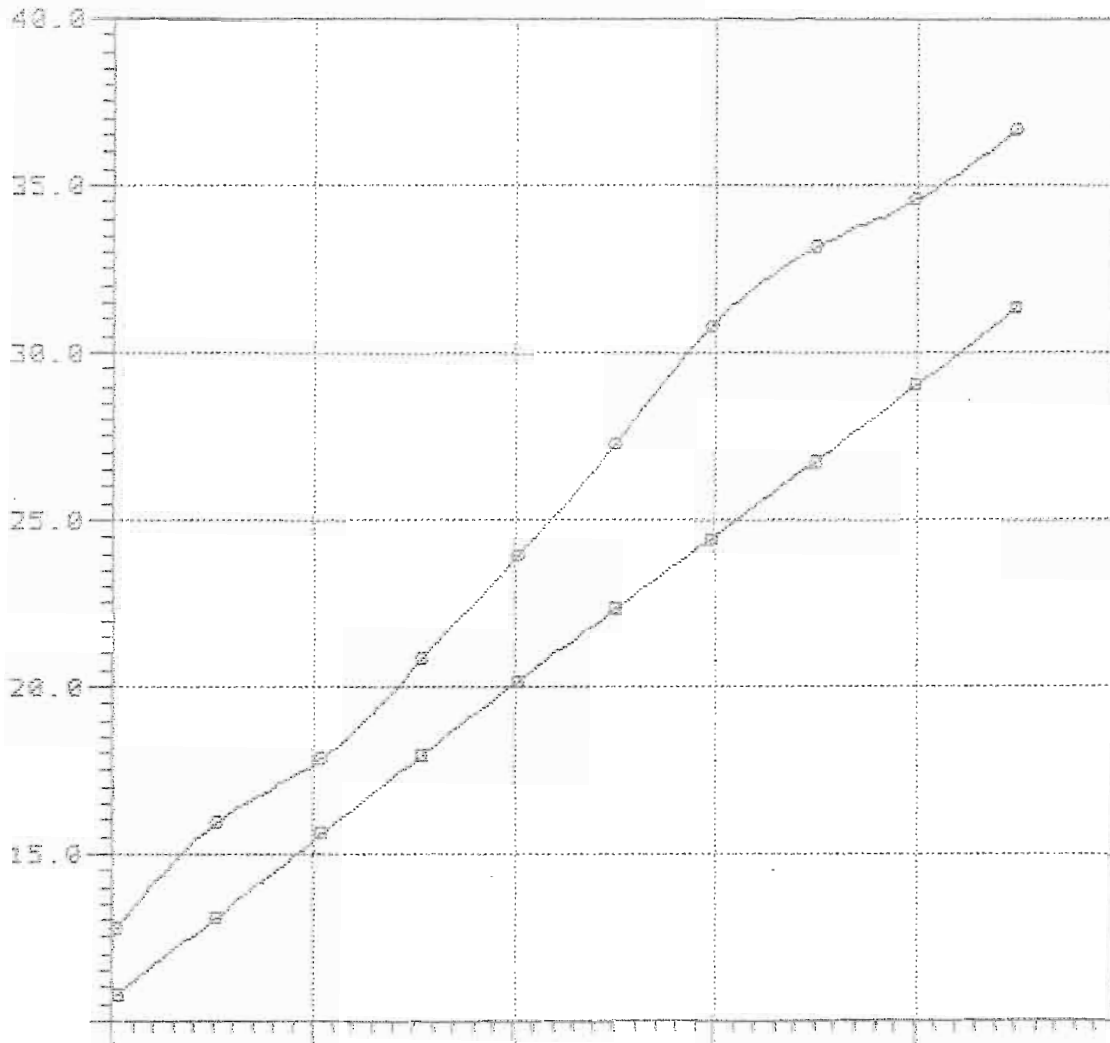
Rbare: Bare-hull resistance (N)



—○—

—□— Delft-311 Lpx/Bpx=4.09 Rp/Vol=8.50 Vol/Lpx=6.59 Lpx/Rp=5.06 Log/Lpx=6.488

Rbare: Bare-hull resistance (ND)



—○—  
—□—

400

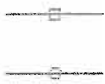
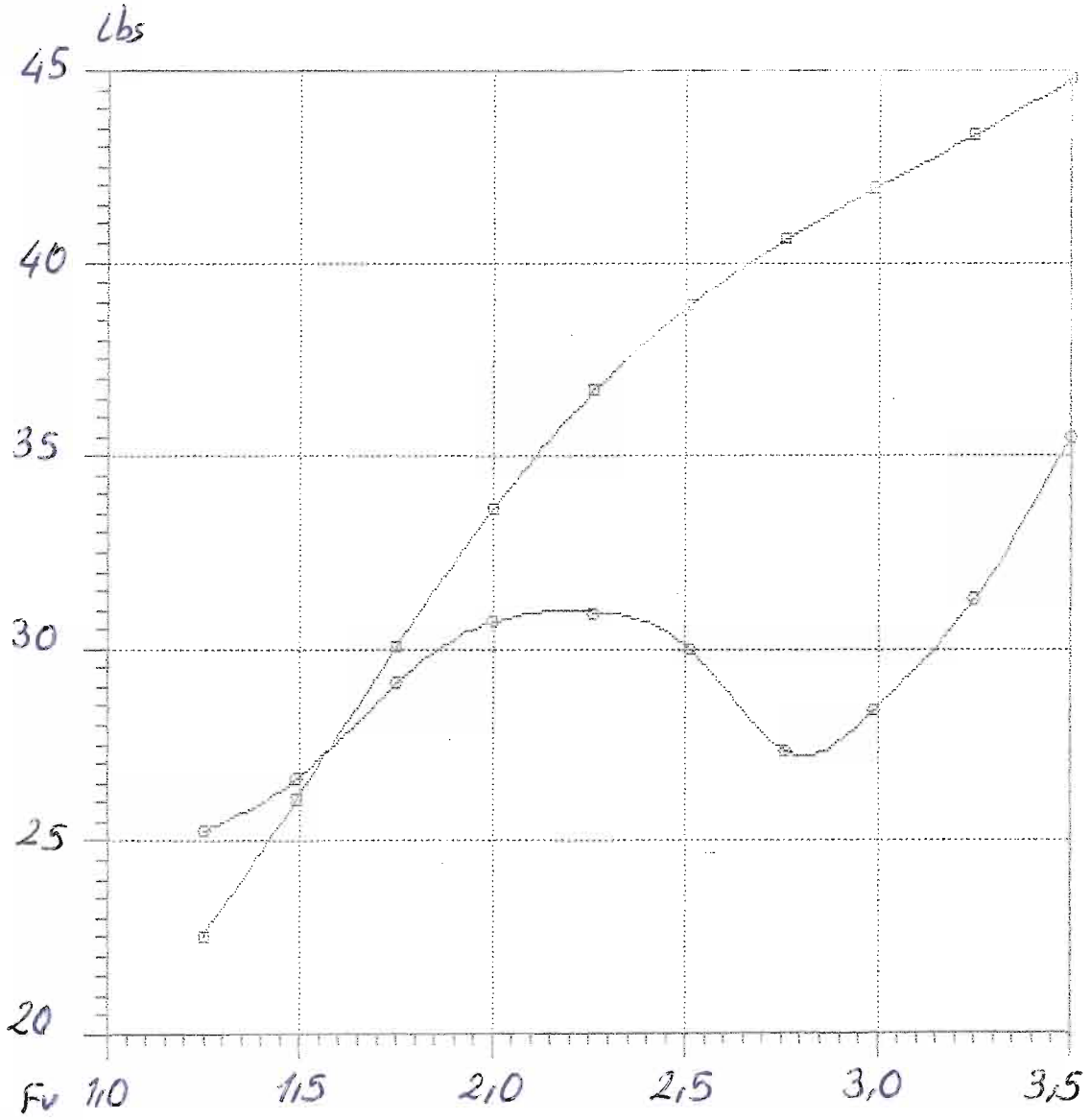
Model = 400  
Ref = DELFT  
Friction = ITTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.73 dm  
Ap = 33.47 sqdm  
Disp = 237.40 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 7.30 degree  
Vce = -25.40 mm

Lpx/Bpx = 5.501  
Lpx/Ap = 6.722  
Ap /Vol = 4.000  
Lpx/Vol = 5.244  
Cvload = 1.164  
Lbload = 0.075

~~XXXXXXXXXX~~  
Disp-Lpx = 199.87

4-52-40b



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### Bare-hull resistance

vs.

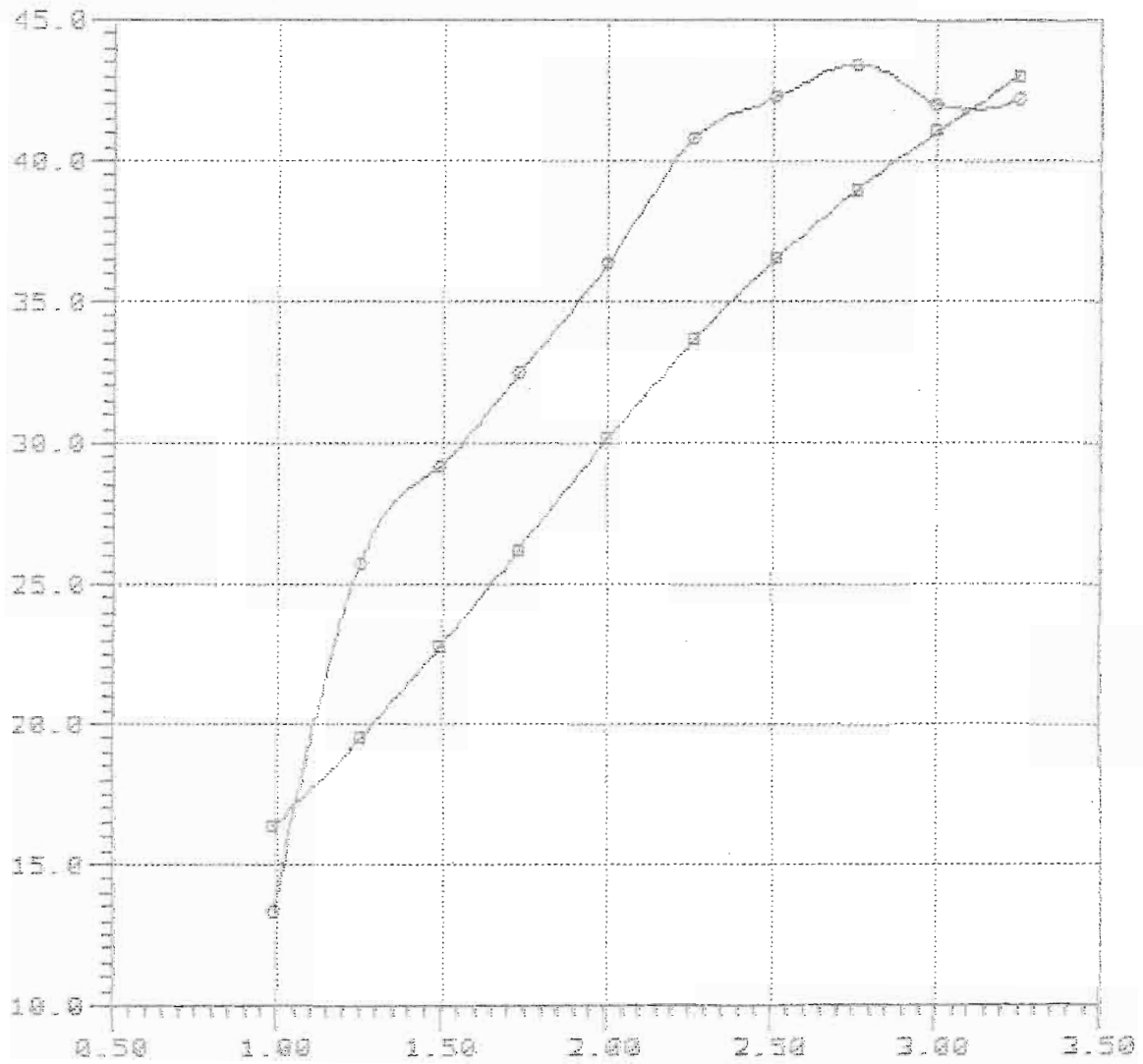
### Volumetric Froude number

File: 4-52-446.mdl

Date: 29 Feb 00

Time: 10:57

Rbare: Bare-hull resistance (N)



Fv: Volumetric Froude number

#### Curve legend

—□—

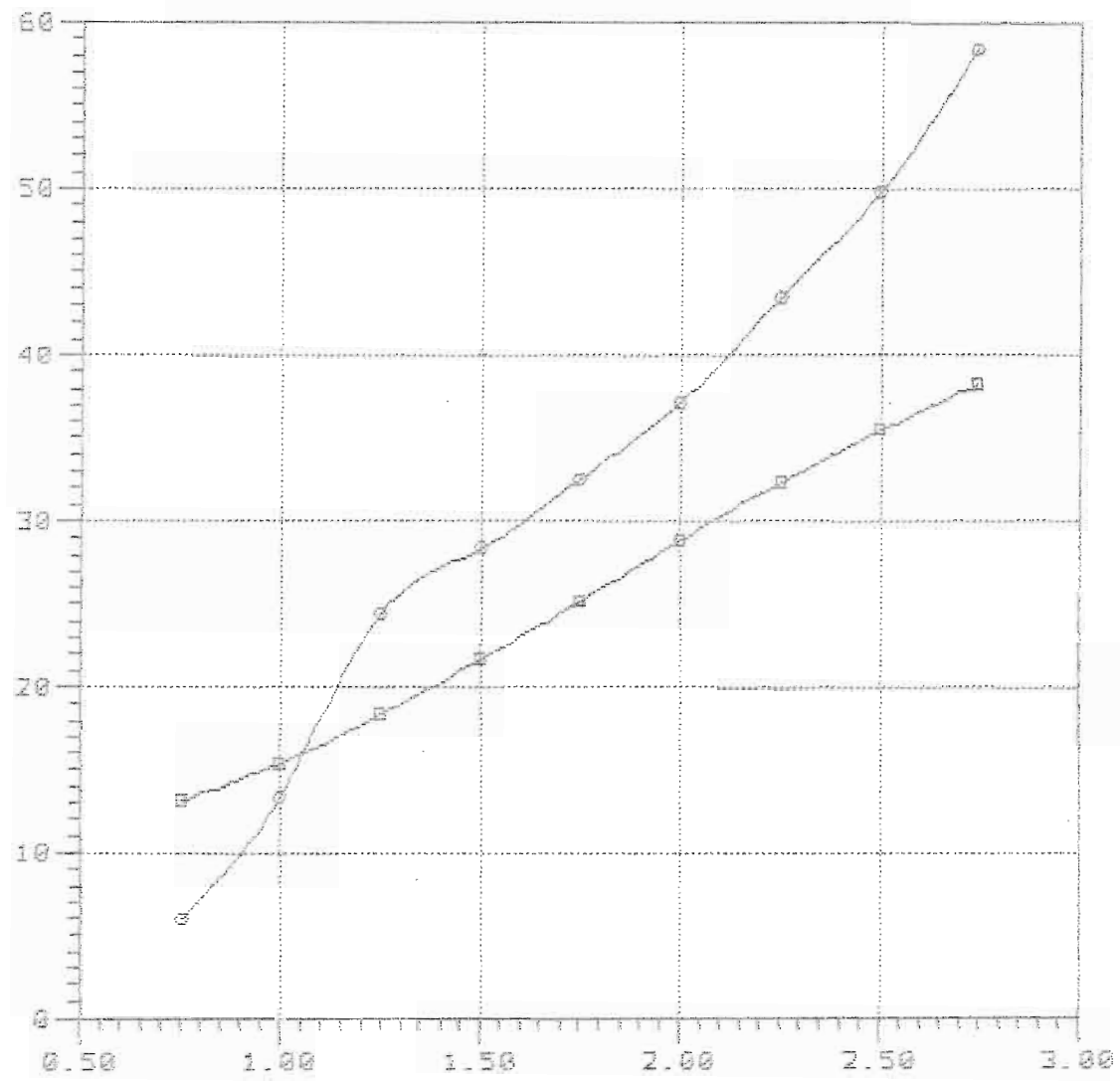
—○— Drift-442 Lpx/Bpx=5.50 Ap/Vol=4.00 Vol/Lpx=5.24 Lpx/Ap=6.722 Log/Lpx=0.446

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Bare-hull resistance  
vs.  
Volumetric Froude number

File: 4-52-466.mdi  
Date: 29 Feb 00  
Time: 11:00

Rbare: Bare-hull resistance (N)



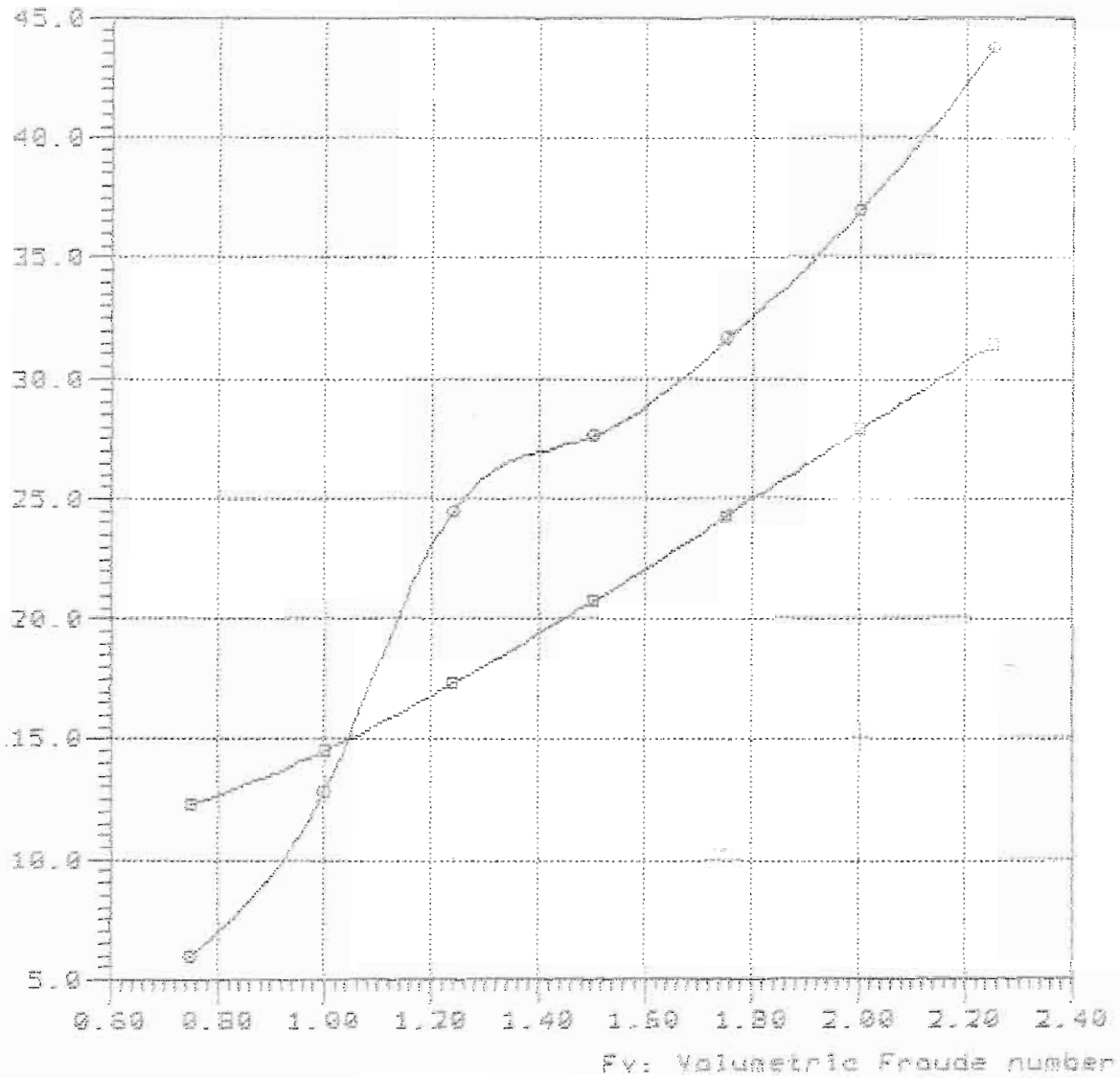
Fv: Volumetric Froude number

Curve legend

- 
- Delift-440 Lpx/Bpx=5.50 Ap/Vol=4.00 Vol/Lpx=5.24 Lpx/Ap=6.722 Lcg/Lpx=0.466



Rbare: Bare-hull resistance (N)



—■—

—●— Delft-441 Lpx/Bpx=5.50 Ap/Vol=4.00 Vol/Lpx=5.24 Lpx/Ap=6.722 Lcg/Lpx=0.486

Model = 400  
Ref = DELFT  
Friction = ITTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.73 dm  
Ap = 33.47 sqdm

Disp = 147.30 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 7.30 degree  
Vce = -25.40 mm

Lpx/Bpx = 5.501  
Lpx/Ap = 6.722  
Ap /Vol = 5.498  
Lpx/Vol = 6.148  
Cvload = 0.722  
Lbload = 0.046

~~XXXXXXXXXX~~  
Disp-Lpx = 124.02

NavCad(tm) 3.1d

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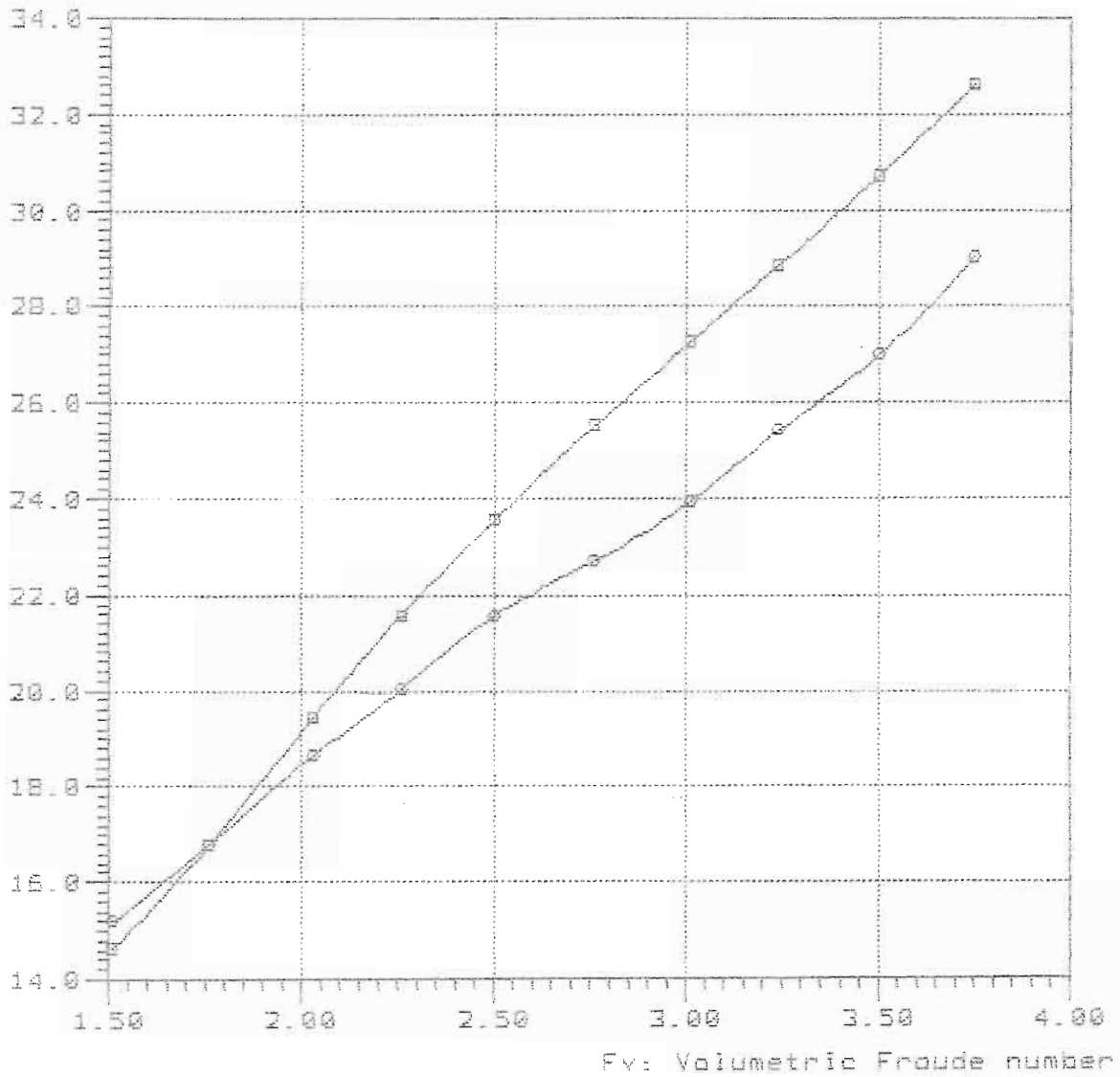
HydroComp, Inc.

File: 6-81-40b.mdl

Date: 29 Feb 00

Time: 11:22

Rbare: Bare-hull resistance (N)



—□—

—○— Delft-433 Lpx/Bpx=5.50 Ap/Vol=5.50 Vol/Lpx=6.14 Lpx/Ag=6.722 Log/Lpx=0.406

NavCad(tm) 3.1d

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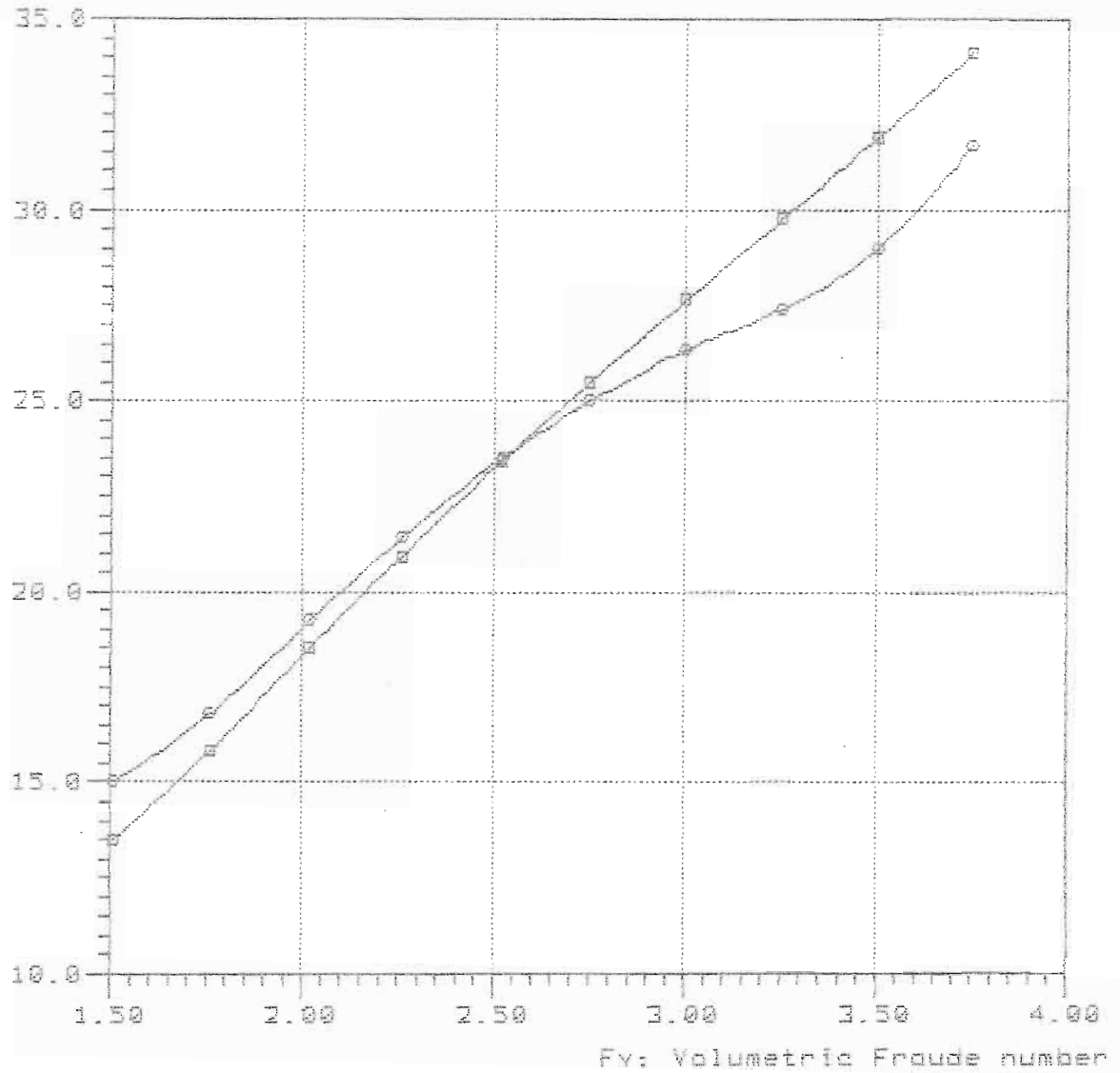
HydroComp, Inc.

