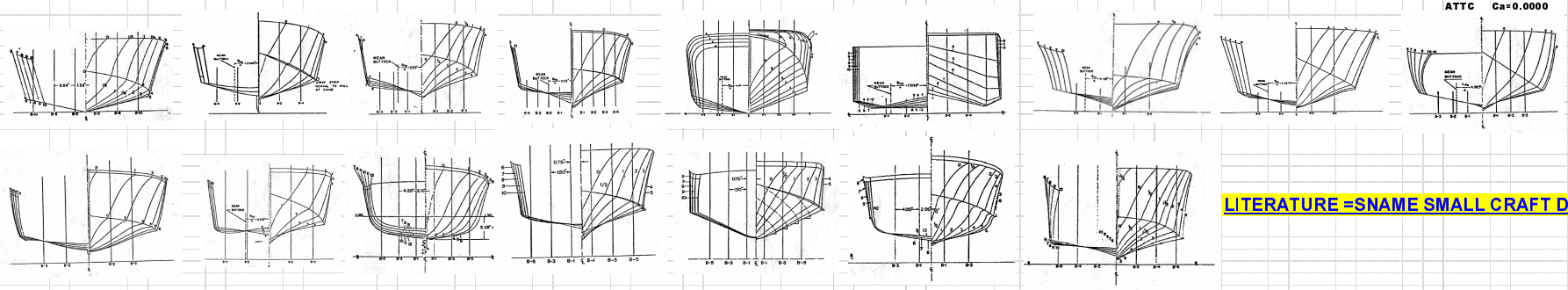
SNAME Small Craft Data Sheets

SNAME Planing Hull Series

Model	Lpx		Lwl		Bpx		Dep		βχ	βτχ	Centroid	Lcg aft of Centroid	Lcg from Transom		Lcg/Lpx	Centerline angle	Ap		Twisted angle	Lpx/Bpx	Ap/Vol	Lpx/Ap	Lpx/Vol	Cv	Vcg/Lpx	Shaft Angle	Lce Transom	
1888	2,568	ft	2,470	ft	0,815	ft	7,670	Lb	21,50	1,60	47,60	-6,00	1,068	ft	0,416	-2,11	1,733	ft^2	19,90	3,15	7,002	3,805	5,162	0,221	----------	10,70	0,000	ft
	0,783	m	0,753	m	0,248	m	3,479	kg					0,326	m			0,1610	m^2									0,0000	m
2387	3,020	ft	2,970	ft	0,750	ft	8,900	Lb	20,00	4,00	45,40	-6,00	1,190	ft	0,394	-2,20	1,921	ft^2	16,00	4,03	7,028	4,748	5,776	0,329	----------	10,80	0,000	ft
	0,920	m	0,905	m	0,229	m	4,037	kg					0,363	m			0,1785	m^2									0,0000	m
3592	8,740	ft	8,480	ft	1,720	ft	167,500	Lb	22,00	6,50	48,30	-6,00	3,697	ft	0,423	0,00	13,536	ft^2	15,50	5,08	6,999	5,643	6,285	0,514	----------	9,00	0,000	ft
	2,664	m	2,585	m	0,524	m	75,978	kg					1,127	m			1,2575	m^2									0,0000	m
3626	7,650	ft	7,480	ft	1,790	ft	129,600	Lb	17,50	7,00	49,00	-6,00	3,290	ft	0,430	-0,90	11,420	ft^2	10,50	4,27	7,006	5,125	5,992	0,353	----------	8,30	0,000	ft
	2,332	m	2,280	m	0,546	m	58,787	kg					1,003	m			1,0610	m^2									0,0000	m
3941	8,662	ft	8,460	ft	1,820	ft	157,300	Lb	19,00	5,00	45,20	-6,00	3,396	ft	0,392	-0,40	12,985	ft^2	14,00	4,76	7,001	5,778	6,361	0,407	----------	8,50	0,310	ft
	2,640	m	2,579	m	0,555	m	71,351	kg					1,035	m			1,2063	m^2									0,0288	m
4310	7,500	ft	7,240	ft	1,980	ft	145,200	Lb	12,75	12,75	44,50	-6,00	2,888	ft	0,385	-1,30	12,310	ft^2	0,00	3,79	7,001	4,569	5,656	0,292	----------	11,33	0,000	ft
	2,286	m	2,207	m	0,604	m	65,863	kg					0,880	m			1,1436	m^2									0,0000	m
4315	7,300	ft	7,230	ft	2,000	ft	145,200	Lb	17,50	6,00	44,70	-6,00	2,825	ft	0,387	-1,50	12,310	ft^2	11,50	3,65	7,001	4,329	5,505	0,283	----------	12,00	0,706	ft
	2,225	m	2,204	m	0,610	m	65,863	kg					0,861	m			1,1436	m^2									0,0656	m
4618	7,395	ft	7,220	ft	1,937	ft	146,200	Lb	16,25	5,25	45,30	-6,00	2,906	ft	0,393	-1,70	12,360	ft^2	11,00	3,82	6,997	4,424	5,564	0,314	----------	11,00	0,000	ft
	2,254	m	2,201	m	0,590	m	66,316	kg					0,886	m			1,1483	m^2									0,0000	m
4708	3,297	ft	3,172	ft	0,820	ft	11,350	Lb	16,25	6,00	44,40	-6,00	1,266	ft	0,384	-1,80	2,251	ft^2	10,25	4,02	7,003	4,829	5,815	0,321	----------	8,80	0,000	ft
	1,005	m	0,967	m	0,250	m	5,148	kg					0,386	m			0,2091	m^2									0,0000	m
4744	3,057	ft	2,830	ft	0,995	ft	13,950	Lb	21,50	5,25	45,90	-6,00	1,220	ft	0,399	-1,50	2,580	ft^2	16,25	3,07	6,996	3,622	5,034	0,221	----------	15,50	0,000	ft
	0,932	m	0,863	m	0,303	m	6,328	kg					0,372	m			0,2397	m^2									0,0000	m
4876	3,120	ft	2,970	ft	0,890	ft	11,260	Lb	25,00	24,50	42,40	-6,00	1,136	ft	0,364	-1,10	2,240	ft^2	0,50	3,51	7,006	4,346	5,518	0,249	----------	10,80	0,000	ft
	0,951	m	0,905	m	0,271	m	5,108	kg					0,346	m			0,2081	m^2									0,0000	m
4958	8,626	ft	8,420	ft	1,947	ft	179,000	Lb	16,50	0,33	43,40	-6,00	3,226	ft	0,374	-0,80	14,000	ft^2	16,18	4,43	6,925	5,315	6,067	0,379	----------	7,71	0,000	ft
	2,629	m	2,566	m	0,593	m	81,194	kg					0,983	m			1,3006	m^2									0,0000	m



LITERATURE =SNAME SMALL CRAFT DATA SHEETS

REPORTS

THE SOCIETY OF NAVAL ARCHITECTS AND MARINE ENGINEERS
74 TRINITY PLACE, NEW YORK, N. Y. 10006

INDEX SHEET D-13

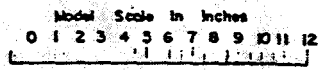
SMALL CRAFT DATA SHEETS

Sheet No.	Craft	Appendages	Length/Beam Ratio	Type of Section Shape (Forward, Aft)
1	Tentative Parent for Planing Boat Series	chine spray strips	4.09	convex, straight
2	USN 45-ft Utility Boat	skeg and chine spray strips	4.02	convex
3	USN 26-ft Personnel Boat	none	4.02	concave
4	USN 33-ft Personnel Boat	skeg	3.15	concave
5	USN 80-ft PT-8	chine spray strips	5.07	concave, straight
6	Sea Sled Design for 43-ft Aircraft Rescue Boat	none	3.23	inverted vee
7	70ft Elco PT Boat (Scott-Paine Design)	chine spray strips	4.27	concave
8	Annapolis Yacht Yard Design for 76-ft PT Boat	chine spray strips	4.76	inverted bell
9	"Monohedron" Design for 43-ft Aircraft Rescue Boat	chine spray strips	3.78	concave, straight
10	John Hacker Design for 43-ft Aircraft Rescue Boat	skeg and chine spray strips	3.64	inverted bell
11	USN 40-ft Landing Craft Personnel	chine spray strips	3.82	concave
12	USN 50-ft Utility Boat	none	--	round bottom
13	USN 52-ft Landing Craft Swimmer Reconnaissance	chine spray strips	4.03	concave, convex
14	Ray Hunt Design for 52-ft Landing Craft Swimmer Reconnaissance	chine and bottom spray strips	3.51	straight (deep vee)
15	USN 41-ft Personnel Boat	chine spray strips	--	round bilge
16	USN 63-ft Aircraft Rescue Boat (Dair Long Design)	chine spray strips	4.43	concave

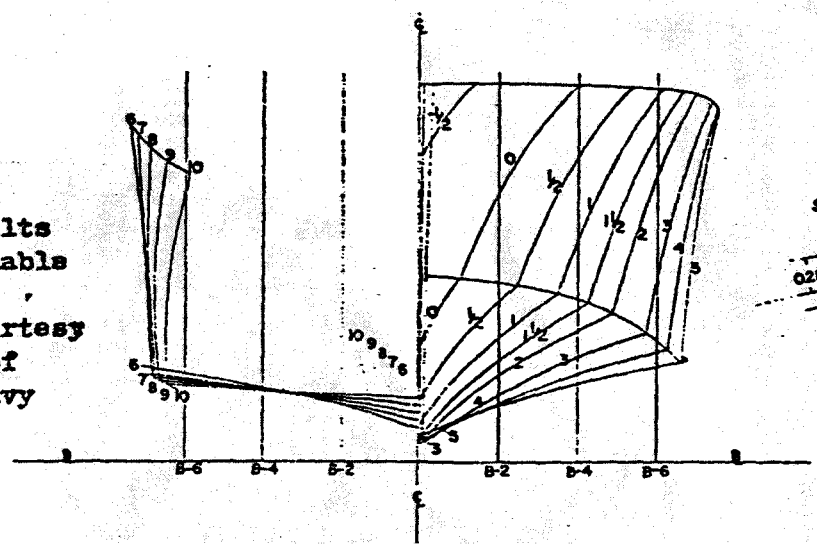
S.N.A.M.E. Small Craft Data Sheet No. 16

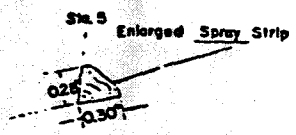
Hard-chine boat, $L_P/B_{PX} = 4.43$

TMB Model No. 4958

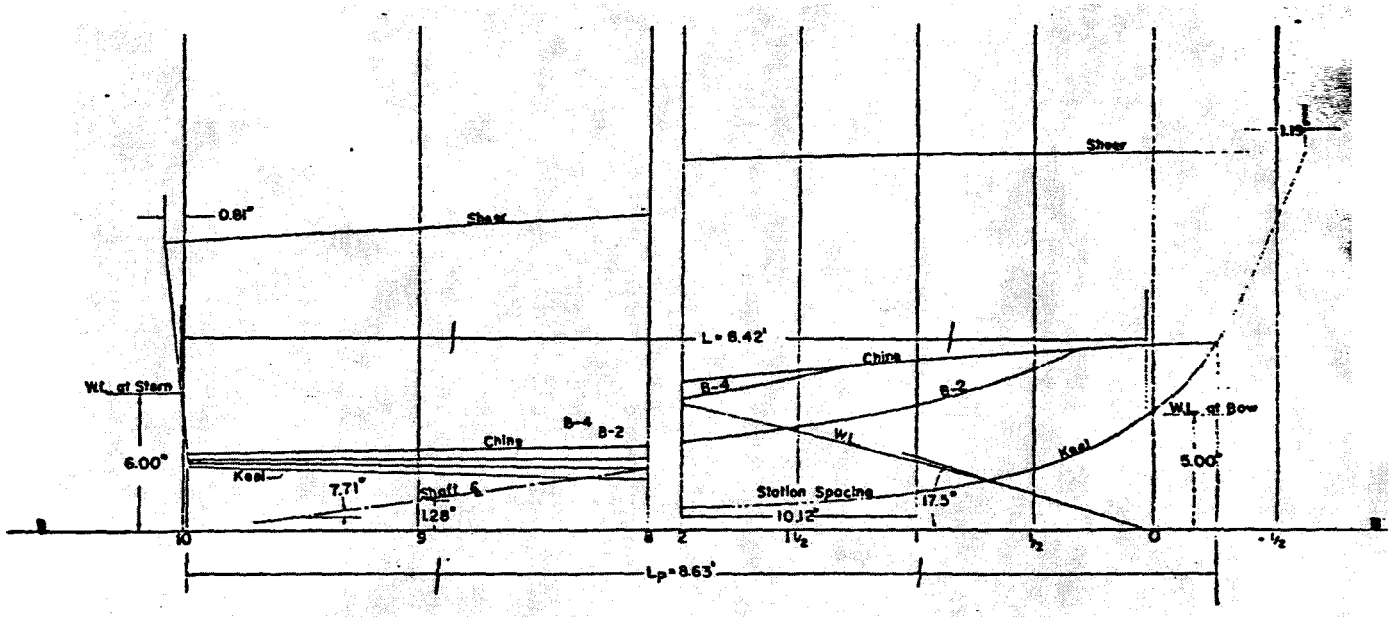


These lines and model test results were made available to the Society through the courtesy of the Bureau of Ships, U. S. Navy Department.





Spray Strip Extends Along Chine From Sta. 0.41 To Sta. 5.82



MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat: 63' Aircraft Rescue Boat
Laboratory: DTMB(Langley Field, Va.)
Water Temperature: 65° F
Basin: High-Speed
Specific Weight: 63.35 lb/ft3
Model Number: 4958
Basin Size: 2880 x 24 x 12 ft
Model Material: Wood
Appendages: Spray Strips
Model Length: 8.63 ft
Model Finish: Paint
Test: 1 Date: June 1963
Turbulence Stimul.: None

Remarks: Model was towed in the shaft line shown in the profile drawing. Tests were conducted in brackish water having a specific gravity of 1.015 and kinematic viscosity of 1.1456×10^{-5} ft^2/sec.

Planing Bottom Dimensions and Coefficients

L_P	8.626 ft
B_{PX}	1.947 ft
B_{PA}	1.623 ft
A_P	14.000 ft^2
$A_P/\nabla^{2/3}$	7.000
$L_P/\nabla^{1/3}$	6.100
L_P/B_{PA}	5.315

LWL Dimensions and Coefficients

L	
B_X	
H	
L/B_X	
$L/\nabla^{1/3}$	
C_B	
C_P	
C_W	

Model Test Condition

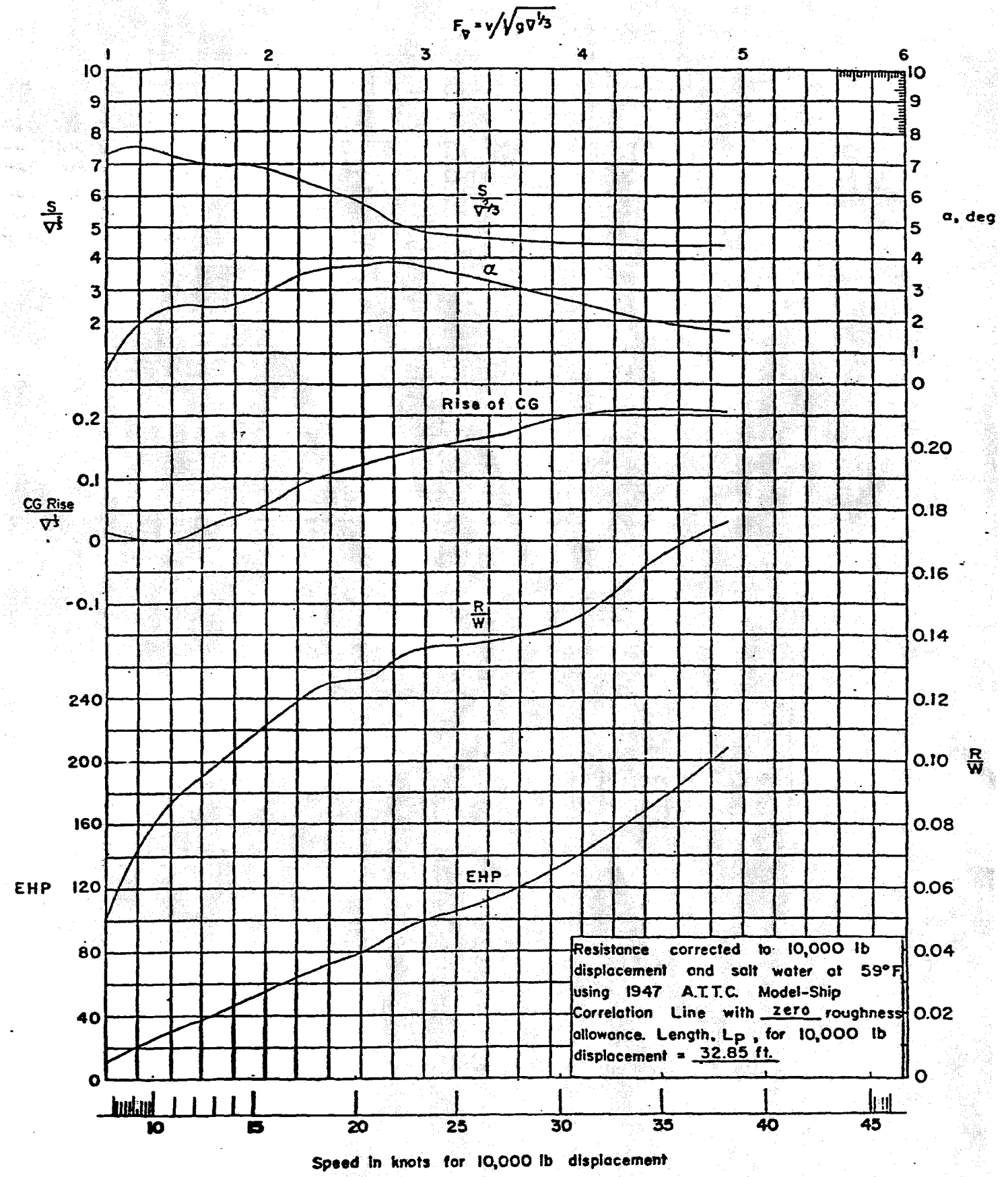
Δ, lb: 179 τ_0: 0.38 deg α_0: −0.42 deg

LCG location 3.24 ft forward of Station 10
(LCG location 6 percent L_P aft of centroid of A_P)

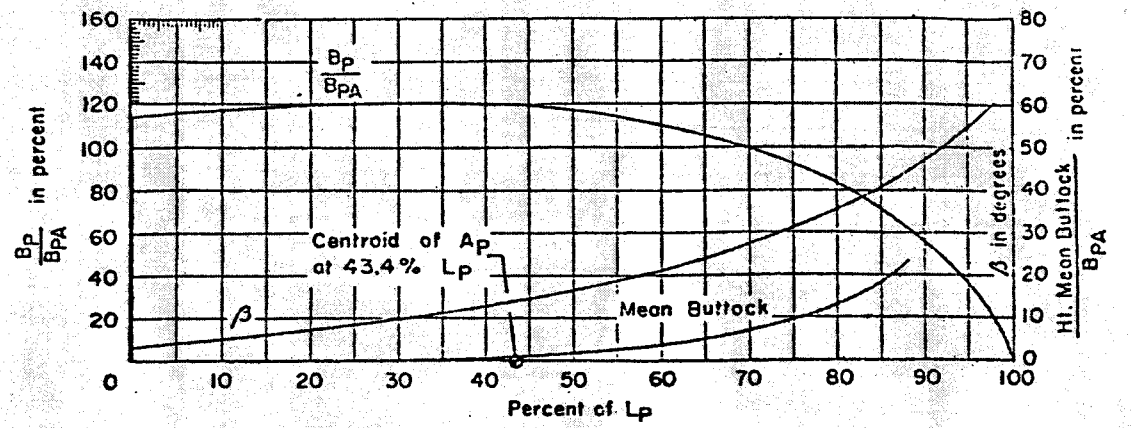
Model Test Results

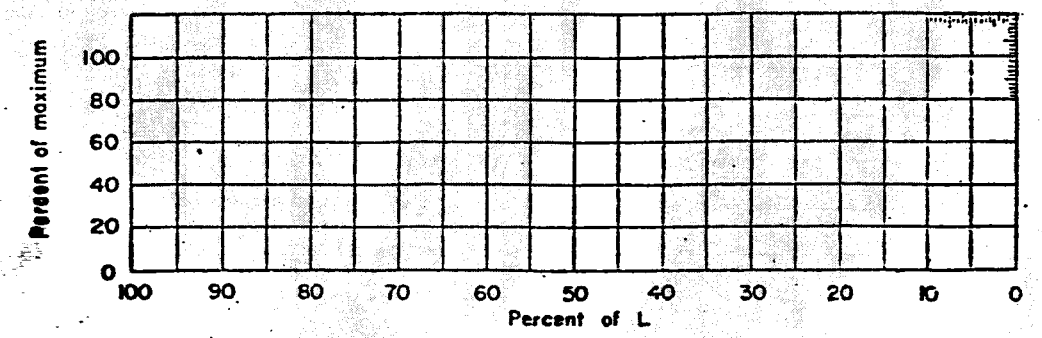
V, knots	R_t, lb	Solid water wetted lengths fwd of O% L_P, ft		Spray at chine fwd of O% L_P, ft	Rex10^{-6}	S, ft^2	10^3 C_t	Change of trim, deg	CG rise, in.	F_∇
		keel	chine							
1.84	1.00	8.43	5.80	5.90	1.925	14.58	7.265	0.12	0	0.48
3.08	4.26	8.42	5.70	5.70	3.204	14.48	11.074	0.12	-0.18	0.77
3.91	8.75	8.40	5.60	5.60	4.032	14.54	14.059	0.57	-0.27	0.98
4.74	13.42	8.22	6.70	6.80	5.209	15.40	13.851	2.20	-0.50	1.18
5.62	16.70	8.05	6.10	6.50	5.866	14.77	12.746	3.00	-0.45	1.40
6.57	18.58	7.92	5.80	6.20	6.646	14.26	10.755	2.88	0.13	1.64
7.40	20.55	7.80	5.40	6.00	7.201	14.13	9.470	3.12	0.25	1.85
8.29	22.50	7.60	5.20	5.70	7.821	13.72	8.512	3.50	0.60	2.07
8.88	23.68	7.40	4.95	5.30	8.085	13.23	8.090	4.00	1.05	2.22
9.41	24.80	7.05	4.70	5.10	8.154	12.59	7.929	4.13	1.25	2.35
10.42	25.28	6.75	4.30	4.70	8.487	11.77	7.051	4.20	1.50	2.60
11.49	27.10	6.40	4.00	4.40	8.805	9.84	7.445	4.30	1.80	2.87
13.32	28.01	6.25	3.70	4.10	9.771	9.40	5.990	3.75	2.23	3.33
15.46	30.25	6.27	3.50	3.80	11.214	9.22	4.824	3.12	2.60	3.89
17.17	33.64	6.30	3.20	3.60	12.024	8.96	4.540	2.63	2.97	4.29
19.55	38.20	6.45	3.05	3.40	13.806	8.96	3.910	2.13	3.14	4.92
21.14	42.68	6.60	2.80	3.20	14.646	8.87	3.841	1.88	3.21	5.28

PERFORMANCE CHARACTERISTICS



FORM CHARACTERISTICS





Notation

As far as possible the notation used is consistent with the Society's "Explanatory Notes for Resistance and Propulsion Data Sheets" (Technical and Research Bulletin No. 1-13). Exceptions and additions are listed below. The subscript P designates the planing bottom which is the portion of the bottom bounded by the chines and transom.

A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

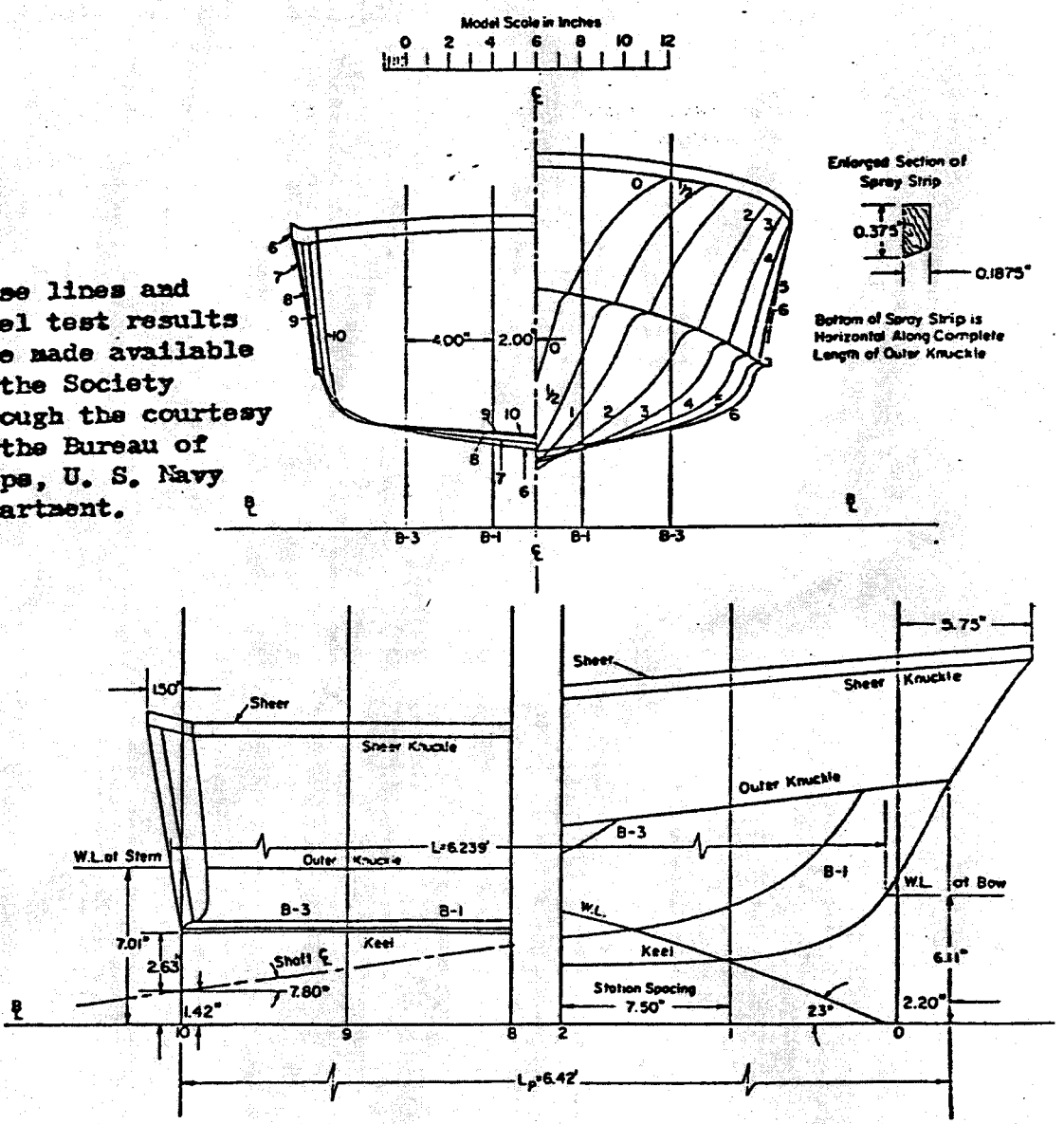
Subscript O indicates value when hull is at rest in water.

S.N.A.M.E. Small Craft Data Sheet No. 15

Round-bottom boat, $L/B_X = 4.01$

TMB Model No. 4943

These lines and model test results were made available to the Society through the courtesy of the Bureau of Ships, U. S. Navy Department.



MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat 41 ft Personnel Boat
Model Number 4943
Appendages Spray Strip

Laboratory DTMB(Langley Field, Va.)
Basin High-Speed
Basin Size 2880X24X12 ft.
Model Length 6.42 ft
Test 8 Date 10 Dec 62

Water Temperature 49°
Specific Weight 63.2 lb/ft3
Model Material Wood
Model Finish Paint
Turbulence Stimul. none

Remarks: Model was towed in the shaft line shown in the profile drawing.

Planing Bottom Dimensions and Coefficients

L_P 6.417 ft
B_{PX} 1.704 ft
B_{PA} 1.393 ft
A_P 8.945 ft
$A_P/\nabla^{2/3}$ 7.000
$L_P/\nabla^{1/3}$ 5.677
L_P/B_{PA} 4.607

LWL Dimensions and Coefficients

L 6.239 ft
B_X 1.557 ft
H_X 0.241 ft
L/B_X 4.006
$L/\nabla^{1/3}$ 5.517
C_B 0.618
C_P 0.748
C_W 0.812

Model Test Condition

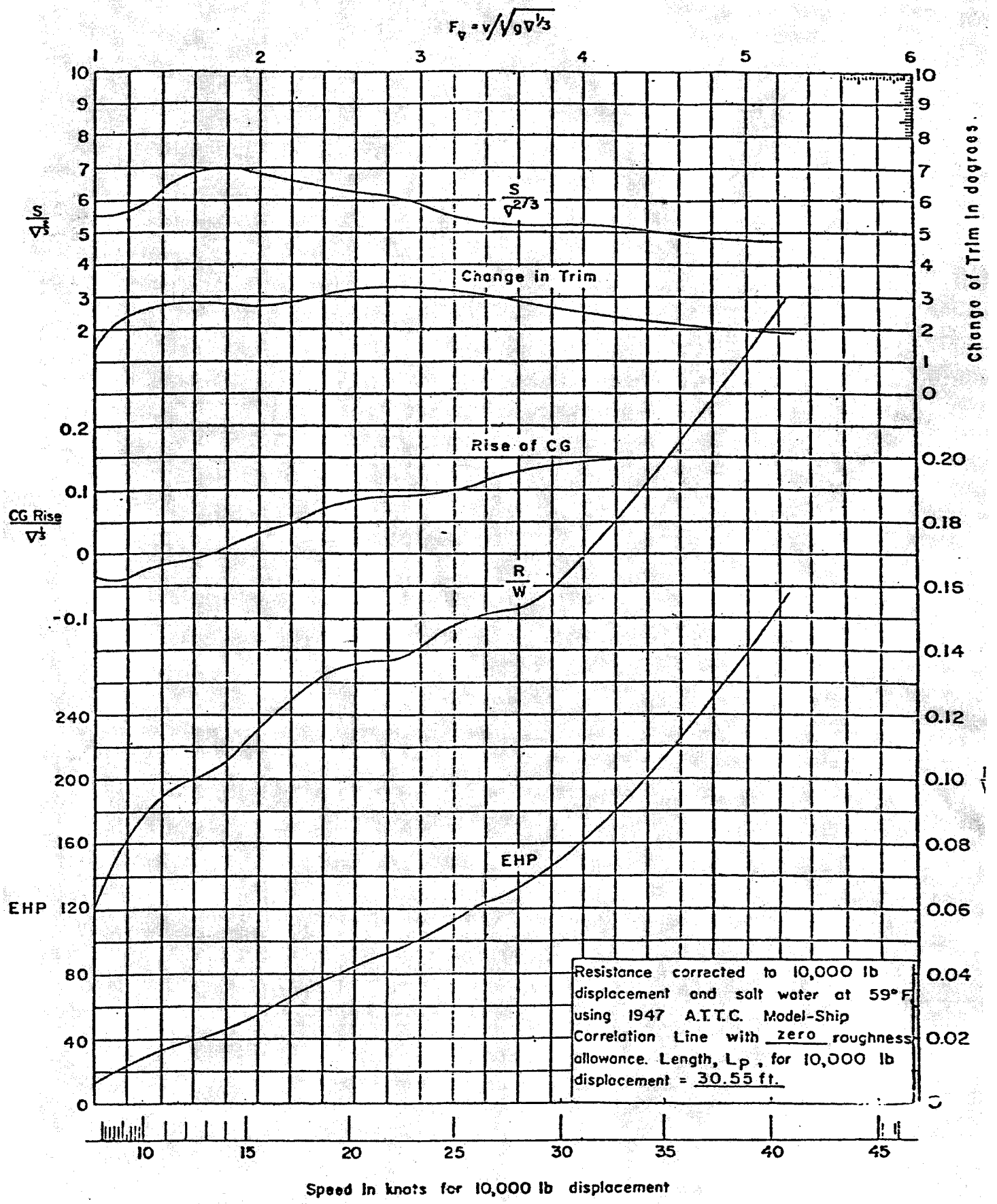
Δ, lb 91.4 τ_0 0.67 deg bystern α_0 —

LCG location 2.42 ft forward of Station 10
(LCG location 6 percent L_P aft of centroid of Ap)

Model Test Results

V, knots	R_t, lb	Wetted length of keel, ft	Wetted length of chine, ft	Rex10^{-6}	S, ft^2	10^3 C_t	Change of trim, deg	CG rise, in.	F_∇
3.55	5.4	6.2	1.5	1.594	7.20	21.203	1.19	−0.42	0.99
4.15	7.5	6.13	1.6	1.864	7.22	21.576	2.21	−0.54	1.16
4.68	8.7	6.04	1.8	2.137	8.42	16.849	2.61	−0.29	1.31
5.27	9.8	6.0	2.3	2.548	7.72	16.310	2.84	−0.17	1.47
6.10	10.3	6.0	3.8	3.482	9.05	10.918	2.82	−0.01	1.71
7.02	11.7	5.95	3.7	3.941	8.91	9.518	2.70	0.41	1.96
8.03	13.1	5.8	3.5	4.347	8.61	8.434	2.92	0.68	2.24
8.65	13.9	5.7	3.2	4.483	8.29	8.006	3.08	1.03	2.42
10.07	14.7	5.4	3.1	4.985	7.90	6.553	3.32	1.23	2.82
10.96	15.5	5.32	2.6	5.055	7.40	6.229	3.35	1.32	3.06
11.96	16.4	5.1	2.3	5.157	6.91	5.920	3.13	1.50	3.34
13.27	17.3	5.1	2.2	5.641	6.81	5.153	2.78	1.86	3.71
14.63	19.8	5.15	2.1	6.169	6.78	4.872	2.52	1.97	4.09
16.58	23.4	5.20	1.6	6.569	6.40	4.746	2.19	2.00	4.63
18.72	28.6	5.37	1.3	7.261	6.23	4.679	1.91	2.04	5.23

PERFORMANCE CHARACTERISTICS



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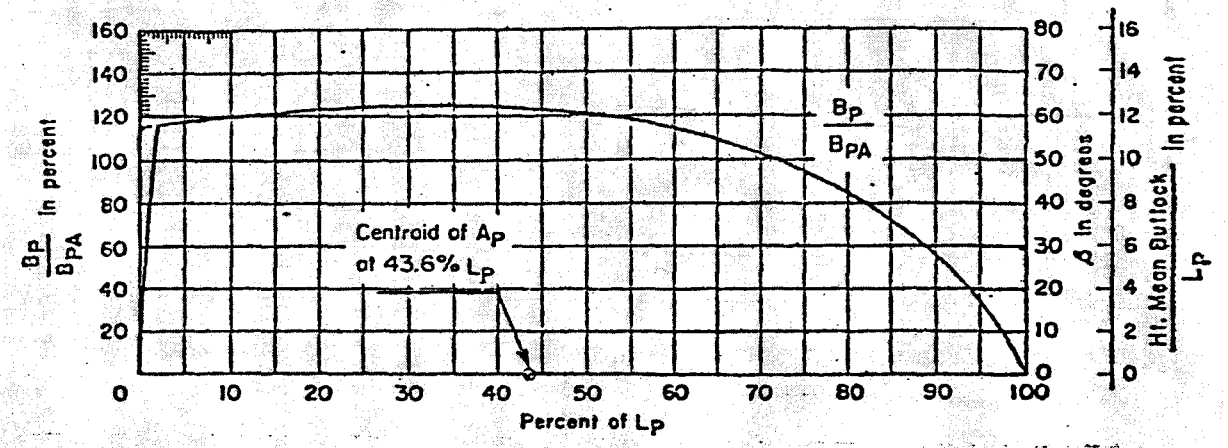

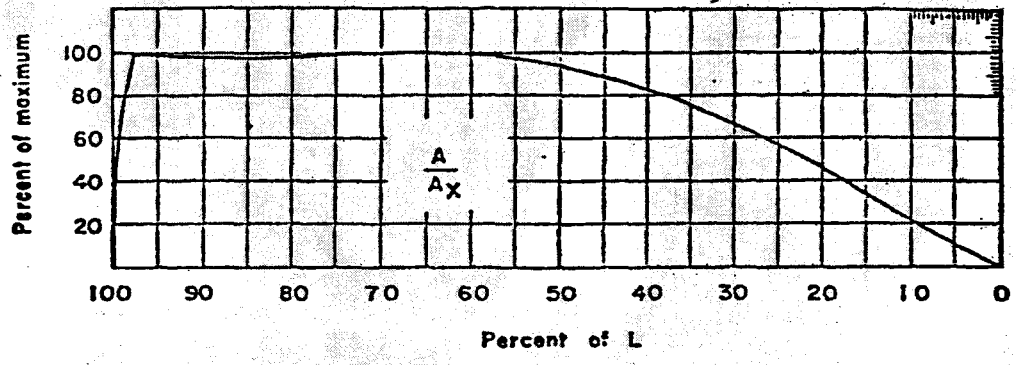

Notation

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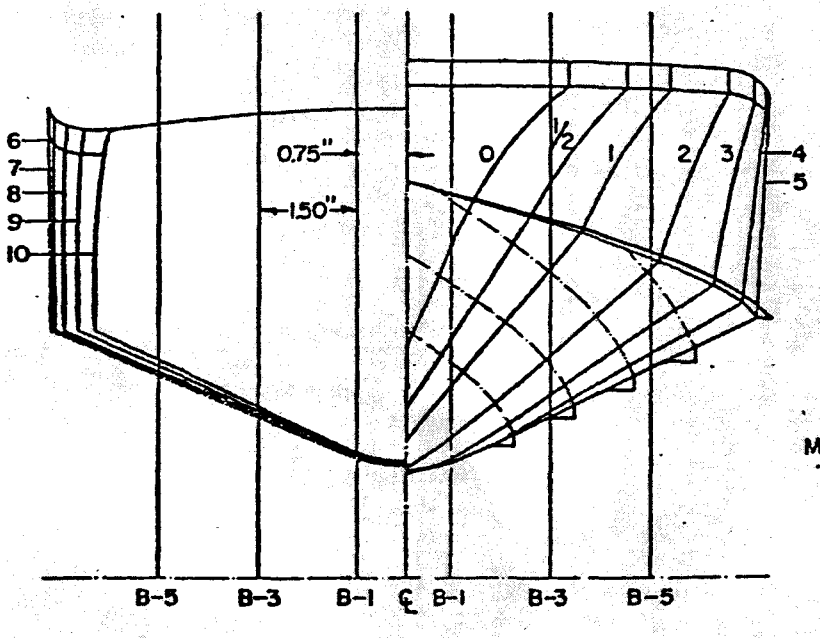
A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

Subscript *o* indicates value when hull is at rest in water.

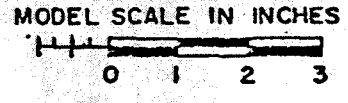
S.N.A.M.E. Small Craft Data Sheet No. 14

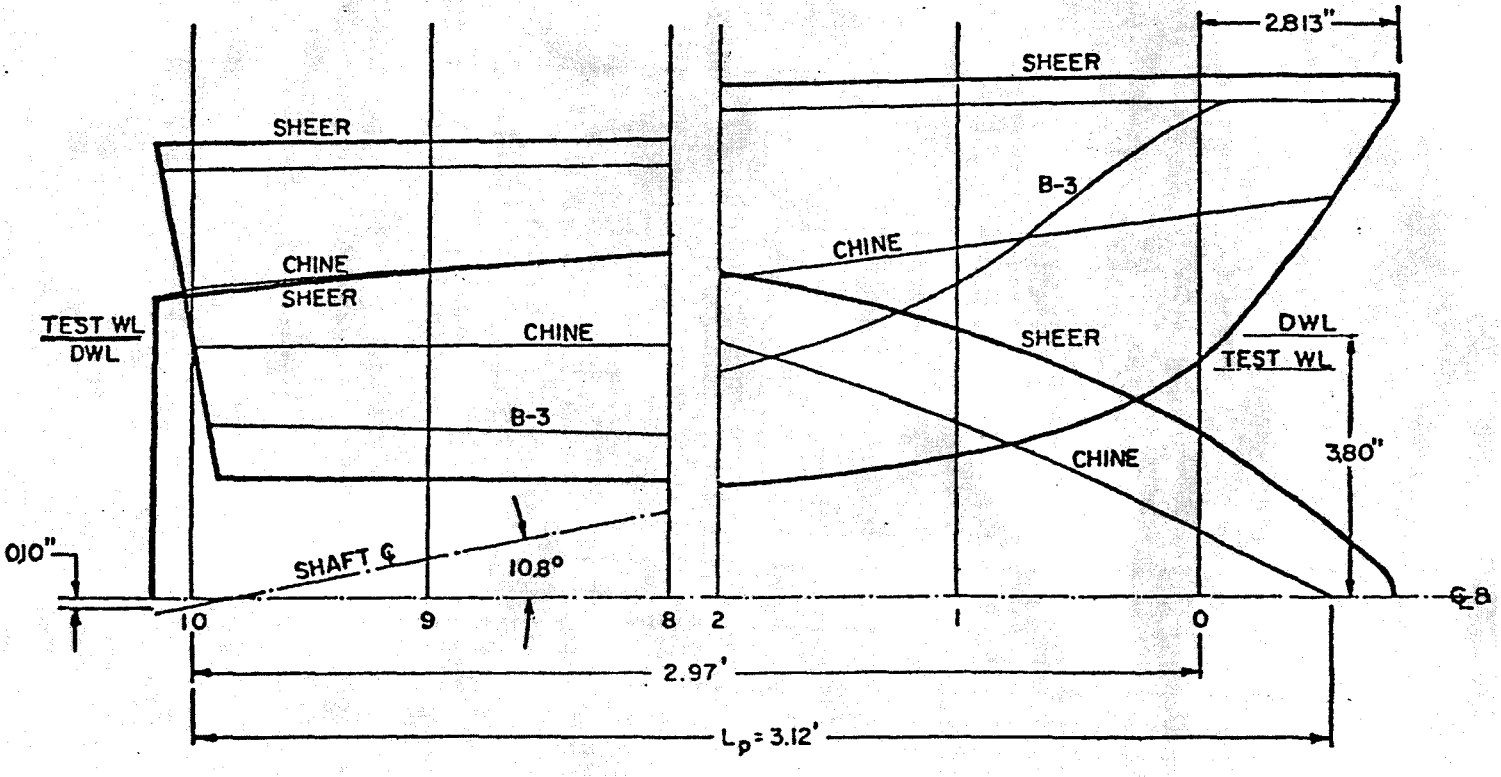
Hard-chine boat, $L_P/B_{PX} = 3.51$

TMB Model No. 4876



These lines and model test results were made available to the Society through the courtesy of the Bureau of Ships, U. S. Navy Department.





MODEL PARTICULARS, TEST CONDITIONS, ...

Ray Hunt Design for 52-ft LCSR

Laboratory Davidson Laboratory

Basin Tank No. 1

Basin Size 100'x9'x4½'

Model Length 3.25 ft.

Test 1B Date 28 Mar 61

Water Temperature 70.5°

Specific Weight 62.3 lb/ft³

Model Material Balsa

Model Finish Resin and paint

Turbulence Stimul. .04" strut

el Number DTMB 4876

endages Spray strips

Remarks: Model was towed in the shaft line shown in the profile drawing.

Planing Bottom Dimensions and Coefficients

L_P	3.12 ft
B_{PX}	0.89 ft
B_{PA}	0.72 ft
A_P	2.24 ft²
$A_P/\nabla^{2/3}$	7.00
$L_P/\nabla^{1/3}$	5.51
L_P/B_{PA}	4.33

LWL Dimensions and Coefficients

L	
B_X	
H	
L/B_X	
$L/\nabla^{1/3}$	
C_B	
C_P	
C_W	

Model Test Condition

Δ, lb 11.26 τ_0 .80° α_0 .80°

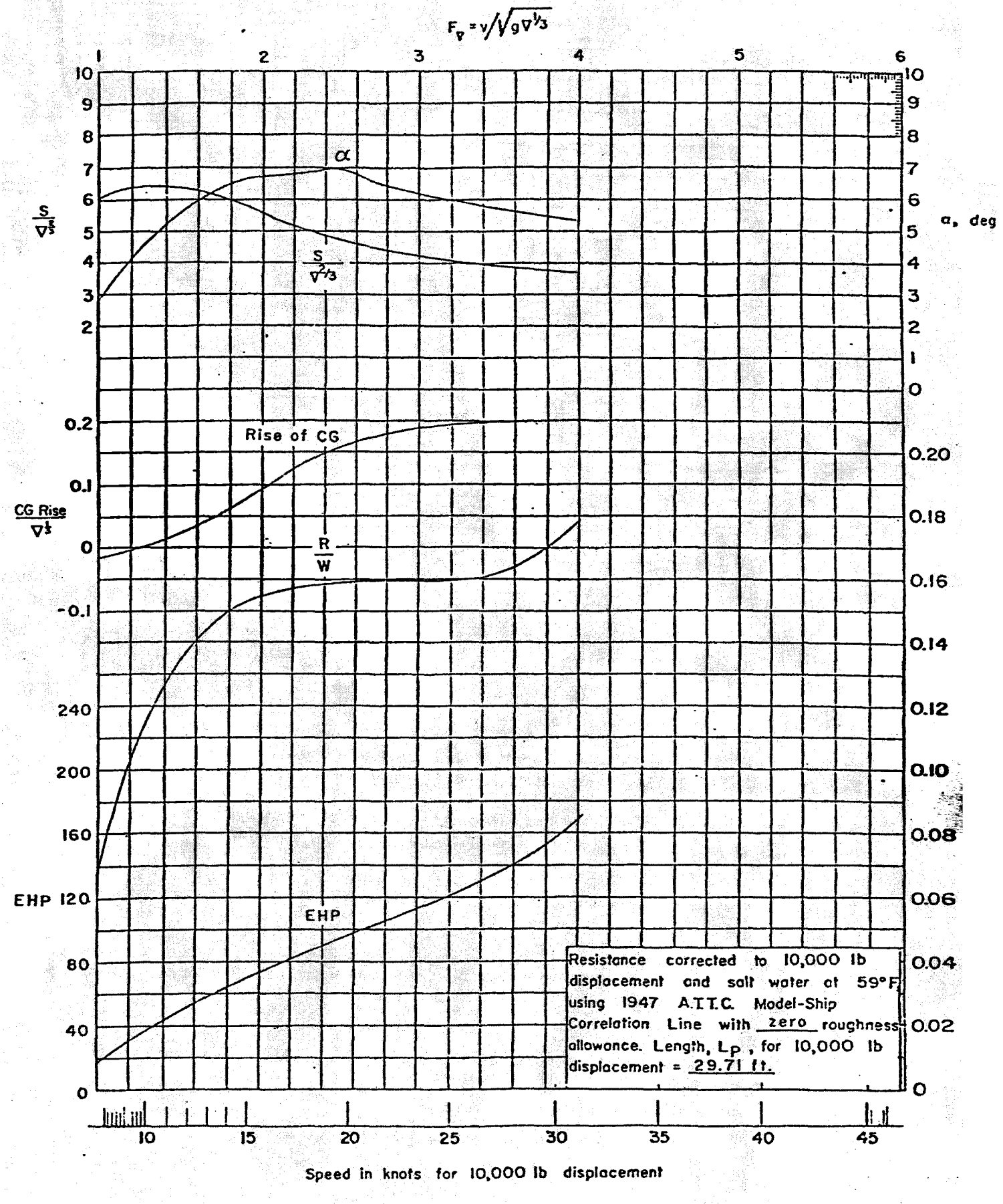
LCG location 1.14' forward of Station 10

(LCG location 6 percent L_P aft of centroid of A_P)

Model Test Results

V, knots	R_T, lb	Wetted length of keel, ft	Wetted length of chine, ft	Rex10^{-6}	S, ft²	10^3 C_f	Change of trim, deg	CG rise, in.	F_∇
2.463	.700	2.96	1.00	1.174	1.90	21.98	1.4	−.12	.975
3.505	1.545	2.62	1.71	1.479	2.07	21.98	4.3	.09	1.387
4.201	1.791	2.50	1.58	1.691	1.96	18.75	5.4	.31	1.662
4.896	1.928	2.42	1.42	1.908	1.84	15.83	5.9	.57	1.937
5.583	2.011	2.17	1.25	1.950	1.64	14.24	6.0	.89	2.209
6.283	2.059	2.08	1.17	2.104	1.55	12.19	6.2	1.08	2.486
6.974	2.107	2.00	1.04	2.246	1.45	10.82	5.7	1.16	2.760
7.669	2.146	1.96	0.92	2.420	1.37	9.636	5.4	1.29	3.035
8.710	2.240	1.92	0.79	2.693	1.29	8.284	5.0	1.34	3.447
9.406	2.365	1.87	0.71	2.832	1.22	7.928	4.8	1.35	3.722
10.097	2.544	1.87	0.67	3.041	1.21	7.462	4.6	1.36	3.996