File: 6-61-45b.mdl

Date: 29 Feb 00

Time: 11:23

Rbare: Bare-hull resistance (N)



—□—

—○— Delft-432 Lpx/Bpx=5.50 Ap/Val=5.50 Val/Lpx=6.14 Lpx/Ap=6.722 Lcg/Lpx=0.446

NavCad(tm) 3.1d

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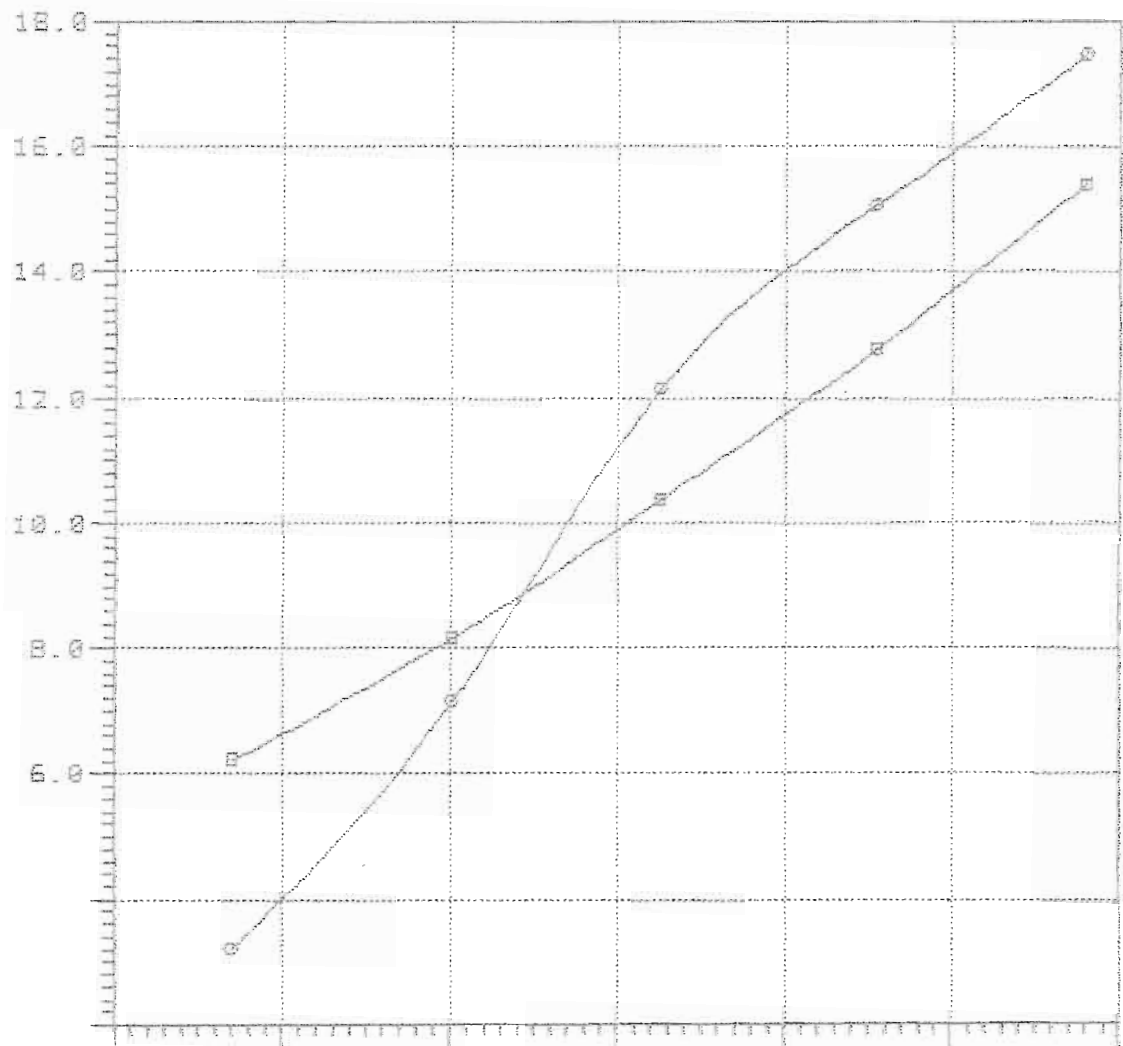
HydroComp, Inc.

File: 6-81-486.mdl

Date: 29 Feb 88

Time: 11:24

Rbare: Bare-hull resistance <NO>



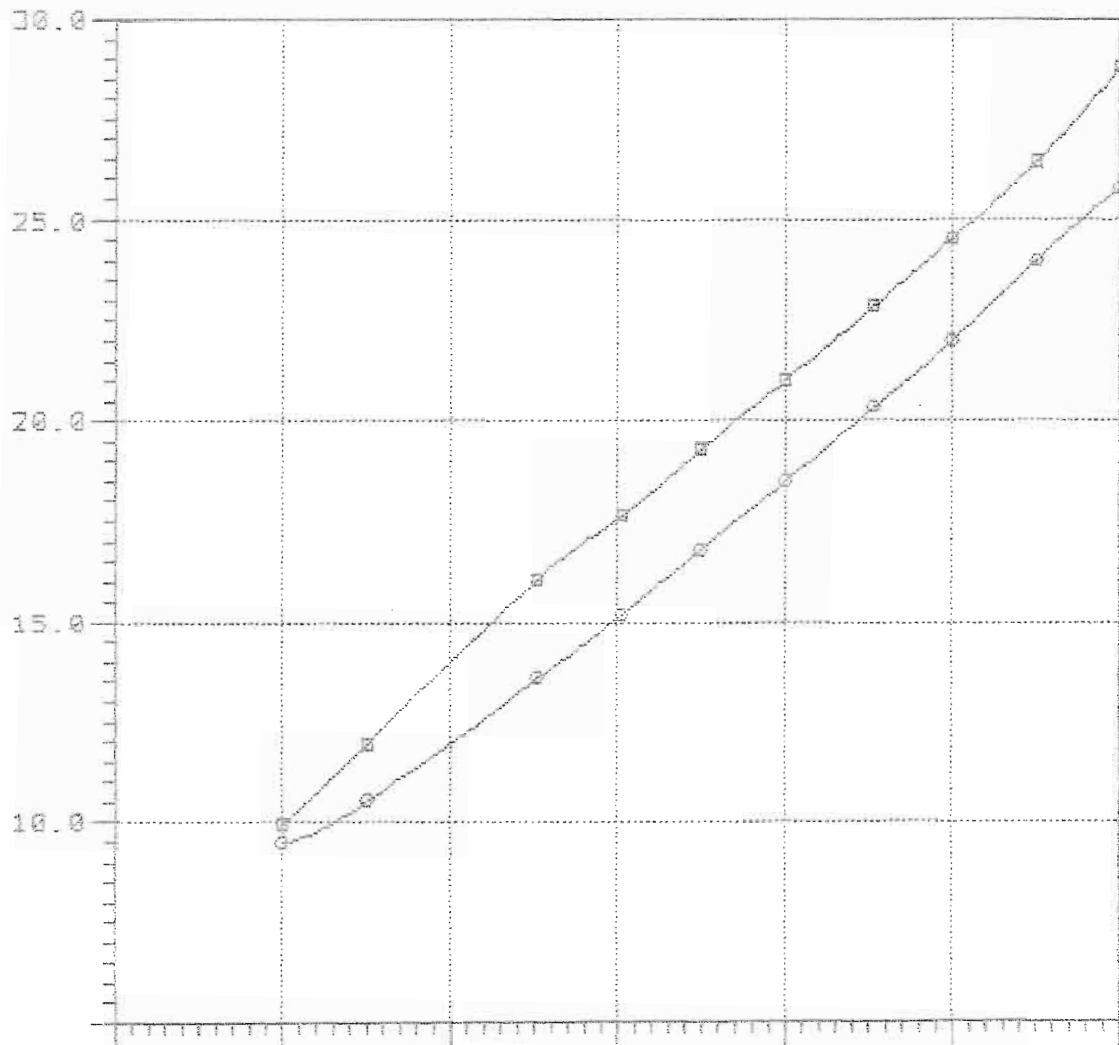
—□—  
—○—

Model = 400  
Ref = DELFT  
Friction = ITTC Ca=0.0

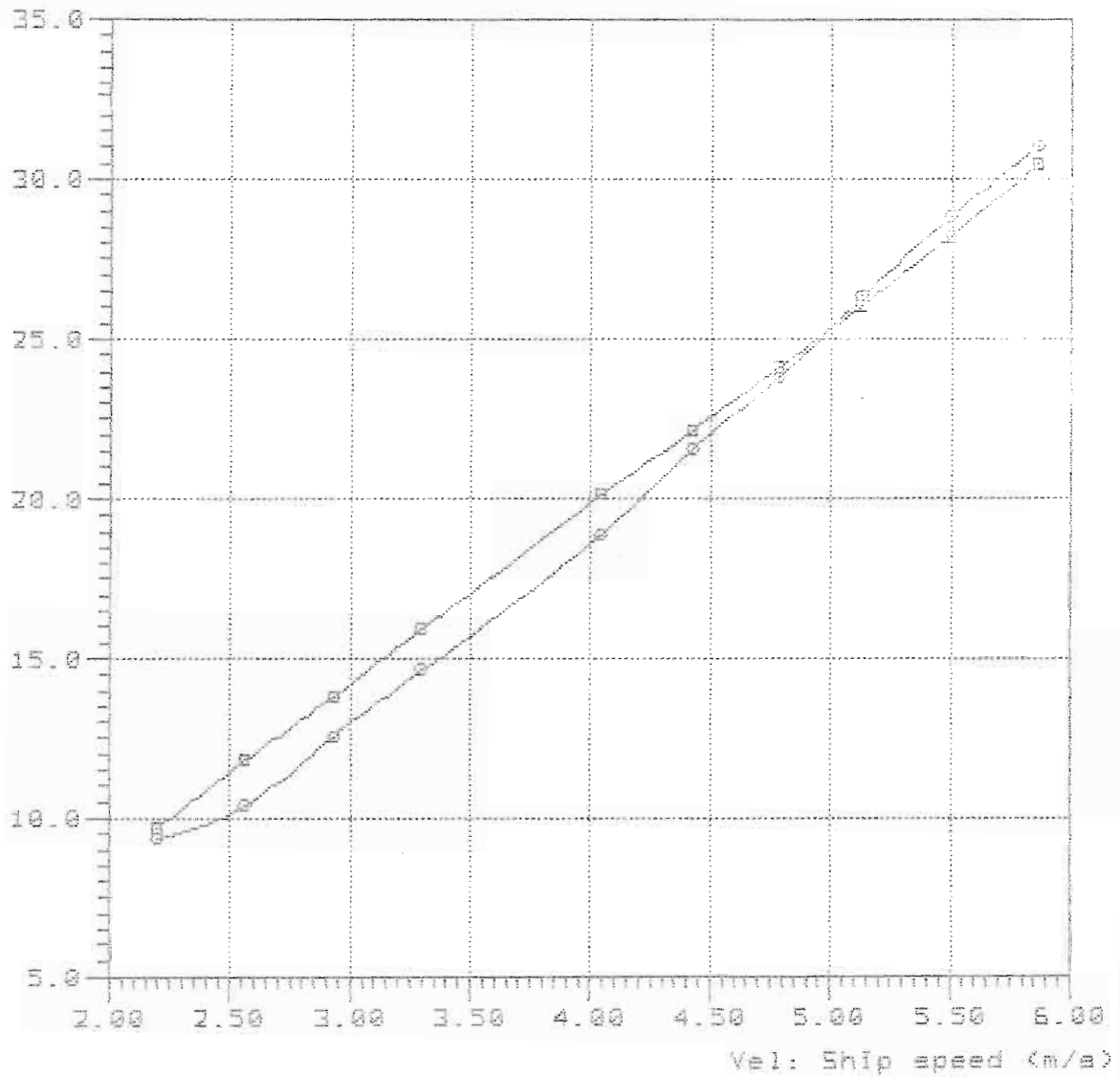
Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.73 dm  
Ap = 33.47 sqdm  
Disp = 102.60 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 7.30 degree  
Vce = -25.40 mm

Lpx/Bpx = 5.501  
Lpx/Ap = 6.722  
Ap /Vol = 6.997  
Lpx/Vol = 6.935  
Cvload = 0.503  
Lbload = 0.032  
**████████████████████**  
Disp-Lpx = 86.38

Rbare: Bare-hull resistance (N)



Rbare: Bare-hull resistance (N)

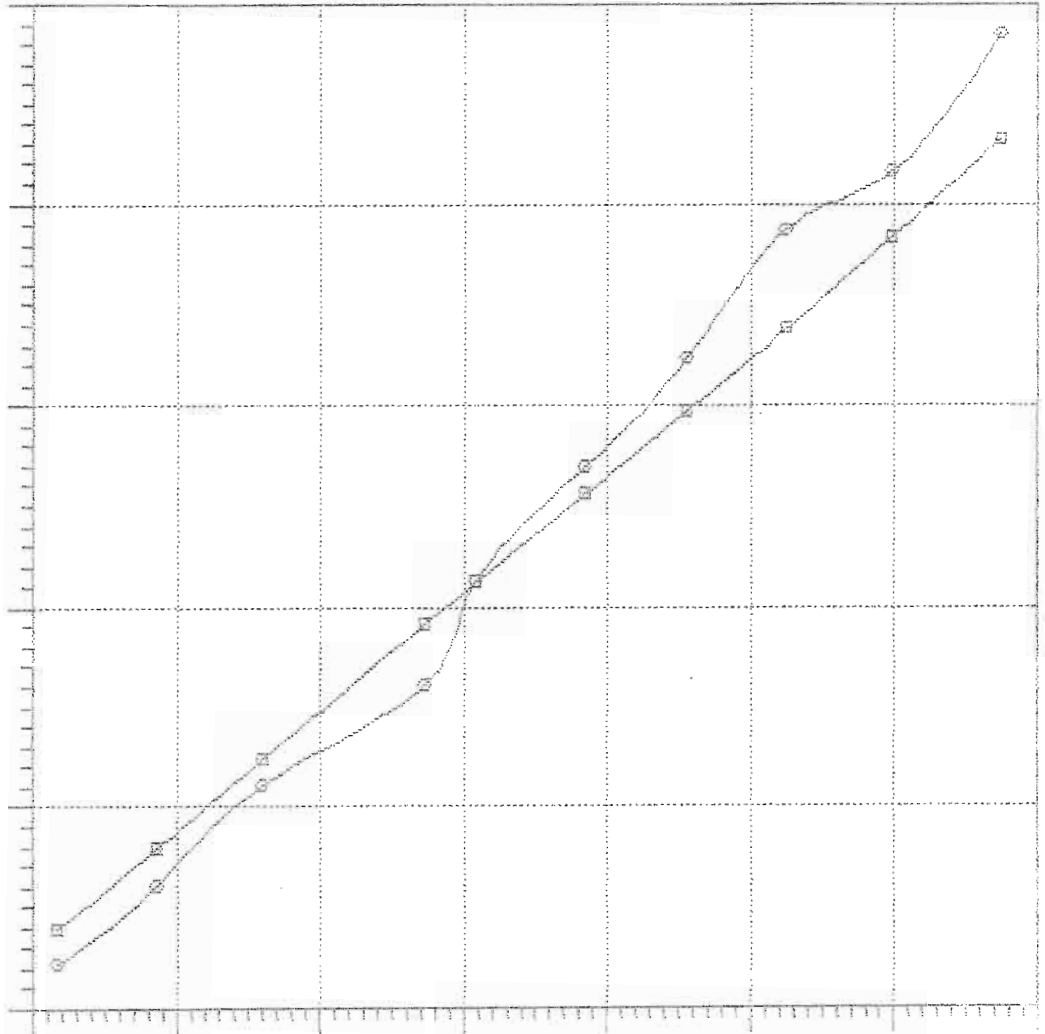


—■—

—○— Delft-422 Lpx/Bpx=5.50 Ap/Vol=7.00 Vol/Lpx=6.93 Lpx/Ap=6.722 Log/Lpx=0.446



7-69-47b



□  
○

NavCad(tm) 3.1d

### Bare-hull resistance

File: 7-89-49b.md

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vs.

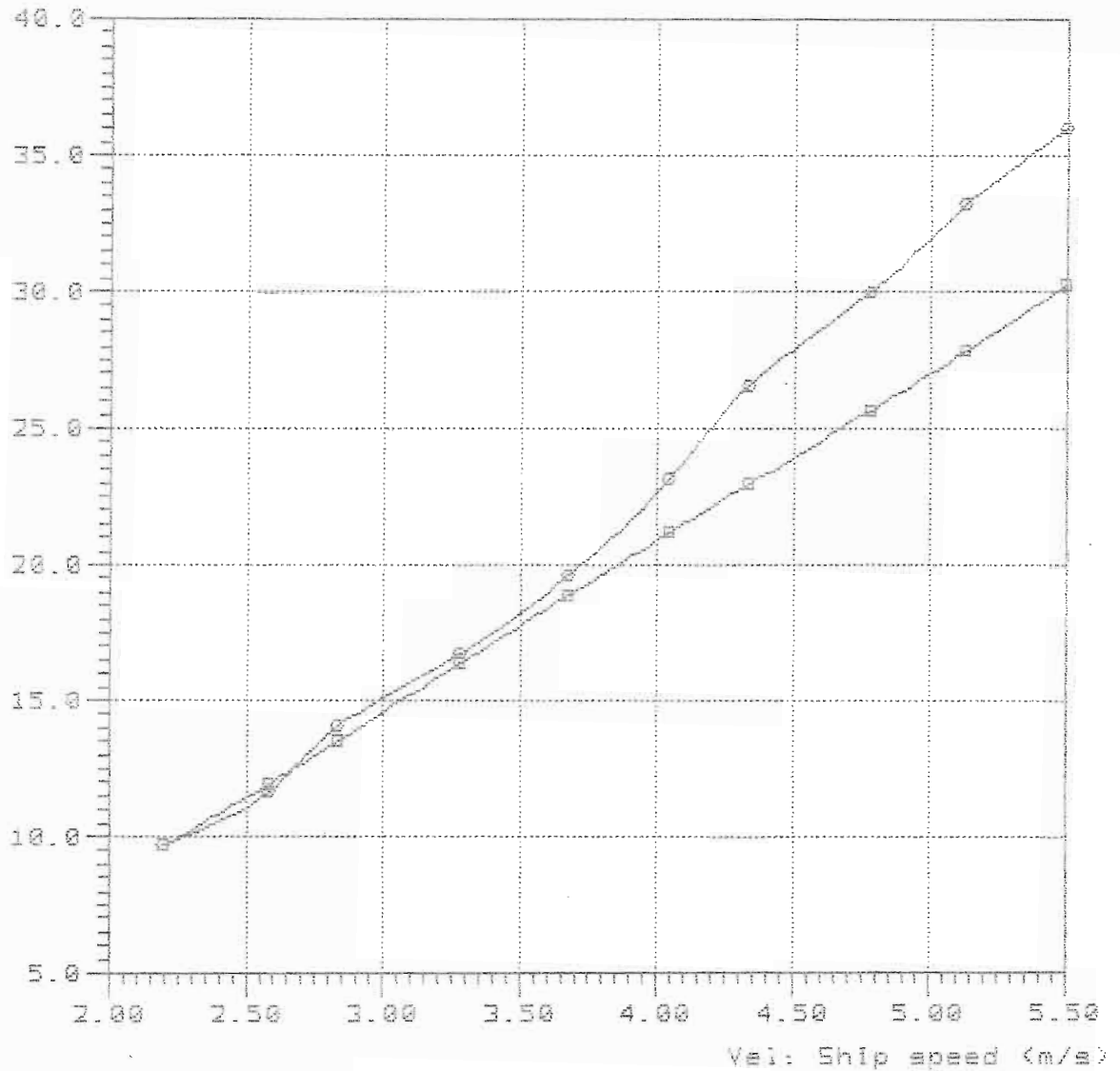
Date: 29 Feb 88

HydroComp, Inc.

### Ship speed

Time: 11:36

Rbare: Bare-hull resistance (N)



#### Curve legend

—□—

—○— Delft-421 Lpx/Bpx=5.50 Ap/Val=7.00 Val/Lpx=6.93 Lpx/Ap=6.722 Log/Lpx=0.486

Model = 400  
Ref = DELFT  
Friction = ITTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.73 dm  
Ap = 33.44 sqdm  
Disp = 76.60 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 7.30 degree  
Vce = -25.40 mm

Lpx/Bpx = 5.501  
Lpx/Ap = 6.728  
Ap /Vol = 8.494  
Lpx/Vol = 7.645  
Cvload = 0.375  
Lbload = 0.024  
~~XXXXXXXXXXXXXXXXXXXX~~  
Disp-Lpx = 64.49

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

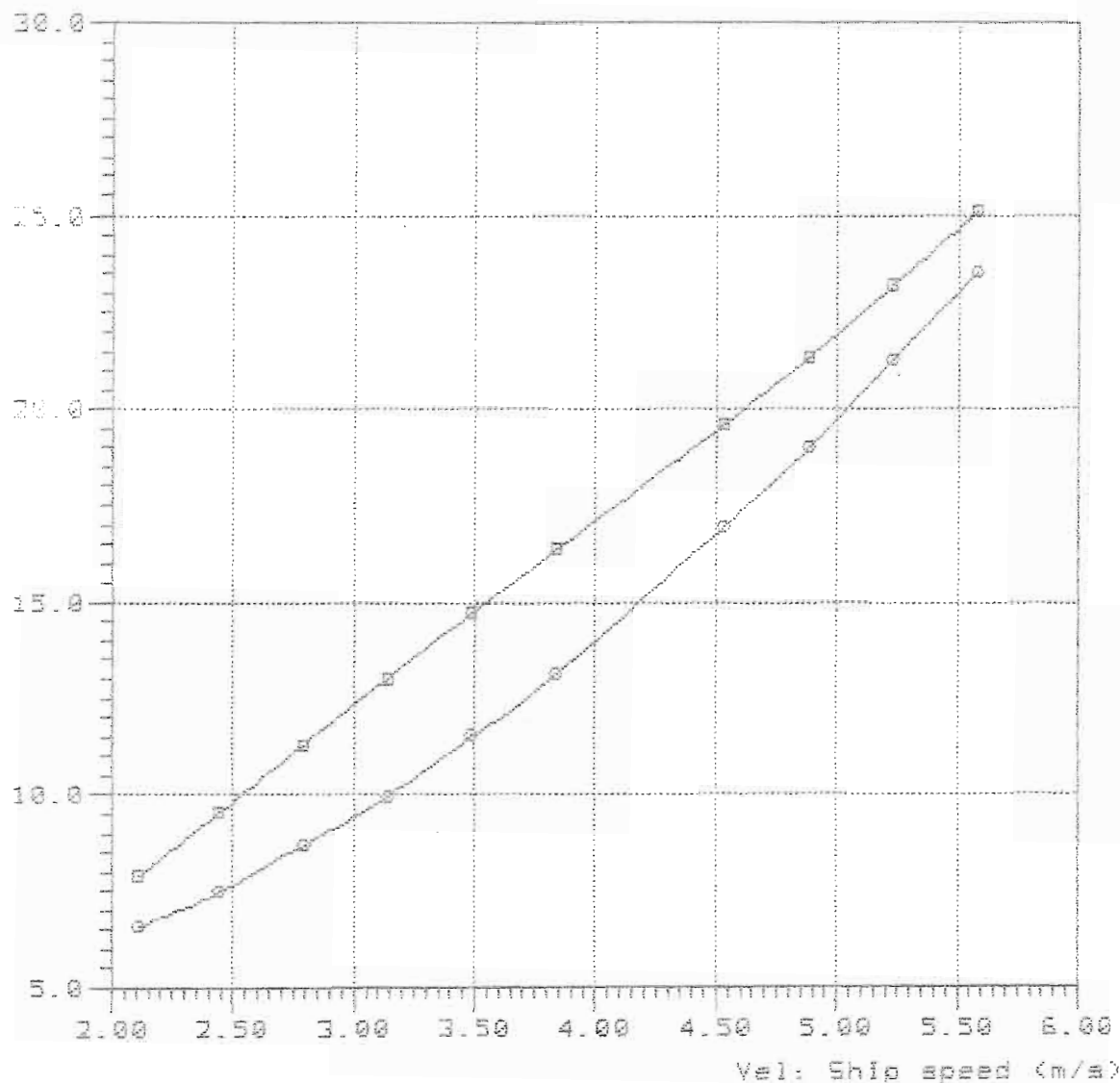
### Ship speed

File: 9-76-40b.mcl

Date: 29 Feb 88

Time: 11:37

Rbare: Bare-hull resistance (N)

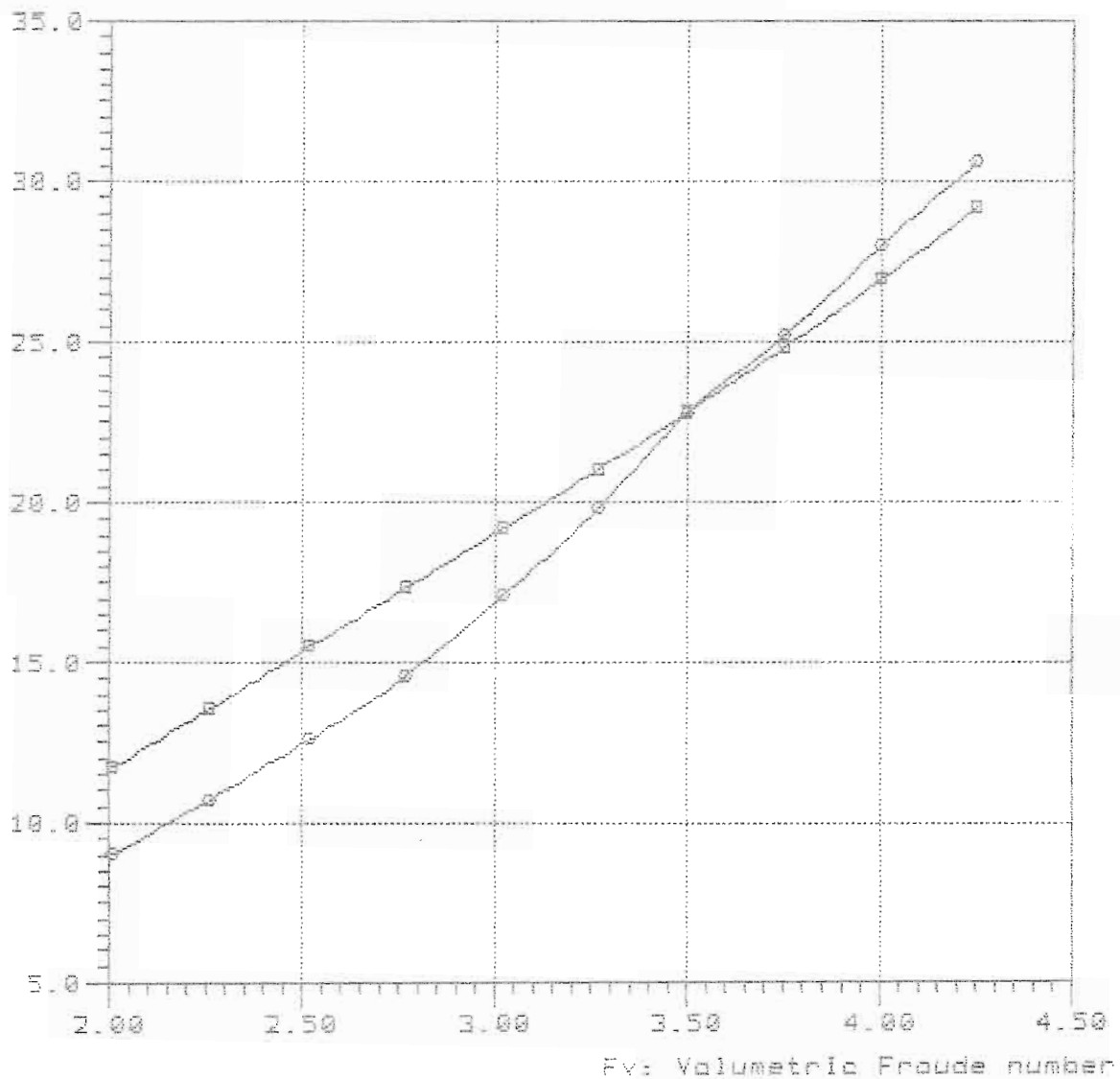


#### Curve legend

—■—

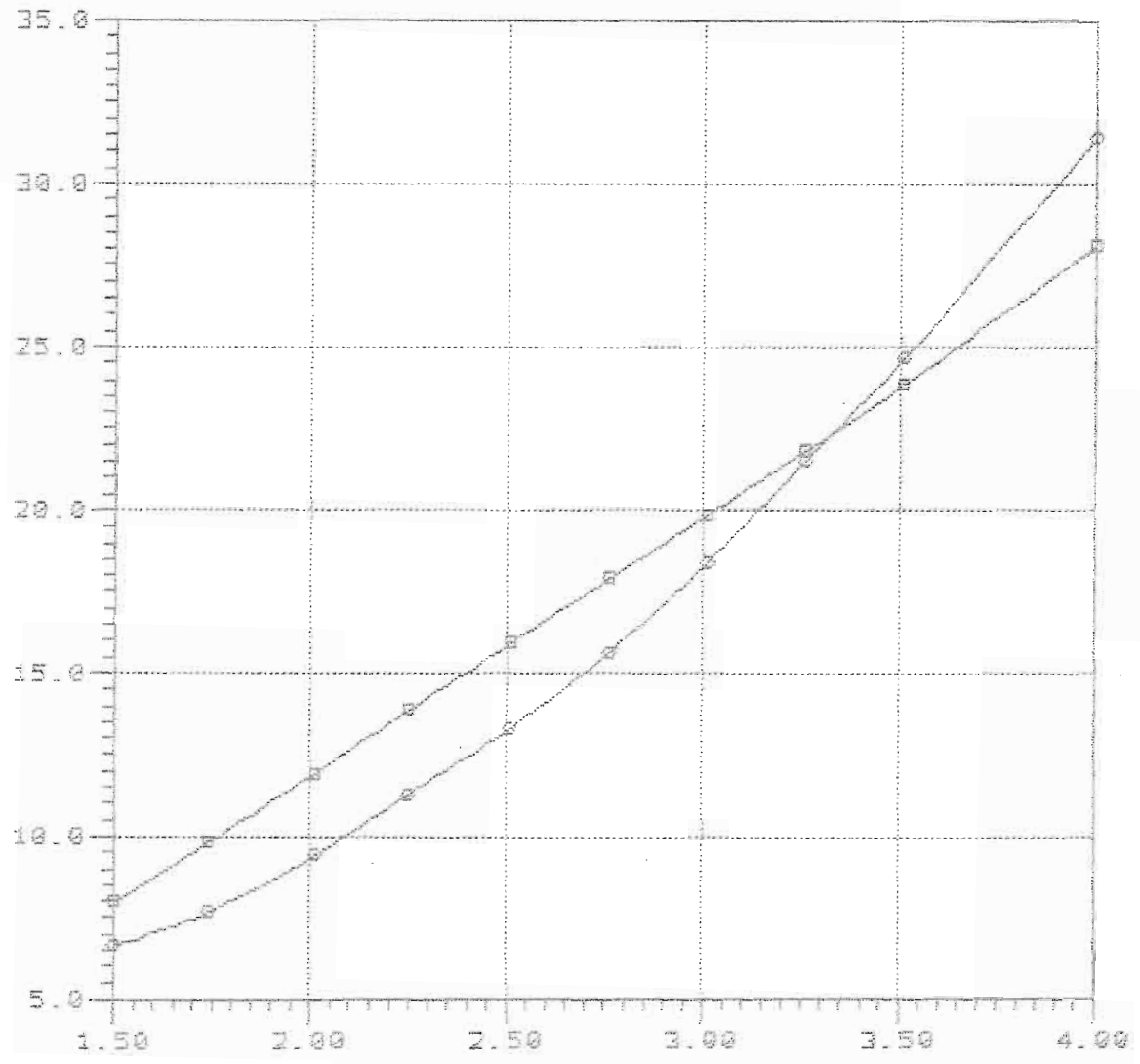
—○— Delft-413 Lpx/Bpx=5.58 Ap/Val=5.50 Val/Lpx=7.64 Lpx/Ap=6.728 Lcg/Lpx=0.486