PERFORMANCE CHARACTERISTICS



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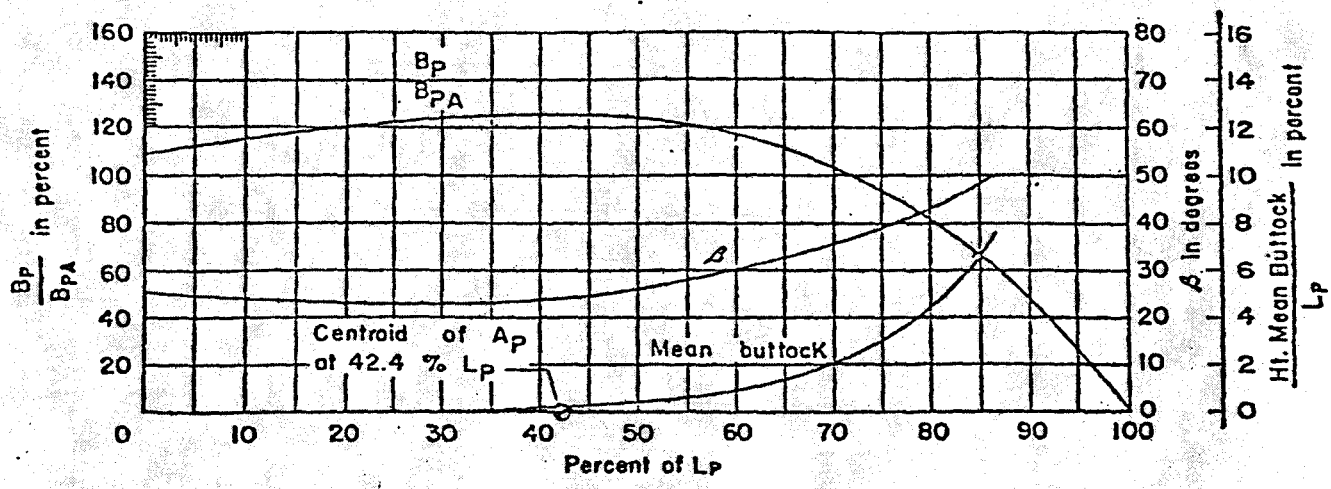
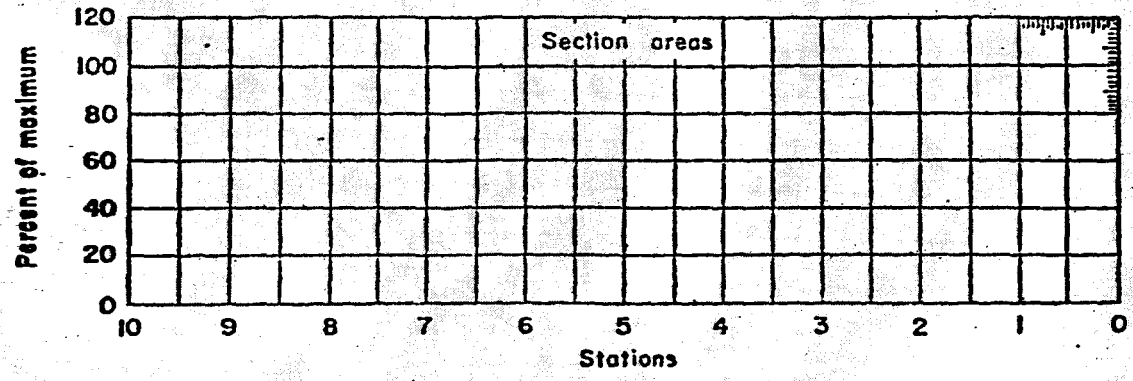




Notation

As far as possible the notation used is consistent with the Society's "Explanatory Notes for Resistance and Propulsion Data Sheets" (Technical and Research Bulletin No. 1-13). Exceptions and additions are listed below. The subscript P designates the planing bottom which is the portion of the bottom bounded by the chines and transo

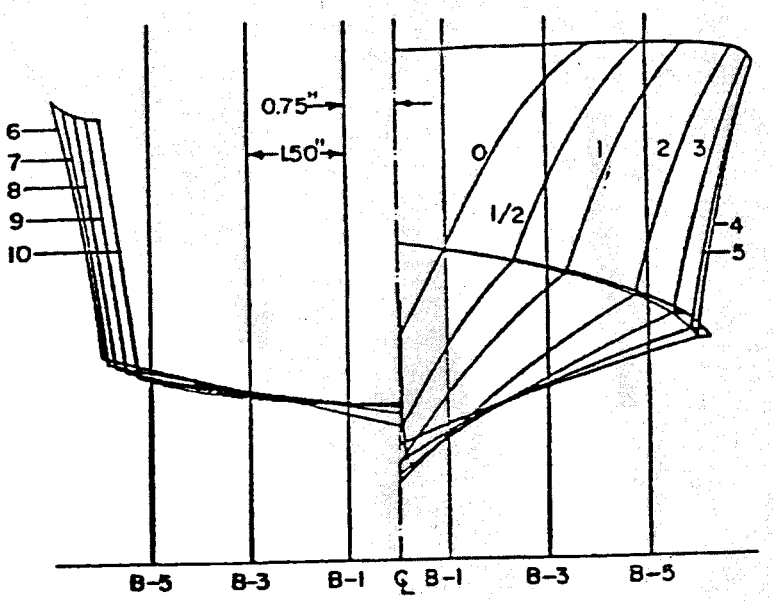
A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded)..
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

Subscript o indicates value when hull is at rest in water.

S.N.A.M.E. Small Craft Data Sheet No. 13

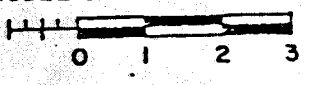
Hard-chine boat, $L_P/B_{PX} = 4.03$

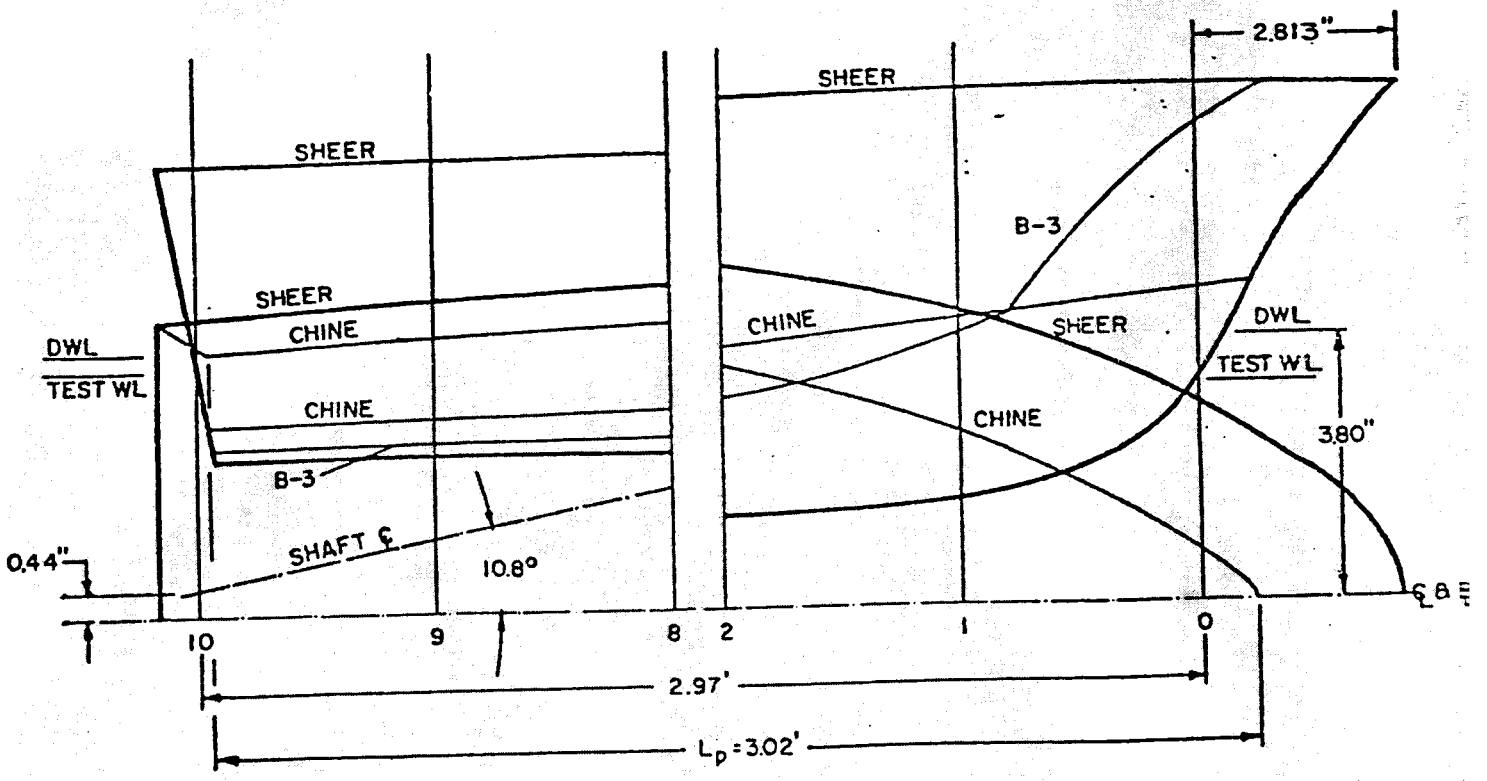
DL Model No. 2387



These lines and model test results were made available to the Society through the courtesy of the Bureau of Ships, U. S. Navy Department.

MODEL SCALE IN INCHES





MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

of 52-ft. LCSR	Laboratory DAVIDSON LABORATORY	Water Temperature	70 deg.
	Basin Tank No. 1	Specific Weight	62.3 lb/ft^3
dal Number DL 2387	Basin Size 100'x9x4-1/2	Model Material	Pine
pendages Spray strips	Model Length 3.25 ft.	Model Finish	Varnish
	Test 1-E Date 12 Jan.1961	Turbulence Stimul.	.04" Strut

Remarks: Model was towed in the shaft line shown in the profile drawing.

Planing Bottom Dimensions and Coefficients

L_P	3.02 ft
B_{PX}	0.75 ft
B_{PA}	0.636 ft
A_P	1.921 ft^2
$A_P/\nabla^{2/3}$	7.00
$L_P/\nabla^{1/3}$	5.77
L_P/B_{PA}	4.75.

LWL Dimensions and Coefficients

L	
B_X	
H	
L/B_X	
$L/\nabla^{1/3}$	
C_B	
C_P	
C_W	

Model Test Condition

Δ, lb 8.90 τ_0 .66° α_0 .66°

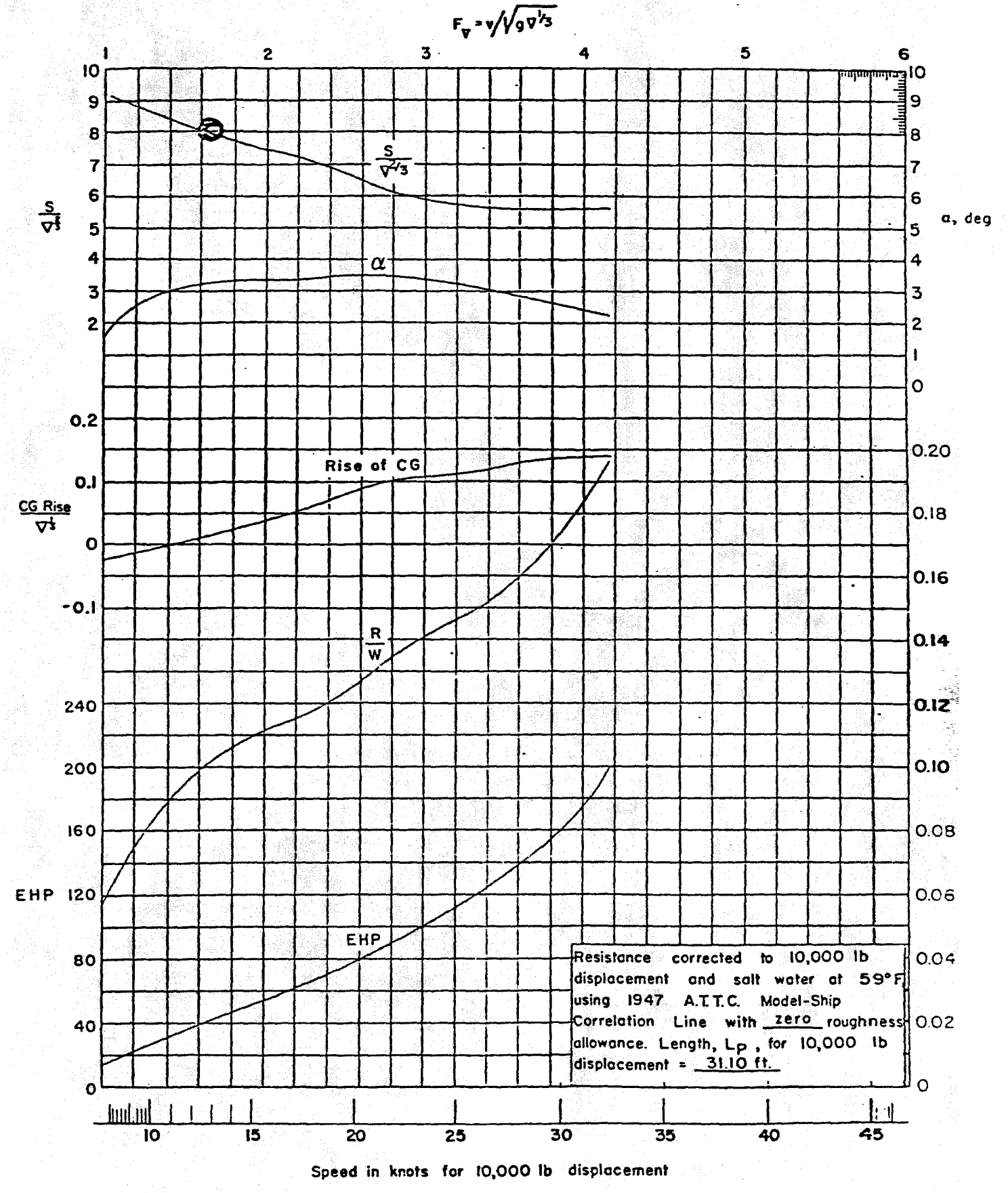
LCG location 1.212' forward of Station 10

(LCG location 6.0 percent L_P aft of centroid of A_P)

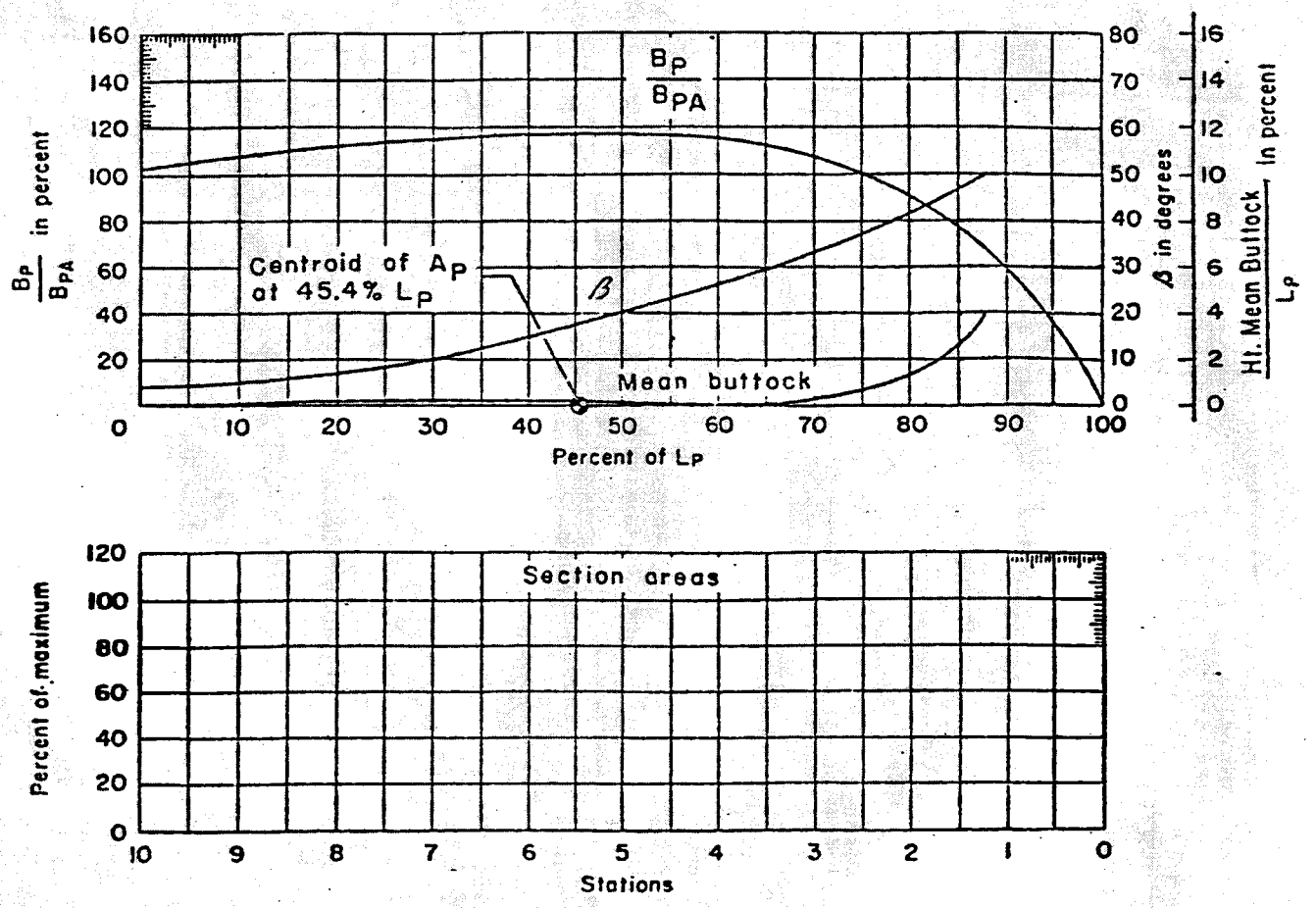
Model Test Results

V, knots	R_t, lb	Wetted length of keel, ft	Wetted length of chine, ft	Rex10^{-6}	S, ft^2	10^3 C_f	Change of trim, deg	CG rise, in.	F_∇
2.463	.59	2.96	3.02	1.168	2.52	13.97	.93	-.17	1.013
3.855	1.030	2.87	2.00	1.772	2.22	11.30	2.60	+.06	1.586
4.896	1.218	2.83	1.87	2.218	2.05	8.99	2.68	+.23	2.013
6.283	1.432	2.79	1.58	2.806	1.80	7.32	2.90	+.54	2.583
6.974	1.559	2.75	1.42	3.070	1.64	7.08	2.76	+.55	2.868
7.669	1.688	2.75	1.33	3.377	1.60	6.49	2.68	+.68	3.155
8.015	1.762	2.71	1.29	3.478	1.57	6.32	2.38	+.76	3.297
8.710	1.908	2.71	1.25	3.779	1.56	5.83	2.30	+.79	3.582
9.406									
10.097	2.389	2.71	1.21	4.381	1.54	5.51	1.63	+.86	4.153

PERFORMANCE CHARACTERISTICS



FORM CHARACTERISTICS



Notation

As far as possible the notation used is consistent with the Society's "Explanatory Notes for Resistance and Propulsion Data Sheets" (Technical and Research Bulletin No. 1-13). Exceptions and additions are listed below. The subscript P designates the planing bottom which is the portion of the bottom bounded by the chines and transom.

A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

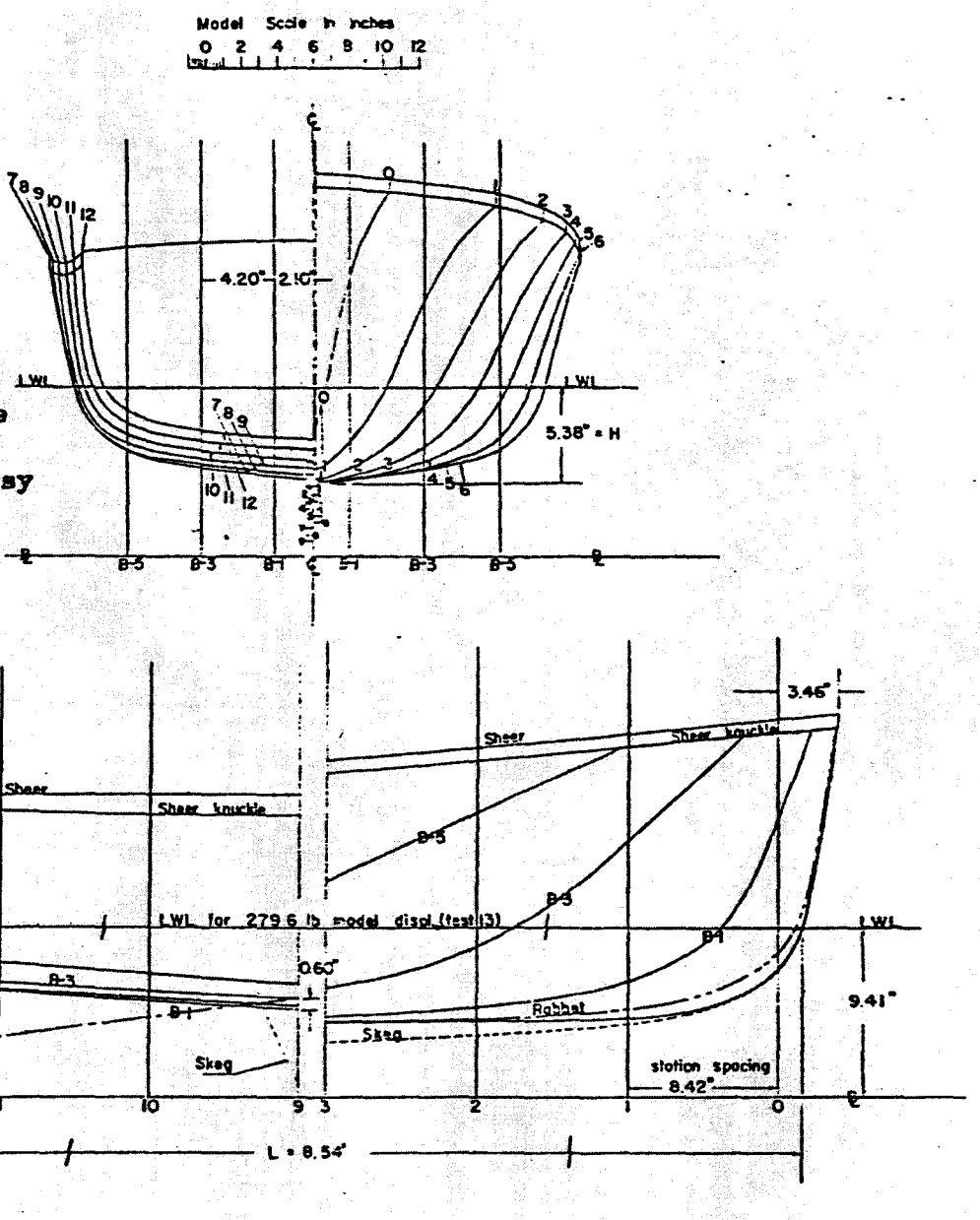
Subscript o indicates value when hull is at rest in water.

S.N.A.M.E. Small Craft Data Sheet No. 12

Round-bottom boat, $L/B_X = 3.81$

TMB Model No. 4777

These lines and model test results were made available to the Society through the courtesy of the Bureau of Ships, U. S. Navy Department.



MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat: 50' Utility Boat; Series 63
Model Number: 4777
Appendages: None

Laboratory: DATMOBAS
Basin: High-Speed
Basin Size: 2698' x 21' x (10' & 16')
Model Length: 8.541 ft.
Test: 13 Date: 4 August 1961

Water Temperature: 75 Degrees
Specific Weight: 62.222 ft^3
Model Material: Wood
Model Finish: Paint
Turbulence Stimul.: None

Remarks: Model was towed in the shaft line shown in the profile drawing.
Draft measurement excludes appendages

Planing Bottom Dimensions and Coefficients

L_P —
B_{PX} —
B_{PA} —
A_P —
$A_P/\nabla^{2/3}$ —
$L_P/\nabla^{1/3}$ —
L_P/B_{PA} —

LWL Dimensions and Coefficients

L 8.541 ft.
B_X 2.24 ft.
H 0.448 ft.
L/B_X 3.81
$L/\nabla^{1/3}$ 5.18
C_B 0.524
C_P 0.679
C_W 0.782

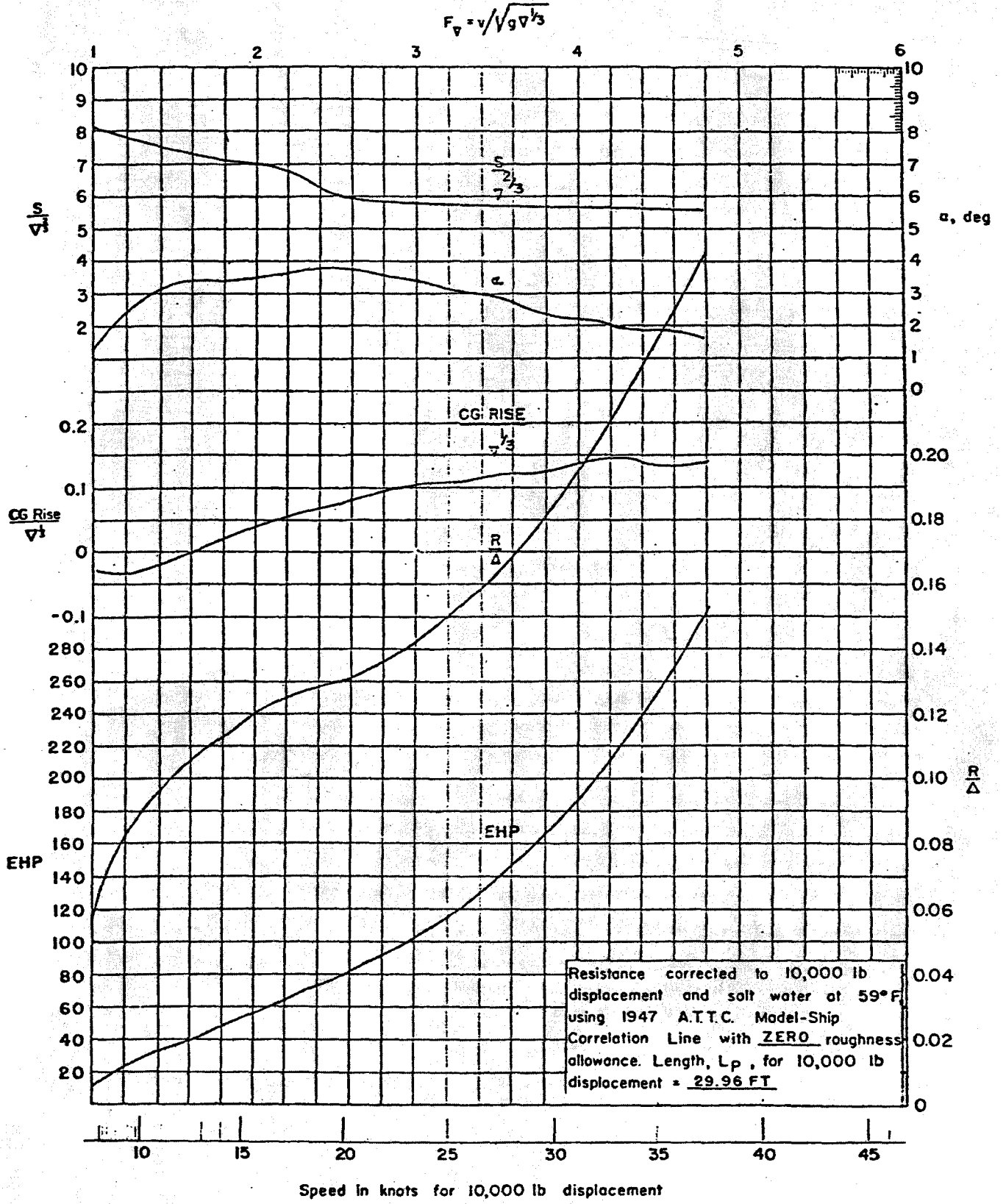
Model Test Condition

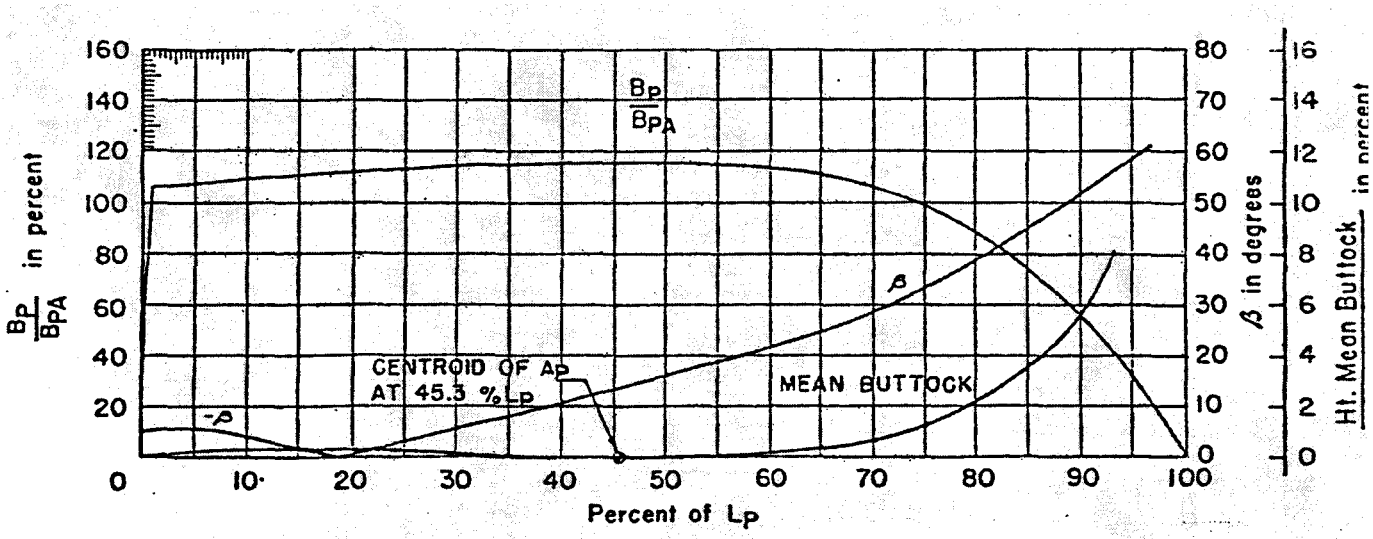
Δ, lb 279.6 τ_0 0 σ_0 —

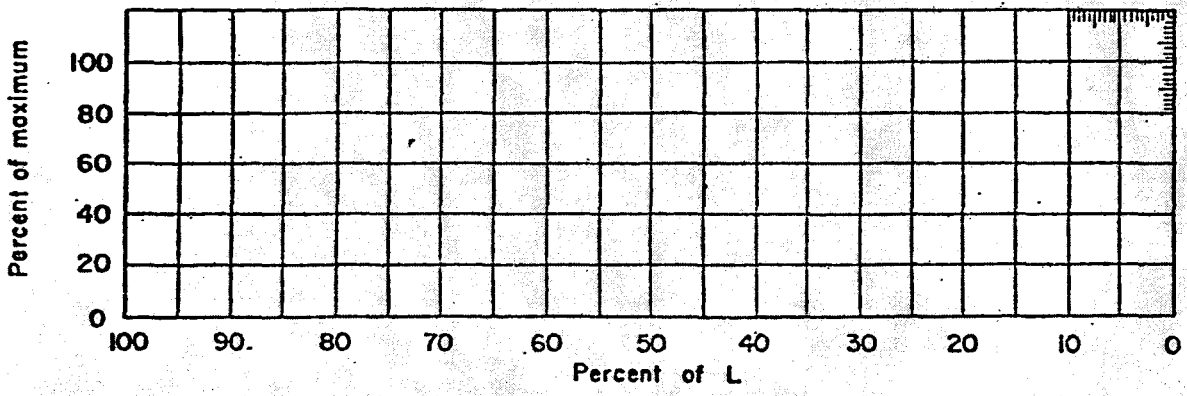
Model Test Results

V, knots	R_T, lb	Wetted length of keel, ft	Wetted length of chine, ft	Rex10^{-6}	S, ft^2	10^3 C_T	Change of trim, deg	CG rise, in.	F_∇
0	0	—	—	—	17.672		0		
1.00	0.36			1.458		7.390	-0.03	-0.077	0.232
1.52	0.80			2.216		7.109	-0.03	-0.107	0.353
2.00	1.44			2.916		7.390	-0.03	-0.107	0.464
2.51	2.61			3.661		8.505	-0.05	-0.266	0.583
3.00	4.26			4.375		9.717	0	-0.350	0.696
3.51	6.67			5.119		11.114	0.10	-0.569	0.815
3.99	10.36			5.819		13.359	0.60	-0.268	0.926
4.49	17.05			6.548		17.285	1.83	-0.958	1.042
5.00	23.13			7.293		18.994	3.05	-0.993	1.160
5.49	26.68			8.006		18.176	3.80	-0.757	1.274
5.98	28.78			8.772		16.522	4.10	-0.478	1.388
6.48	29.93			9.451		14.633	4.15	-0.247	1.504
6.99	30.76			10.19		12.924	4.07	-0.0897	1.662
7.49	31.84			10.92		11.651	4.07	-0.0897	1.738
7.98	32.64			11.64		10.536	4.05	0.0717	1.852
8.98	35.22			12.37		10.549	3.95	0.1902	1.968
8.96	37.06			13.07		9.489	3.95	0.2402	2.079
9.46	40.61			13.80	▼	9.316	4.05	0.3717	2.195
9.98	42.31	—	—	14.55	17.672	8.720	4.55	0.6795	2.361

PERFORMANCE CHARACTERISTICS







Notation

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A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

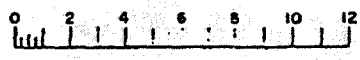
Subscript 0 indicates value when hull is at rest in water.

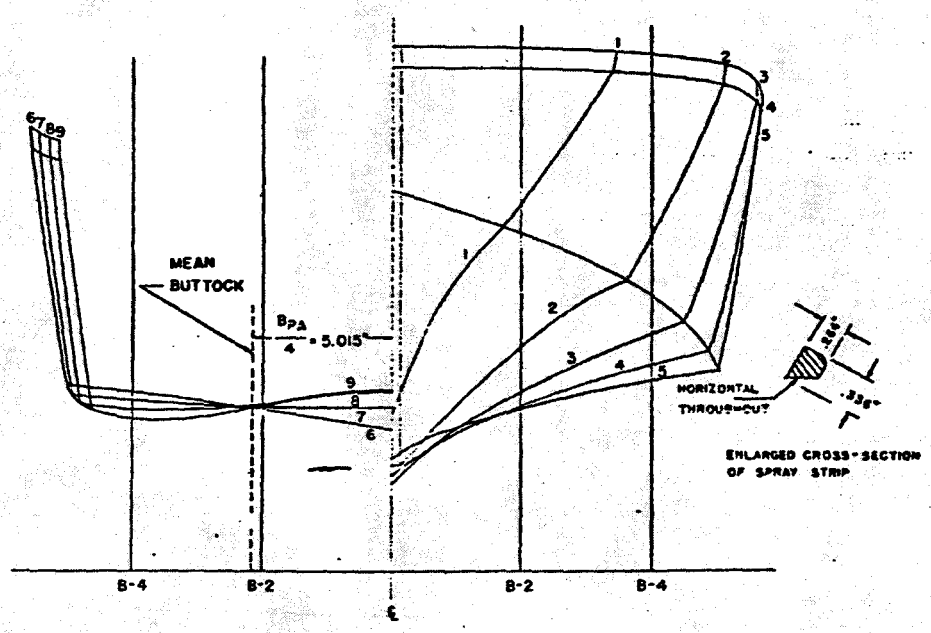
S.N.A. & M.E. SMALL CRAFT DATA SHEET No. II

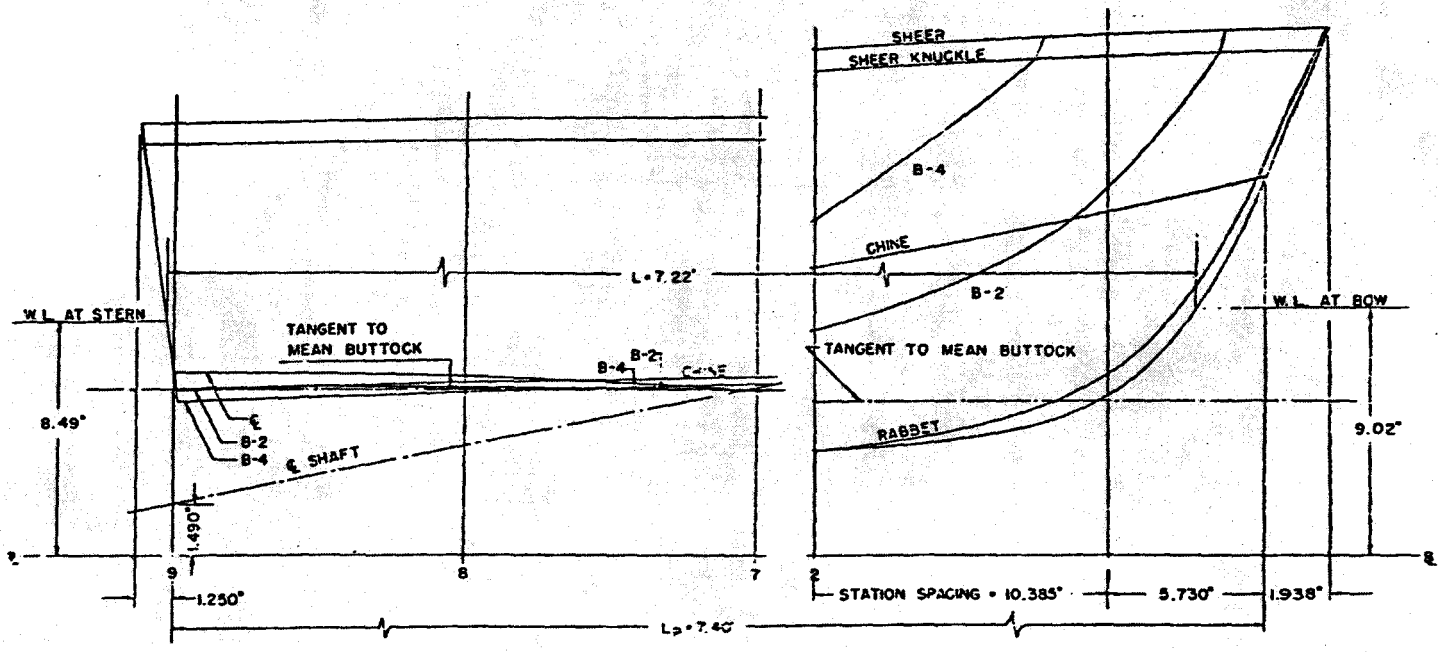
HARD-CHINE BOAT, $L_P/B_{PX} = 3.82$

MODEL No. TMB-4618-1

MODEL SCALE IN INCHES







MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat 40 FT. LCP (L) | Laboratory DATMOBAS | Water Temperature 73° F

Basin HIGH SPEED | Specific Weight 62.3 LB/FT^3

Model Number 4618 - 1 | Basin Size 2968' x 21' x (10' & 16') | Model Material WOOD

Appendages SPRAY STRIPS | Model Length 7.395 FT. | Model Finish PAINT

Test 8 | Date 24 - AUG. '56 | Turbulence Stimul. NONE

Remarks: Model was towed in the shaft line shown in the profile drawing.

THESE LINES AND MODEL TEST RESULTS WERE MADE AVAILABLE TO THE SOCIETY THROUGH THE COURTESY OF THE BUREAU OF SHIPS, U.S. NAVY DEPARTMENT.

Planing Bottom Dimensions and Coefficients

L_P	7.395 FT.
B_{PX}	1.937 FT.
B_{PA}	1.672 FT.
A_P	12.36 FT^2
$A_P/\nabla^{2/3}$	7.00
$L_P/\nabla^{1/3}$	5.56
L_P/B_{PA}	4.42

LWL Dimensions and Coefficients

L	
B_X	
H	
L/B_X	
$L/\nabla^{1/3}$	
C_B	
C_P	
C_W	

Model Test Condition

Δ, lb 146.2 | τ_0 0.03° x STERN | σ_0 0.30°

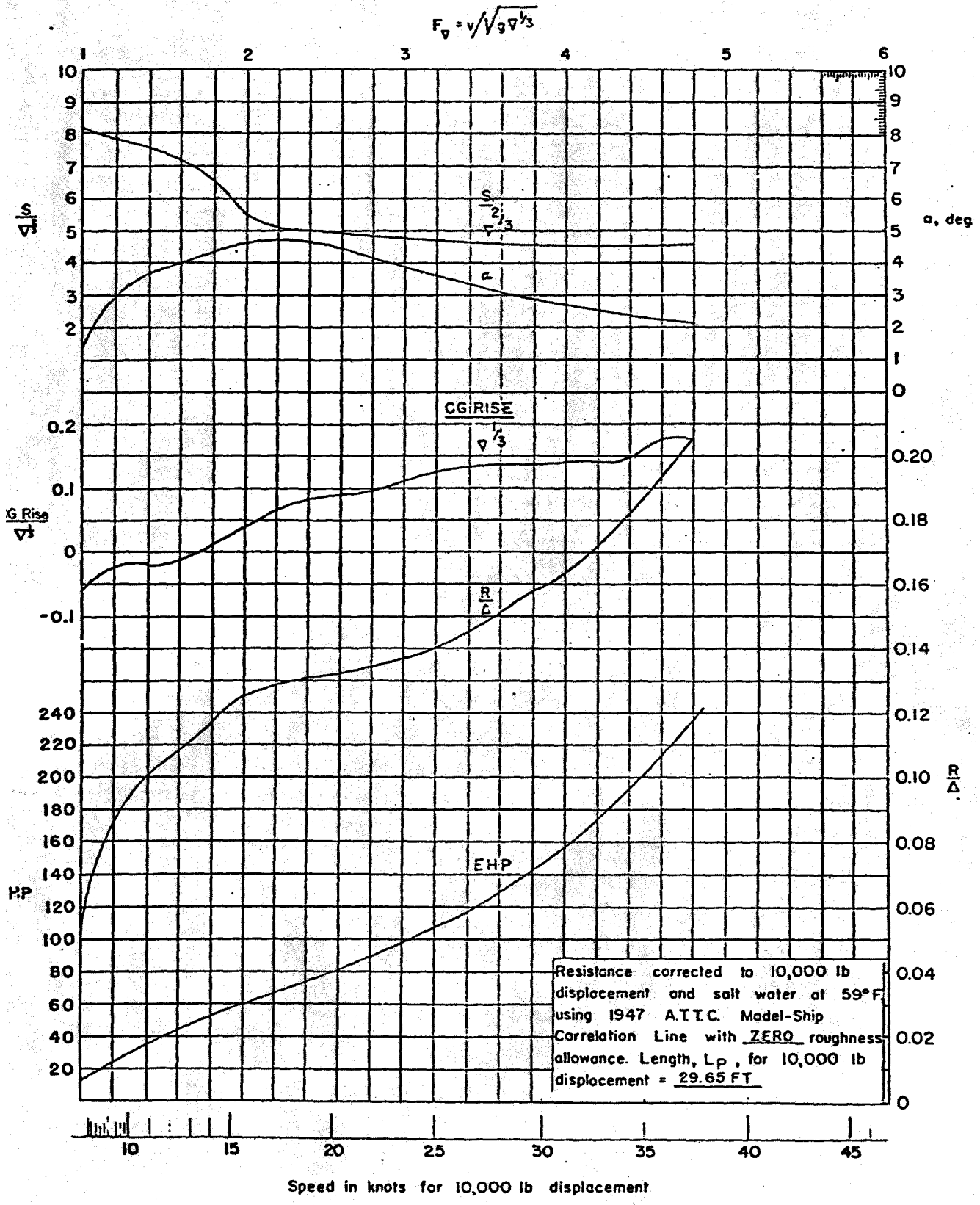
LCG location 2.91 FT forward of Station 9

(LCG location 6 percent L_P aft of centroid of A_P)

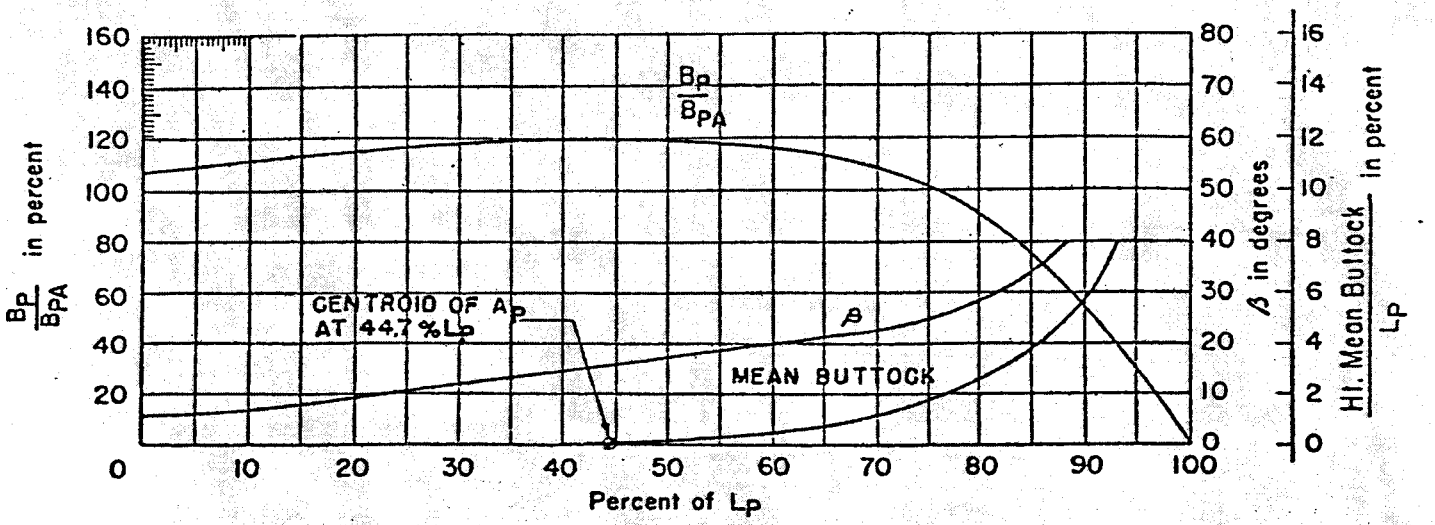
Model Test Results

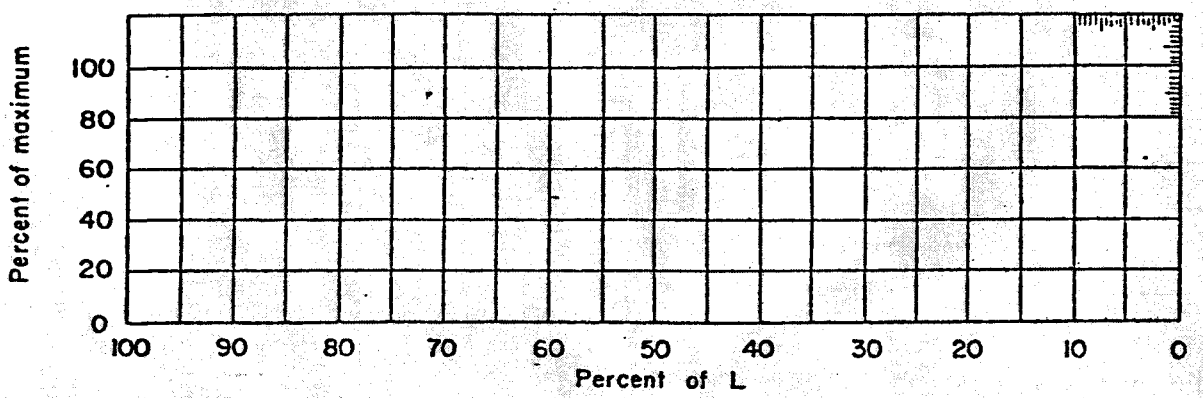
V, knots	R_t, lb	Solid water wetted lengths fwd of 0% L_P, ft		Spray at chine fwd of 0% L_P, ft	$R_N \times 10^{-6}$	S, ft^2	10^3 C_t	Change of trim, deg	CG rise, in.	F_∇
		keel	chine							
3.88	9.15	7.15	6.00	6.60	4.243	14.21	15.49	1.09	-0.53	1.00
4.84	13.53	7.05	5.60	6.20	5.092	13.88	15.07	2.40	-0.49	1.25
5.83	15.99	6.95	5.20	5.90	5.900	13.08	13.03	2.97	0.14	1.51
6.81	17.63	6.88	4.90	5.70	6.676	12.57	10.95	3.05	0.31	1.76
7.76	19.19	6.83	4.65	5.40	7.414	12.38	9.32	3.17	0.65	2.00
8.74	20.47	6.75	4.35	5.10	8.074	11.69	8.30	3.37	1.04	2.26
9.68	20.97	6.65	4.00	4.60	8.557	10.65	7.61	3.50	1.18	2.50
10.72	22.06	6.62	3.50	4.60	9.296	10.41	6.68	3.27	1.45	2.77
11.67	23.47	6.63	3.65	4.60	9.984	10.26	6.08	2.97	1.66	3.01
12.61	25.31	6.65	3.60	4.60	10.704	10.18	5.66	2.75	1.71	3.26
13.58	27.33	6.64	3.40	4.80	11.460	10.12	5.30	2.62	1.90	3.51
14.55	29.85	6.72	3.90	4.90	12.231	10.07	5.07	2.17	1.98	3.70
15.52	32.90	6.75	3.30	5.10	12.968	10.01	4.95	1.91	2.15	4.01
16.50	36.09	6.78	3.20	5.20	13.705	9.95	4.82	1.62	2.33	4.26
17.42	39.81	6.80	3.15	5.40	14.440	9.93	4.78	1.52	2.18	4.50
18.42	43.68	6.80	3.10	5.50	15.177	9.87	4.72	1.35	2.21	4.76

PERFORMANCE CHARACTERISTICS



FORM CHARACTERISTICS





Notation

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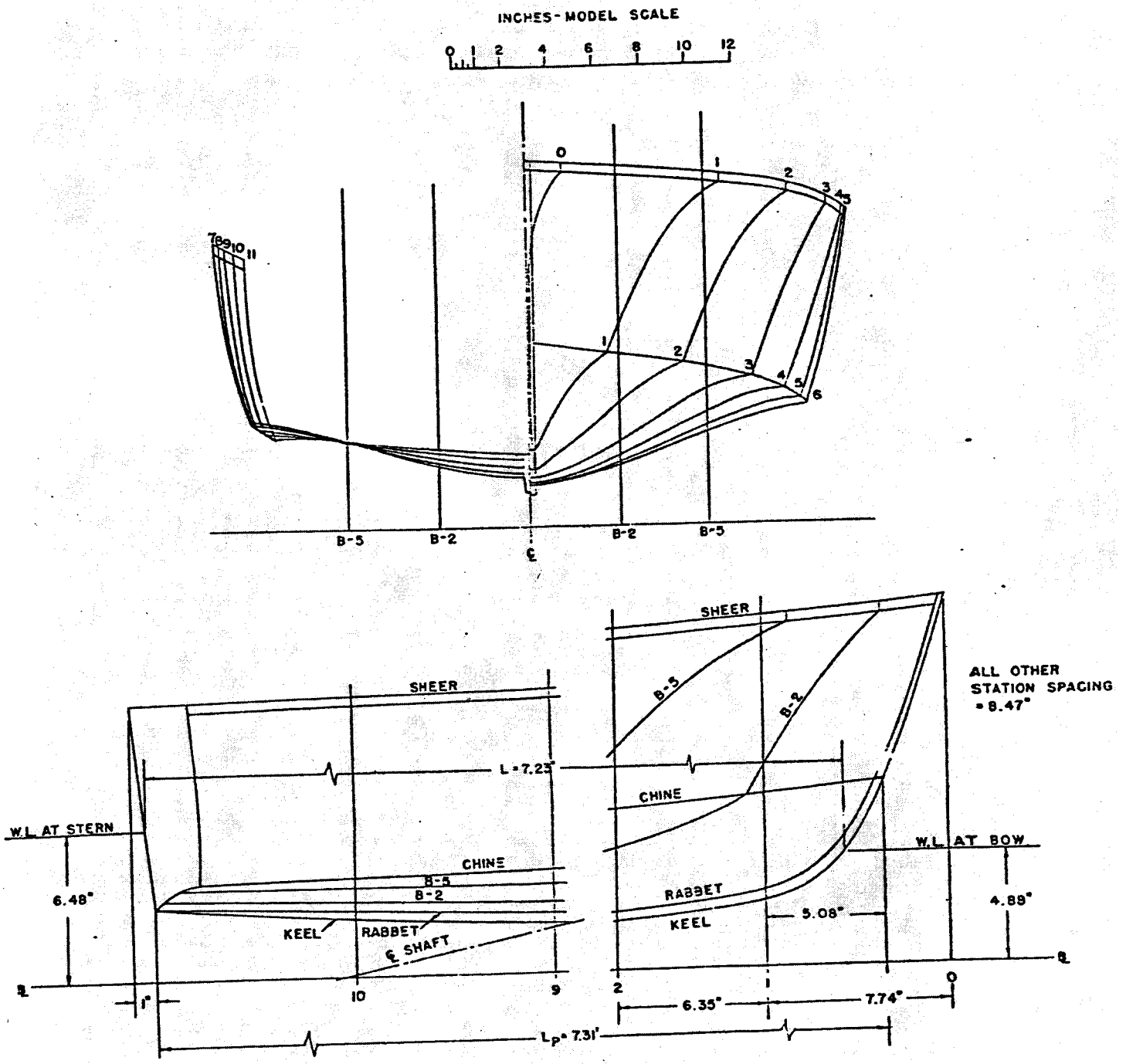
A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

Subscript O indicates value when hull is at rest in water.

S. N. A. & M. E. . SMALL CRAFT DATA SHEET No. 10

HARD-CHINE BOAT, $L_P / B_{PX} = 3.64$

MODEL No. TMB-4315



MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat AVR DESIGN
Laboratory DATMOBAS
Water Temperature 64.2° F
Basin HIGH SPEED
Specific Weight 62.3 LB/FT³
Model Number 4315
Basin Size 2966' x 21' x (10' & 16')
Model Material WOOD
Appendages SPRAY STRIPS & KEEL
Model Length 7.299 FT.
Model Finish PAINT
Test 11 Date 25-FEB-1955
Turbulence Stimul. NONE

Remarks: Model was towed in the shaft line shown in the profile drawing.
THESE LINES AND MODEL TEST RESULTS WERE MADE AVAILABLE TO THE SOCIETY THROUGH THE COURTESY OF THE BUREAU OF SHIPS, U.S. NAVY DEPARTMENT.

Planing Bottom Dimensions and Coefficients

L_P	7.30 FT.
B_{PX}	2.00 FT.
B_{PA}	1.686 FT.
A_P	12.31 FT.²
$A_P/\nabla^{2/3}$	7.00
$L_P/\nabla^{1/3}$	5.50
L_P/B_{PA}	4.33

LWL Dimensions and Coefficients

L	
B_X	
H	
L/B_X	
$L/\nabla^{1/3}$	
C_B	
C_P	
C_W	

Model Test Condition

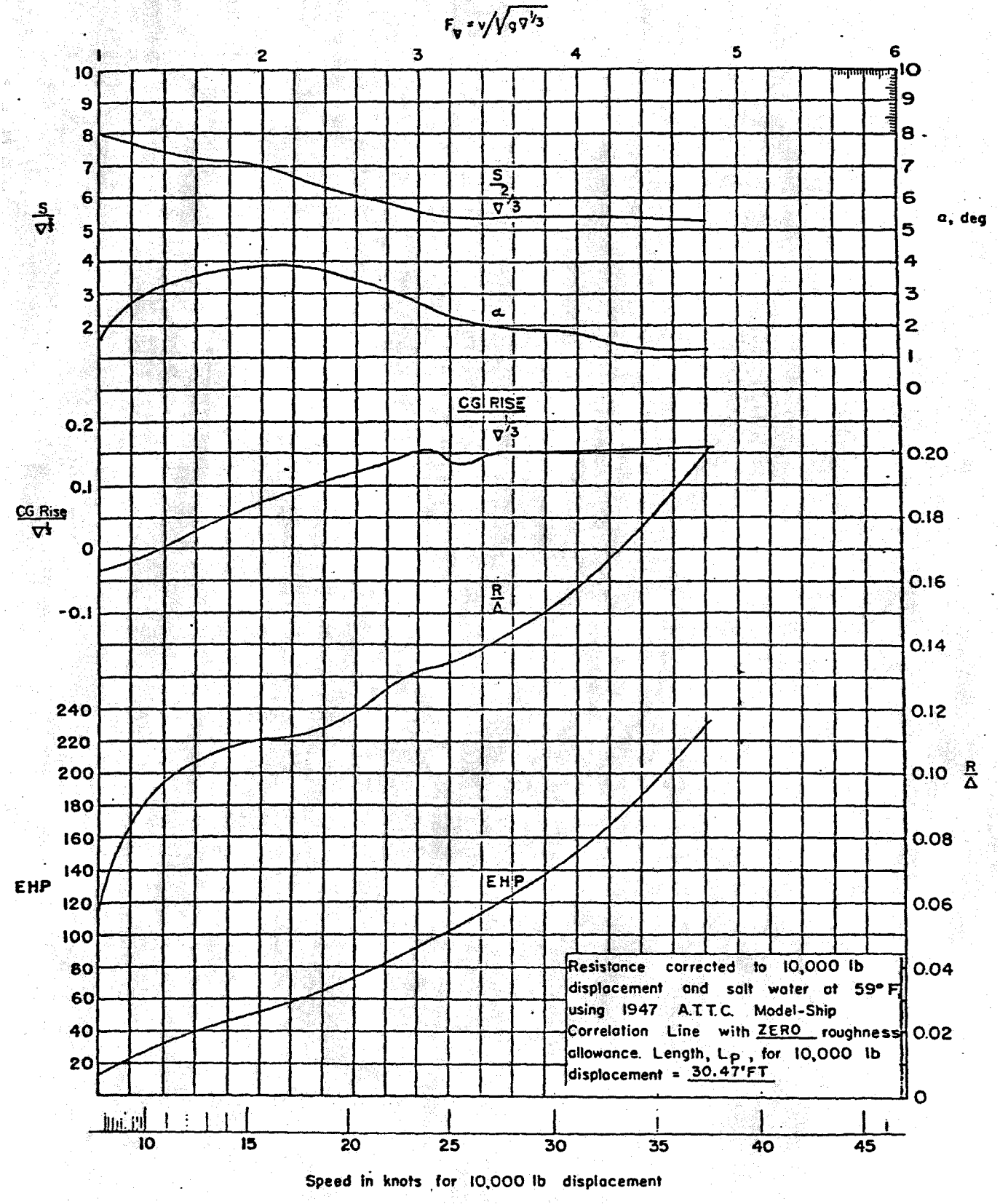
Δ, lb 145.2 τ_0 0.67° x STERN α_0 0.17°

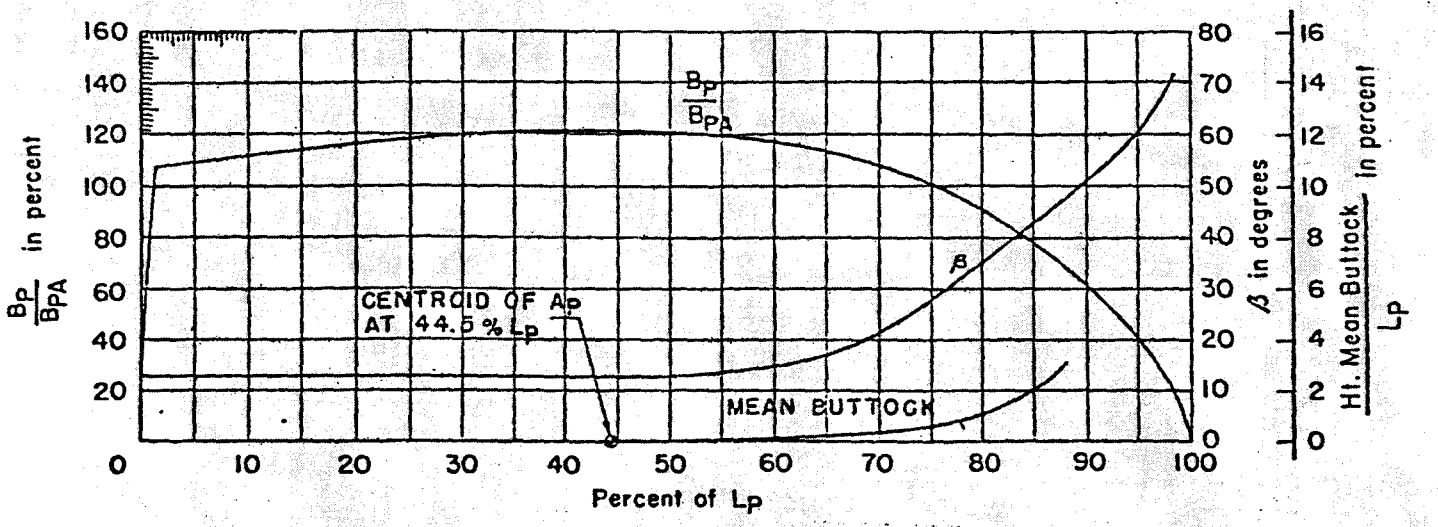
LCG location 2.82 FT forward of Station 11
(LCG location 6 percent L_P aft of centroid of A_P)

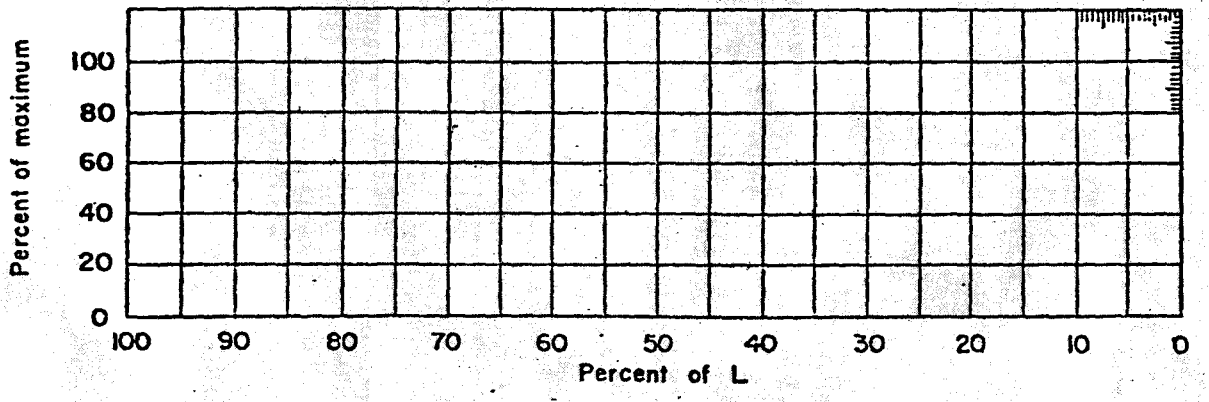
Model Test Results

V, knots	R_t, lb	Solid water wetted lengths fwd of 0% L_P, ft		Spray at chine fwd of 0% L_P, ft	Rex10^{-6}	S, ft²	10^3 C_t	Change of trim, deg	CG rise, in.	F_∇
		keel	chine							
3.89	9.19	7.11	5.95	6.68	3.737	14.17	15.513	1.45	-0.80	1.00
4.86	14.32	6.89	5.20	5.70	4.404	13.58	16.157	3.15	-0.29	1.26
5.80	16.40	6.62	4.78	5.50	4.938	12.70	13.750	3.70	-0.30	1.51
6.78	17.97	6.28	4.38	5.35	5.334	11.77	12.020	4.05	0.15	1.75
7.76	19.70	5.80	3.95	5.05	5.589	10.57	11.202	4.50	0.67	2.01
8.69	20.48	5.65	3.60	4.78	5.784	9.39	10.412	4.70	1.16	2.25
9.64	21.04	5.35	3.38	4.55	6.118	8.95	9.158	4.35	1.41	2.49
10.64	21.61	5.20	3.15	4.38	6.585	8.70	8.942	4.05	1.54	2.75
11.60	22.42	5.25	2.98	4.20	7.037	8.54	7.059	3.70	1.75	3.00
12.53	23.26	5.29	2.79	4.15	7.508	8.42	6.368	3.35	1.95	3.24
13.55	24.59	5.35	2.70	4.05	8.020	8.30	5.840	3.05	2.13	3.50
14.49	26.15	5.40	2.58	4.00	8.512	8.24	5.470	2.75	2.13	3.75
15.50	27.79	5.45	2.40	3.94	9.013	8.16	5.132	2.55	2.21	4.01
16.40	29.70	5.50	2.35	3.90	9.488	8.10	4.933	2.35	2.20	4.24
17.88	32.19	5.65	2.20	3.90	10.000	8.07	4.779	2.15	2.24	4.49
18.36	34.63	5.60	2.15	3.90	10.510	8.03	4.630	2.00	2.26	4.75

PERFORMANCE CHARACTERISTICS







Notation

As far as possible the notation used is consistent with the Society's "Explanatory Notes for Resistance and Propulsion Data Sheets" (Technical and Research Bulletin No. 1-13). Exceptions and additions are listed below. The subscript P designates the planing bottom which is the portion of the bottom bounded by the chines and transom.

A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

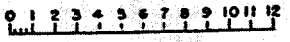
Subscript 0 indicates value when hull is at rest in water.

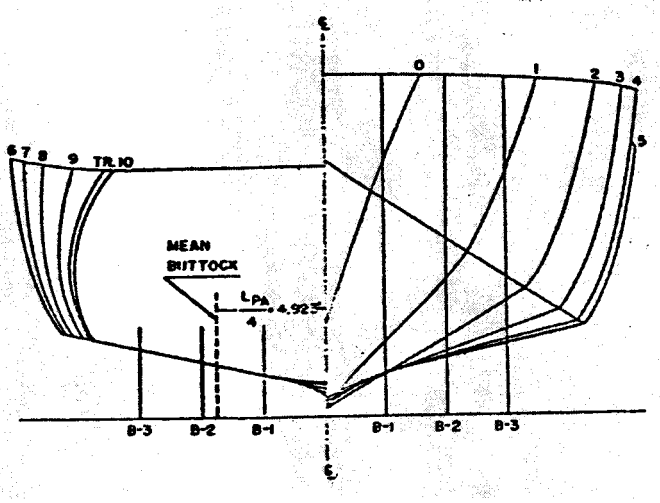
S N A & M E SMALL CRAFT DATA SHEET No.9

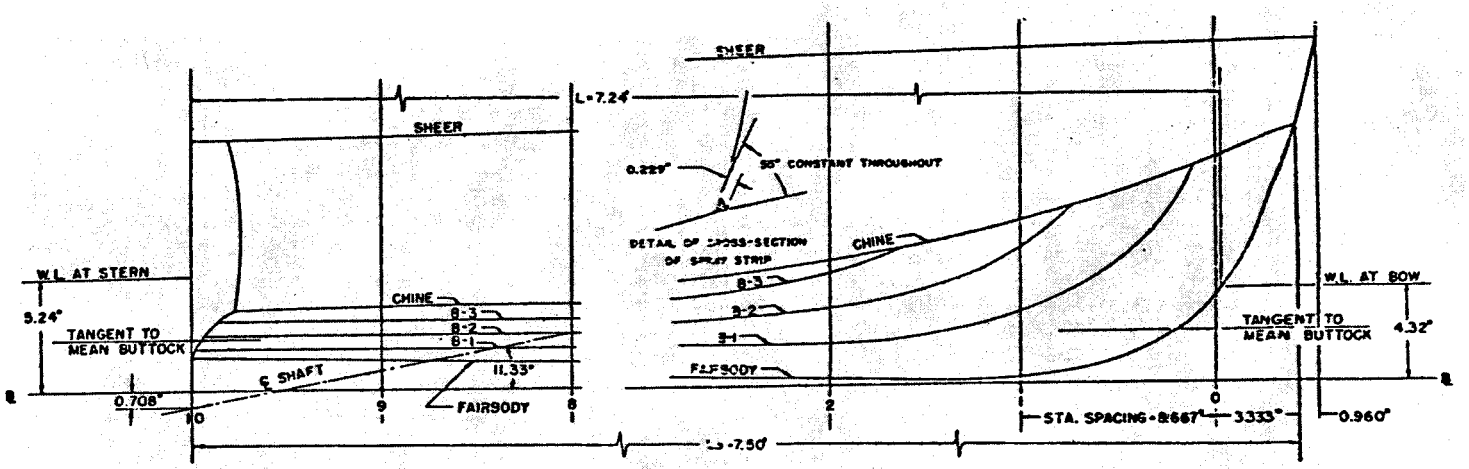
HARD-CHINE BOAT, L_p/B_{px}=3.78

MODEL No. [illegible]-4310

MODEL SCALE IN INCHES







MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat MONOHEDRON DESIGN EBHFTP
Model Number 4310
Appendages SPRAY STRIPS

Laboratory DATMOBAS
Basin HIGH SPEED
Basin Size 2968' x 21' x (10' & 16')
Model Length 7.500 FT.
Test 19 Date 5-AUG-1955

Water Temperature 65° F
Specific Weight 62.3 LB/FT^3
Model Material WOOD
Model Finish PAINT
Turbulence Stimul. NONE

Remarks: Model was towed in the shaft line shown in the profile drawing.
THESE LINES AND MODEL TEST RESULTS WERE MADE AVAILABLE TO THE SOCIETY THROUGH THE COURTESY OF THE BUREAU OF SHIPS, U. S. NAVY DEPARTMENT.

Planing Bottom Dimensions and Coefficients

L_P	7.500 FT.
B_{PX}	1.98 FT.
B_{PA}	1.64 FT.
A_P	12.31 FT^2
$A_P/\nabla^{2/3}$	7.00
$L_P/\nabla^{1/3}$	5.66
L_P/B_{PA}	4.57

LWL Dimensions and Coefficients

L	
B_X	
H	
L/B_X	
$L/\nabla^{1/3}$	
C_B	
C_P	
C_W	

Model Test Condition

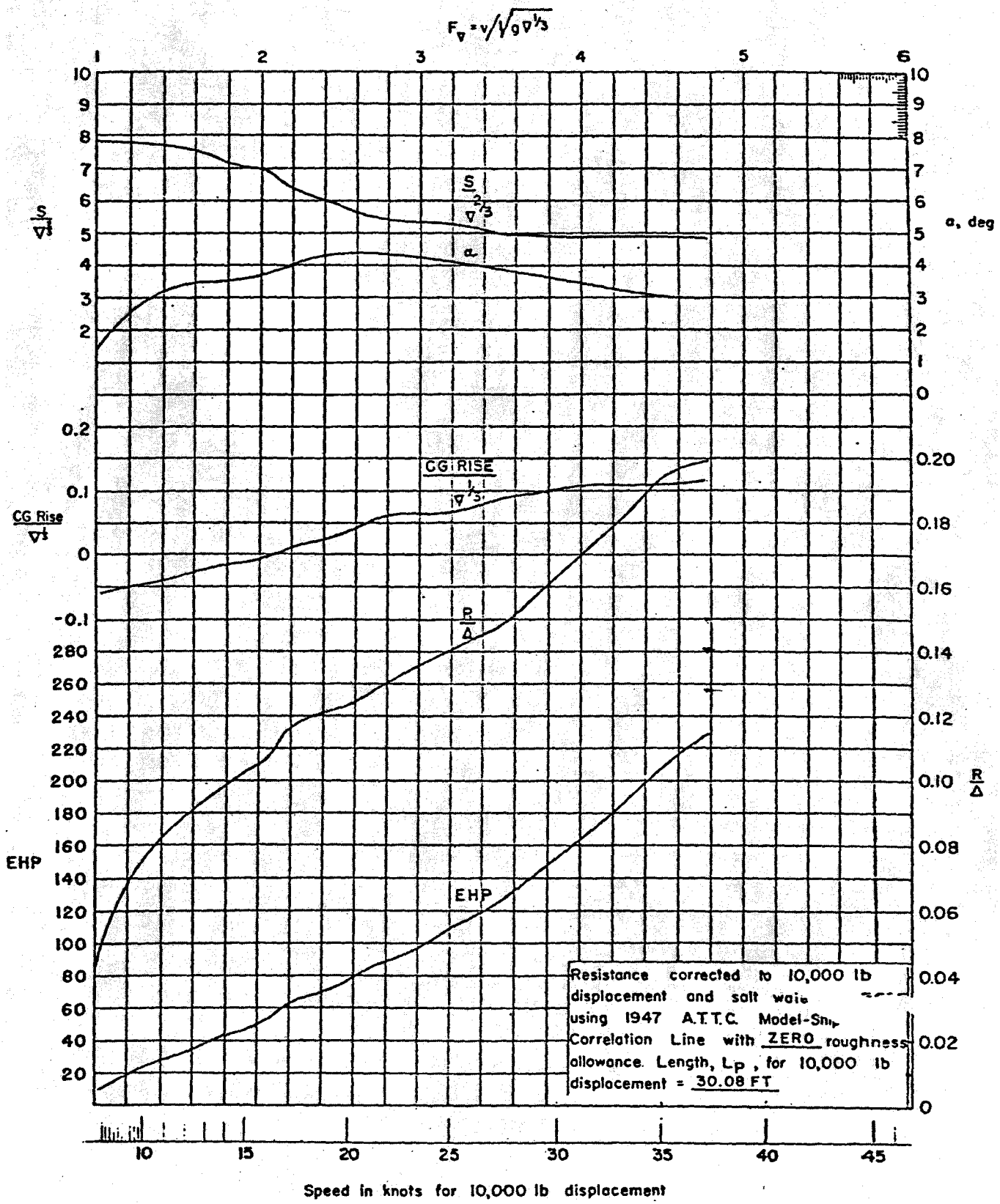
Δ, lb 145.2 τ_0 0.75° x STERN α_0 0.75°

LCG location 2.89 FT forward of Station 10
(LCG location 6 percent L_P aft of centroid of A_P)