Rbare: Bare-hull resistance (N)



Delft-412 Lpx/Bpx=5.50 Ap/Vol=8.50 Vol/Lpx=7.64 Lpx/Ap=6.728 Log/Lpx=0.446

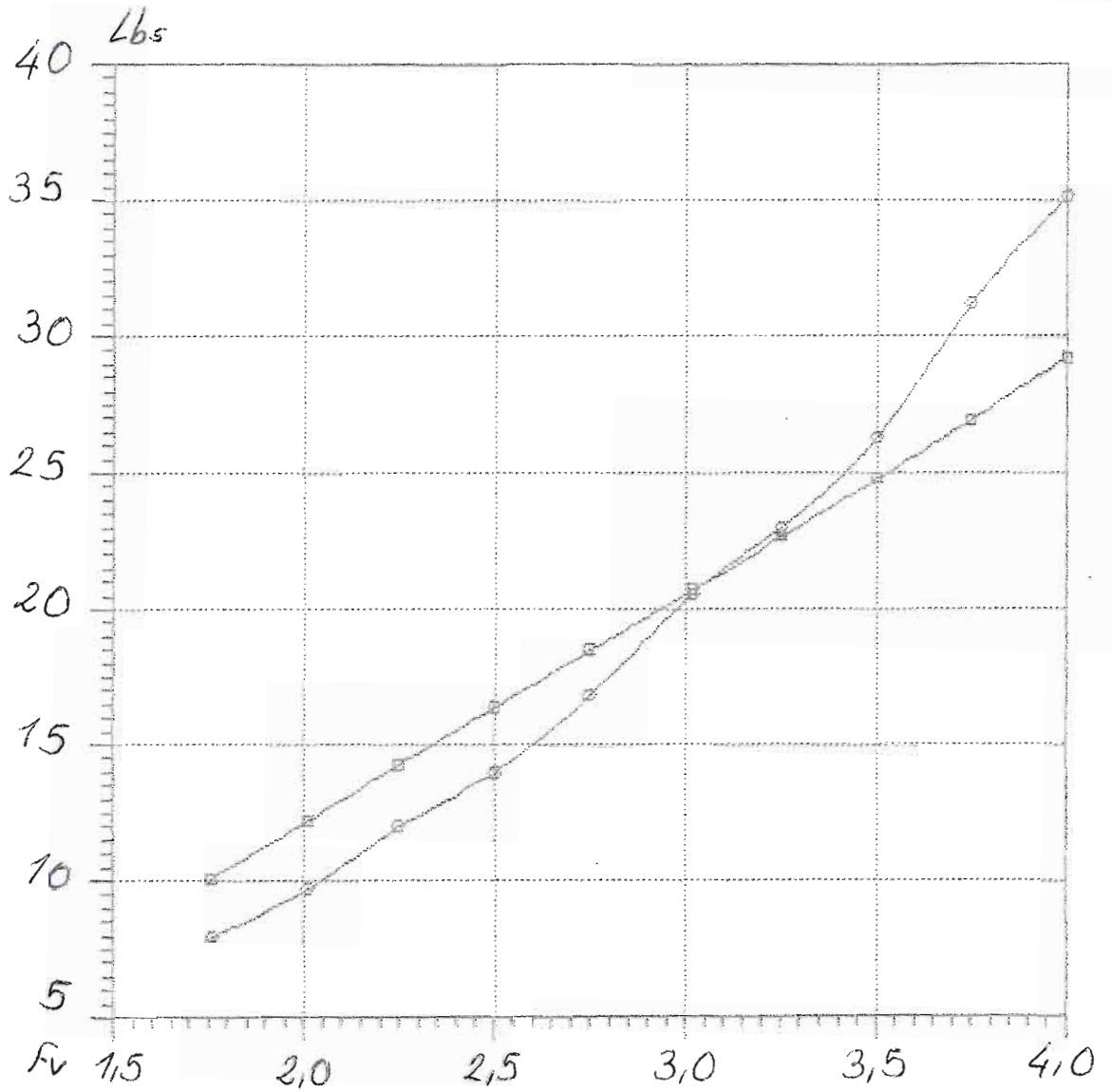
Rbare: Bare-hull resistance (N)



Fv: Volumetric Froude number

—□—  
—○— Delft-410 Lpx/Bpx=5.50 Ap/Vol=8.50 Vol/Lpx=7.64 Lpx/Ap=6.728 Lcg/Lpx=0.466

9-76-49 b



500

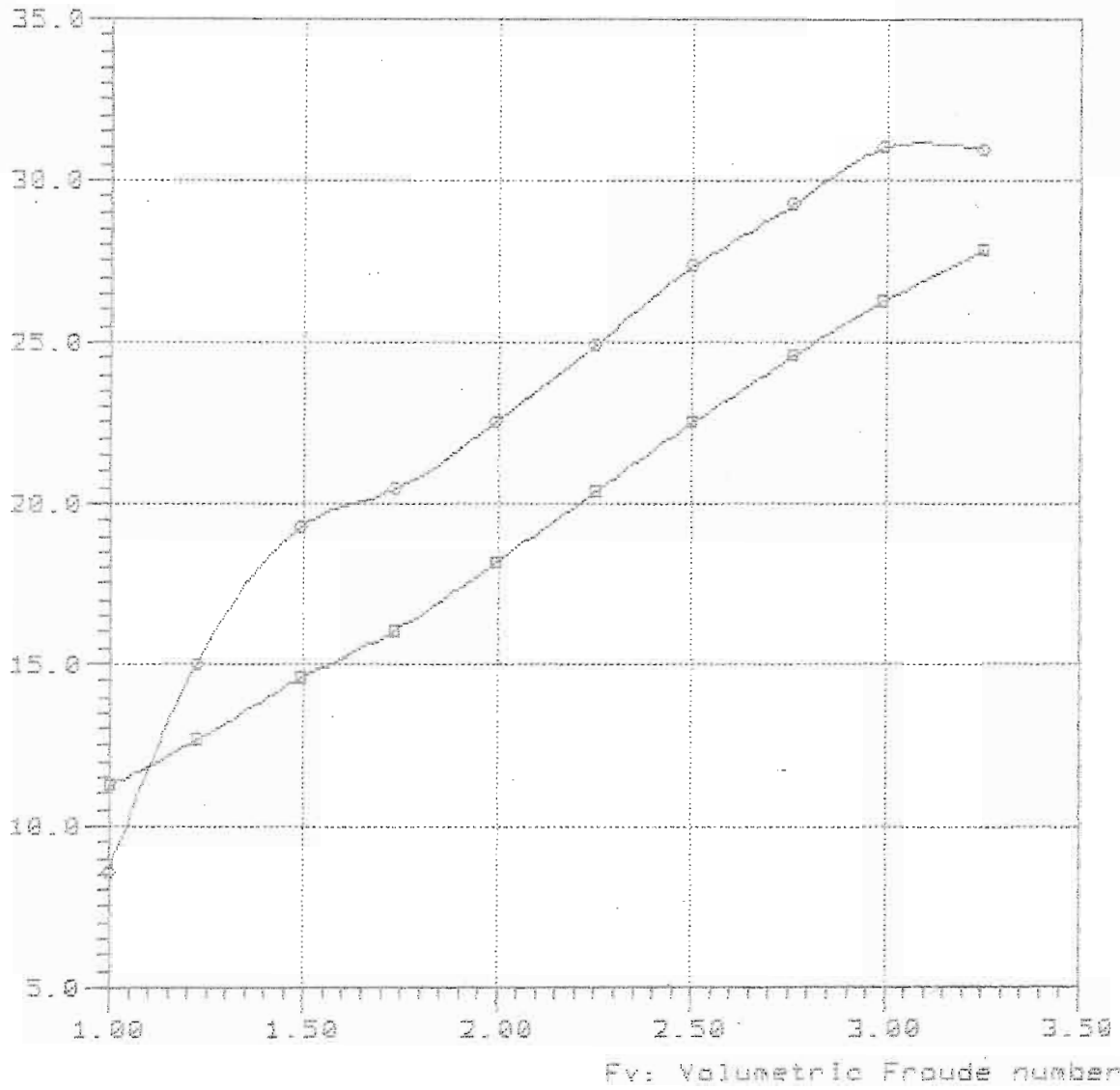


Model = 500  
Ref = DELFT  
Friction = ITTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.14 dm  
Ap = 26.27 sqdm  
Disp = 165.20 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 5.75 degree  
Vce = -19.80 mm

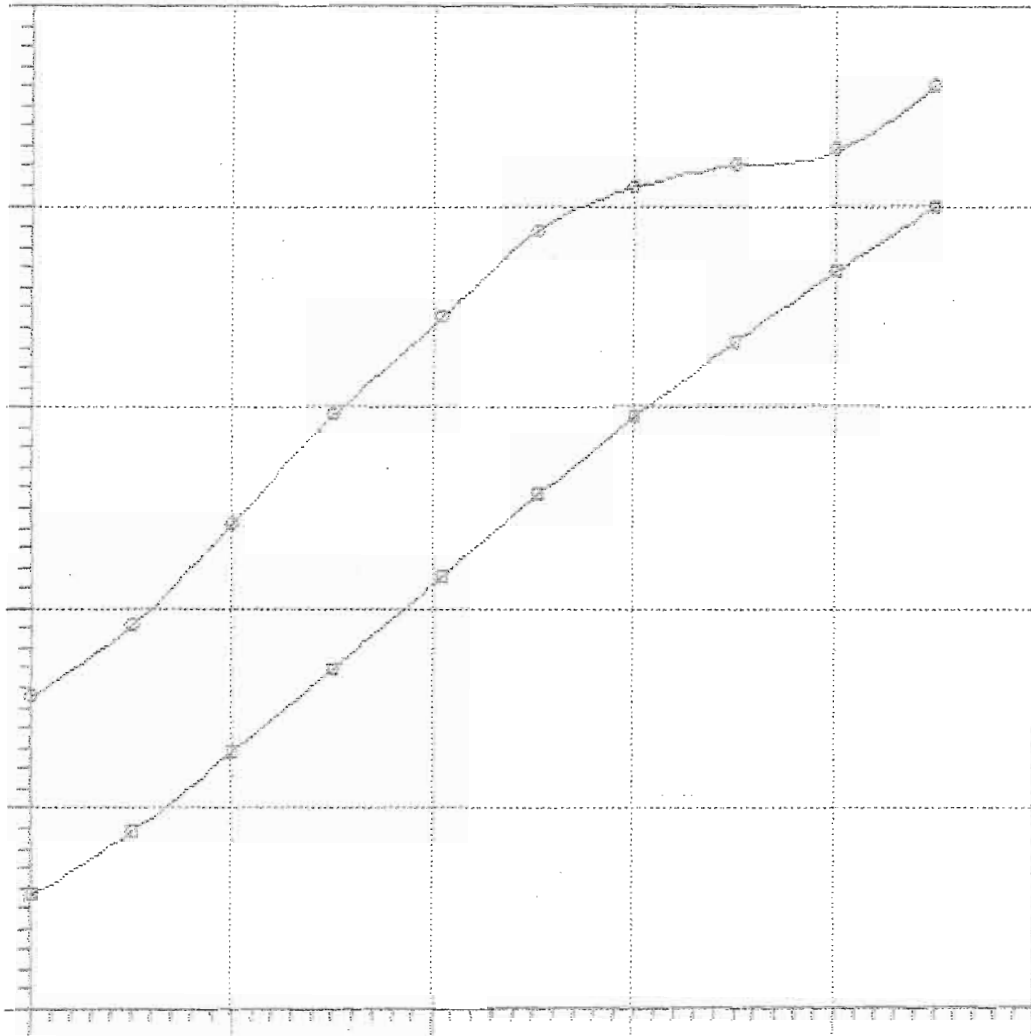
Lpx/Bpx = 7.000  
Lpx/Ap = 8.565  
Ap /Vol = 3.998  
Lpx/Vol = 5.917  
Cvload = 1.668  
Lbload = 0.075  
Disp-Lpx = 139.09

Rbare: Bare-hull resistance (N)



—■—  
—●— Delft-543 Lpx/Bpx=7.00 Ap/Vol=4.0 Vol/Lpx=3.91 Lpx/Ap=8.568 Log/Lpx=0.406

4-59-446



—□—  
—□—

NavCad(1m) 3.1d

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### Bare-hull resistance

vs.

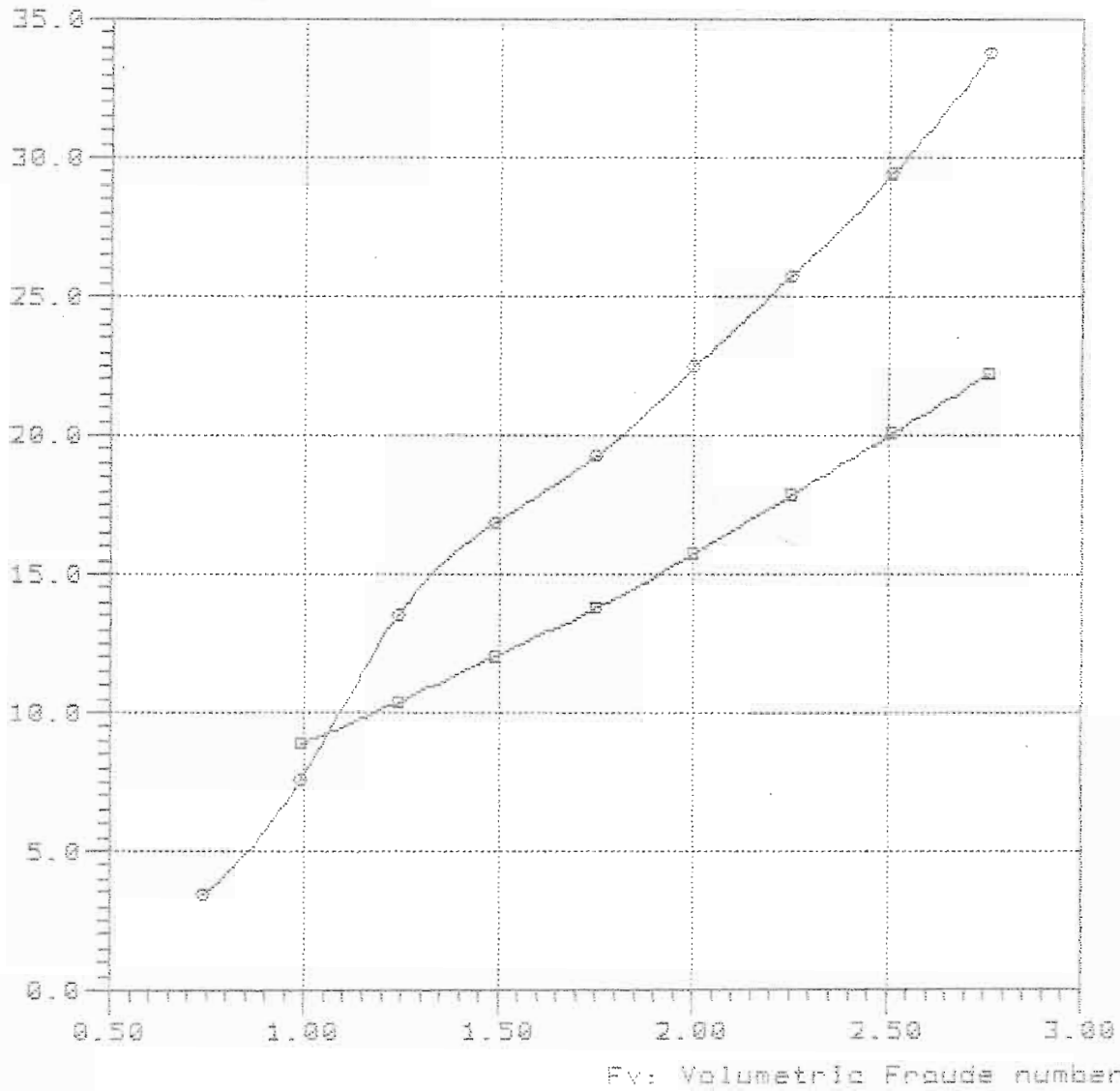
### Volumetric Froude number

File: 4-59-466.mdl

Date: 29 Feb 88

Time: 12:52

Rbare: Bare-hull resistance (N)



#### Curve legend

—○—

—□— Delft-540 Lpx/Bpx=7.00 Ap/Vol=4.0 Vol/Lpx=5.91 Lpx/Ap=8.568 Log/Lpx=0.466

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

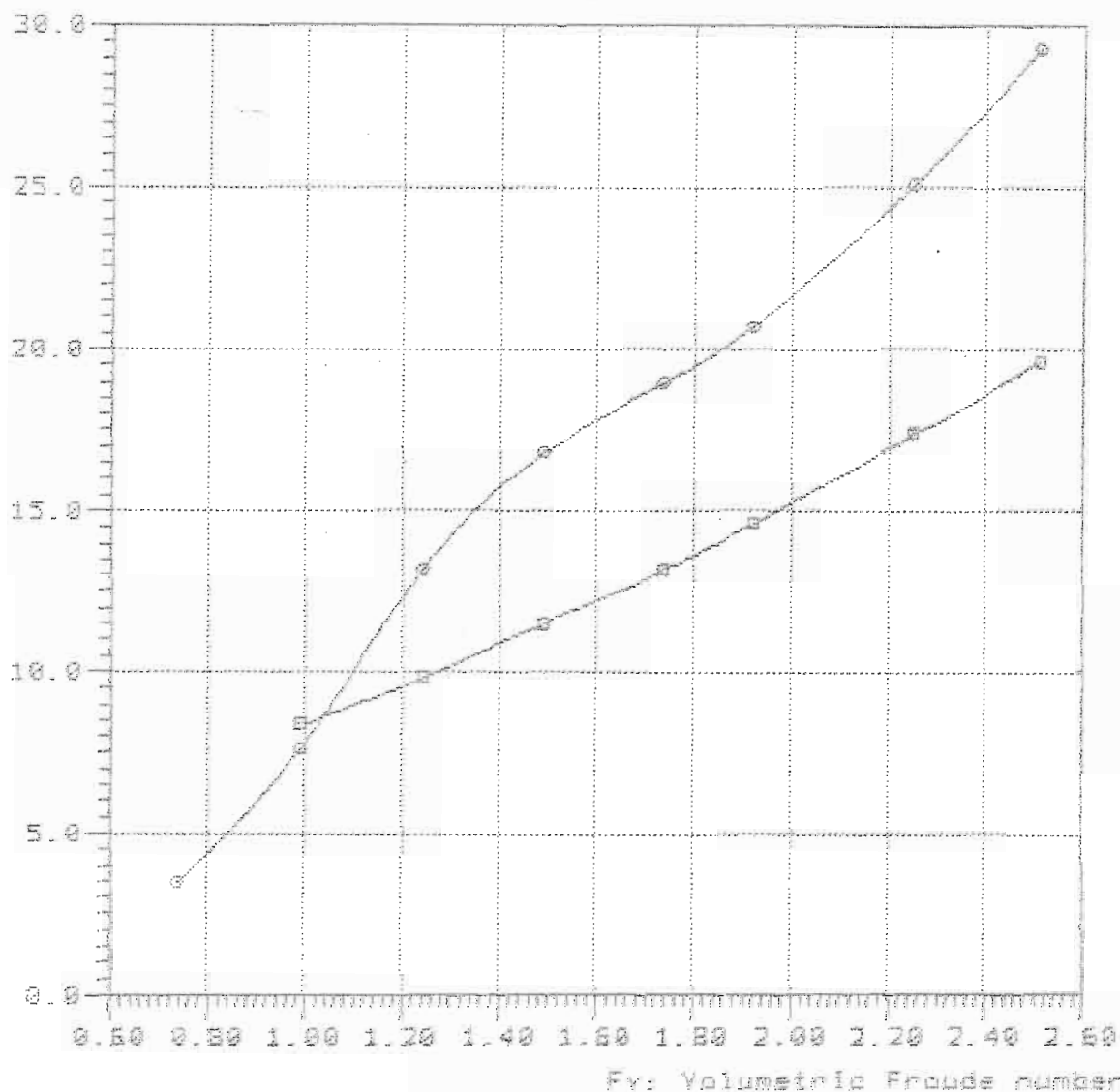
### Volumetric Froude number

File: 4-59-486.mdl

Date: 29 Feb 88

Time: 12:54

Rbare: Bare-hull resistance (N)



#### Curve legend

—□—

—○— Delft-541 Lpx/Bpx=7.00 Rp/Vol=4.0 Vol/Lpx=3.81 Lpx/Rp=6.568 Log/Lpx=9.486

Model = 500  
Ref = DELFT  
Friction = ITTC Ca=0.0

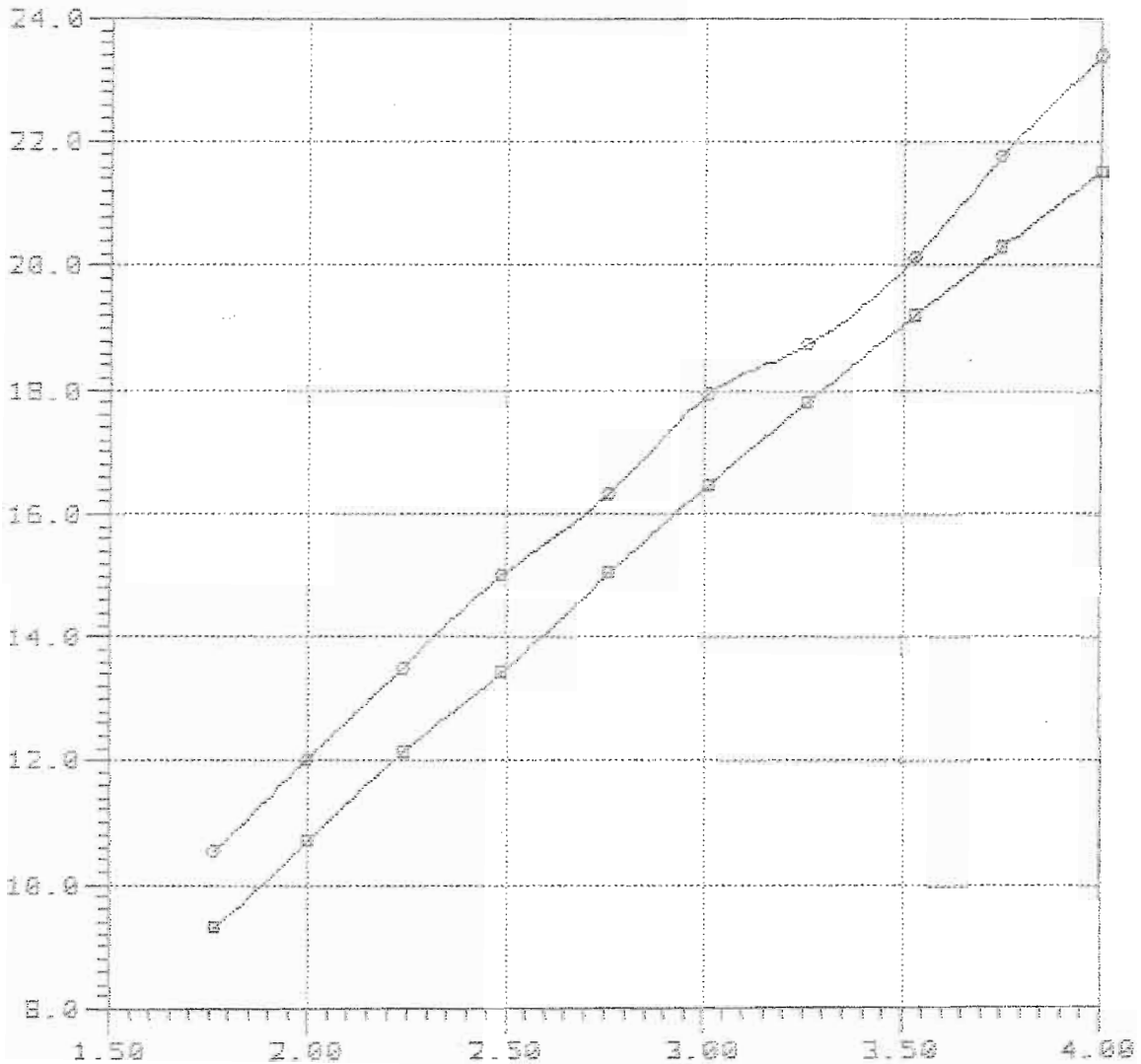
Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.14 dm  
Ap = 26.27 sqdm

Disp = 102.40 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 5.75 degree  
Vce = -19.80 mm

Lpx/Bpx = 7.000  
Lpx/Ap = 8.565  
Ap /Vol = 5.499  
Lpx/Vol = 6.940  
Cvload = 1.034  
Lbload = 0.046

~~XXXXXXXXXX~~  
Disp-Lpx = 86.21

Rbare: Bare-hull resistance (kN)

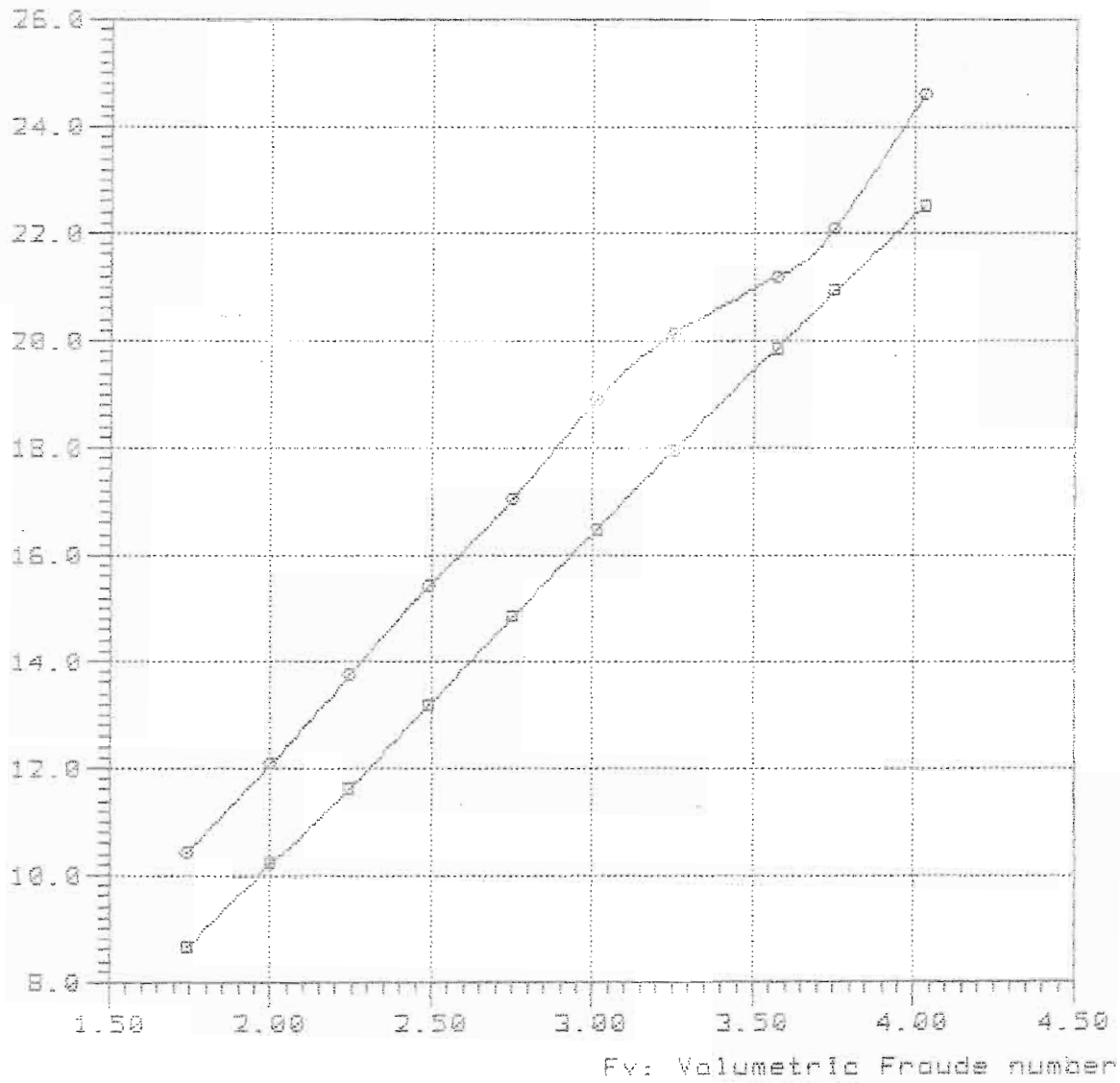


Fv: Volumetric Froude number

—■—

—●— Delft-533 Lpx/Bpx=7.00 Ap/Vol=5.56 Vol/Lpx=6.94 Lpx/Ap=8.568 Log/Lpx=8.486

Rbare: Bare-hull resistance (N)

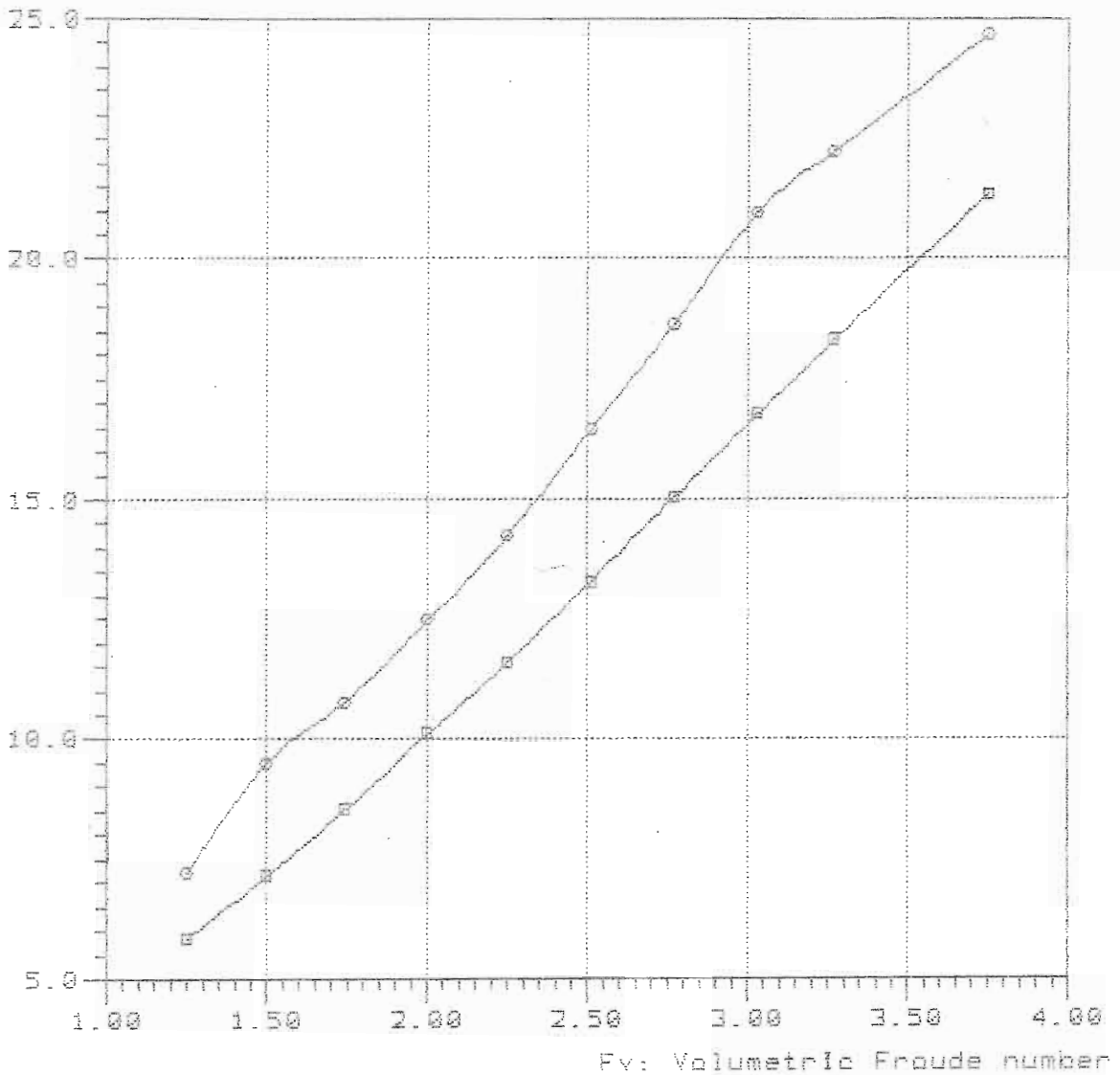


—□—

—○— Deift-532 Lpx/Bpx=7.00 Ap/Vol=5.50 Vol/Lpx=6.94 Lpx/Ap=8.568 Log/Lpx=0.446



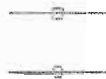
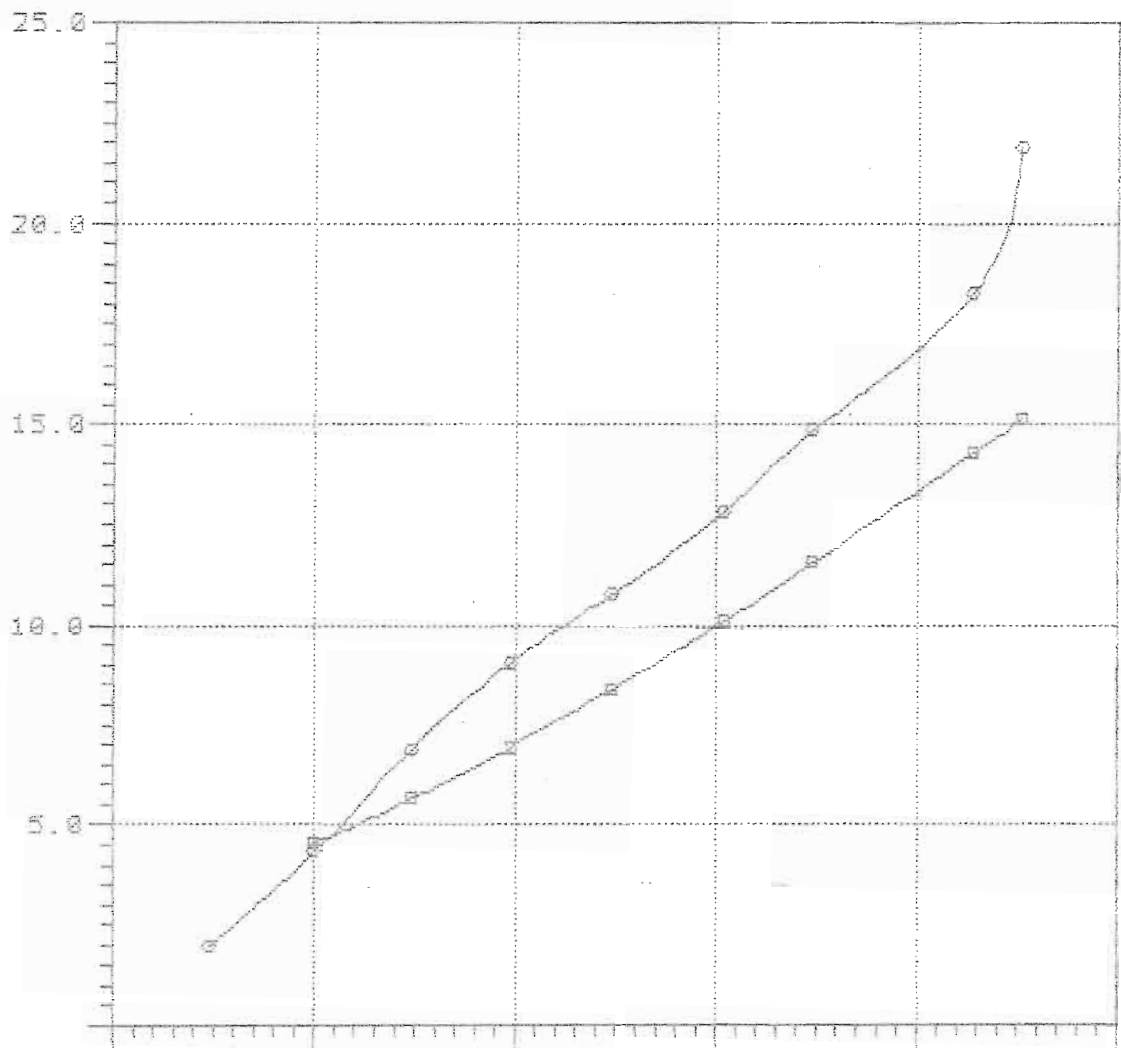
Rbare: Bare-hull resistance (N)



—■—

—●— Deift-530 Lpx/Bpx=7.00 Ap/Vol=5.50 Vol/Lpx=6.94 Lpx/Ap=8.568 Log/Lpx=0.466

Rbare: Bare-hull resistance (N)



Model = 500  
Ref = DELFT  
Friction = ITTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.14 dm  
Ap = 26.27 sqdm  
Disp = 71.30 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 5.75 degree  
Vce = -19.80 mm

Lpx/Bpx = 7.000  
Lpx/Ap = 8.565  
Ap /Vol = 7.000  
Lpx/Vol = 7.830  
Cvload = 0.720  
Lbload = 0.032

~~XXXXXXXXXXXX~~  
Disp-Lpx = 60.03

NavCad(tm) 3.1d

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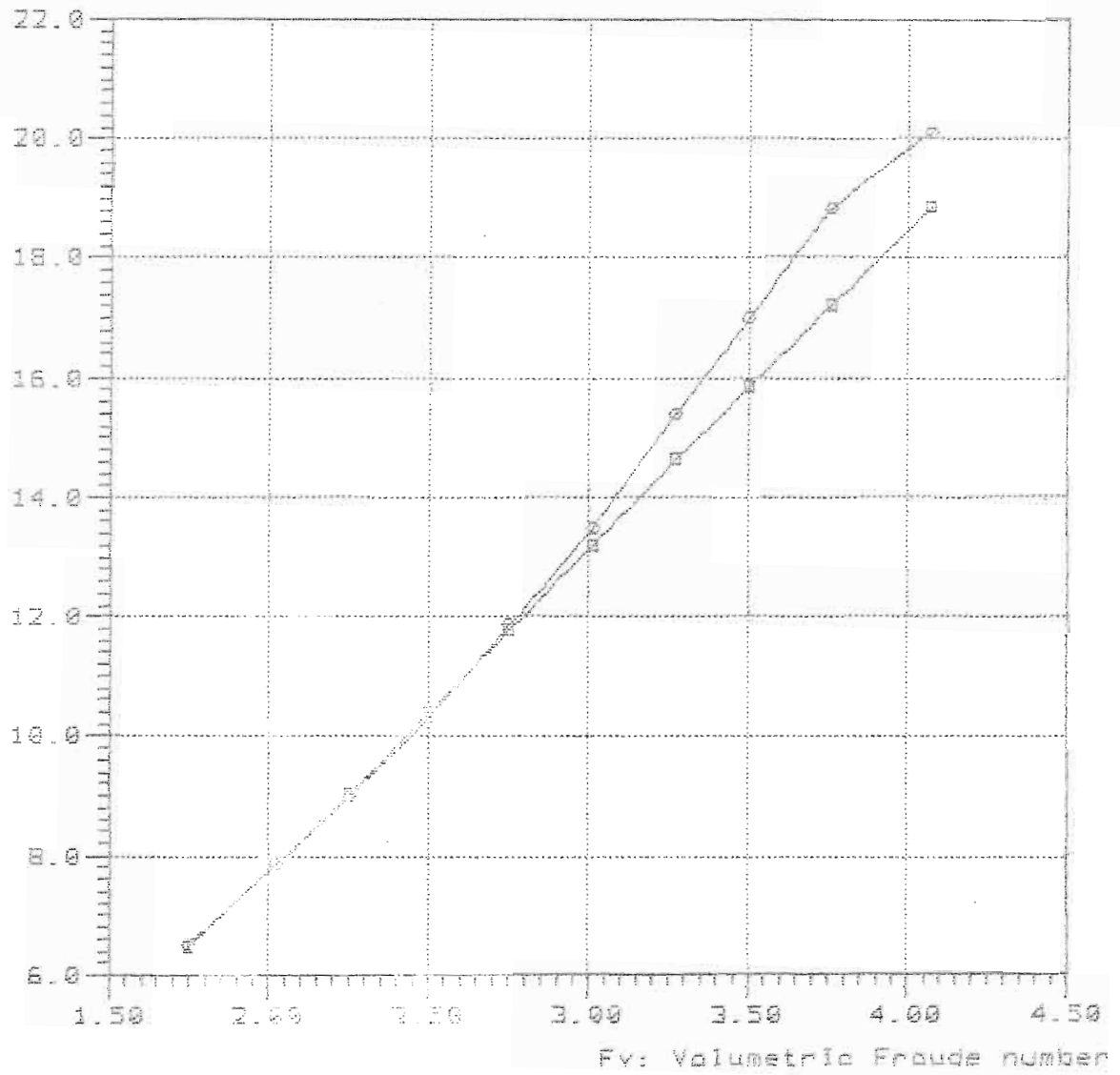
HydroComp, Inc.

File: 7-78-45b.mdl

Date: 28 Feb 88

Time: 13:37

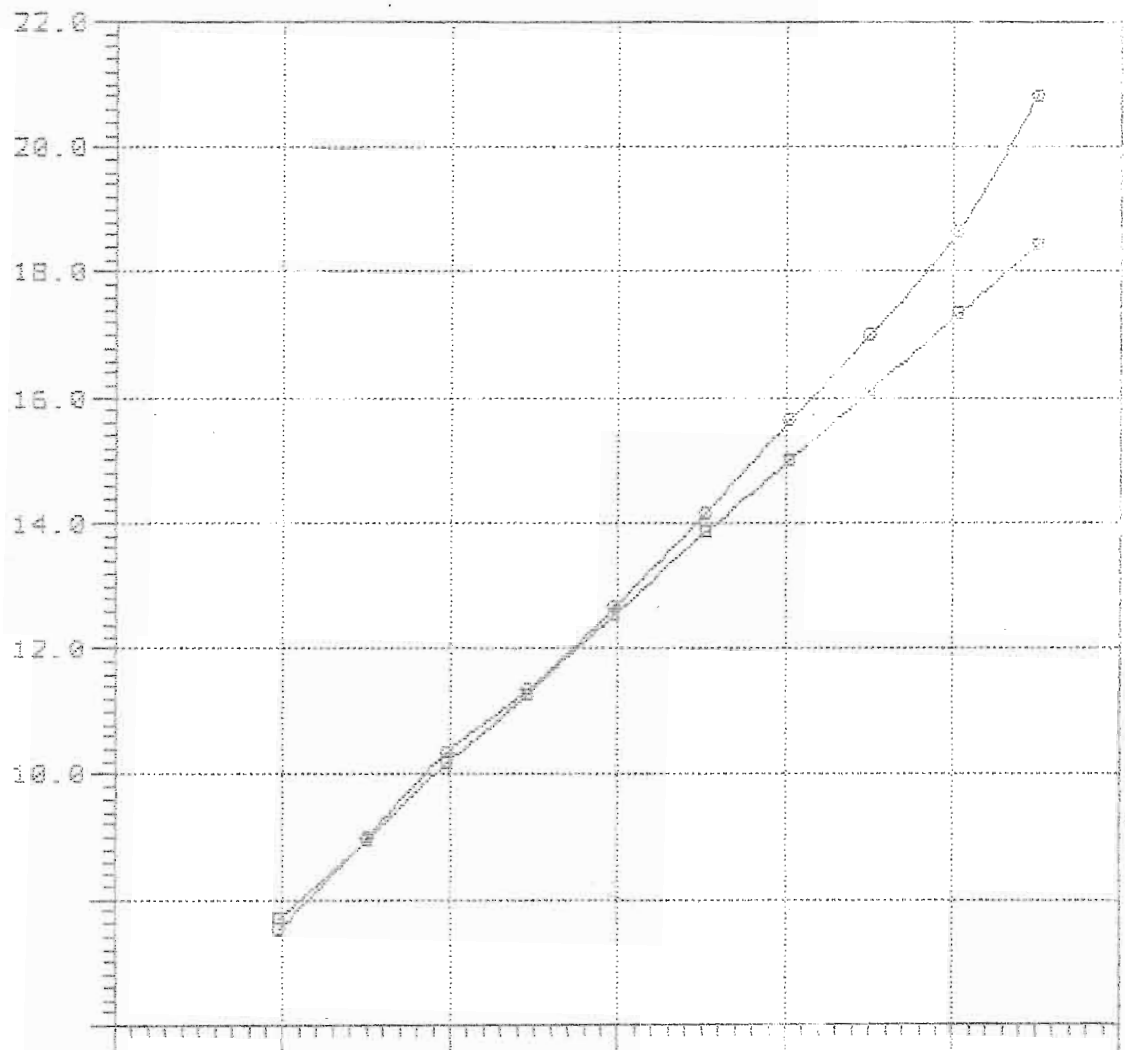
Rbare: Bare-hull resistance (N)



—□—

—○— Delft-522 Lpx/Rpx=7.88 Ap/Vol=7.88 Vol/Lpx=7.83 Lpx/Ap=8.571 Lcg/Lpx=0.446

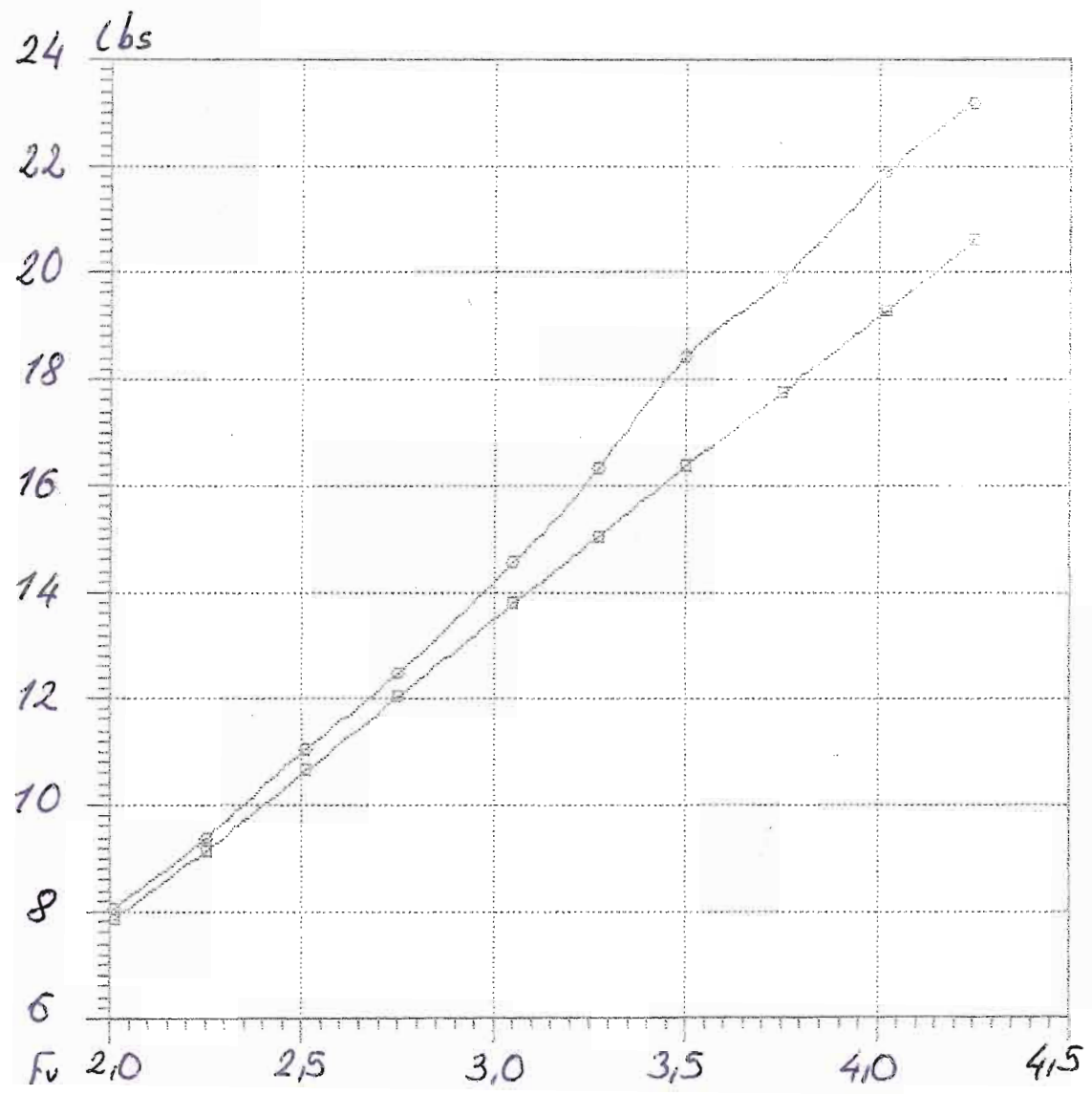
Rbare: Bare-hull resistance (N)



—○—

—□—

7-78-47b



—□—  
—○—

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

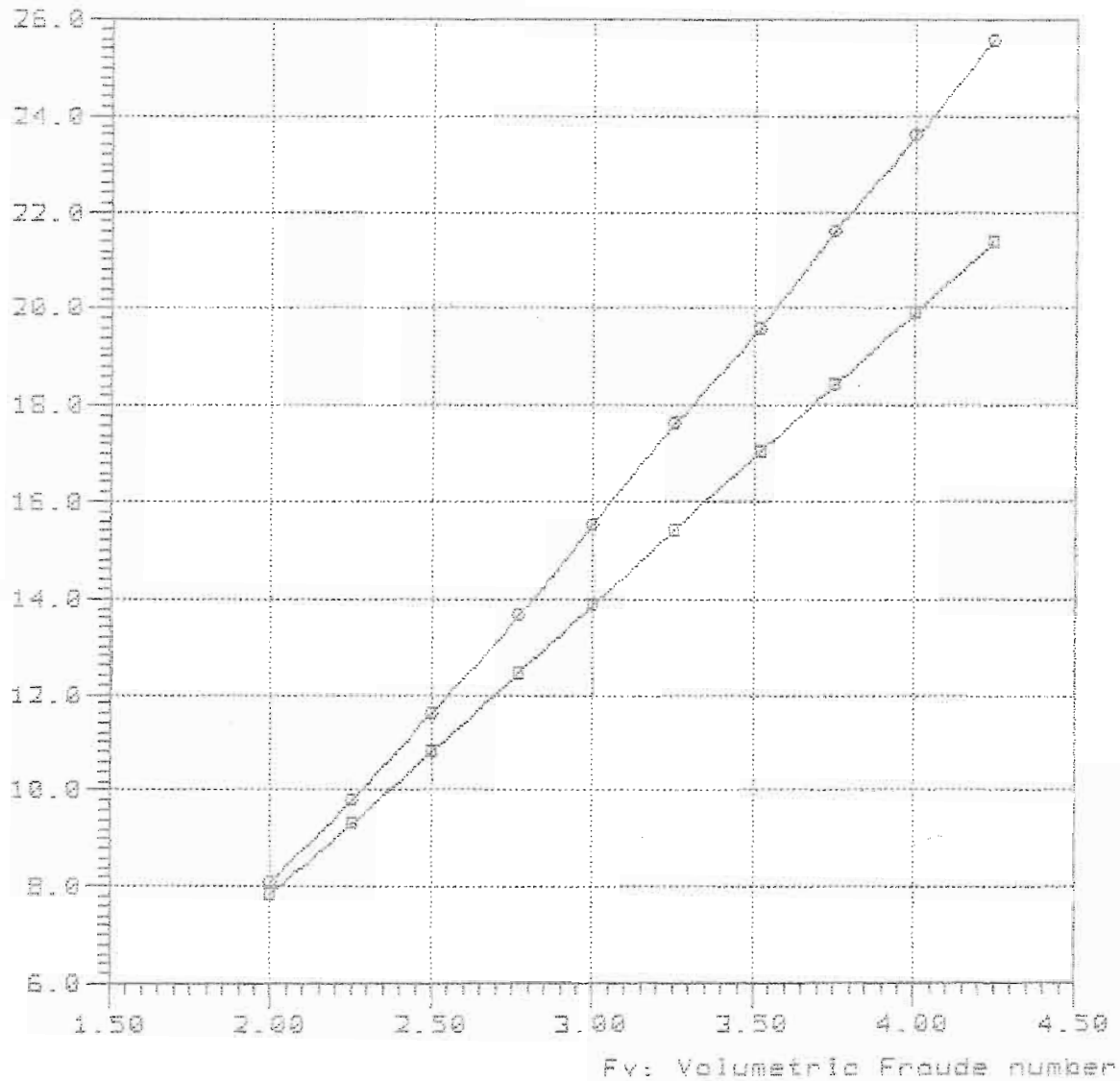
### Volumetric Froude number

File: 7-78-49b.mdl

Date: 29 Feb 88

Time: 13:54

Rbare: Bare-hull resistance (N)



#### Curve legend

—■—

—○— Delft-521 Lpx/Bpx=7.00 Rp/Vol=7.00 Vol/Lpx=7.83 Lpx/Rp=8.571 Lcg/Lpx=0.485

Model = 500  
Ref = DELFT  
Friction = ITTC Ca=0.0

Lpx = 15.00 dm  
Lwl = 14.63 dm  
Bpx = 2.14 dm  
Ap = 26.27 sqdm  
Disp = 53.40 N  
Deadrise = 30.00 degree  
Twist Angle = 0.00 degree  
Shaft Angle = 5.75 degree  
Vce = -19.80 mm

Lpx/Bpx = 7.000  
Lpx/Ap = 8.565  
Ap /Vol = 8.487  
Lpx/Vol = 8.622  
Cvload = 0.539  
Lbload = 0.024

~~XXXXXXXXXX~~  
Disp-Lpx = 44.96



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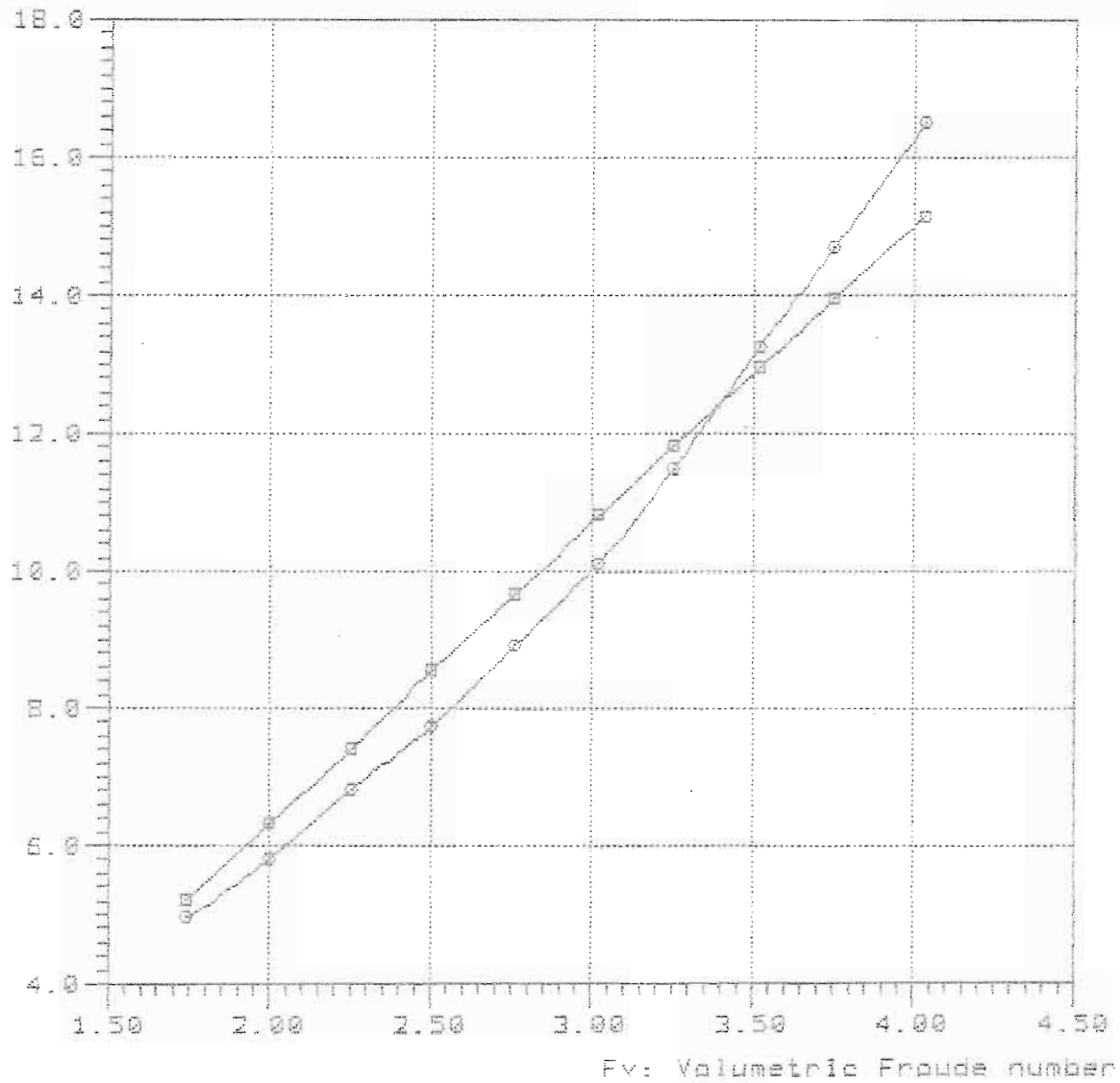
HydroComp, Inc.