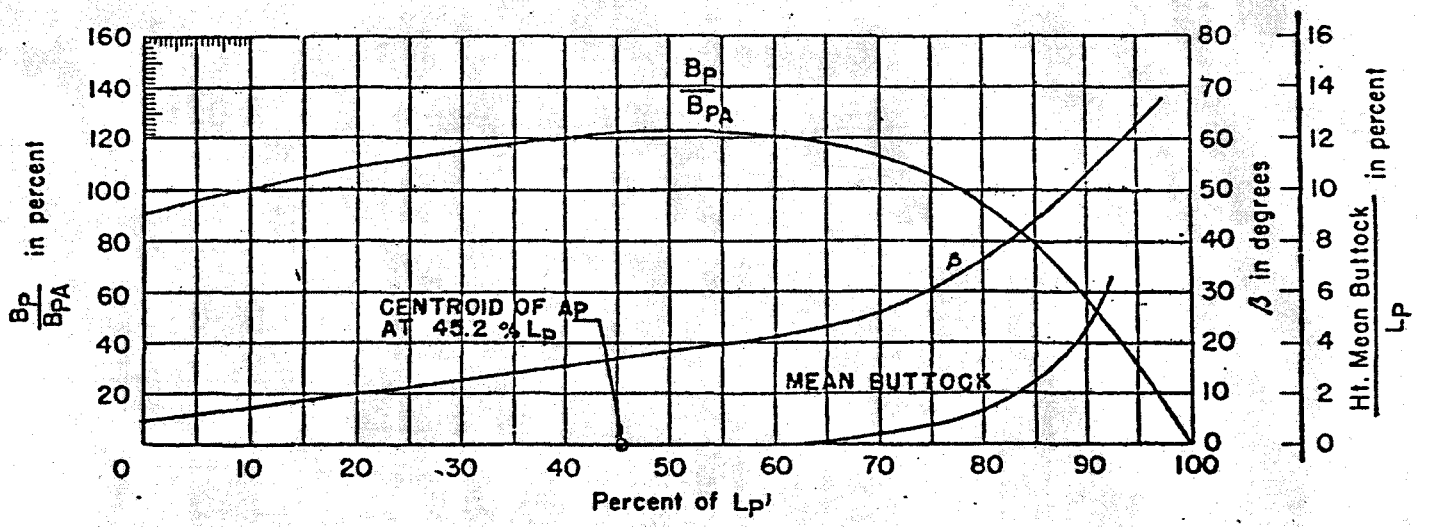
Model Test Results

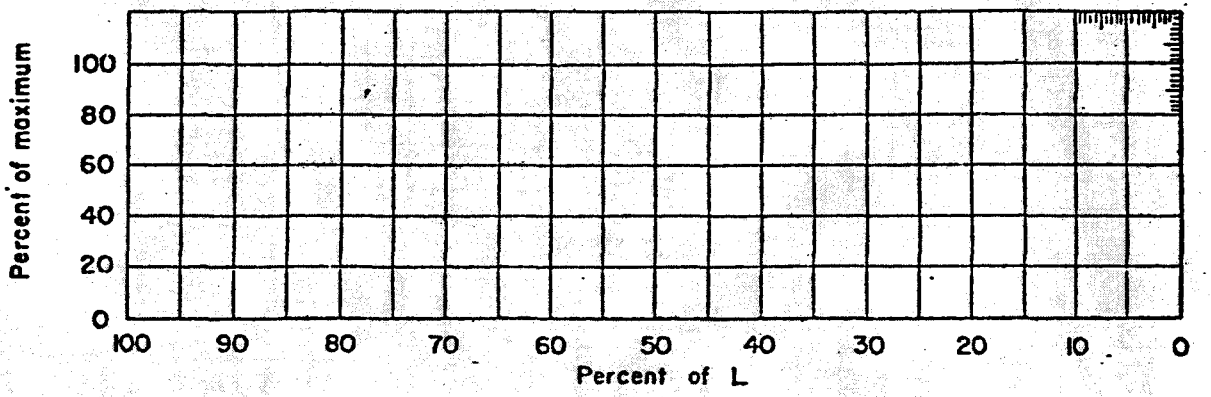
V, knots	R_t, lb	Solid water wetted lengths fwd of 0% L_P, ft		Spray at chine fwd of 0% L_P, ft	Re x 10^{-6}	S, ft^2	10^3 C_t	Change of trim, deg	CG rise, in.	F_∇
		keel	chine							
3.85	9.00	7.15	6.30	6.80	3.858	13.98	15.72	0.77	-0.61	1.00
4.84	13.80	7.10	5.65	6.50	4.632	13.45	15.85	2.70	-0.15	1.25
5.77	15.57	7.05	5.20	6.15	5.280	12.89	13.13	2.58	0.24	1.49
6.76	16.48	7.00	4.90	5.90	6.014	12.48	10.46	2.82	0.66	1.75
7.70	17.56	6.90	4.90	5.55	6.793	12.32	9.08	3.15	1.14	1.99
8.63	18.16	6.85	4.70	5.30	7.459	11.58	7.62	3.12	1.52	2.23
9.60	18.82	6.70	4.20	4.80	7.823	10.94	6.75	2.82	1.76	2.48
10.61	20.22	6.60	3.72	4.20	8.187	10.35	6.26	2.43	2.07	2.74
11.60	21.80	6.95	3.30	3.90	8.455	9.84	5.95	2.08	2.60	3.00
12.53	22.51	6.40	3.10	3.70	8.900	9.60	5.40	1.30	2.10	3.24
13.50	24.01	6.45	2.90	3.50	9.447	9.48	5.03	1.27	2.47	3.49
14.51	25.43	6.55	2.80	3.40	10.155	9.48	4.61	1.07	2.45	3.75
15.49	27.33	6.60	2.65	3.30	10.724	9.34	4.41	1.00	2.41	4.00
16.44	29.32	6.65	2.55	3.30	11.307	9.30	4.22	0.70	2.45	4.25
17.36	31.51	6.70	2.40	3.10	11.511	9.18	4.12	0.53	2.47	4.49
18.32	34.14	6.70	2.40	3.10	12.465	9.18	4.01	0.47	2.54	4.74

PERFORMANCE CHARACTERISTICS



FORM CHARACTERISTICS





Notation

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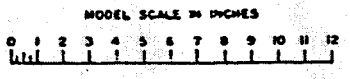
A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

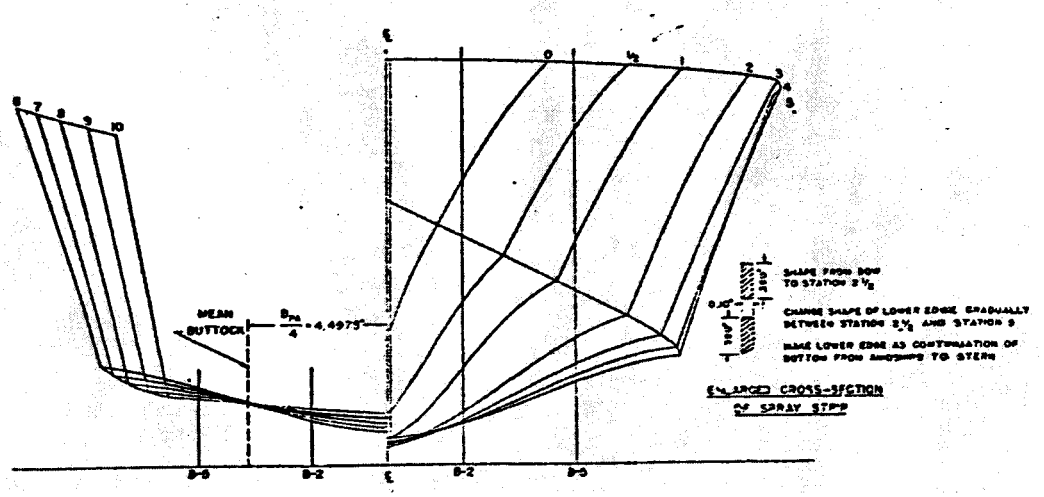
Subscript O indicates value when hull is at rest in water.

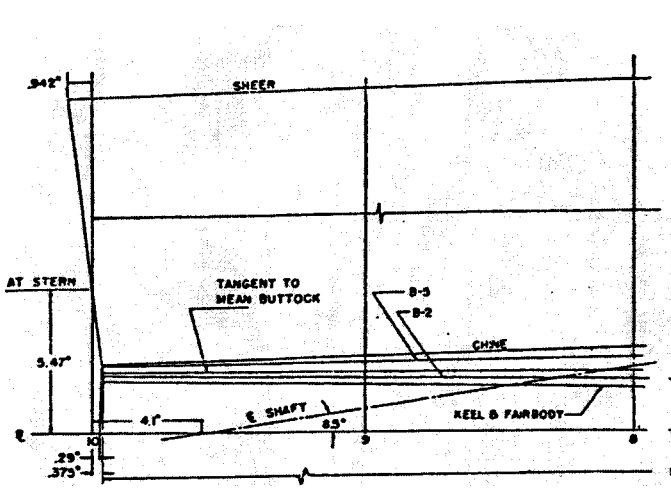
S.N.A.& M.E. SMALL CRAFT DATA SHEET No.8

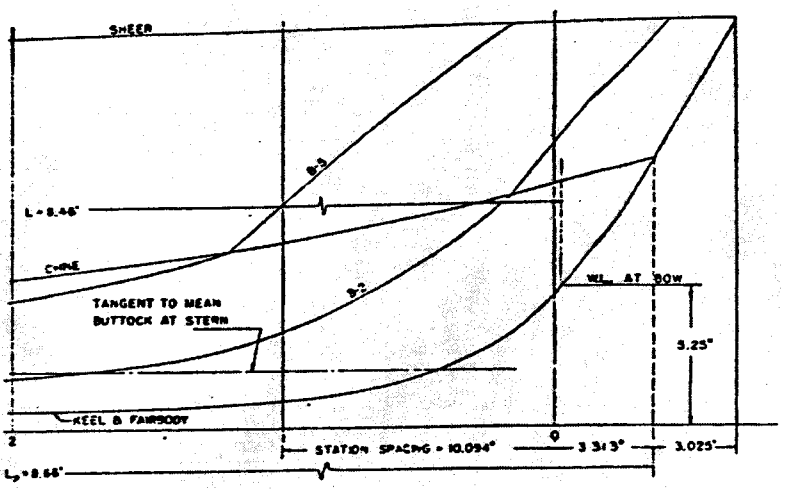
HARD-CHINE BOAT, L_p/B_{pk}=4.76

MODEL No. TMB-3941









MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat 76.67 FT. PT BOAT
Model Number 3941
Appendages SPRAY STRIP

Laboratory DATMOBAS
Basin HIGH SPEED
Basin Size 2968' x 21' x 00' & 16'
Model Length 8.662
Test 19 Date 1-AUG-55

Water Temperature 77°
Specific Weight 62.2
Model Material WOOD
Model Finish PAINT
Turbulence Stimul. NONE

Remarks: Model was towed in the shaft line shown in the profile drawing.
THESE LINES AND MODEL TEST RESULTS WERE MADE AVAILABLE TO THE SOCIETY THROUGH THE COURTESY OF THE BUREAU OF SHIPS, U. S. NAVY DEPARTMENT.

Planing Bottom Dimensions and Coefficients

L_P 8.662 FT.
B_{PX} 1.820 FT.
B_{PA} 1.499 FT.
A_P 12.985 FT^2
$A_P/\nabla^{2/3}$ 7.00
$L_P/\nabla^{1/3}$ 8.36
L_P/B_{PA} 5.78

LWL Dimensions and Coefficients

L
B_X
H
L/B_X
$L/\nabla^{1/3}$
C_B
C_P
C_W

Model Test Condition

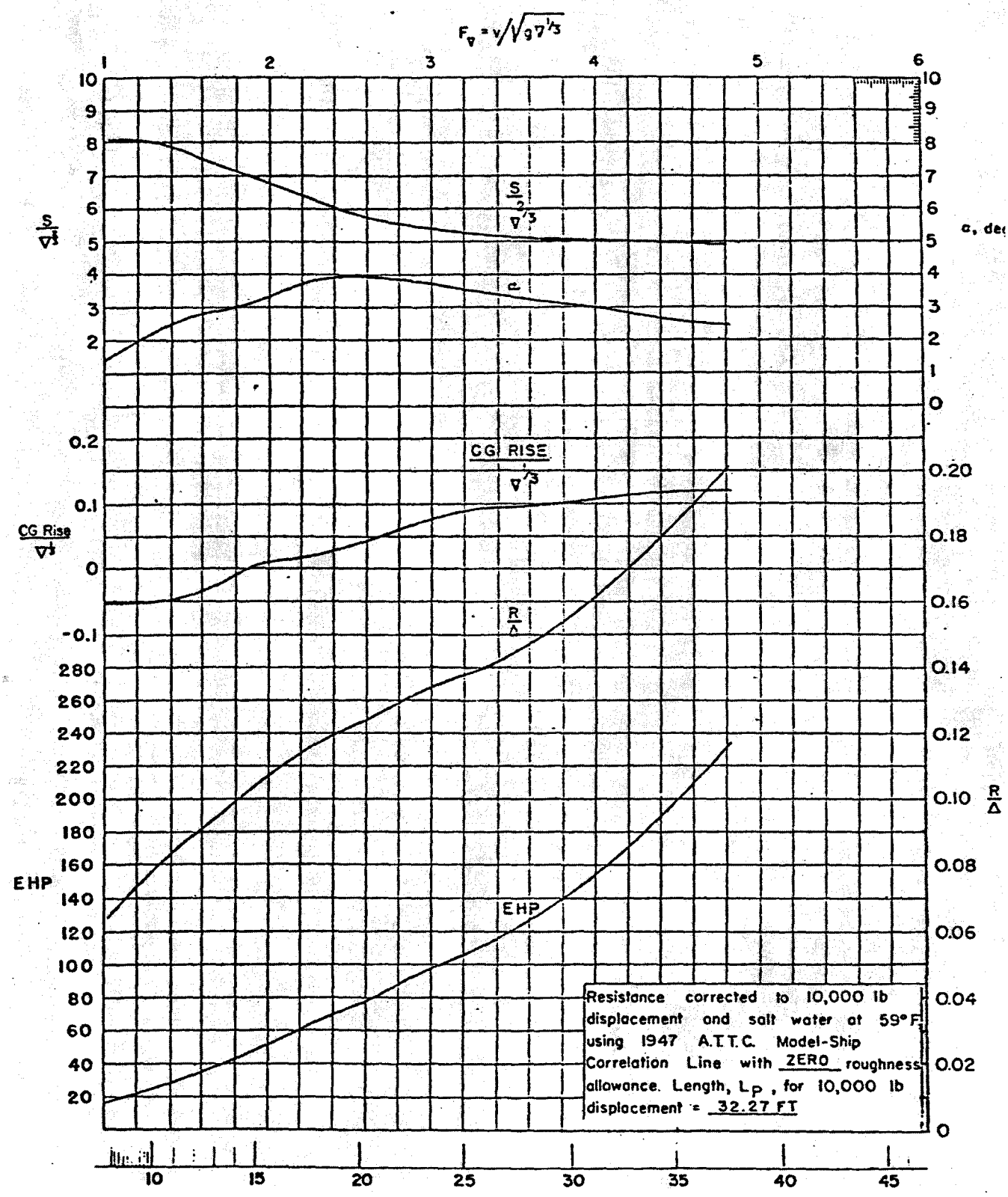
Δ, lb 15.73 τ_0 0.51° X STERN α_0 0.42°

LCG location 3.40 forward of Station 10
(LCG location 6 percent L_P aft of centroid of A_P)

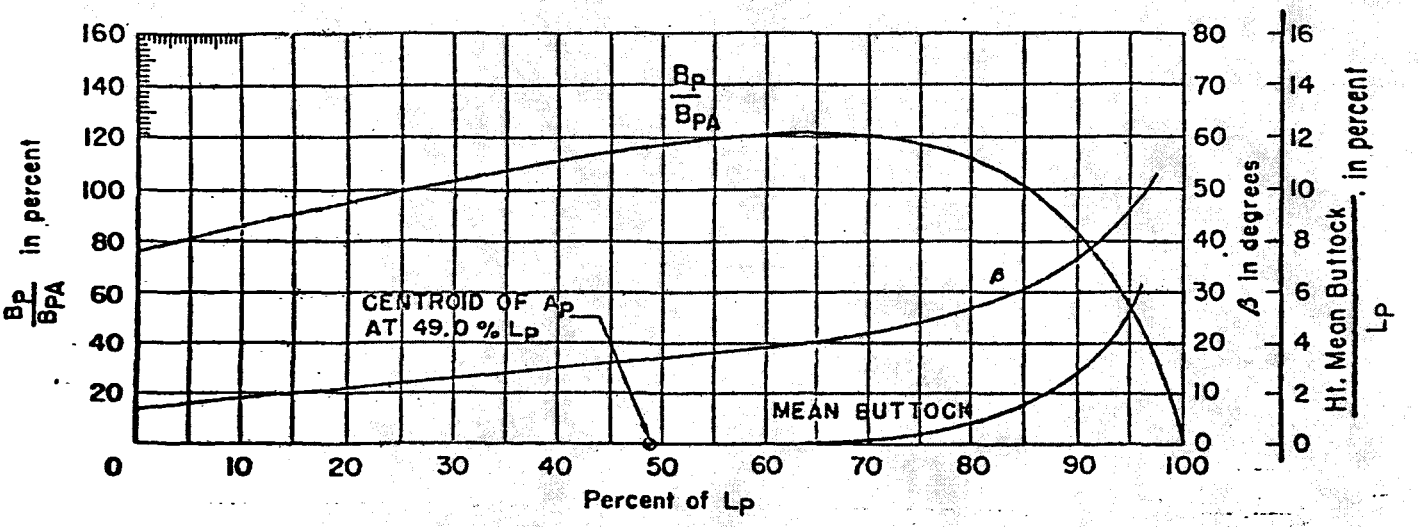
Model Test Results

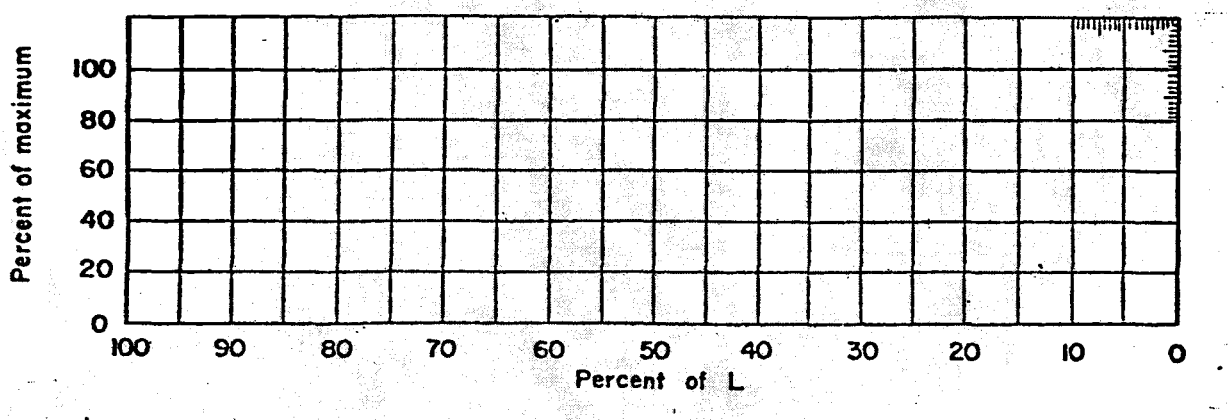
V, knots	R_t, lb	Solid water wetted lengths fwd of 0% L_P, ft		Spray at chine fwd of 0% L_P, ft	Re x 10^{-6}	S, ft^2	10^3 C_t	Change of trim, deg	CG rise, in.	F_∇
		keel	chine							
3.90	7.90	8.35	7.45	8.00	5.189	14.54	12.946	1.20	-0.832	0.993
4.90	12.38	8.22	6.75	7.70	6.428	14.42	12.963	2.40	-0.813	1.250
5.90	14.85	8.10	6.33	7.50	7.448	14.24	11.069	2.95	-0.544	1.505
6.86	16.50	8.00	6.00	7.40	8.407	13.49	10.860	3.10	-0.298	1.750
7.84	18.11	7.95	5.65	7.25	9.333	12.91	8.275	3.20	-0.017	2.000
8.84	19.95	7.75	5.25	6.70	10.050	11.94	7.752	3.55	0.141	2.255
9.80	21.18	7.40	4.80	5.85	10.466	10.92	7.321	3.90	0.549	2.500
10.77	22.49	7.00	4.50	5.50	10.843	10.10	6.950	3.90	0.999	2.748
11.72	23.78	7.90	4.25	5.30	11.430	9.91	6.425	3.82	1.057	2.991
12.70	24.97	6.85	4.05	5.10	12.118	9.76	5.901	3.65	1.122	3.241
13.72	26.27	6.80	3.46	5.00	12.804	9.28	5.880	3.40	1.444	3.500
14.70	28.19	6.80	3.75	4.85	13.564	9.17	5.145	3.27	1.572	3.750
15.74	30.76	6.85	3.60	4.75	14.385	9.08	4.795	3.00	1.721	4.016
16.70	32.90	6.95	3.50	4.65	15.262	9.08	4.567	2.80	1.720	4.261
17.64	34.90	7.05	3.40	4.65	16.122	9.08	4.361	2.65	1.764	4.500
18.60	36.36	7.10	3.30	4.60	16.934	9.03	4.221	2.50	1.868	4.746

PERFORMANCE CHARACTERISTICS



FORM CHARACTERISTICS





Notation

As far as possible the notation used is consistent with the Society's "Explanatory Notes for Resistance and Propulsion Data Sheets" (Technical and Research Bulletin No. 1-13). Exceptions and additions are listed below. The subscript P designates the planing bottom which is the portion of the bottom bounded by the chines and transom.

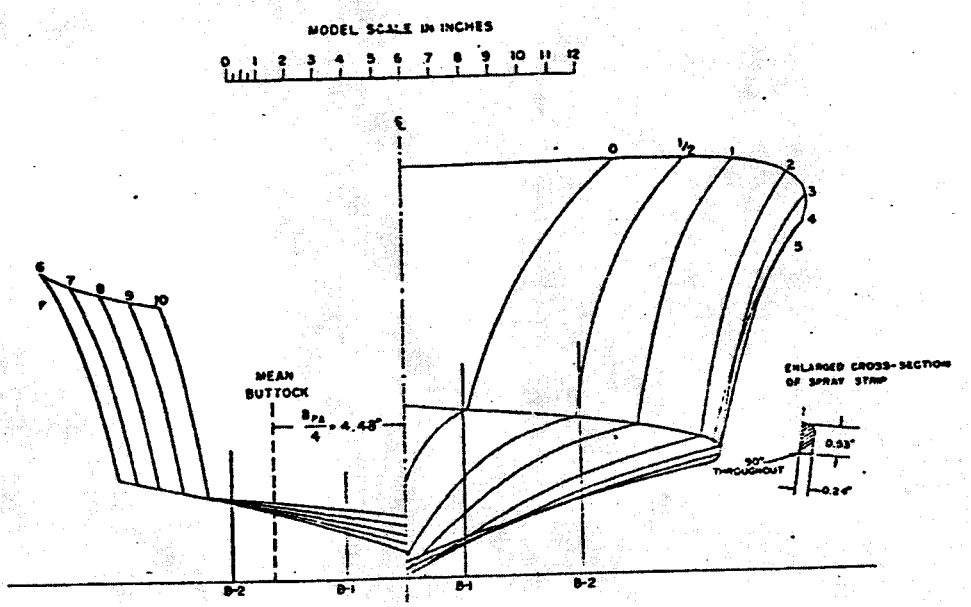
A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

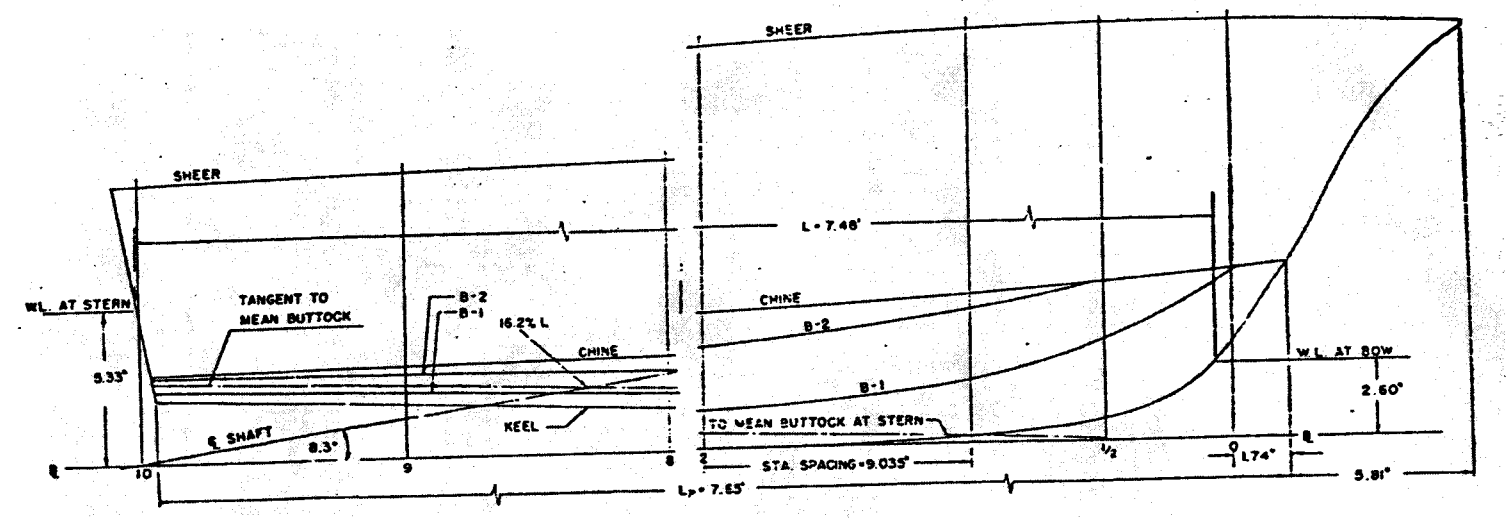
Subscript 0 indicates value when hull is at rest in water.