File: 9-86-48b.mdl

Date: 29 Feb 00

Time: 14:07

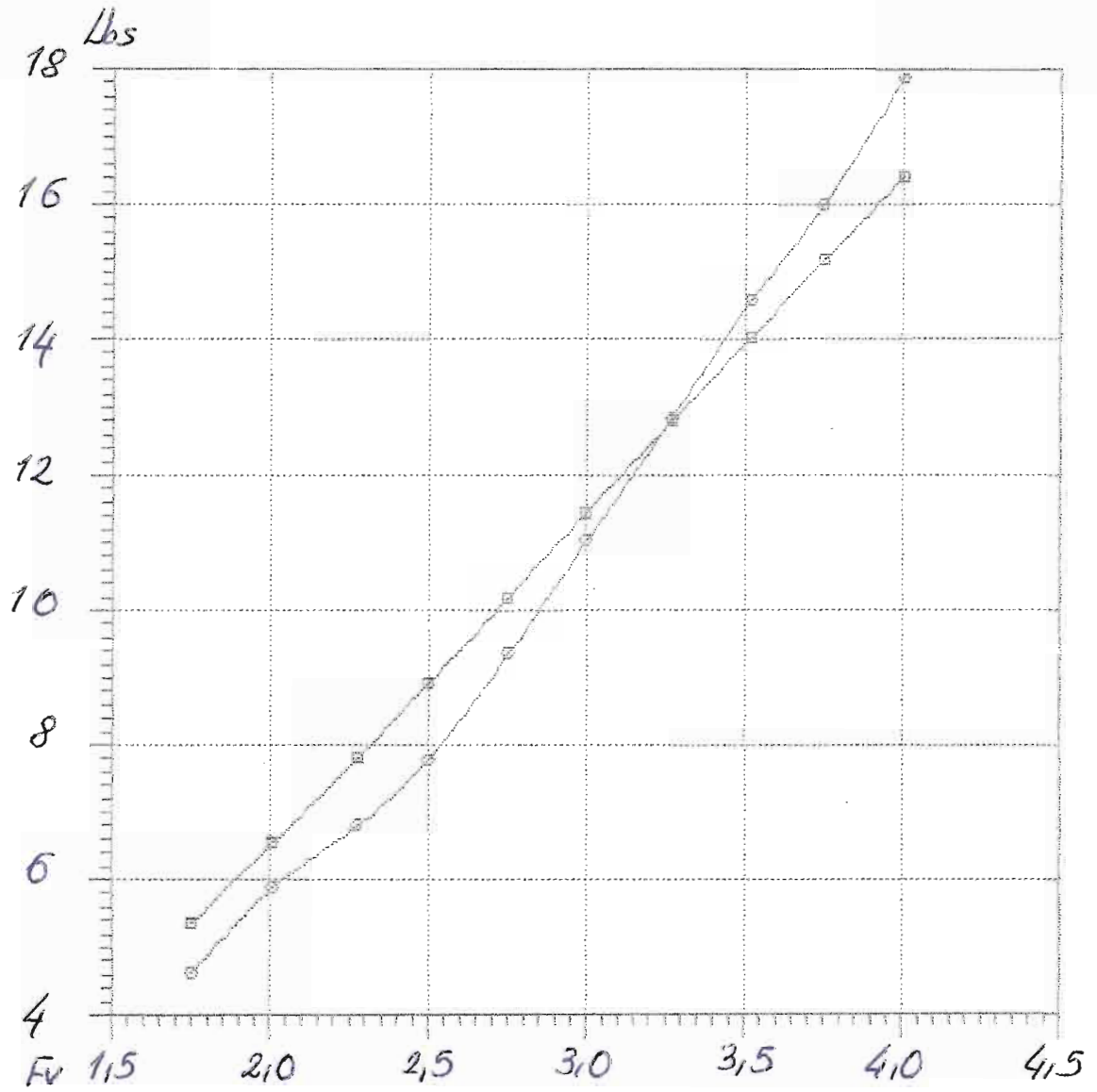
Rbare: Bare-hull resistance (N)



—□—

—○— Delft-513 Lpx/Rpx=7.00 Ap/Vol=8.50 Vol/Lpx=8.62 Lpx/Ap=8.558 Lcg/Lpx=0.486

9-86-45b



—□—  
—○—

NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

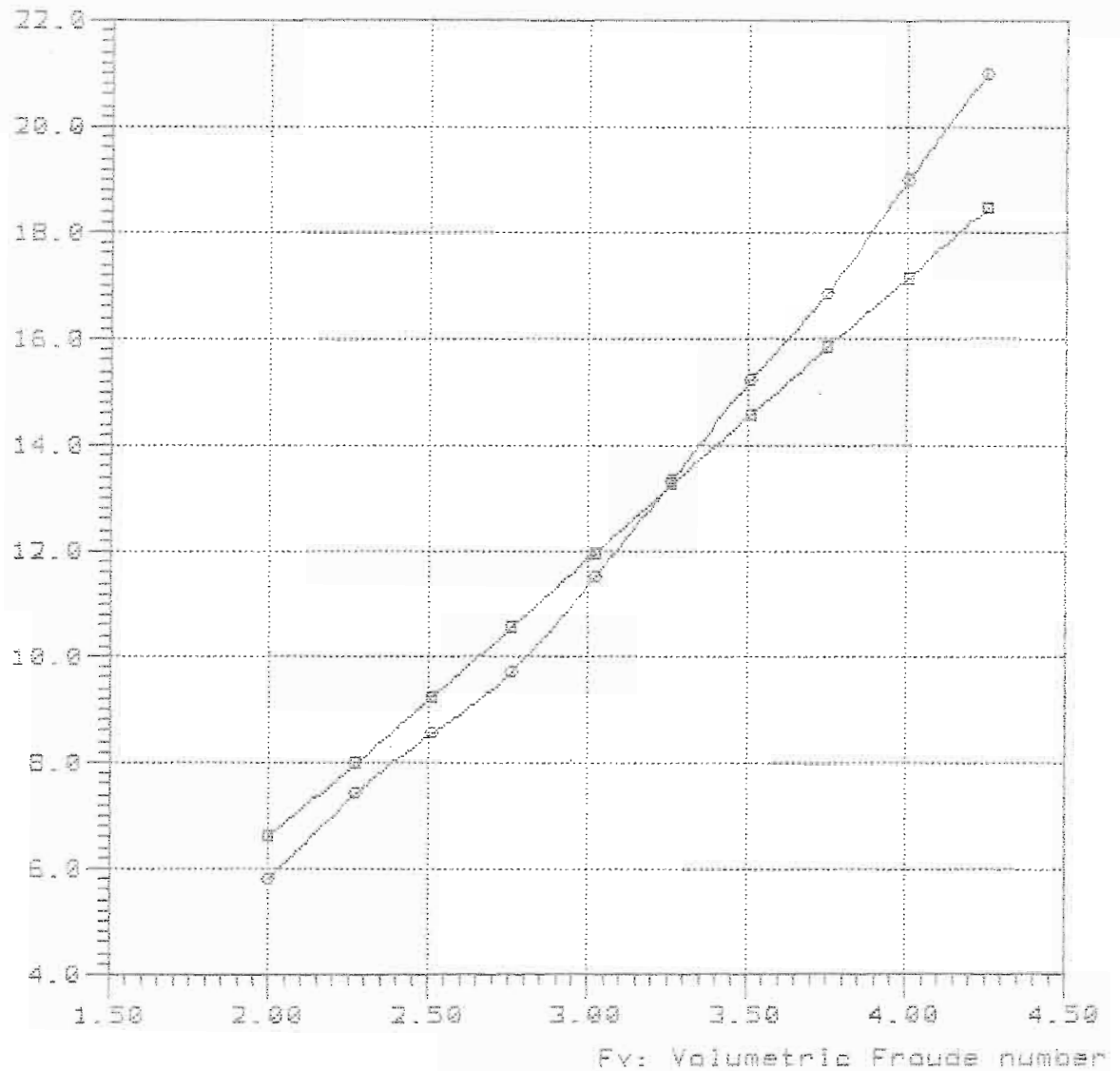
### Volumetric Froude number

File: 9-86-47b.mdl

Date: 29 Feb 88

Time: 14:18

Rbare: Bare-hull resistance (N)

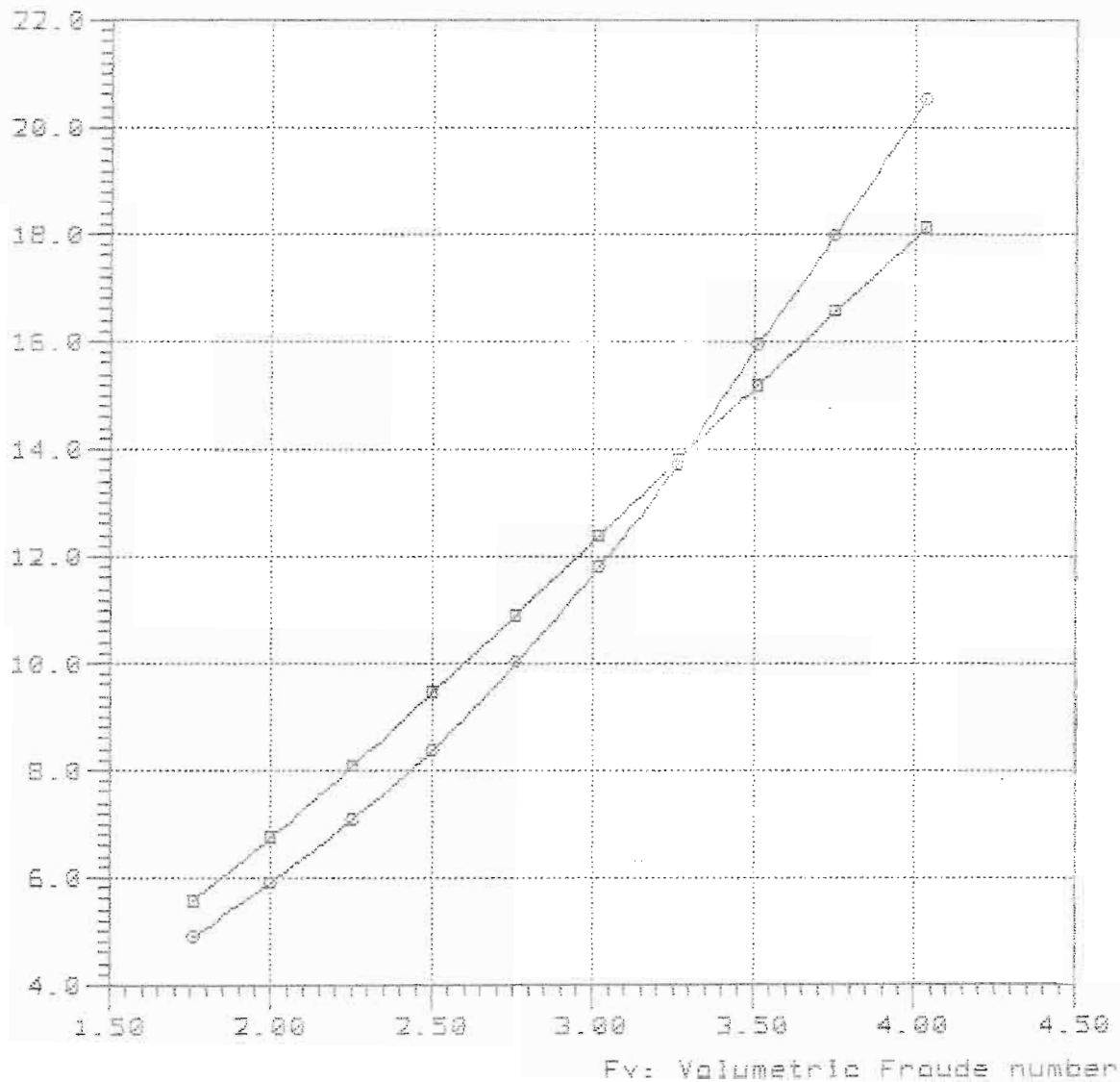


#### Curve legend

—■—

—○— Delft-518 Lpx/Bpx=7.00 Ap/Vol=8.50 Vol/Lpx=8.82 Lpx/Ap=8.558 Lcg/Lpx=0.466

Rbare: Bare-hull resistance (N)



Curve legend

—■—

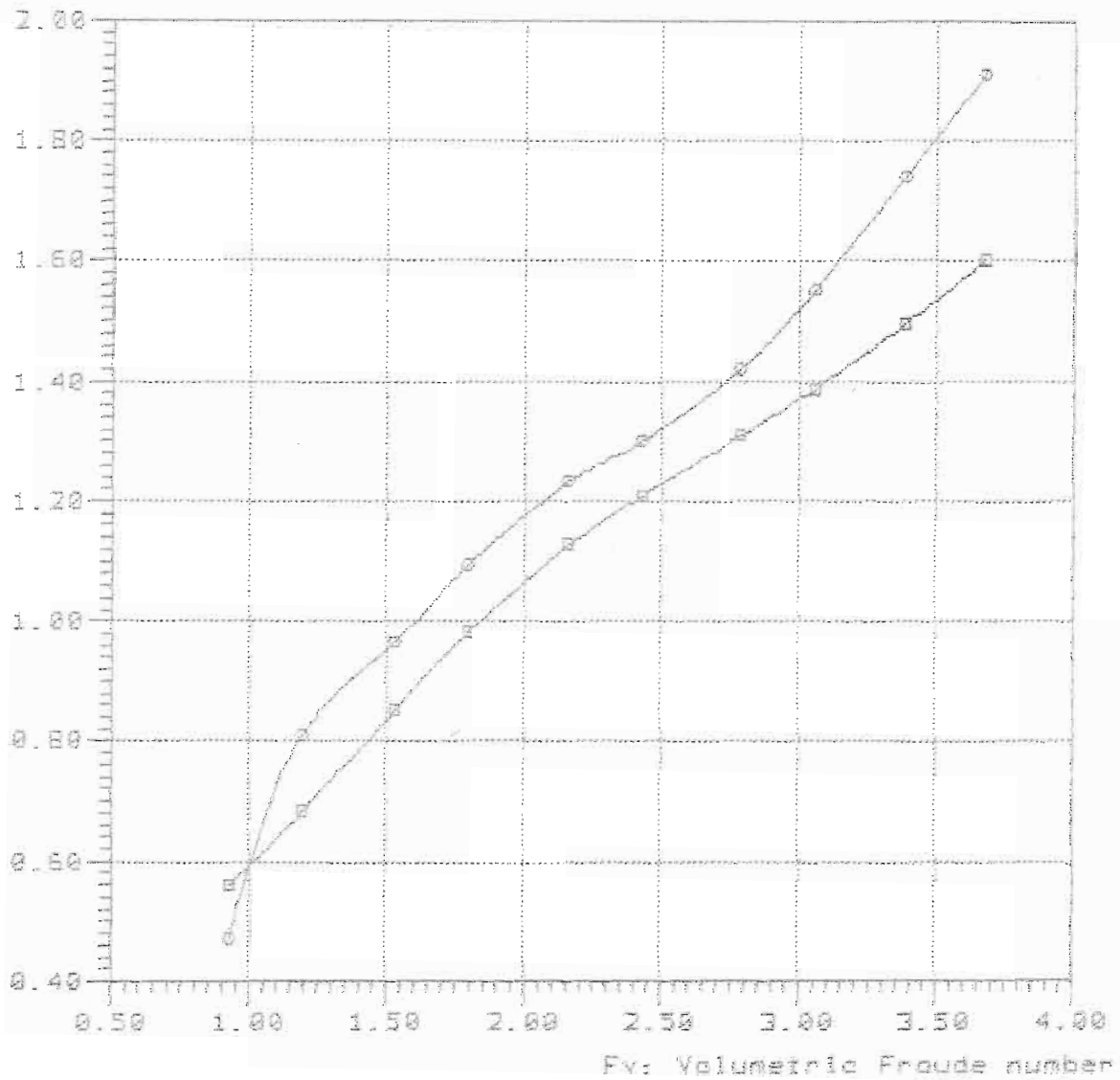
—●— Delft-511 Lpx/Epx=7.00 Ap/Vol=8.50 Vol/Lpx=8.62 Lpx/Ap=8.558 Lcg/Lpx=6.486

OTHERS

Model	=	1888
Ref	=	SNAME
Friction	=	ATTC Ca=0.0
Lpx	=	2.568 ft
Lwl	=	2.470 ft
Bpx	=	0.815 ft
Ap	=	1.733 sqft
Vcg	=	0.000 ft
Disp.	=	7.67 Lb
Deadrise	=	22.30 degree
Twist Angle	=	20.80 degree
Shaft Angle	=	10.70 degree
Vce	=	0.00 inc
Lpx/Bpx	=	3.151
Lpx/AP	=	3.805
Ap /Vol	=	7.129
Lpx/Vol	=	5.209
Cvload	=	0.221
Lbload	=	0.032
Disp-Lpx	=	202.191

**Bu ölçüler dizayn ve bununla ilgili  
Resimlerin telif hakları  
ÇEMBERCI DENİZCİLİĞE Aittir  
Bu döküman veya bunun bir kısmı  
üçüncü şahıslara verilemez. Faksir  
veya kopya edilemez ve her ne mak-  
sadı olursa olsun maksadı dışında  
izinsiz kullanılamaz.**

Rbare: Bare-hull resistance (lba)



—■—

—○—

TMB-1888 Lpx/Bpx=3.151 Ap/Vol=7.012 Lpx/Sp=3.805 Log/Lpx=0.416 %Sp 1957

Model	=	2387
Ref	=	SNAME
Friction	=	ATTC Ca=0.0
Lpx	=	3.020 ft
Lwl	=	2.970 ft
Bpx	=	0.750 ft
Ap	=	1.921 sqft
Vcg	=	0.000 ft
Disp.	=	8.90 Lb
Deadrise	=	20.00 degree
Twist Angle	=	18.80 degree
Shaft Angle	=	10.80 degree
Vce	=	0.00 inc

Lpx/Bpx	=	4.027
Lpx/Ap	=	4.748
Ap /Vol	=	7.156
Lpx/Vol	=	5.830
Cvload	=	0.330
Lbload	=	0.033
Disp-Lpx	=	144.252

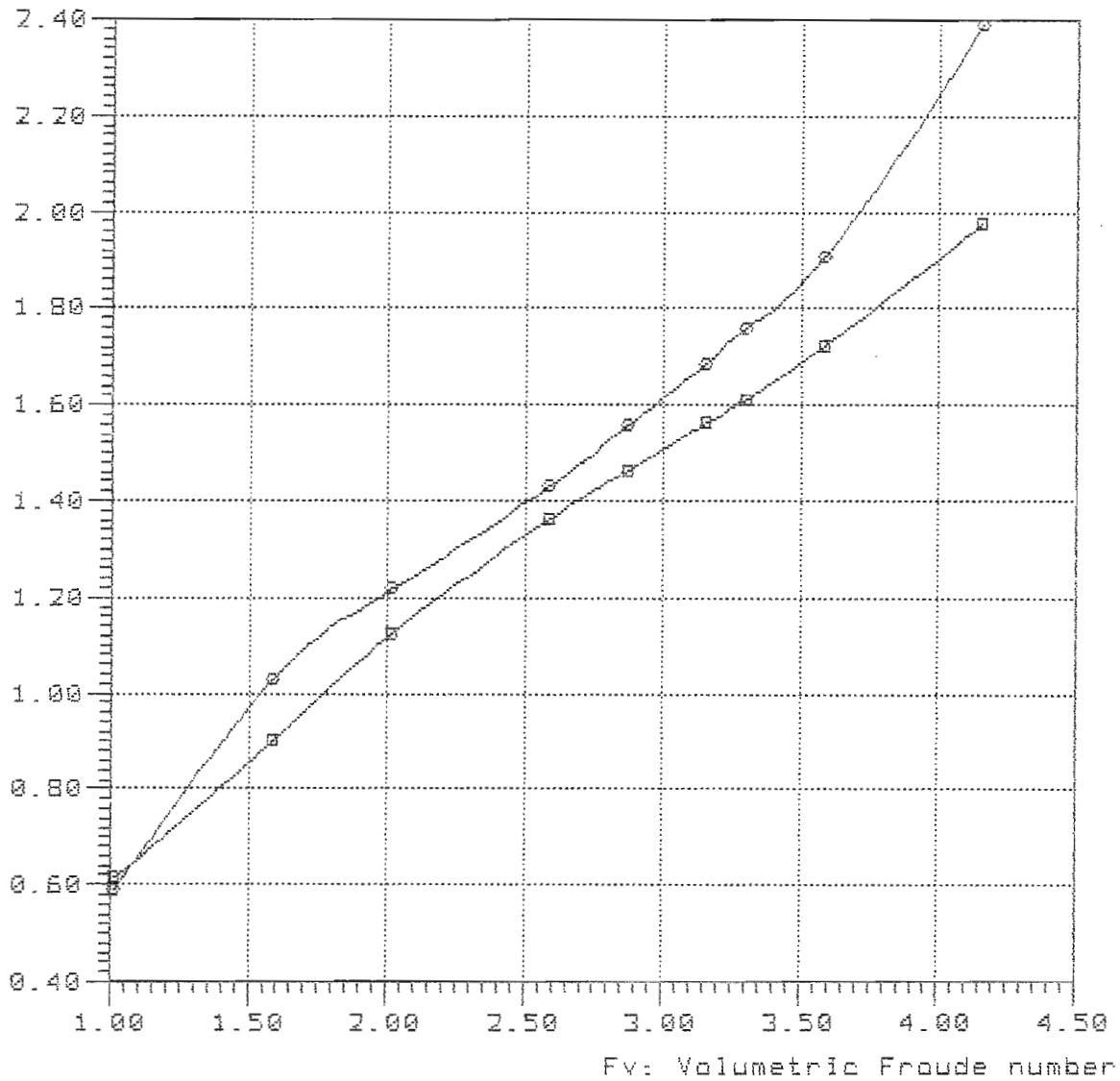


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2387

File: 7-58-394.mdl  
Date: 21 Feb 00  
Time: 17:44

Rbare: Bare-hull resistance (lbs)



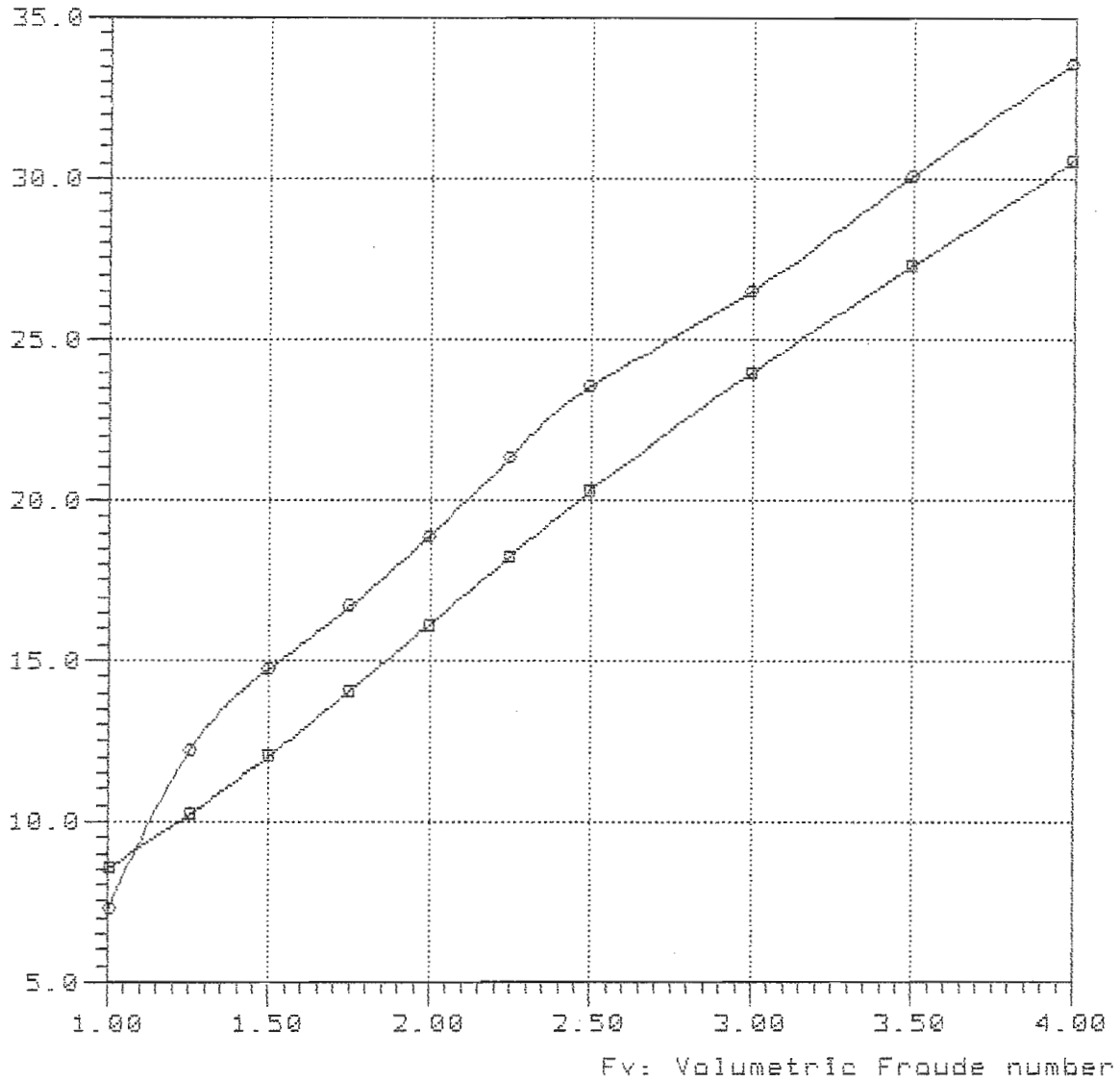
—□—

—○— TMB-2387 Lpx/Bpx=4.027 Ap/Vol=7.039 Lpx/Ap=4.748 Lcg/Lpx=0.394 %6Ap 1961

Model	=	3592
Ref	=	SNAME
Friction	=	ATTC Ca=0.0
Lpx	=	8.740 ft
Lwl	=	8.480 ft
Bpx	=	1.720 ft
Ap	=	13.536 sqft
Vcg	=	0.000 ft
Disp.	=	167.50 Lb
Deadrise	=	21.70 degree
Twist Angle	=	17.30 degree
Shaft Angle	=	9.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	5.081

Lpx/Ap	=	5.643
Ap /Vol	=	7.127
Lpx/Vol	=	6.344
Cvload	=	0.514
Lbload	=	0.037
Disp-Lpx	=	112.004

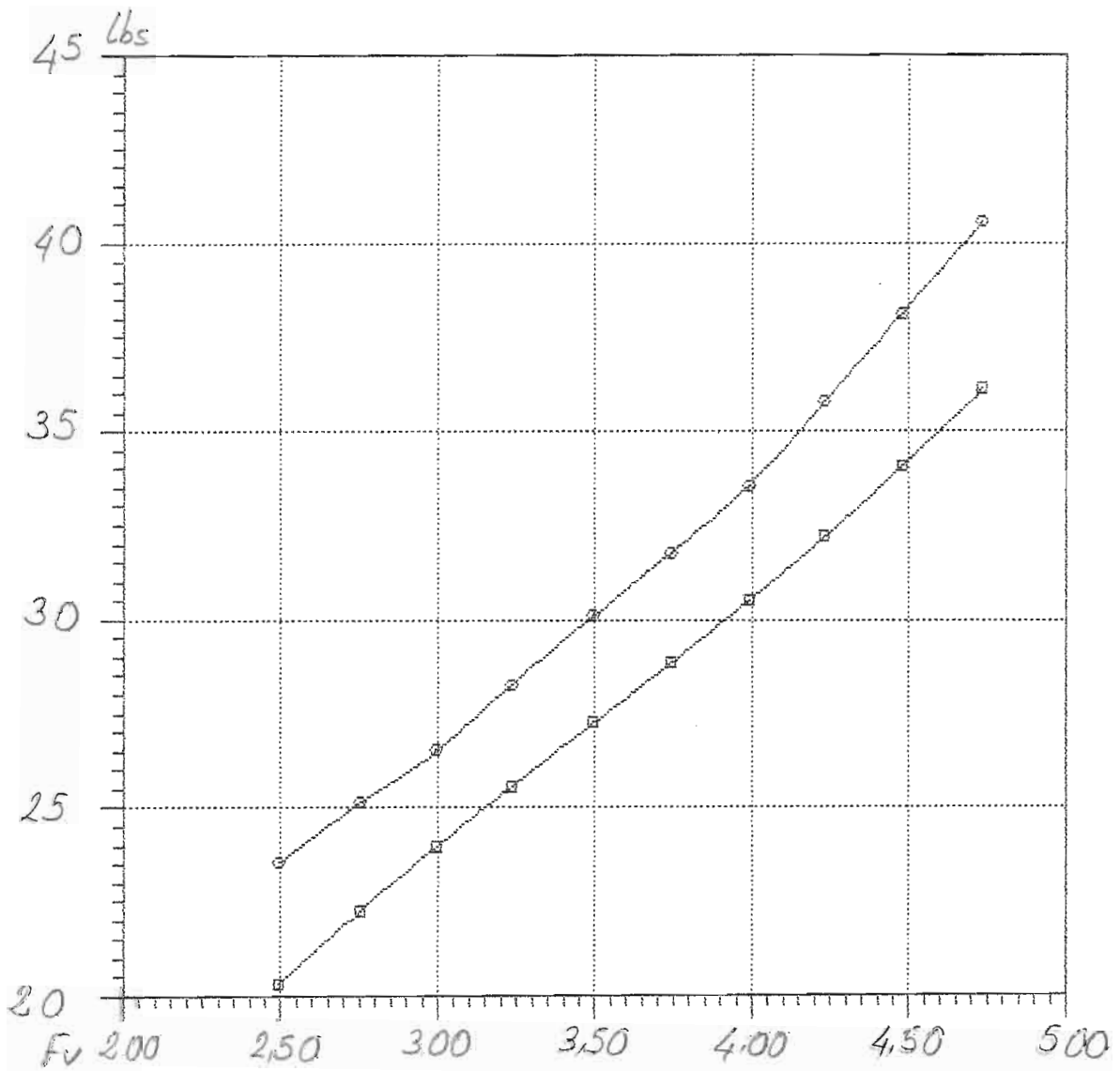
Rbare: Bare-hull resistance (lbs)



—■—

—●— TMB-3592 Lpx/Bpx=5.081 Ap/Vol=7.003 Lpx/Ap=5.643 Lcg/Lpx=0.423 %EAp 1955

7-63-42b



—○—  
—□—

Model	=	3626
Ref	=	SNAME
Friction	=	ATTC Ca=0.0
Lpx	=	7.650 ft
Lwl	=	7.480 ft
Bpx	=	1.790 ft
Ap	=	11.420 sqft
Vcg	=	0.000 ft
Disp.	=	129.60 Lb
Deadrise	=	17.00 degree
Twist Angle	=	9.70 degree
Shaft Angle	=	8.30 degree
Vce	=	0.00 ft
Lpx/Bpx	=	4.274
Lpx/Ap	=	5.125
Ap /Vol	=	7.134
Lpx/Vol	=	6.048
Cvload	=	0.353
Lbload	=	0.033
Disp-Lpx	=	129.233

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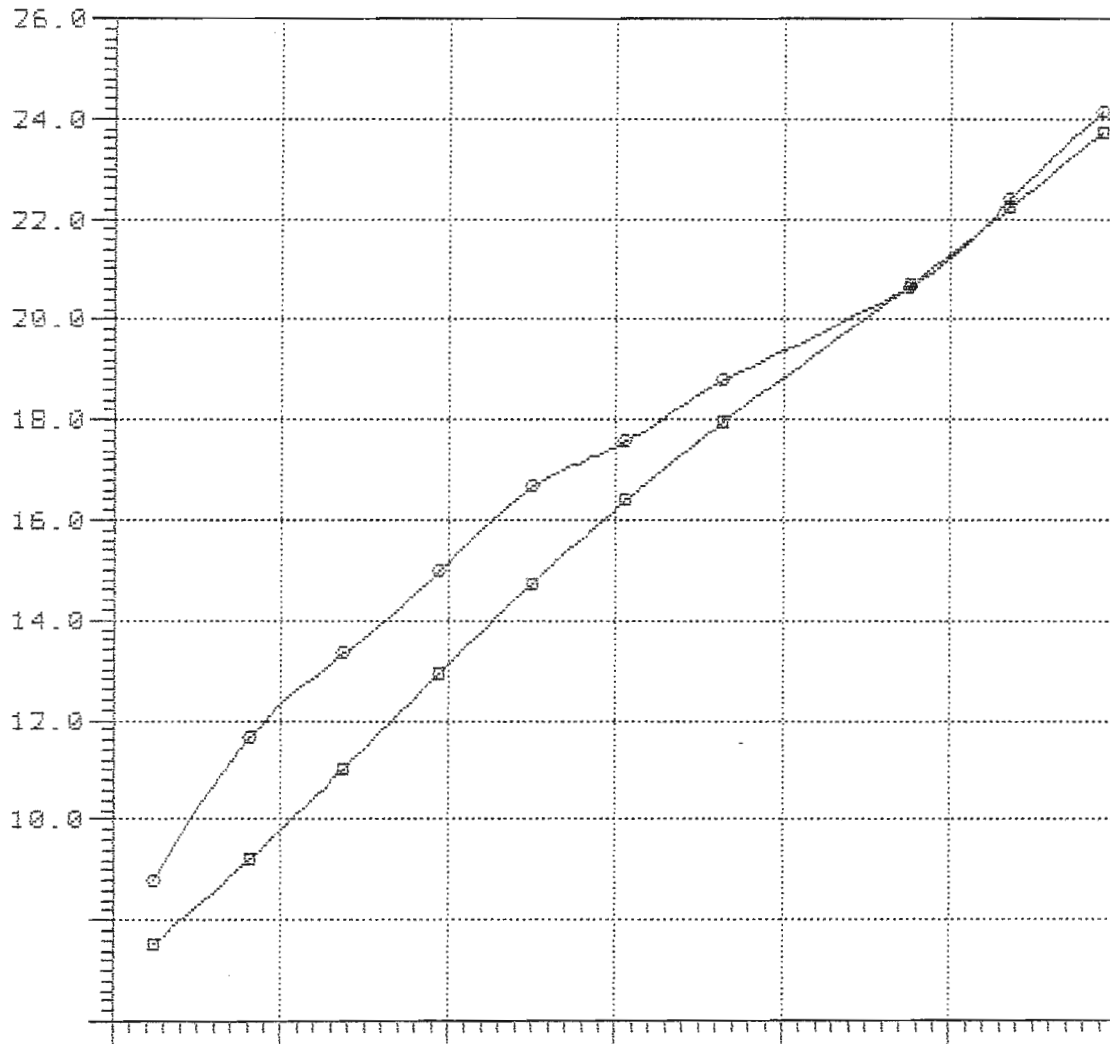
# 3626

File: 7-60-43a.mdl

Date: 21 Feb 00

Time: 17:54

Rbare: Bare-hull resistance (lbs)



—□—

—○— 3526 mdl

NavCad(tm) 3.1d

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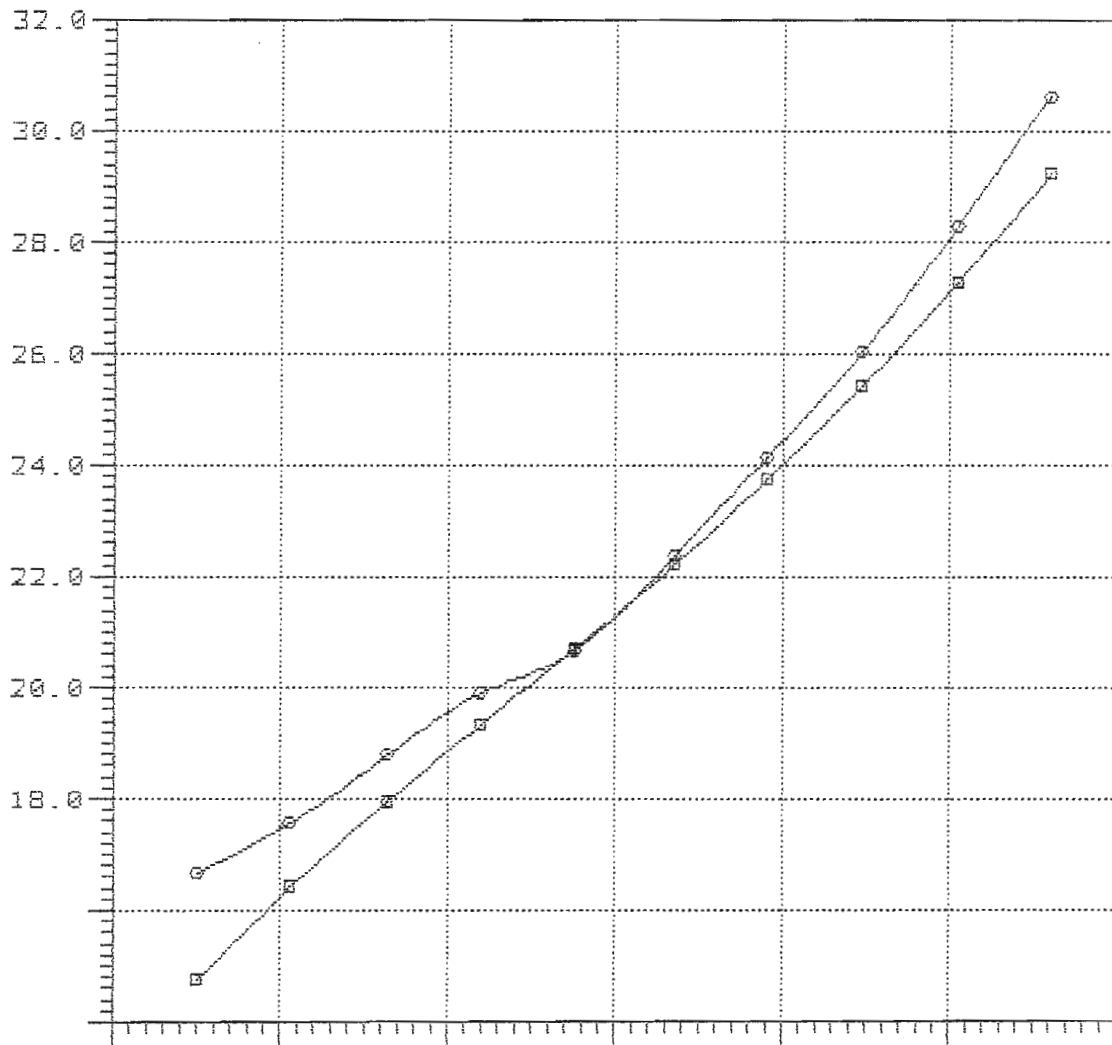
HydroComp, Inc.

File: 7-60-43b.mdl

Date: 21 Feb 00

Time: 17:57

Rbare: Bare-hull resistance (lbs)



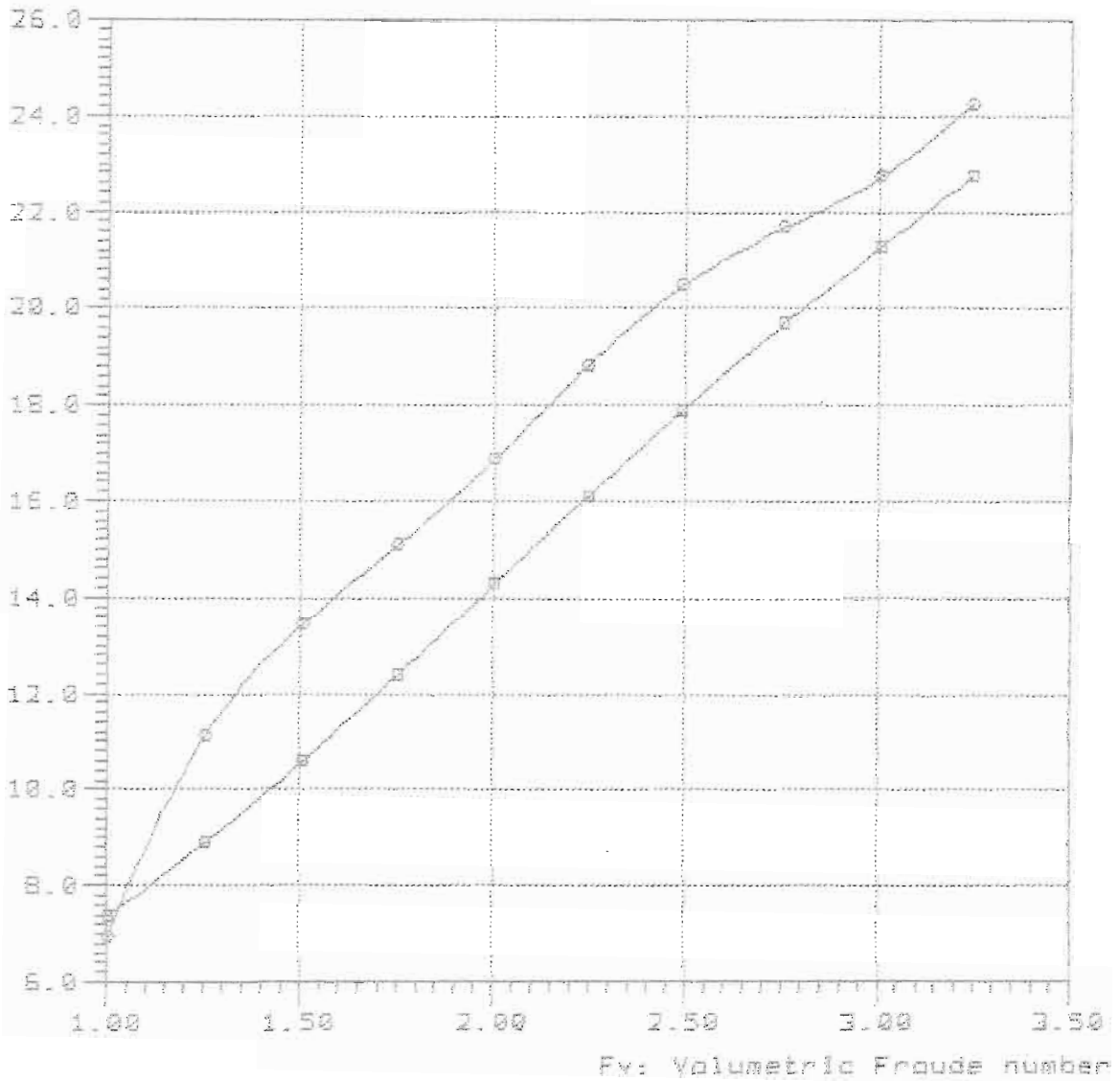
—■—

—○—

Model	=	3722
Ref	=	SNAME
Friction	=	ATTC Ca=0.0
Lpx	=	8.488 ft
Lwl	=	8.064 ft
Bpx	=	1.791 ft
Ap	=	12.466 sqft
Vcg	=	0.000 ft
Disp.	=	148.00 Lb
Deadrise	=	18.00 degree
Twist Angle	=	0.00 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.739
Lpx/Ap	=	5.779
Ap /Vol	=	7.128
Lpx/Vol	=	6.420
Cvload	=	0.403
Lbload	=	0.032
Disp-Lpx	=	108.043

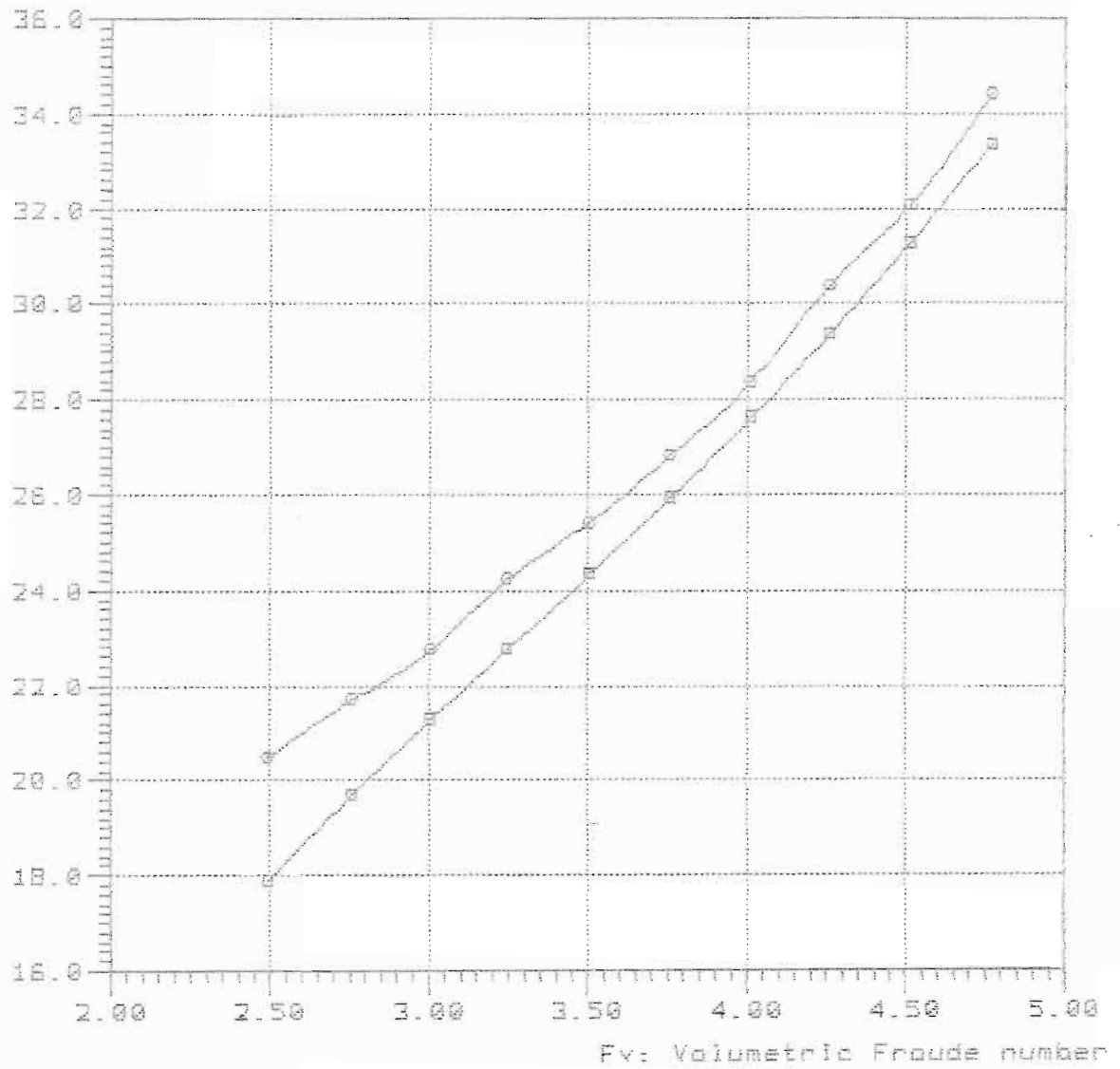


Rbare: Bare-hull resistance (lbs)



—■—  
—●— TMB-Elca 3722 Lpx/Spx=4.740 Ap/Vol=7.004 Lpx/Sp=5.779 Log/Lpx=0.424

Rbare: Bare-hull resistance (lbs)



—□—

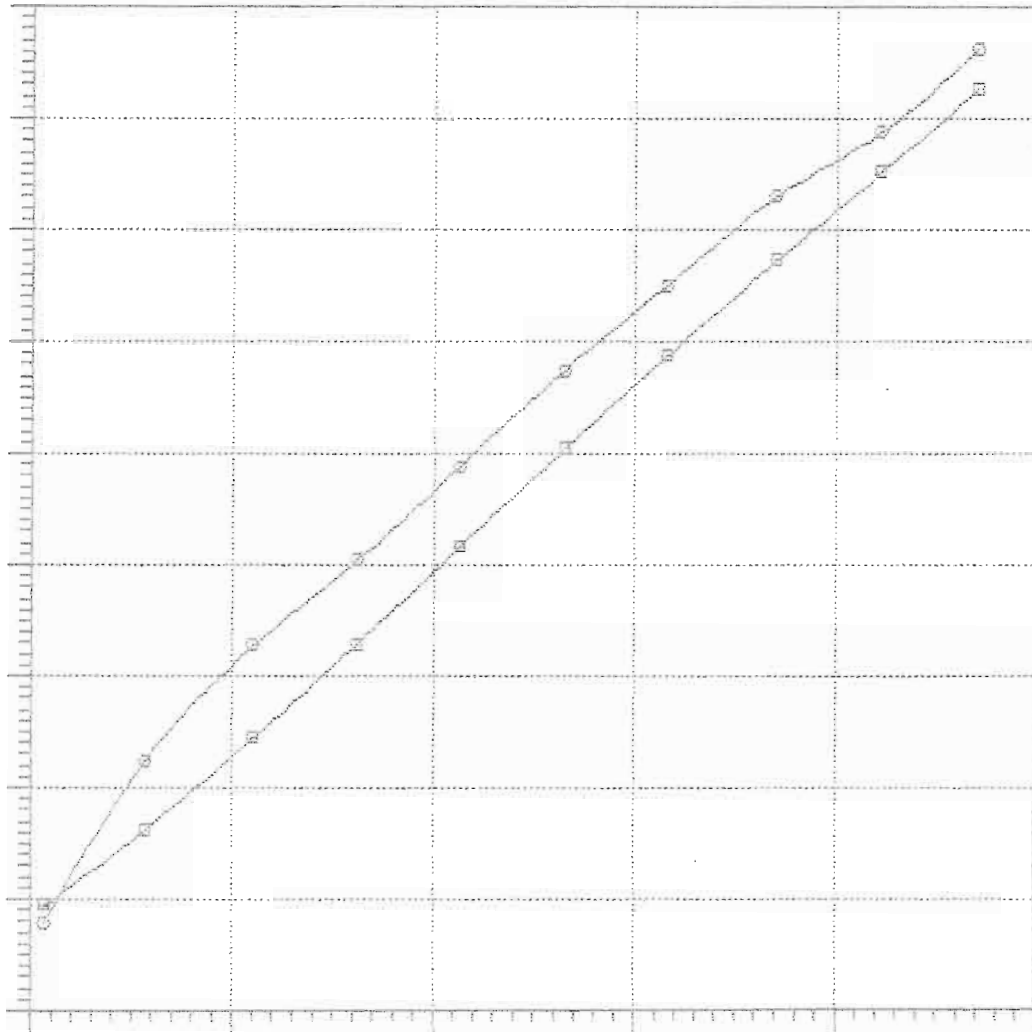
—○— TMB-Eica 3722 Lpx/Epx=4.740 Rp/Vol=7.804 Lpx/Rp=5.775 Log/Lpx=0.434

Model	=	3722
Ref	=	SNAME
Friction	=	ATTC Ca=0.0
Lpx	=	8.488 ft
Lwl	=	8.064 ft
Bpx	=	1.791 ft
Ap	=	12.466 sqft
Vcg	=	0.000 ft
Disp.	=	121.10 Lb
Deadrise	=	18.00 degree
Twist Angle	=	0.00 degree
Shaft Angle	=	0.00 degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.739

Lpx/Ap	=	5.779
Ap /Vol	=	8.148
Lpx/Vol	=	6.864
Cvload	=	0.329
Lbload	=	0.026
Disp-Lpx	=	88.406

3722

8-69-42A



□  
○

NavCad(tm) 3.1d

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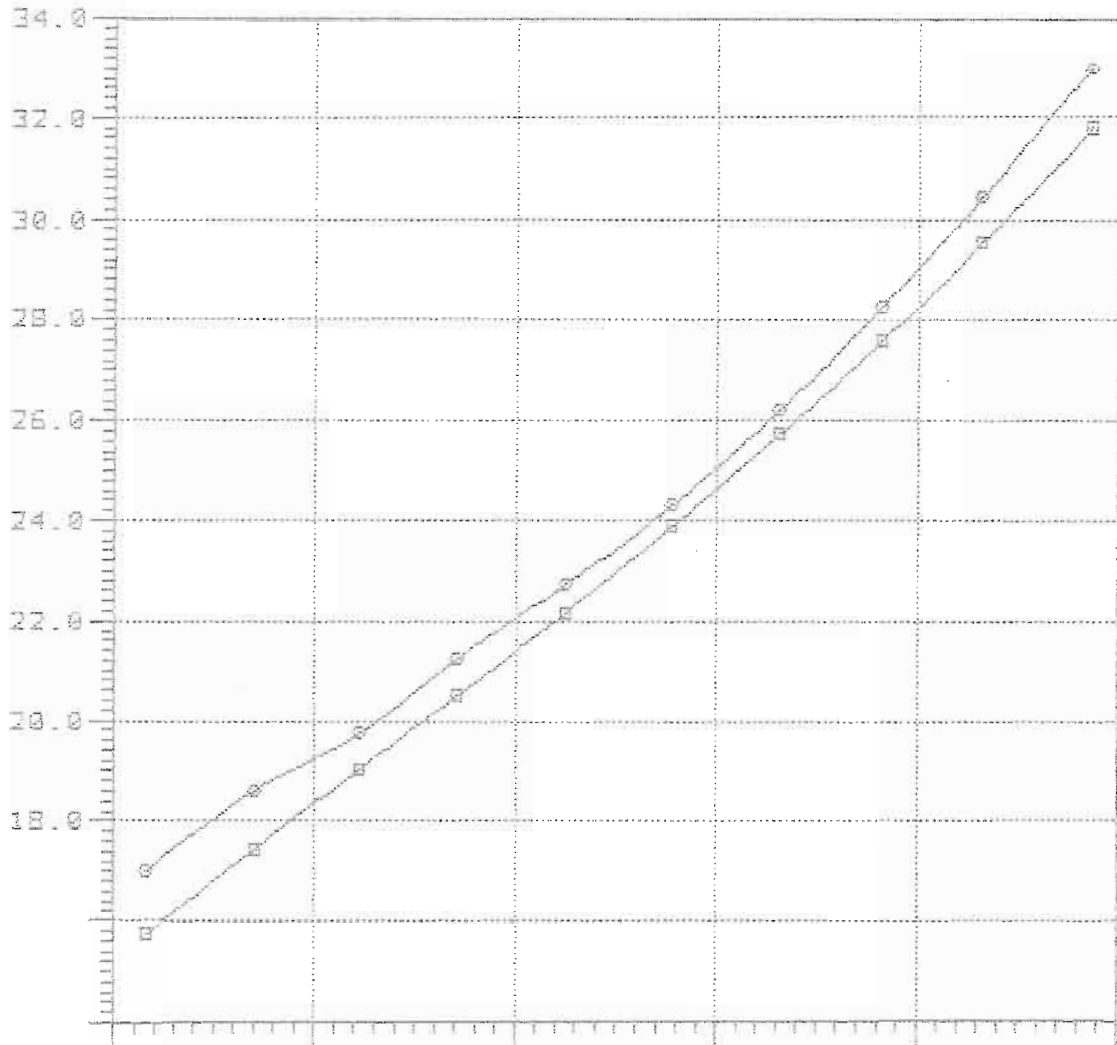
HydroComp, Inc.