S.N.A.& M.E. SMALL CRAFT DATA SHEET No. 7

HARD-CHINE BOAT, $L_P/B_{PX} = 4.27$

MODEL No. TMB-3626





MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat 70 FT. ELCO PT BOAT
Model Number 3626
Appendages SPRAY STRIPS

Laboratory DATMOBAS
Basin HIGH SPEED
Basin Size 2968' x 21' x(10'&16')
Model Length 7.65 FT.
Test 5 Date 6-OCT.-1954

Water Temperature 73° F
Specific Weight 62.3 LB/FT3
Model Material WOOD
Model Finish PAINT
Turbulence Stimul. NONE

Remarks: Model was towed in the shaft line shown in the profile drawing.
THESE LINES AND MODEL TEST RESULTS WERE MADE AVAILABLE TO THE SOCIETY THROUGH THE COURTESY OF THE BUREAU OF SHIPS, U. S. NAVY DEPARTMENT.

Planing Bottom Dimensions and Coefficients

L_P	7.65 FEET
B_{PX}	1.79 FEET
B_{PA}	1.49 FEET
A_P	11.42 FEET^2
$A_P/\nabla^{2/3}$	7.00
$L_P/\nabla^{1/3}$	5.99
L_P/B_{PA}	5.13

LWL Dimensions and Coefficients

L	
B_X	
H	
L/B_X	
$L/\nabla^{1/3}$	
C_B	
C_P	
C_W	

Model Test Condition

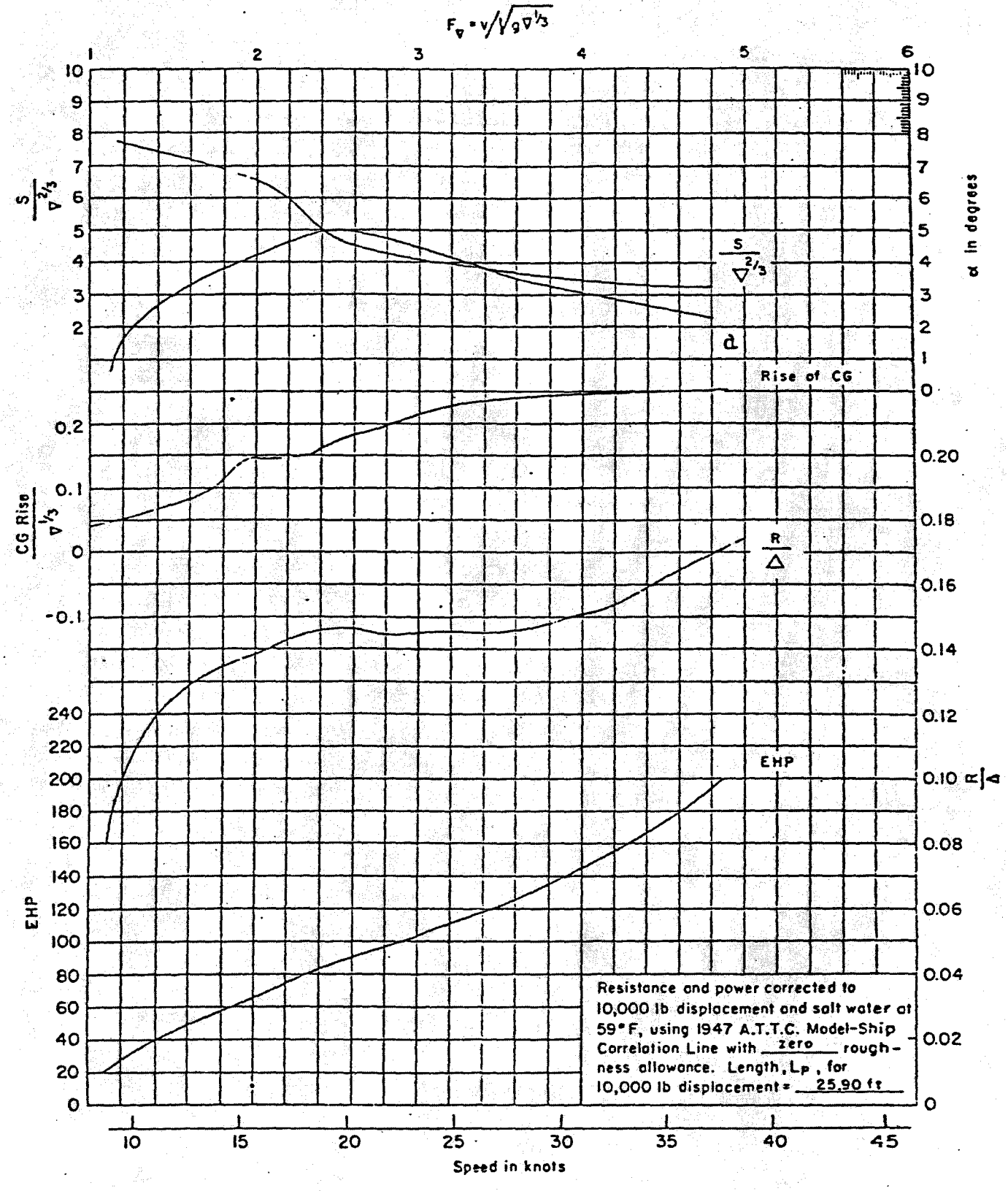
Δ, lb 129.6 τ_0 0.75 DEGREE BY STERN α_0 0.05 DEGREES

LCG location 3.32 forward of Station 10
(LCG location 6 percent L_P aft of centroid of A_P)

Model Test Results

V, knots	R_t, lb	Solid water wetted lengths fwd of 0% L_P, ft		Spray at chine fwd of 0% L_P, ft	Re x 10^{-6}	S, ft^2	10^3 C_t	Change of trim, deg	CG rise, in.	F_∇
		keel	chine							
4.26	8.82	7.50	6.90	7.60	5.105	13.11	13.423	1.40	-0.858	1.12
5.34	11.68	7.45	6.70	7.25	6.089	12.76	11.623	2.50	-0.727	1.41
6.40	13.33	7.40	5.70	6.80	6.978	11.55	9.944	2.85	-0.324	1.69
7.48	14.98	7.30	5.20	6.20	7.782	11.15	8.695	3.18	-0.012	1.97
8.54	16.67	7.10	4.80	5.50	8.444	10.27	8.054	3.75	0.268	2.25
9.60	17.58	6.90	4.90	5.10	9.045	9.45	7.309	3.85	0.612	2.53
10.70	15.79	6.70	4.10	4.80	9.652	8.98	6.633	3.80	0.940	2.82
11.76	19.92	6.65	3.90	4.60	10.296	5.66	6.022	3.62	1.212	3.10
12.82	20.68	6.60	3.70	4.40	10,989	8.45	5.444	3.40	1.466	3.38
13.95	22.39	6.60	3.55	4.35	11.773	8.30	5.020	3.15	1.507	3.68
15.00	24.14	6.65	3.40	4.25	12.584	8.20	4.700	2.95	1.620	3.97
16.08	26.04	6.65	3.25	4.20	13.303	8.10	4.502	2.75	1.732	4.24
17.16	28.30	6.70	3.20	4.25	14.110	8.04	4.325	2.55	1.795	4.52
18.22	30.64	6.75	3.05	4.25	14.891	7.97	4.193	2.40	1.830	4.80

PERFORMANCE CHARACTERISTICS



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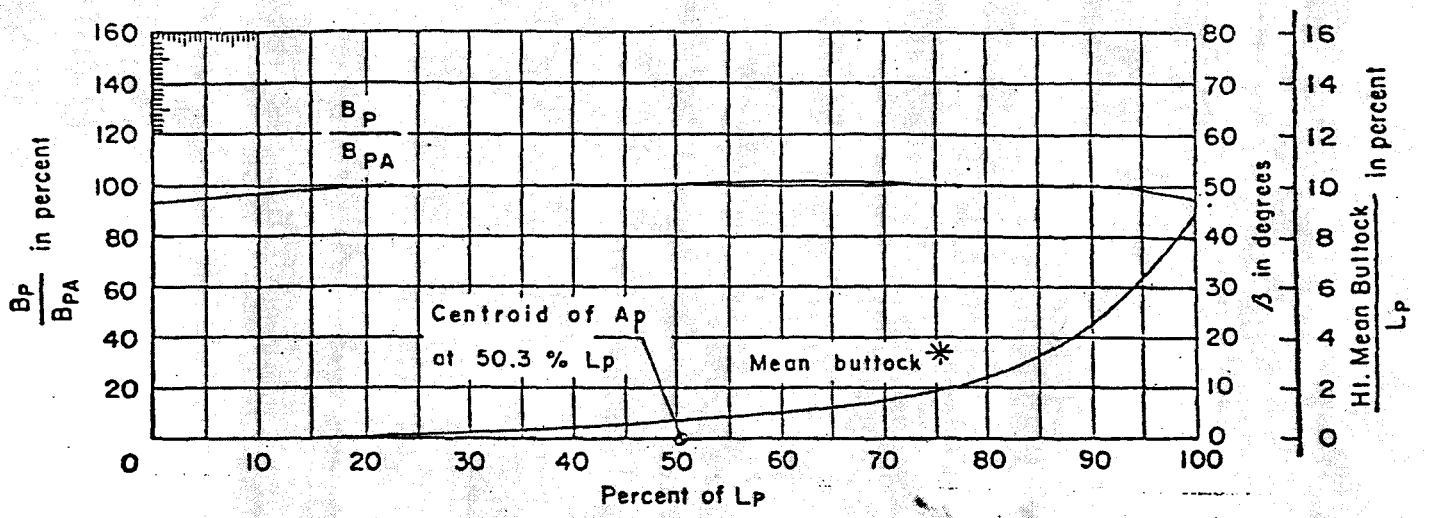
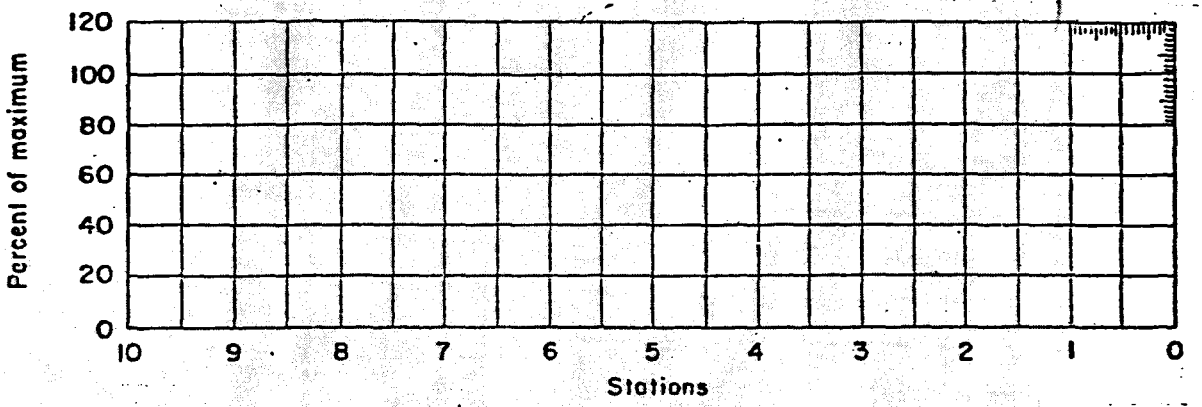


* Note: The mean buttock as shown is based on the actual body plan instead of a simplified body plan



Notation

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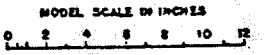
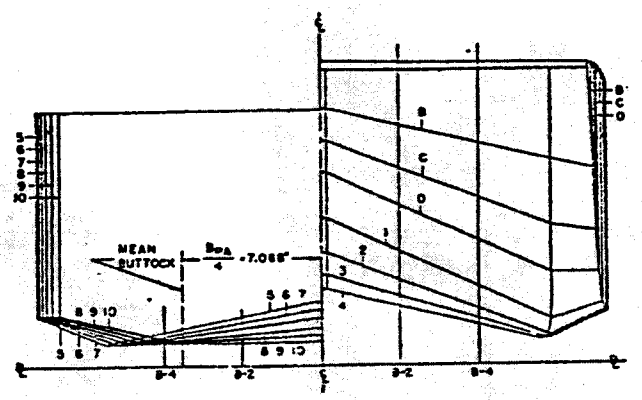
A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

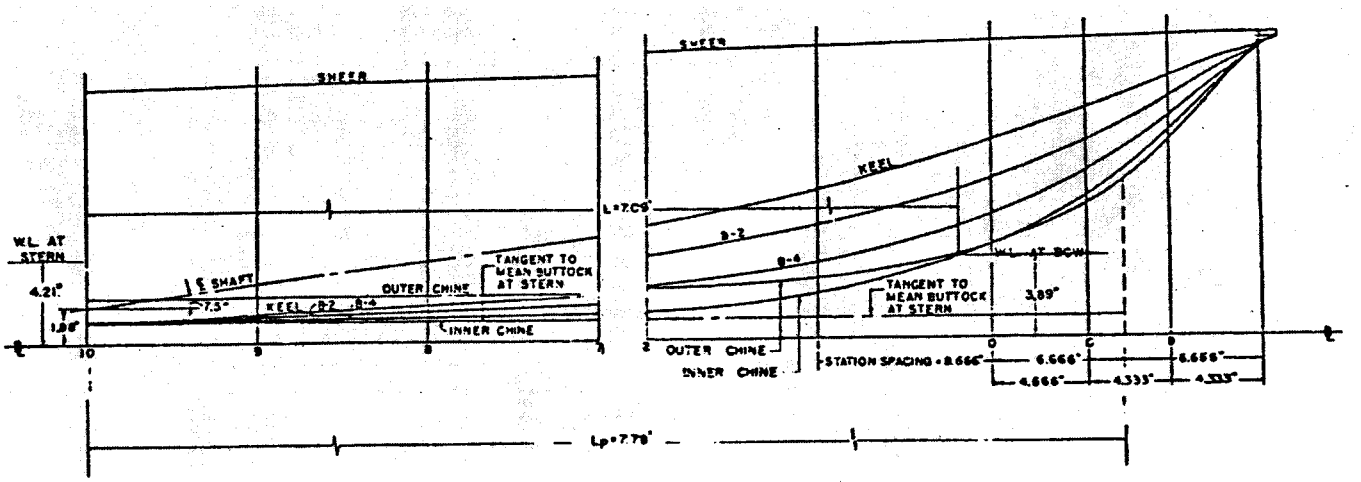
Subscript o indicates value when hull is at rest in water.

SMALL CRAFT
DATA SHEET NO.6

S.N.A.M.E. Small Craft Data Sheet No. 6
Hard-chine boat, L_P/B_{PX}=3.23
Model No. TMB-4309







MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat: Sea Sled Design
Model Number: 4309
Appendages: None

Laboratory: Datmobas
Basin: High-Speed
Basin Size: 2968' X 21' X (10'8 16')
Model Length: 7.778 ft.
Test: 11 Date: 18 Nov. 1954

Water Temperature: 65° F
Specific Weight: 62.3 lb/ft^3
Model Material: Wood
Model Finish: Paint
Turbulence Stimul.: None

Remarks: Model was towed in the shaft line shown in the profile drawing. These lines and model test results were made available to the Society through the courtesy of the Bureau of ships, U.S. Navy Department.

Planing Bottom Dimensions and Coefficients

L_P	7.778 ft.
B_{PX}	2.408 ft.
B_{PA}	2.356 ft.
A_P	18.320 ft.^{2}
$A_P/\nabla^{2/3}$	7.00
$L_P/\nabla^{1/3}$	4.81
L_P/B_{PA}	3.30

LWL Dimensions and Coefficients

L	
B_X	
H	
L/B_X	
$L/\nabla^{1/3}$	
C_B	
C_P	
C_W	

Model Test Condition

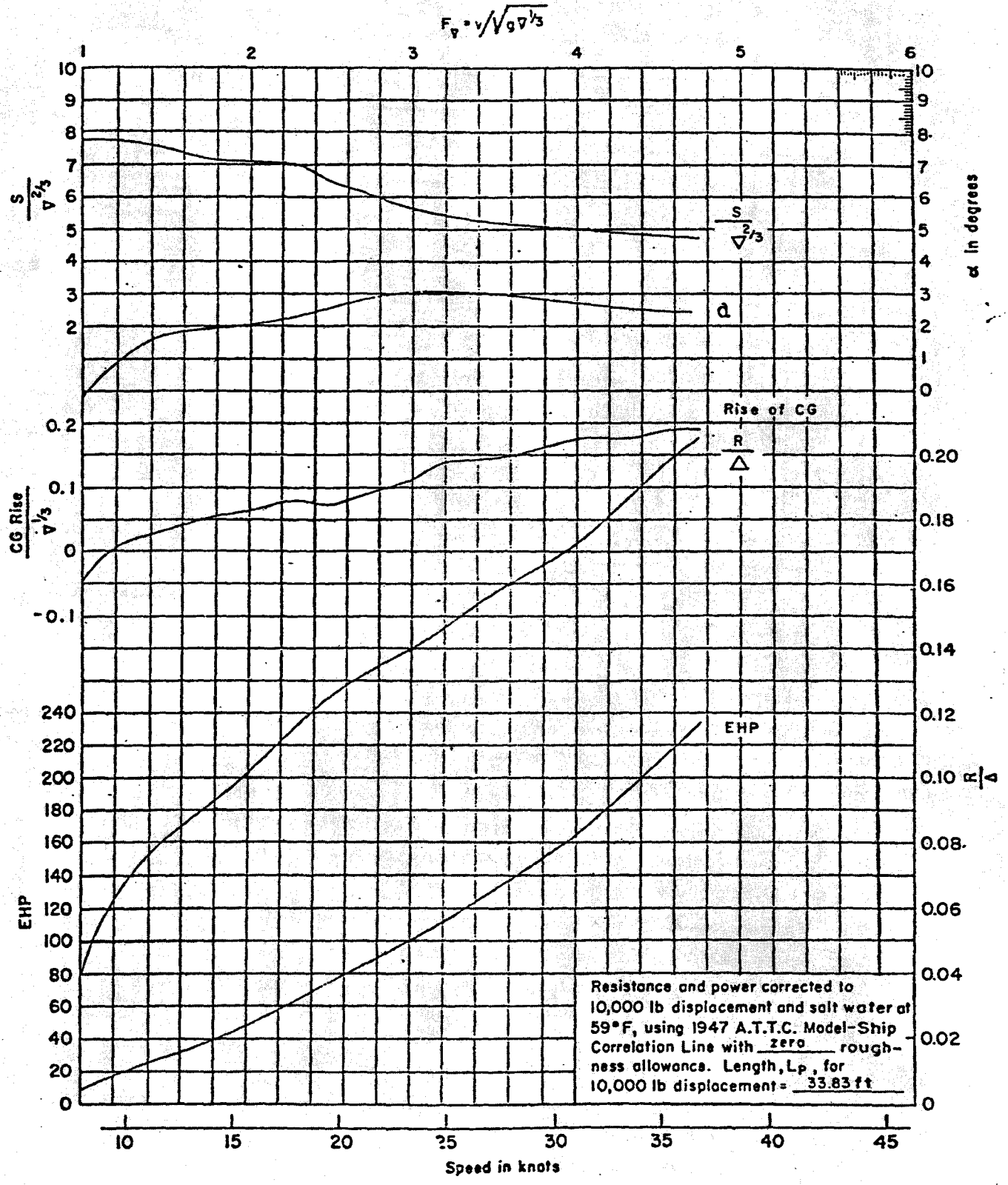
Δ, lb 263.7 τ_0 1.62 deg x bow α_0 −1.22 deg.

LCG location 3.45ft forward of Station 10
(LCG location 6 percent L_P aft of centroid of A_P)

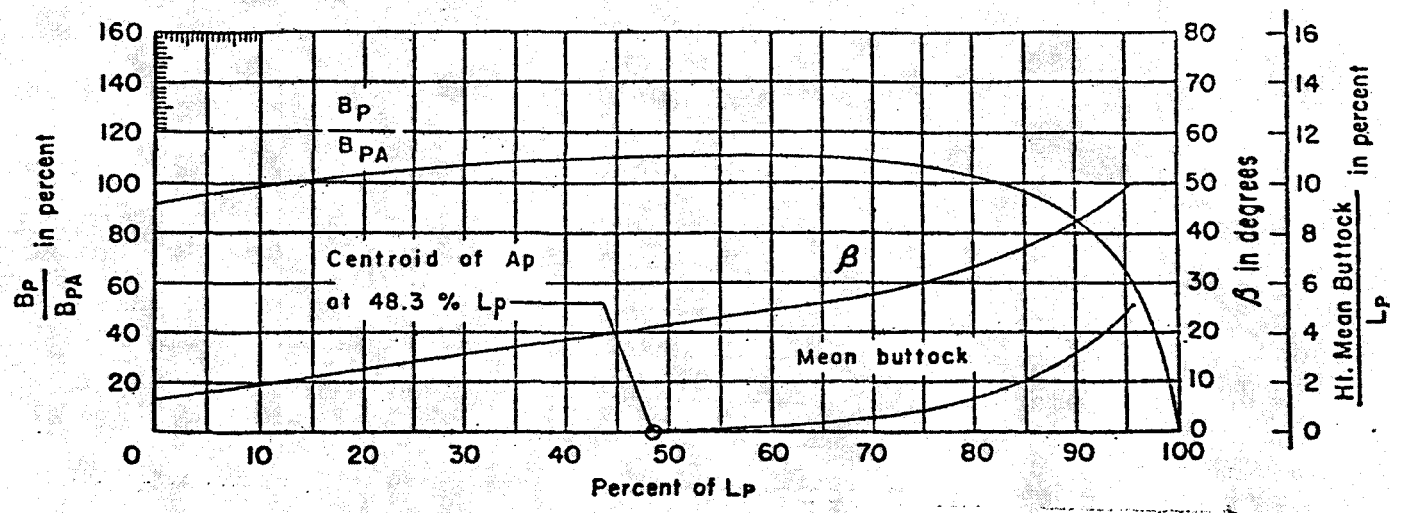
Model Test Results

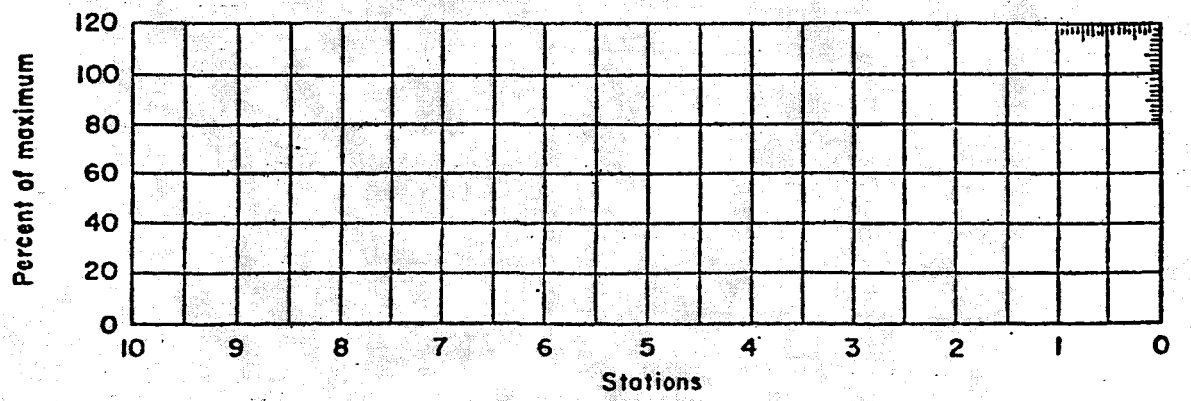
V, knots	R_t, lb	Wetted length of keel, ft	Wetted length of chine, ft	Rex10^{-6}	S, ft^2	10^3 C_t	Change of trim, deg	CG rise, in.	F_∇
4.82	24.23	—	7.65	5.517	20.39	18.52	2.07	0.96	1.129
6.02	33.31	—	7.30	6.576	19.54	17.028	3.92	1.33	1.409
7.21	36.65	—	6.95	7.498	18.57	13.744	4.77	1.81	1.688
8.44	38.78	—	6.40	8.084	17.30	11.391	5.37	2.83	1.976
9.62	40.57	—	5.70	8.205	15.06	10.538	5.92	2.89	2.252
10.86	41.51	—	5.00	8.125	12.35	10.546	6.22	3.45	2.542
12.04	41.30	—	4.65	8.378	11.20	9.207	5.92	3.89	2.818
13.22	41.93	—	4.40	8.705	10.55	8.231	5.52	4.31	3.095
14.46	42.28	—	4.20	9.088	10.00	7.319	5.07	4.57	3.385
15.68	43.02	—	4.00	9.385	9.50	6.607	4.64	4.71	3.671
16.90	44.54	—	3.90	9.863	9.12	6.189	4.34	4.80	3.957
18.10	46.25	—	3.80	10.292	9.00	5.678	4.02	4.80	4.237
19.20	48.45	—	3.65	10.487	8.60	5.532	3.82	4.84	4.495
20.60	51.36	—	3.58	11.036	8.50	5.154	3.52	4.88	4.822