File: 8-69-42b.mdl

Date: 2 Mar 00

Time: 12:38

Rbare: Bare-hull resistance (lbs)



Model = 3941  
Ref = SNAME  
Friction = ATTC Ca=0.0

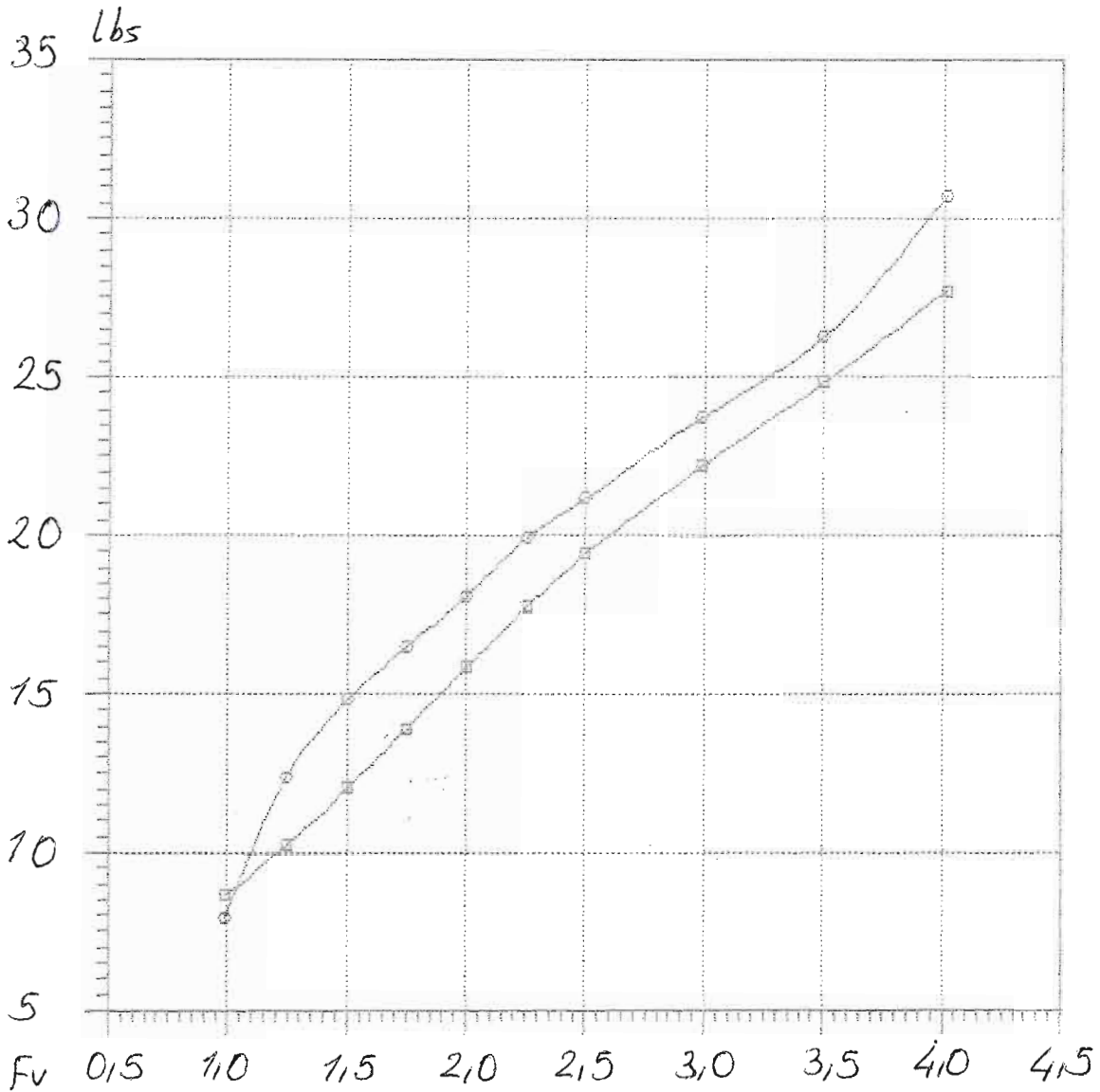
Lpx = 8.660 ft  
Lwl = 8.460 ft  
Bpx = 1.820 ft  
Ap = 12.985 sqft  
Vcg = 0.000 ft  
Disp. = 157.30 Lb

Deadrise = 18.40 degree  
Twist Angle = 13.60 degree  
Shaft Angle = 8.50 degree  
Lce = 0.31 ft

Lpx/Bpx = 4.758  
Lpx/Ap = 5.776  
Ap /Vol = 7.129  
Lpx/Vol = 6.419  
Cvload = 0.408  
Lbload = 0.032  
Disp-Lpx = 108.125

3941

7-64-39A



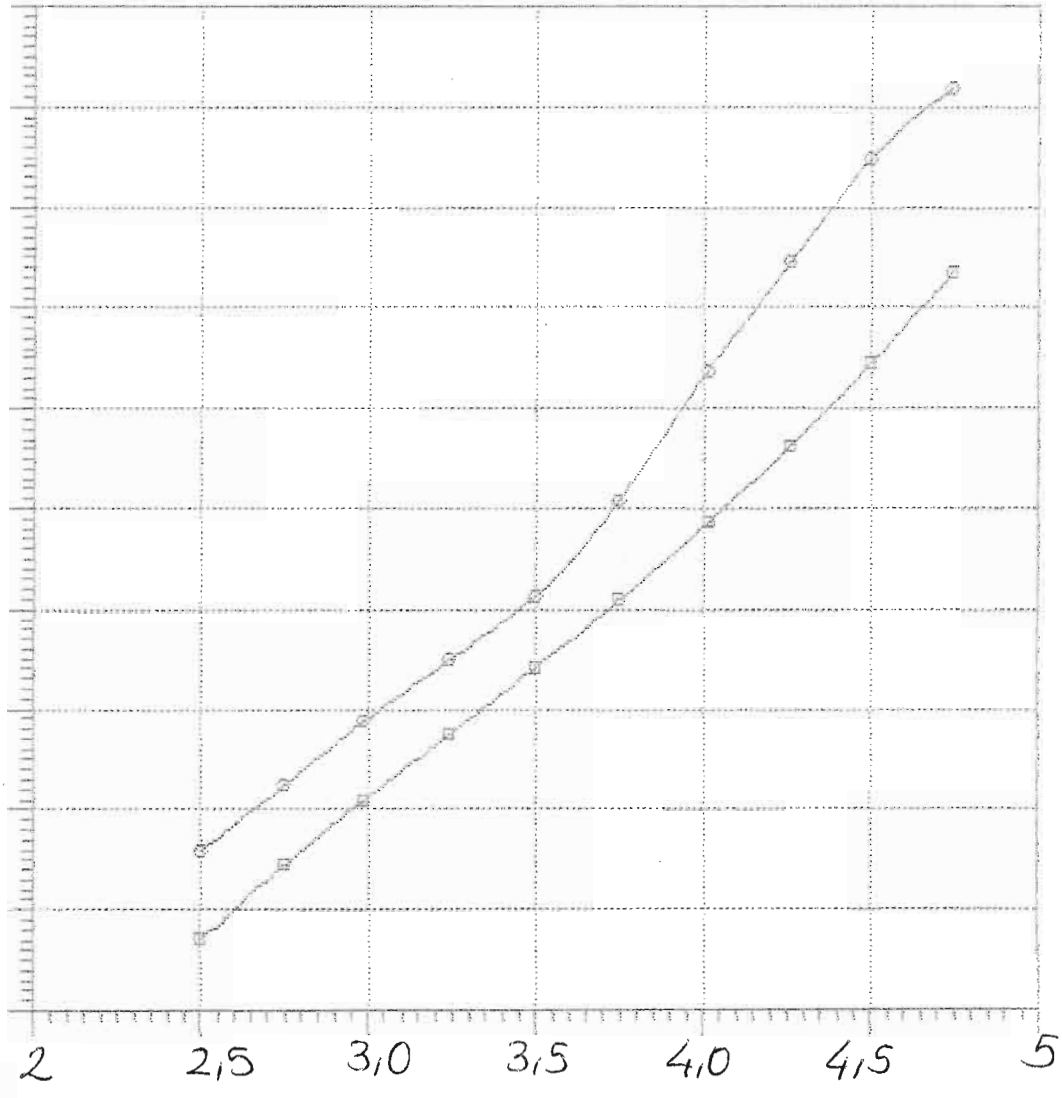
—□—

—○—

7-64-396

38 Lbs

18  
Fu



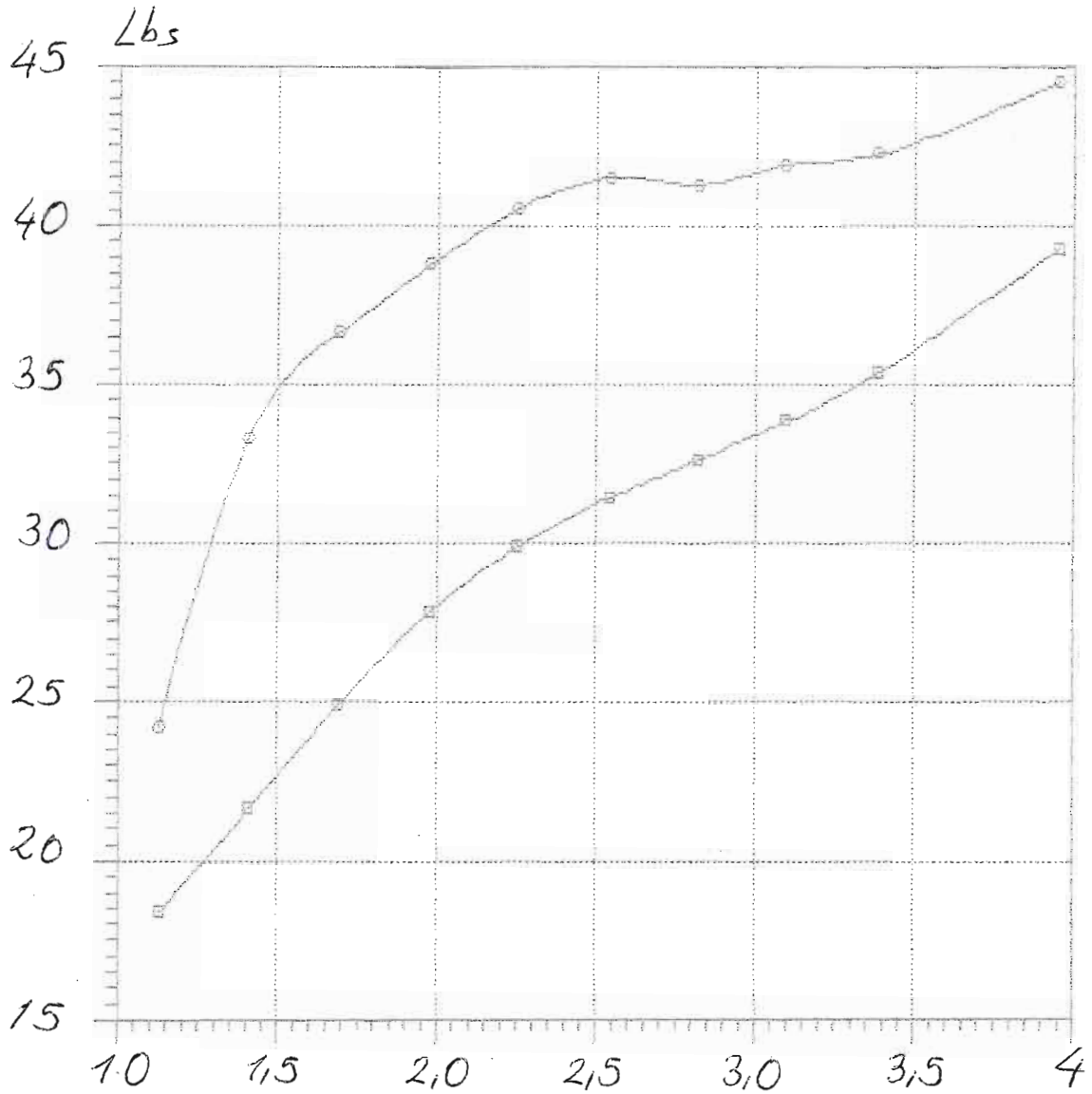
—□—  
—○—



Model	=	4309
Ref	=	SNAME
Friction	=	ATTC Ca=0.0
Lpx	=	7.778 ft
Lwl	=	7.090 ft
Bpx	=	2.408 ft
Ap	=	18.320 sqft
Vcg	=	0.000 ft
Disp.	=	263.70 Lb
Deadrise	=	3.00 degree
Twist Angle	=	3.00 degree
Shaft Angle	=	7.50 degree
Vce	=	0.16 ft
Lpx/Bpx	=	3.230
Lpx/Ap	=	3.302
Ap /Vol	=	7.127
Lpx/Vol	=	4.853
Cvload	=	0.295
Lbload	=	0.041
Disp-Lpx	=	250.183

4309

7-49-44A



NavCad(tm) 3.1d

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### Bare-hull resistance

vs.

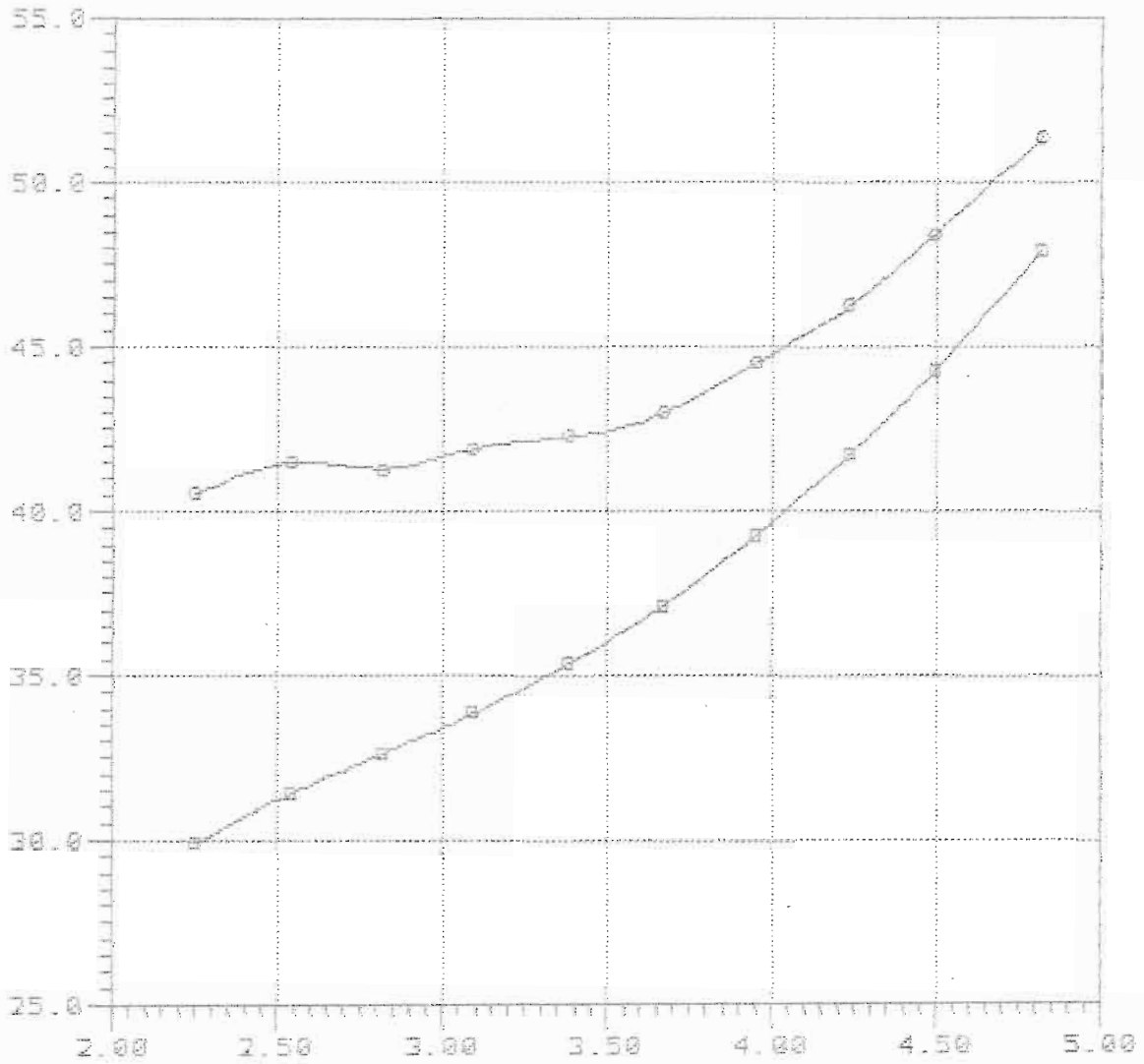
### Volumetric Froude number

File: 7-48-44b.mdl

Date: 2 Mar 00

Time: 17:14

Rbare: Bare-hull resistance (lbs)



Fv: Volumetric Froude number

#### Curve legend

—■—

—●— TMB 4309 1954  $R_p/Vol=7.00$   $L_p/Vol=4.86$   $L_{px}/R_p=3.31$   $Log=0.4436$

Model = 4310  
Ref = SNAME  
Friction =ATTC Ca=0.0

Lpx = 7.500 ft  
Lwl = 7.240 ft  
Bpx = 1.980 ft  
Ap = 12.310 sqft  
Vcg = 0.000 ft  
Disp. = 145.20 Lb  
Deadrise = 13.00 degree  
Twist Angle= 0.00 degree  
Shaft Angle= 11.33 degree  
Vce = -0.06 ft

Lpx/Bpx = 3.788  
Lpx/Ap = 4.569  
Ap /Vol = 7.129  
Lpx/Vol = 5.709  
Cvload = 0.292  
Lbload = 0.032  
Disp-Lpx = 153.651

NavCad(tm) 3.1d

### Bare-hull resistance

File: 7-56-385.mdl

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vs.

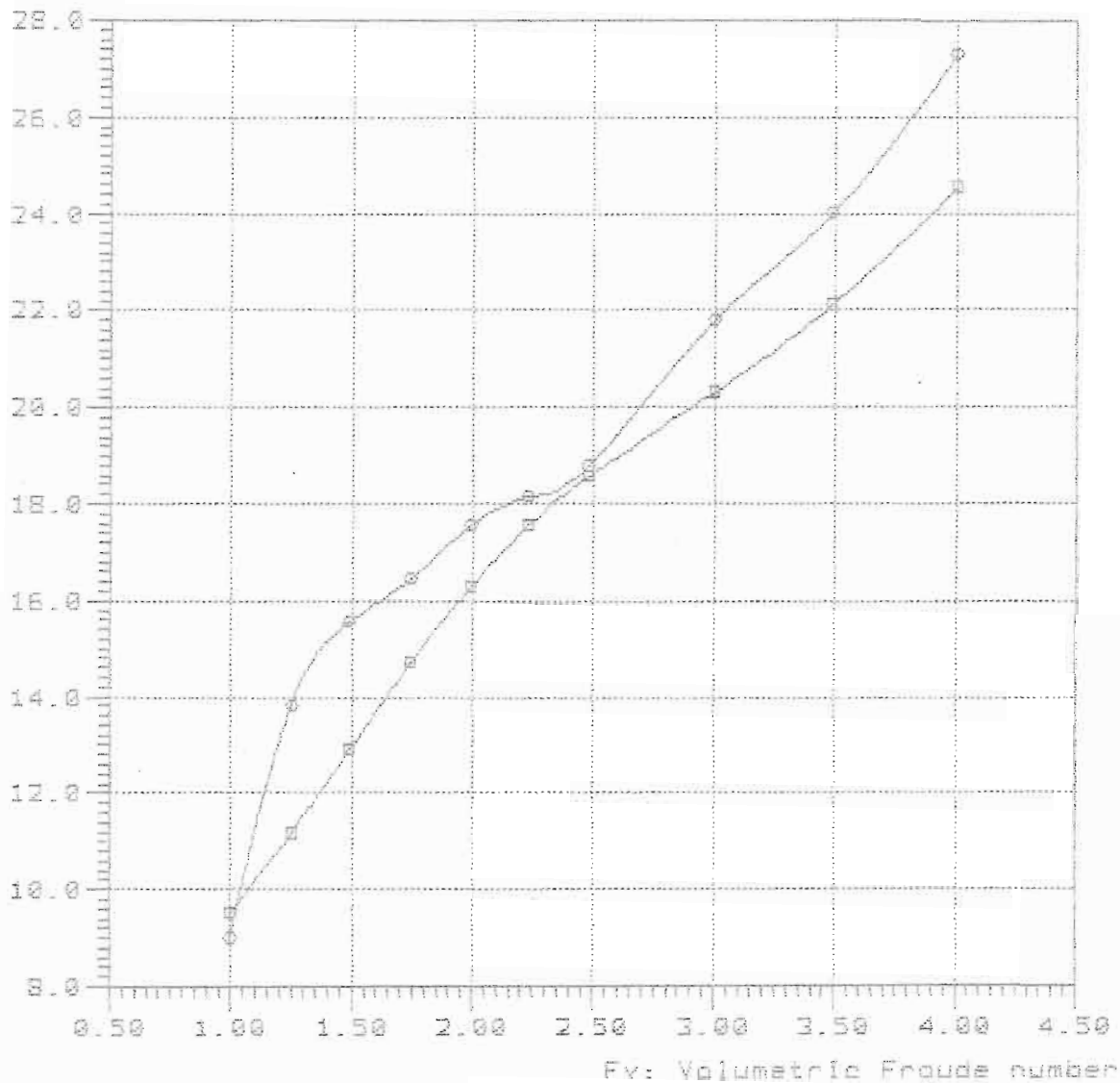
Date: 2 Mar 00

HydroComp, Inc.

### Volumetric Froude number

Time: 12:15

Rbare: Bare-hull resistance (lbs)



#### Curve Legend

—■—

—●— TMB 4310 1555 Ap/Vol=7.00 Lp/Vol=5.66 Log=0.385

Model = 4315  
Ref = SNAME  
Friction =ATTC Ca=0.0  
Lpx = 7.310 ft  
Lwl = 7.230 ft  
Bpx = 2.000 ft  
Ap = 12.310 sqft  
Vcg = 0.000 ft  
Disp. = 145.20 Lb

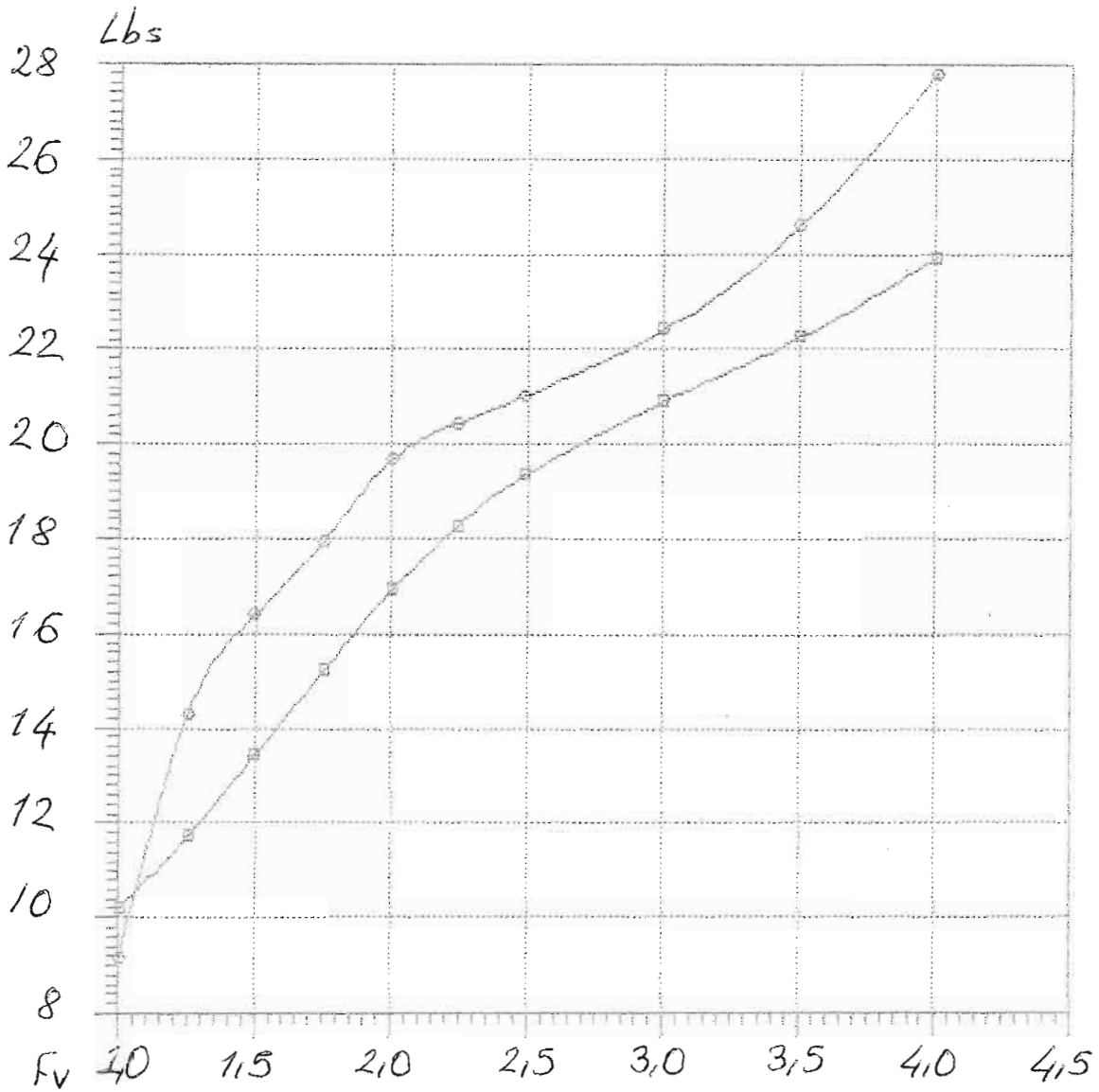
Deadrise = 17.30 degree  
Twist Angle= 11.80 degree  
Shaft Angle= 12.00 degree  
Vce = 0.00 inc

Lpx/Bpx = 3.655  
Lpx/Ap = 4.341  
Ap /Vol = 7.129  
Lpx/Vol = 5.565  
Cvload = 0.284  
Lbload = 0.033  
Disp-Lpx = 165.946

03/02/2000 14:45:42

4315

7-55-38a



NavCad(tm) 3.1d

### Bare-hull resistance

File: 7-85-38b.mdl

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vs.

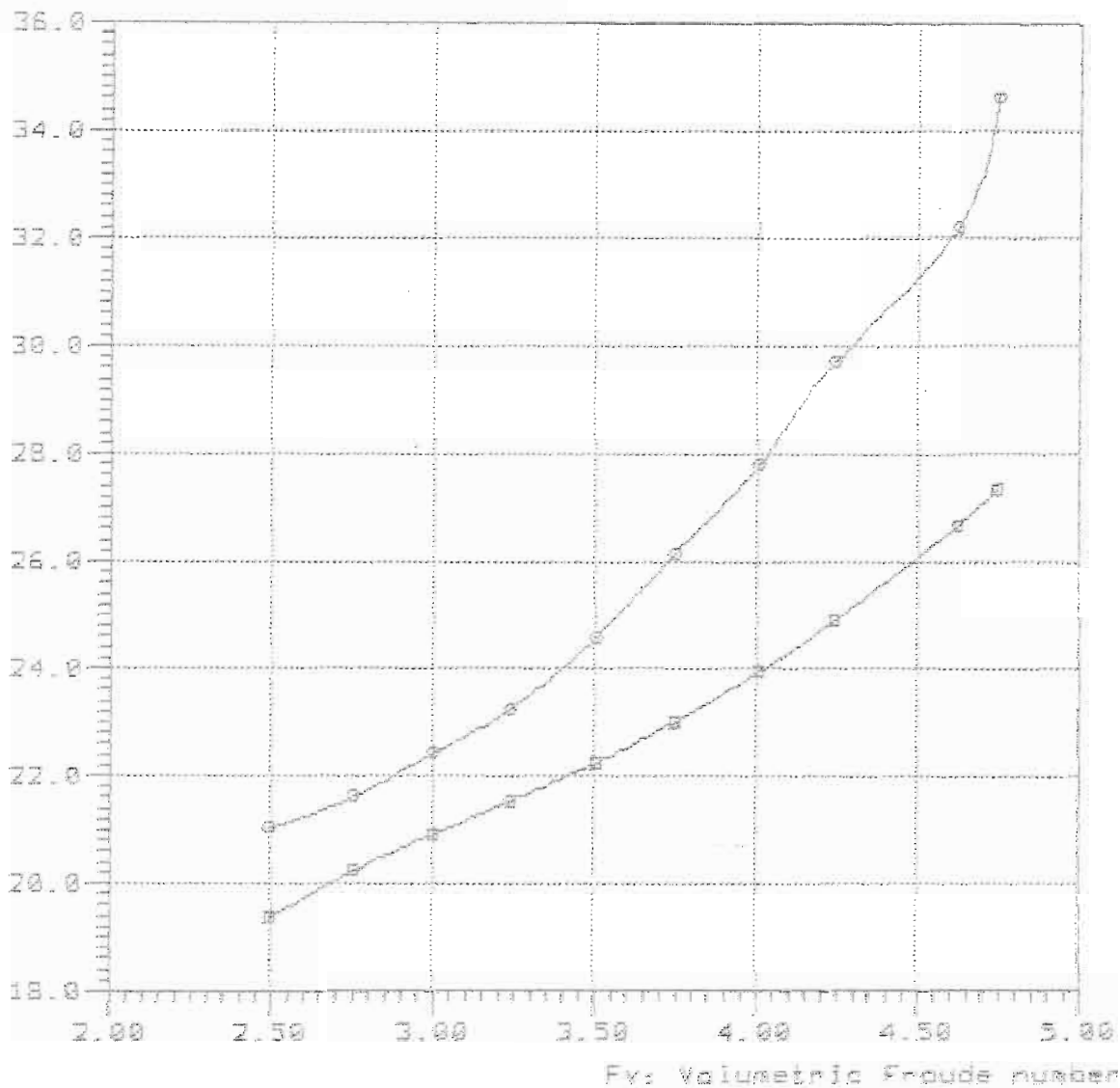
Date: 2 Mar 88

HydroComp, Inc.

### Volumetric Froude number

Time: 14:28

Rbare: Bare-hull resistance (lbs)



#### Curve legend

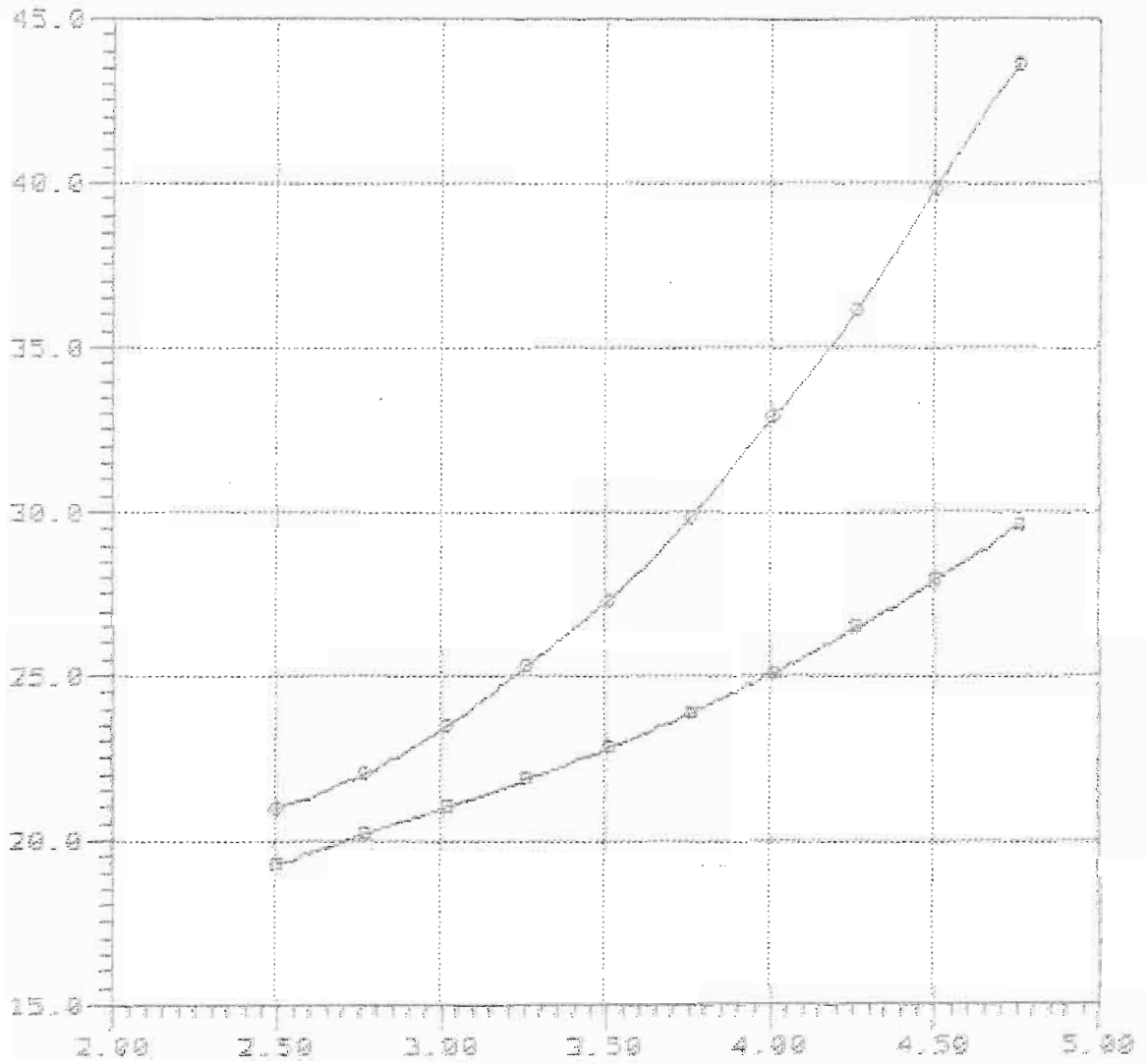
—□—

—○— TMB-4315 Lox/Bpx=4.329 Ap/Vol=7.886 Lox/Ap=4.325 Log/Lox=6.386



Model	=	4618
Ref	=	SNAME
Friction	=	ATTC Ca=0.0
Lpx	=	7.395 ft
Lwl	=	7.220 ft
Bpx	=	1.937 ft
Ap	=	12.360 sqft
Vcg	=	0.000 ft
Disp.	=	146.20 Lb
Deadrise	=	16.00 degree
Twist Angle	=	10.50 degree
Shaft Angle	=	11.00 degree
Vce	=	-1.49 inc
Lpx/Bpx	=	3.818
Lpx/Ap	=	4.424
Ap /Vol	=	7.125
Lpx/Vol	=	5.616
Cvload	=	0.314
Lbload	=	0.034
Disp-Lpx	=	161.393

Rbare: Bare-hull resistance (lbs)

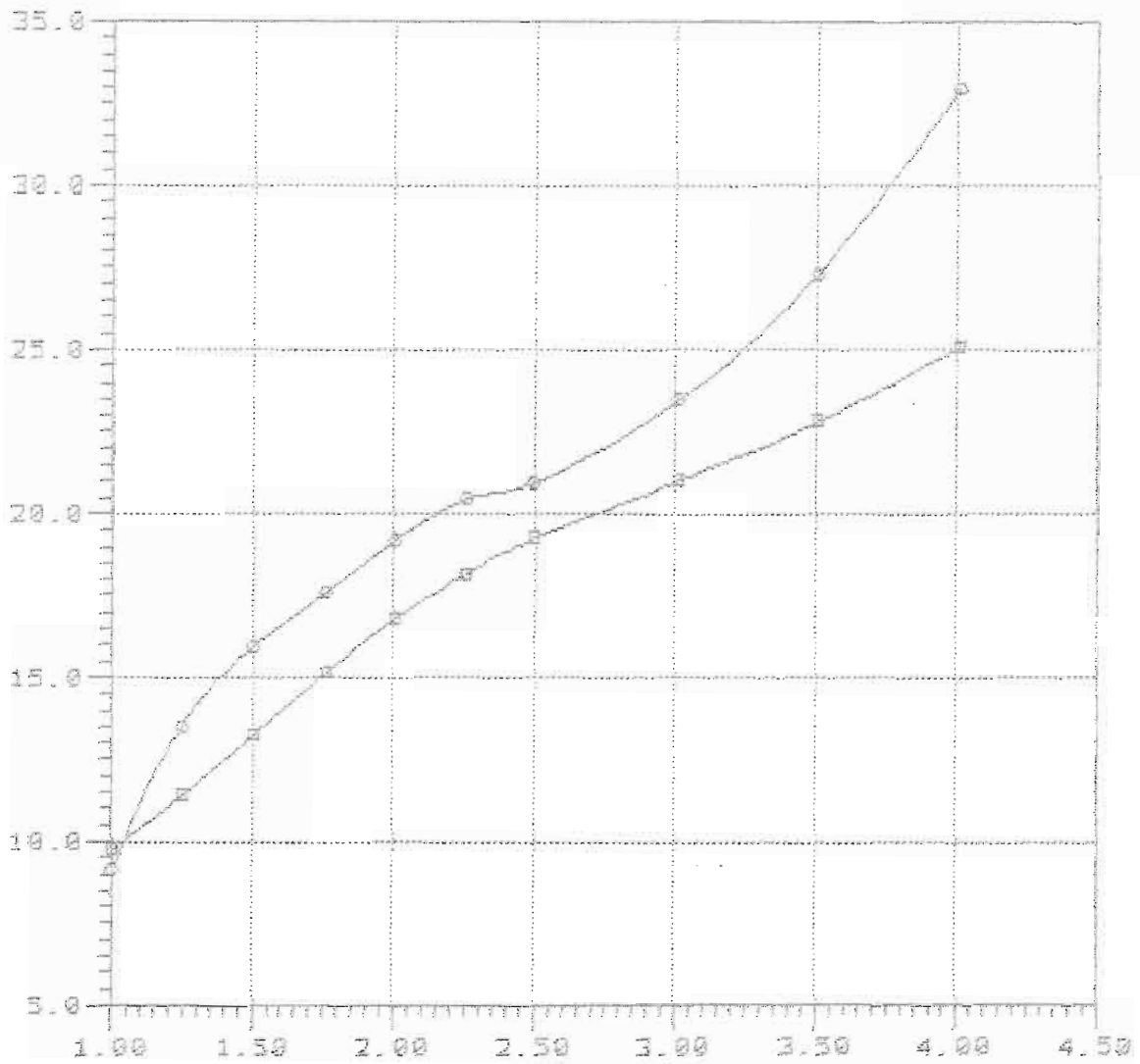


Fv: Volumetric Froude number

—■—

—●— TMB-4518 Lpx/Bpx=3.818 Ap/Vol=7.002 Lpx/Ap=4.424 Lpg/Lpx=0.394

Rbare: Bare-hull resistance (lba)



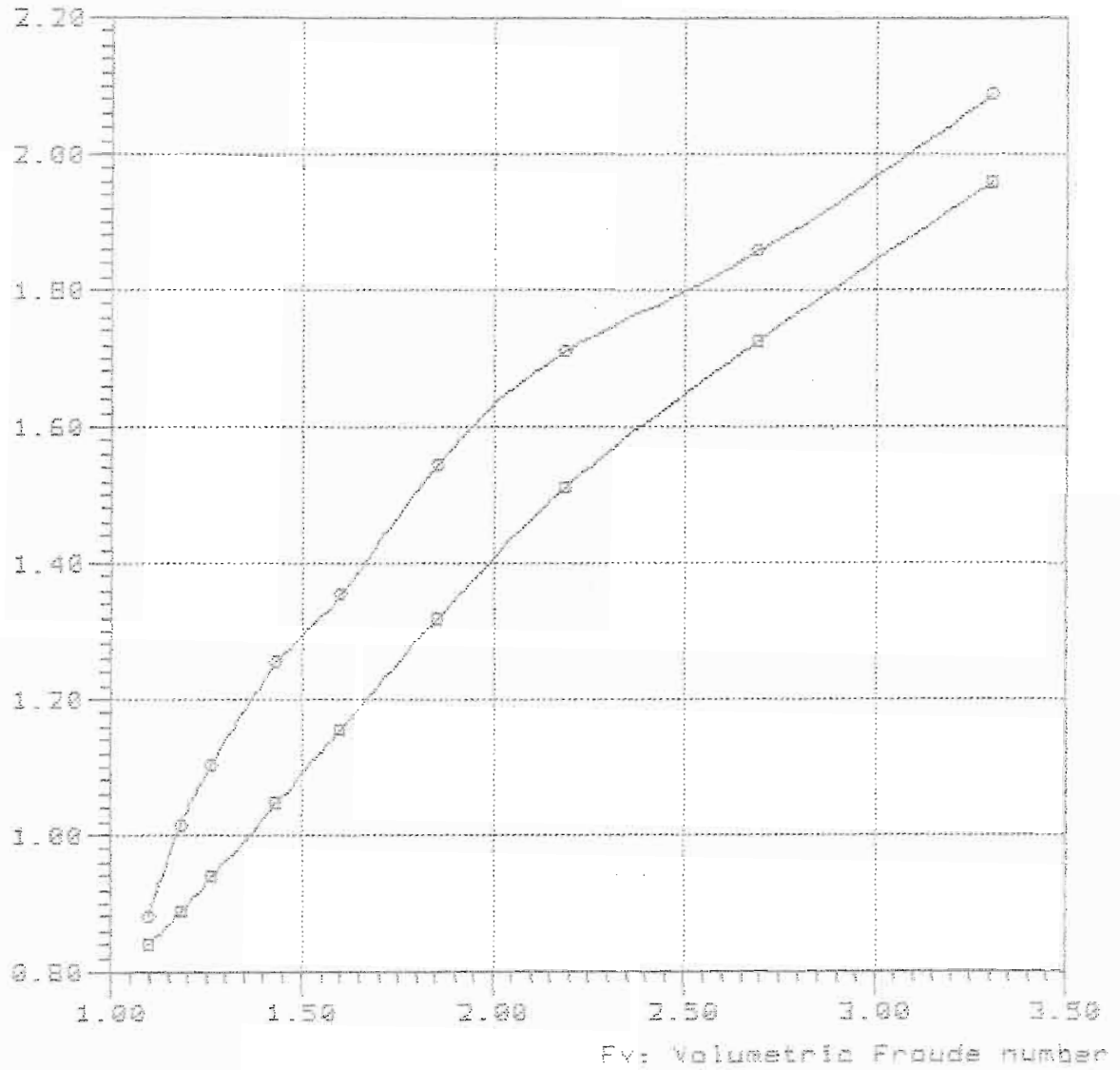
Fv: Volumetric Froude number

—□—

—○— TNB-461B Lpx/Epw=3.818 Ap/Vol=7.002 Lpx/Sp=4.424 Log/Lpx=0.394

Model	=	4708
Ref	=	SNAME
Friction	=	ATTC Ca=0.0
Lpx	=	3.297 ft
Lwl	=	3.132 ft
Bpx	=	0.820 ft
Ap	=	2.251 sqft
Vcg	=	0.000 ft
Disp.	=	11.35 Lb
Deadrise	=	16.30 degree
Twist Angle	=	12.80 degree
Shaft Angle	=	<b>8.80</b> degree
Vce	=	0.00 inc
Lpx/Bpx	=	4.021
Lpx/Ap	=	4.829
Ap /Vol	=	7.130
Lpx/Vol	=	5.869
Cvload	=	0.322
Lbload	=	0.033
Disp-Lpx	=	141.381

Rbare: Bare-hull resistance (lbs)

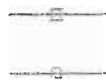
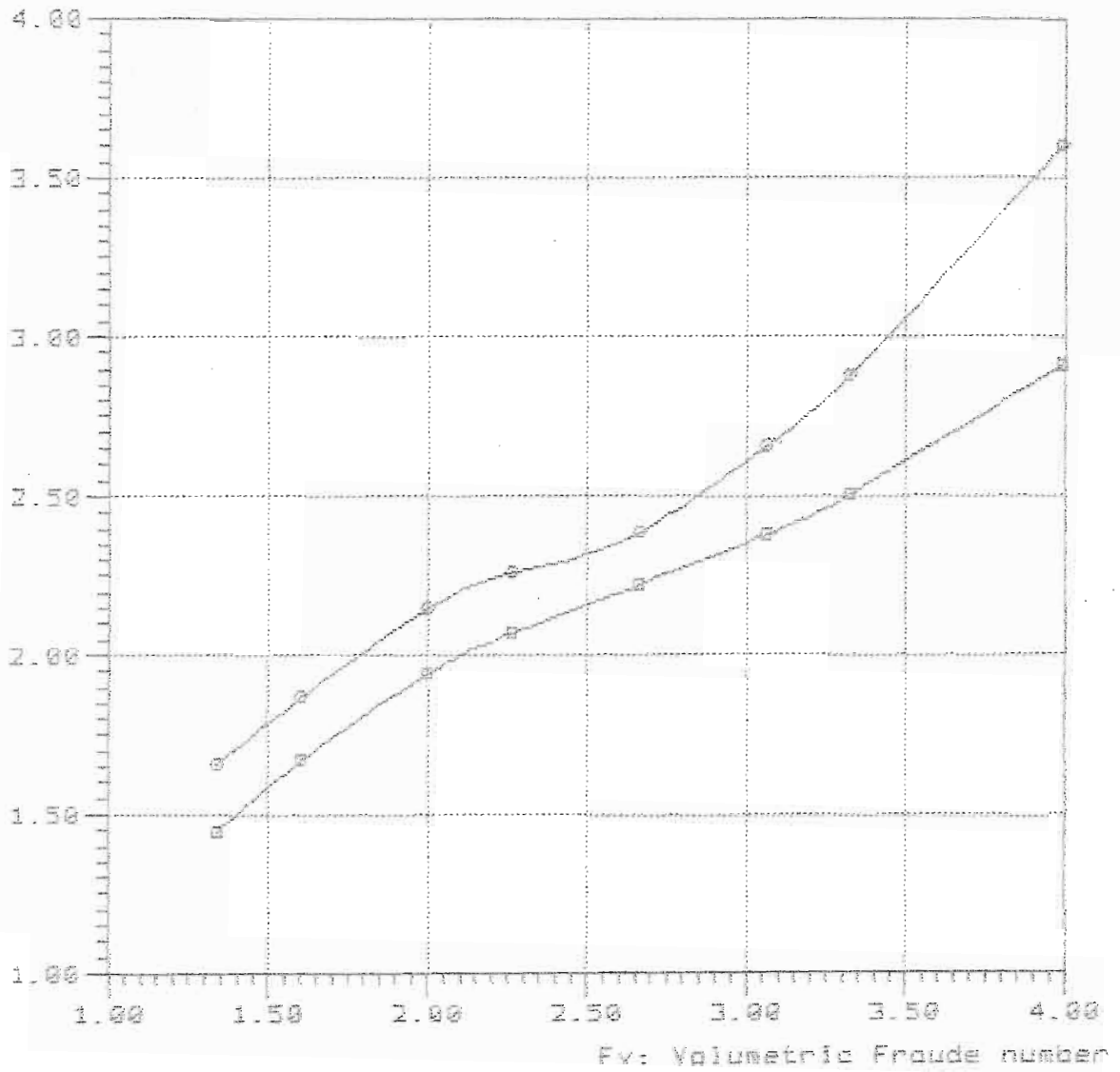


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—○— TMB-470E Lpx/Bpx=4.821 Rp/Vol=7.613 Lpx/Rp=4.829 Lcg/Lpx=0.384 %6Ap 1956

Model	=	4744
Ref	=	SNAME
Friction	=	ATTC Ca=0.0
Lpx	=	3.057 ft
Lwl	=	2.830 ft
Bpx	=	0.995 ft
Ap	=	2.580 sqft
Vcg	=	0.000 ft
Disp.	=	13.95 Lb
Deadrise	=	21.50 degree
Twist Angle	=	18.50 degree
Shaft Angle	=	15.50 degree
Vce	=	0.00 inc
Lpx/Bpx	=	3.072
Lpx/Ap	=	3.622
Ap /Vol	=	7.123
Lpx/Vol	=	5.080
Cvload	=	0.221
Lbload	=	0.034
Disp-Lpx	=	217.992

Rbare: Bare-hull resistance (lbs)

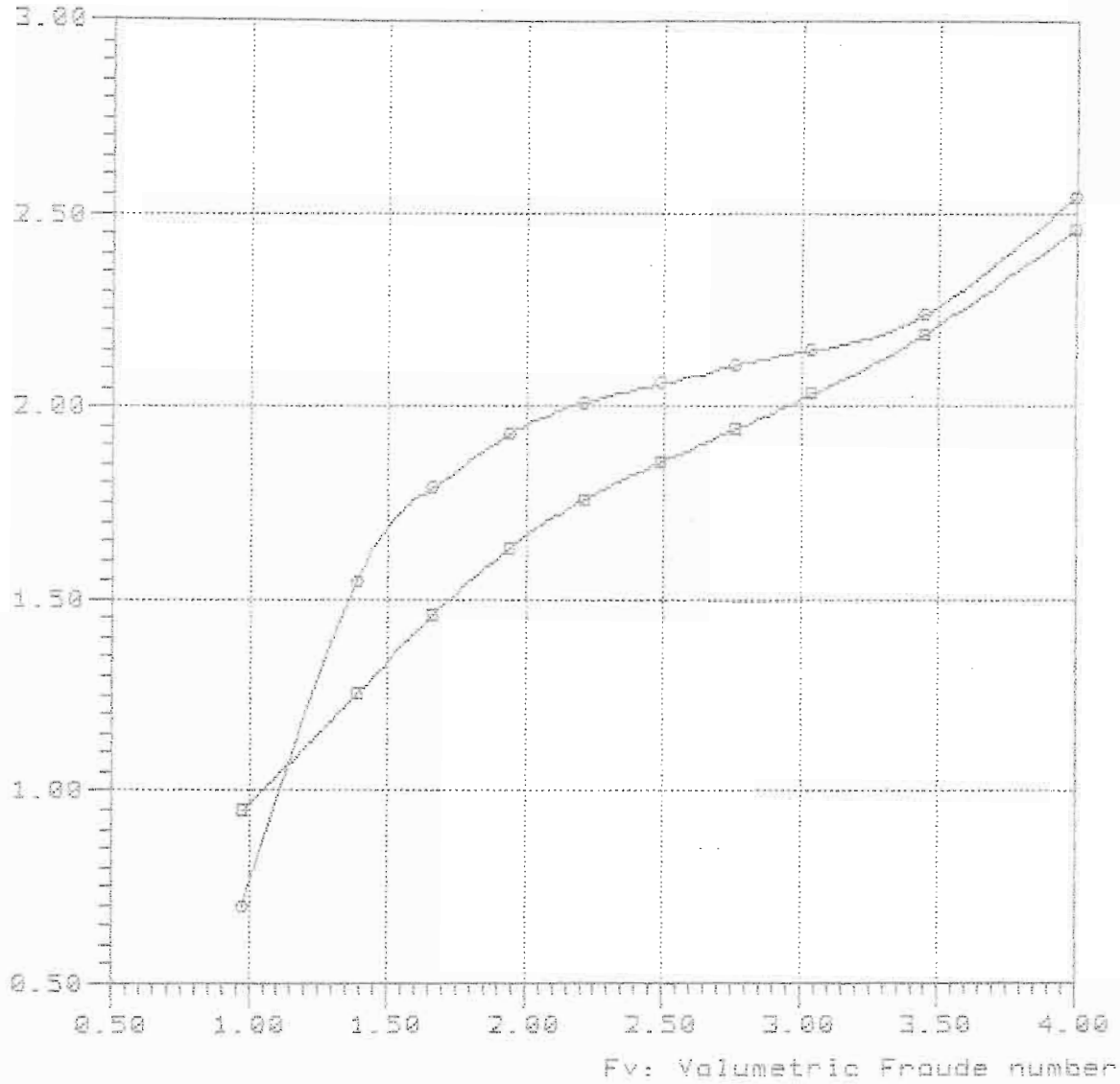


THE-4244 Lpx/Bpx=3.072 Ap/Vol=7.002 Lpx/Ap=3.522 Lcg/Lpx=0.399 %69p 1958

Model	=	4876
Ref	=	SNAME
Friction	=	ATTC Ca=0.0
Lpx	=	3.120 ft
Lwl	=	2.970 ft
Bpx	=	0.890 ft
Ap	=	2.240 sqft
Vcg	=	0.000 ft
Disp.	=	11.26 Lb
Deadrise	=	<b>25.50</b> degree
Twist Angle	=	<b>0.50</b> degree
Shaft Angle	=	10.80 degree
Vce	=	0.00 inc
Lpx/Bpx	=	3.506
Lpx/Ap	=	4.346
Ap /Vol	=	7.133
Lpx/Vol	=	5.569
Cvload	=	0.250
Lbload	=	0.031
Disp-Lpx	=	165.511



Rbare: Bare-hull resistance (lba)



Curve legend

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—○— TMB-4876 Lpx/Box=3.506 Ap/Vol=7.000 Lpx/Ap=4.350 Lcg/Lpx=0.365

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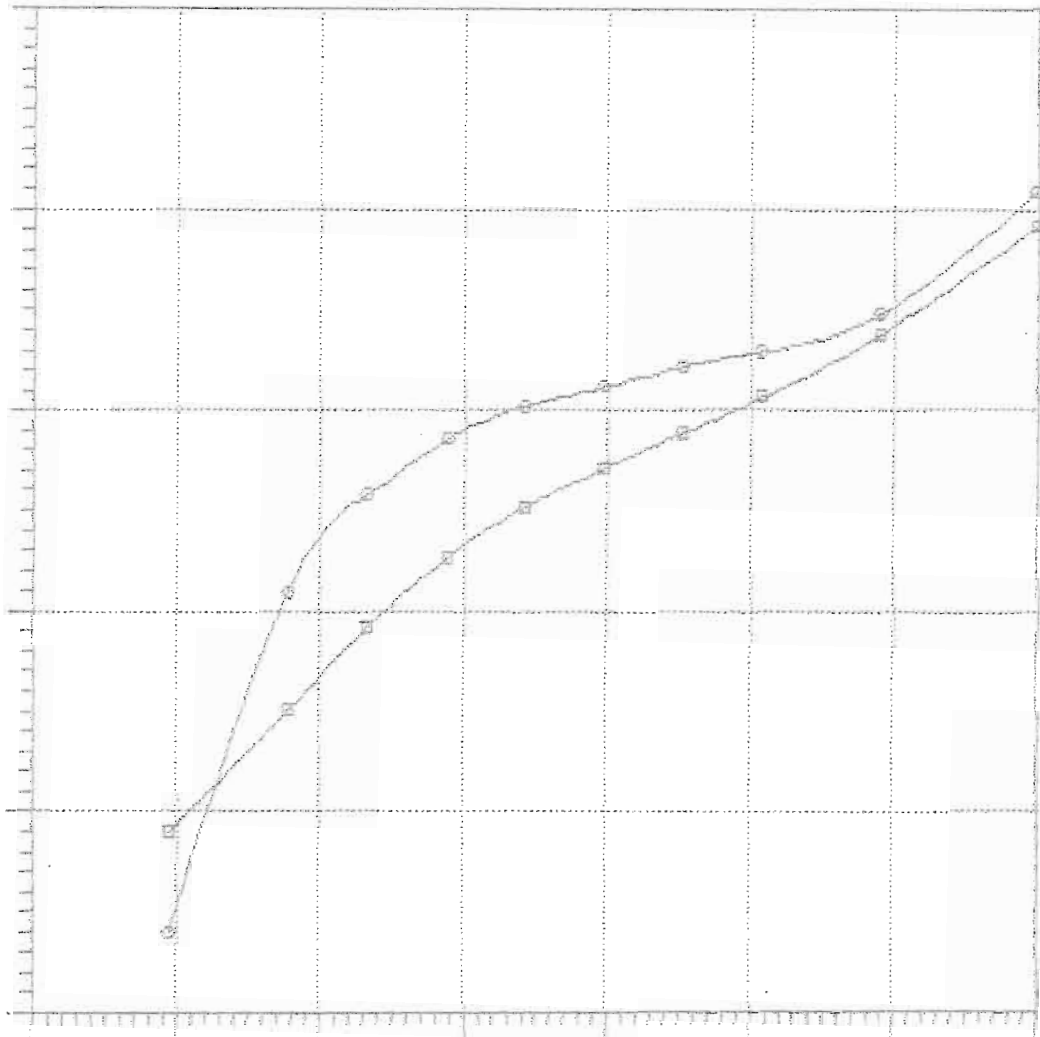
Model = 4958  
Ref = SNAME  
Friction =ATTC Ca=0.0

Lpx = 8.626 ft  
Lwl = 8.420 ft  
Bpx = 1.947 ft  
Ap = 14.000 sqft  
Vcg = 0.000 ft  
Disp. = 179.00 Lb  
Deadrise = 16.40 degree  
Twist Angle= 13.10 degree  
Shaft Angle= 7.71 degree  
Vce = 0.00 inc

Lpx/Bpx = 4.430  
Lpx/Ap = 5.315  
Ap /Vol = 7.052  
Lpx/Vol = 6.124  
Cvload = 0.379  
Lbload = 0.033  
Disp-Lpx = 124.502

4958

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Rbare: Bare-hull resistance (lbs)