PERFORMANCE CHARACTERISTICS



FORM CHARACTERISTICS





Notation

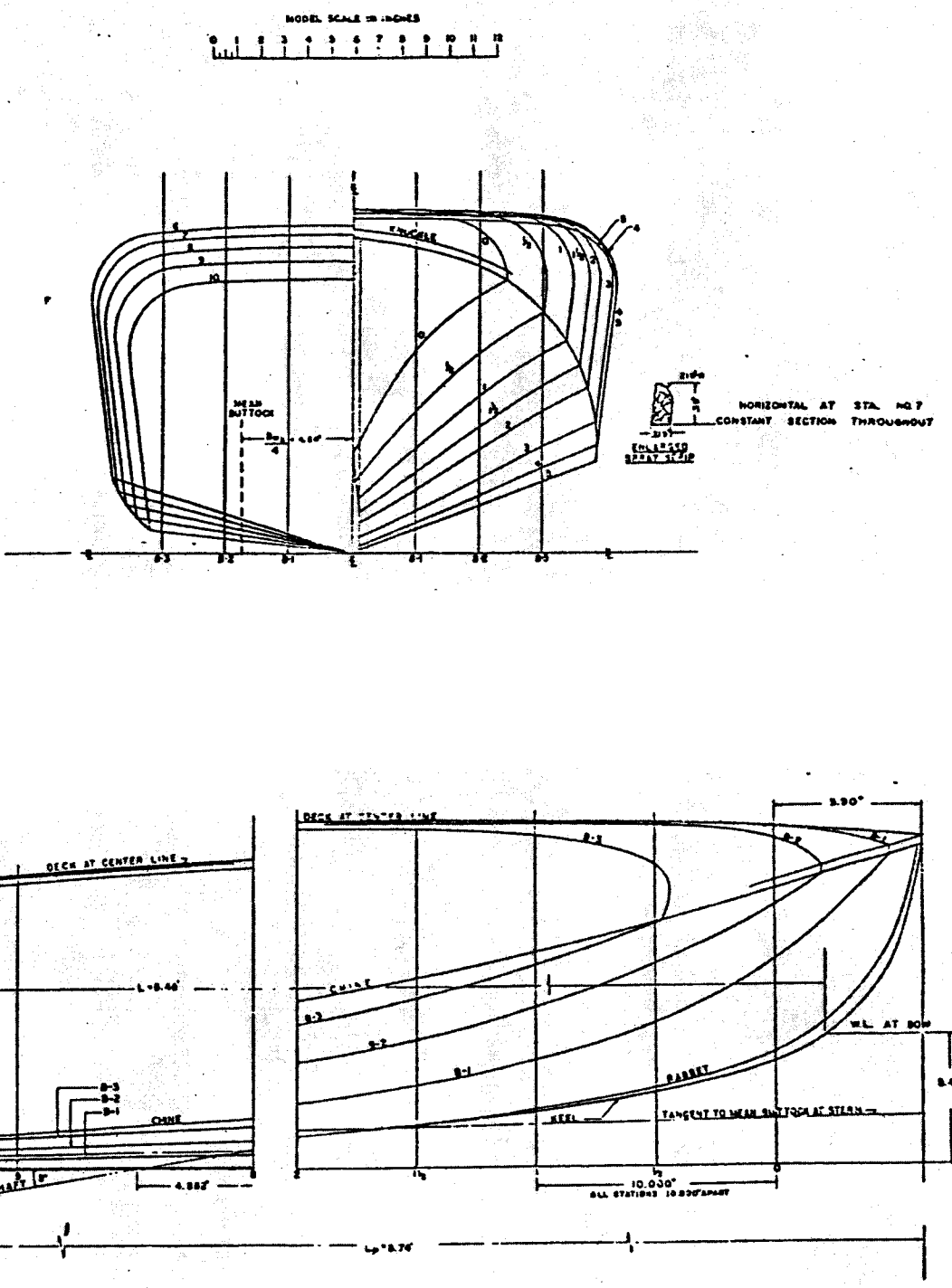
As far as possible the notation used is consistent with the Society's "Explanatory Notes for Resistance and Propulsion Data Sheets" (Technical and Research Bulletin No. 1-13). Exceptions and additions are listed below. The subscript P designates the planing bottom which is the portion of the bottom bounded by the chines and transom.

A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

Subscript o indicates value when hull is at rest in water.

SMALL CRAFT
DATA SHEET NO.5

S.N.A.M.E. Small Craft Data Sheet No. 5
Hard-chine boat, L_P/B_{PX}=5.07
Model No. TMB-3592-1



MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat 80 ft. PT-8
Model Number 3592-1
Appendages Spray Strips

Laboratory Datmobas
Basin High-Speed
Basin Size 2698' X 21' X (10' 8 16')
Model Length 8.74 ft.
Test 8 Date 23 Feb. 1955

Water Temperature 66° F
Specific Weight 62.3 lb/ft³
Model Material Wood
Model Finish Paint
Turbulence Stimul. None

Remarks: Model was towed in the shaft line shown in the profile drawing. These lines and model test results were made available to the Society through the courtesy of the Bureau of Ships, U.S. Navy Department.

Planing Bottom Dimensions and Coefficients

L_P 8.74 ft.
B_{PX} 1.72 ft.
B_{PA} 1.548 ft.
A_P 13.536 ft.²
$A_P/\nabla^{2/3}$ 7.00
$L_P/\nabla^{1/3}$ 6.29
L_P/B_{PA} 5.65

LWL Dimensions and Coefficients

L
B_X
H
L/B_X
$L/\nabla^{1/3}$
C_B
C_P
C_W

Model Test Condition

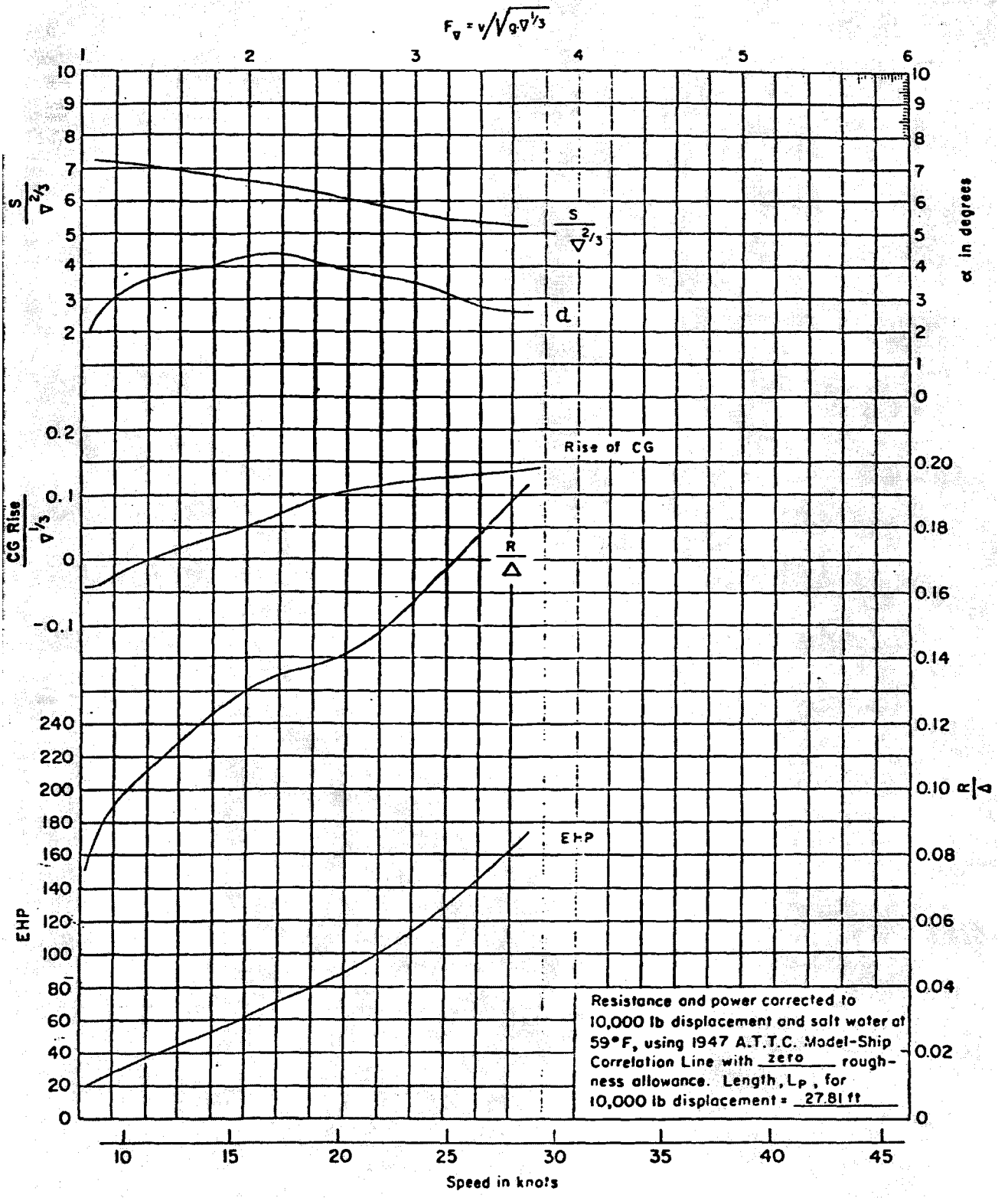
Δ, lb 167.5 τ_0 2.10 deg x bow α_0 -0.70 deg.

LCG location 3.78 ft forward of Station 10
(LCG location 6 percent L_P aft of centroid of A_P)

Model Test Results

V, knots	R_t, lb	Wetted length of keel, ft	Wetted length of chine, ft	Re x 10^{-6}	S, ft²	10^3 C_f	Change of trim, deg	CG rise, in.	F_∇
3.98	7.30	8.46	7.33	4.770	14.92	3.321	0.55	-0.77	1.00
4.97	12.23	8.42	6.96	5.806	14.90	3.211	1.85	+0.26	1.25
5.93	14.76	8.35	6.62	6.765	14.50	3.122	2.50	+0.58	1.50
6.93	16.73	8.28	6.42	7.717	13.92	3.061	2.60	+0.92	1.75
7.90	18.91	8.25	6.17	8.581	13.76	3.008	2.75	+1.09	2.00
8.90	21.37	8.08	5.83	9.424	13.65	2.963	2.95	+1.35	2.25
9.88	23.57	7.92	5.71	10.190	12.68	2.925	3.25	+1.26	2.48
10.90	25.15	7.67	5.33	10.780	11.78	2.899	3.60	+1.56	2.75
11.87	26.53	7.50	5.00	11.270	10.86	2.878	3.75	+1.88	3.00
12.81	28.28	7.35	4.75	11.760	10.47	2.859	3.75	+2.36	3.24
13.85	30.11	7.25	4.58	12.36	10.13	2.836	3.70	+2.43	3.50
14.82	31.79	7.08	4.33	12.93	9.88	2.816	3.60	+2.66	3.74
15.82	33.59	7.08	4.17	13.54	9.67	2.795	3.45	+2.95	3.99
16.76	35.78	7.08	4.04	14.09	9.49	2.777	3.30	+2.95	4.23
17.74	38.14	7.08	3.87	14.69	9.32	2.758	3.20	+3.08	4.48
18.75	40.55	7.04	3.71	15.31	9.19	2.741	3.10	+3.19	4.74

PERFORMANCE CHARACTERISTICS



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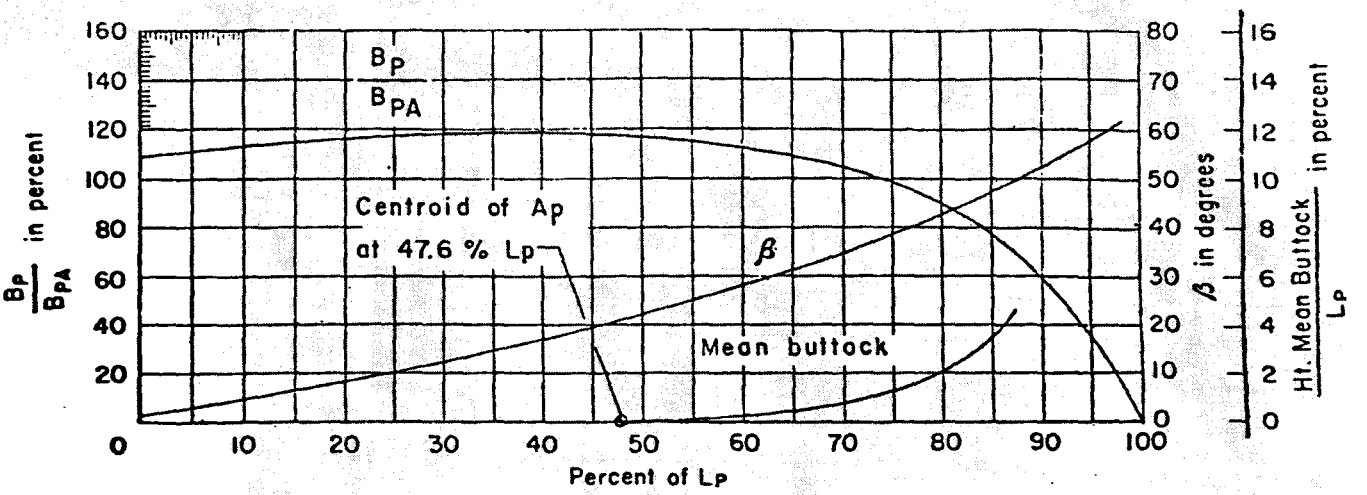

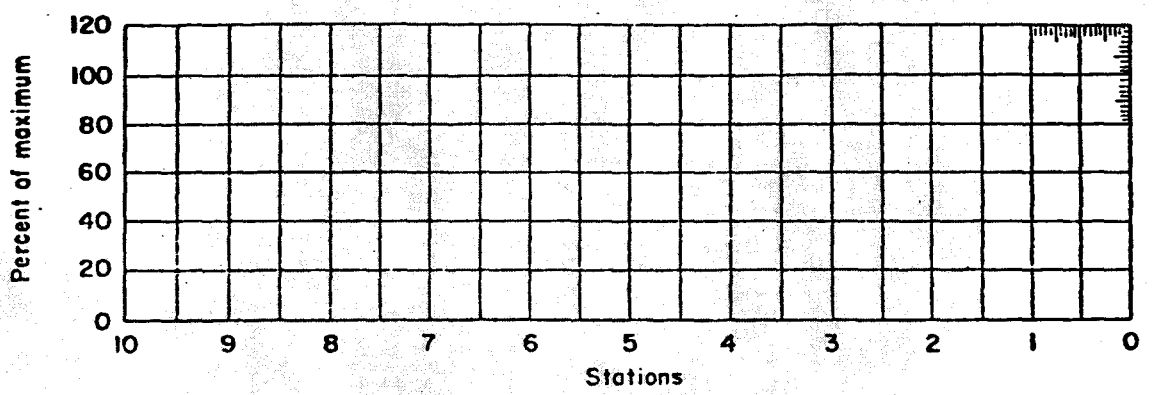

Notation

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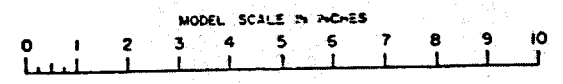
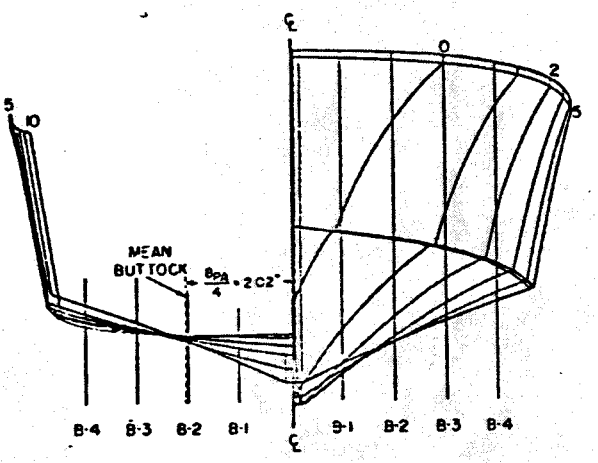
A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

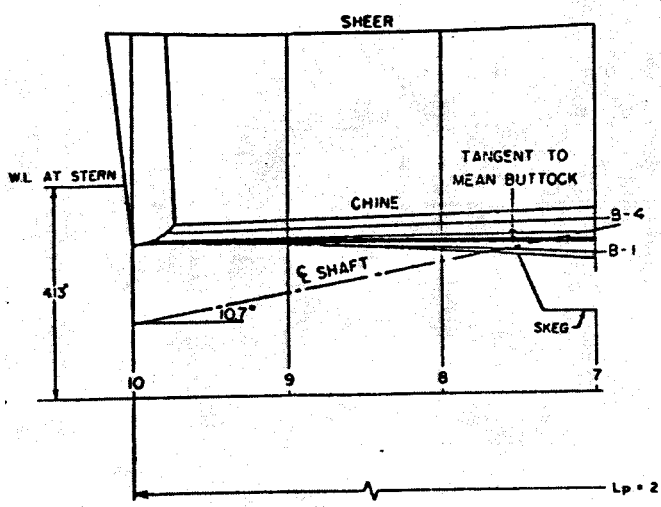
Subscript o indicates value when hull is at rest in water.

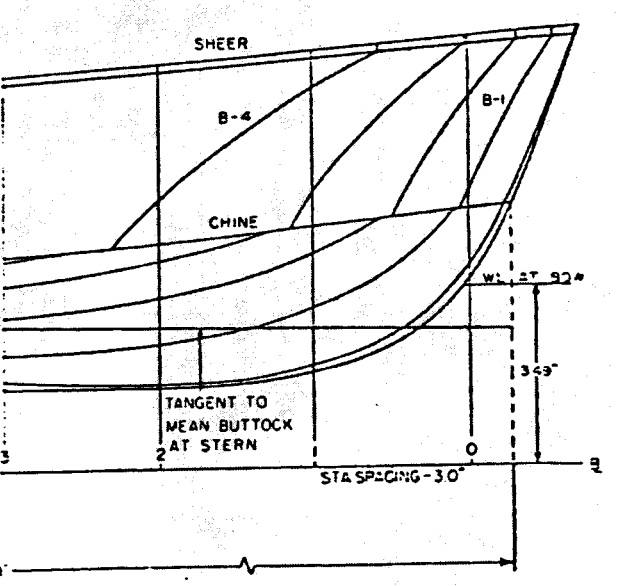
SMALL CRAFT
DATA SHEET NO. 4

S.N.A.M.E. Small Craft Data Sheet No. 4
Hard-chine boat, $L_p/B_{PX} = 3.15$
Model No DL-1338









L_p = 2.558"

Page 1

MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat 33 ft. Personnel Boat
Model Number 1888
Appendages Skeg

Laboratory Davidson Lab.
Basin Tank 1
Basin Size 100' x 9' x 4½'
Model Length 2.568 ft.
Test 1F Date Feb. 18, 1957

Water Temperature 69° F
Specific Weight 62.3 lb/ft³
Model Material Wood
Model Finish Varnish (rubbed down)
Turbulence Stimul. 0.04"d. strut

Remarks: Model was towed in the shaft line shown in the profile drawing. These lines and model test results were made available to the Society through the courtesy of the Bureau of Ships, U.S. Navy Department

Planing Bottom Dimensions and Coefficients

L_P 2.568 ft.
B_{PX} 0.815 ft.
B_{PA} 0.674 ft.
A_P 1.733 ft.²
$A_P/\nabla^{2/3}$ 7.00
$L_P/\nabla^{1/3}$ 5.162
L_P/B_{PA} 3.81

LWL Dimensions and Coefficients

L
B_X
H
L/B_X
$L/\nabla^{1/3}$
C_B
C_P
C_W

Model Test Condition

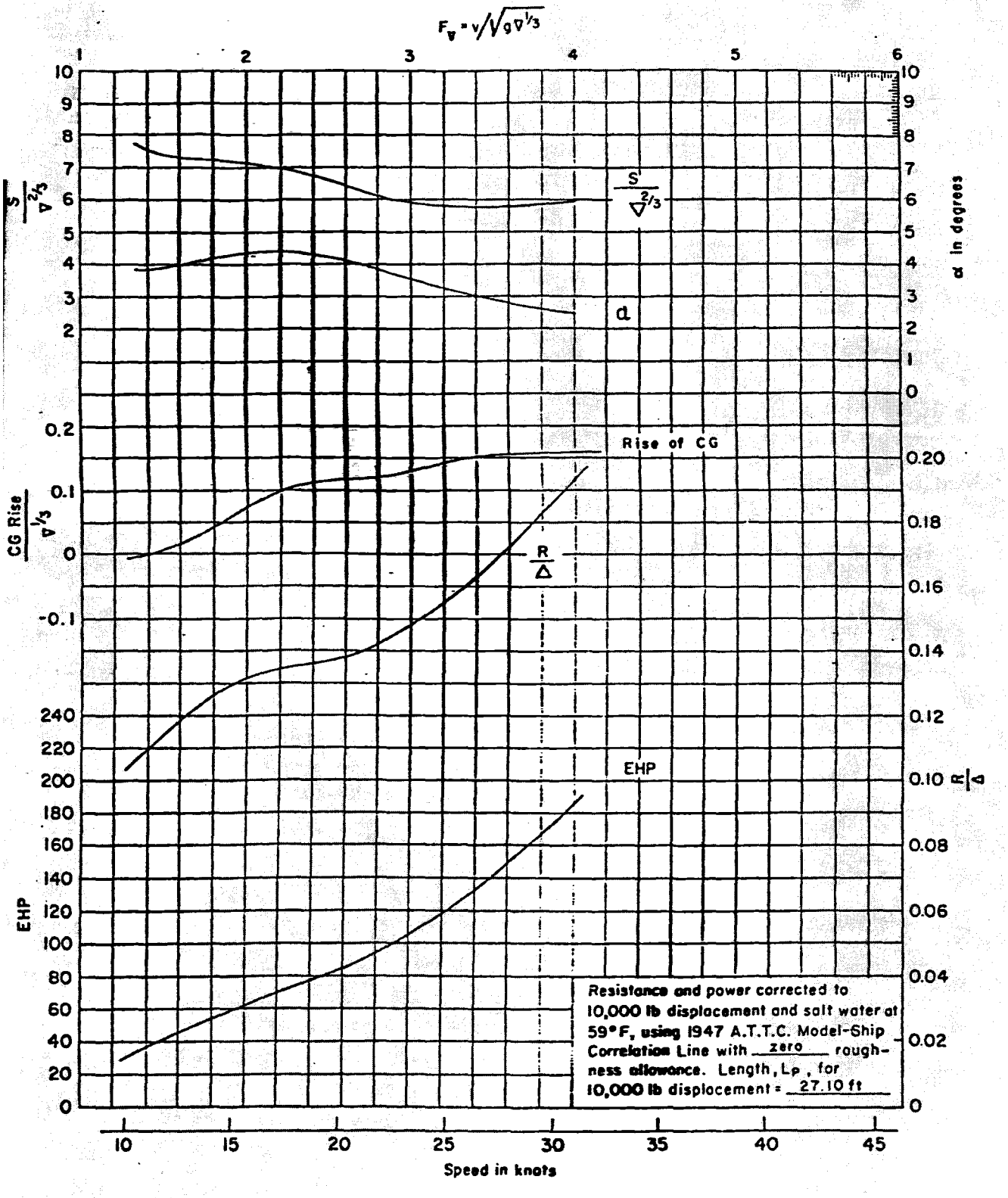
Δ, lb 7.67 τ_0 1.20 deg x stern α_0 0.20 deg

LCG location 0.999 ft forward of Station 10
(LCG location 6 percent L_P aft of centroid of A_P)

Model Test Results

V, knots	R_t, lb	Wetted length of keel, ft	Wetted length of chine, ft	Re x 10^{-6}	S, ft²	10^3 C_t	Change of trim, deg	CG rise, in.	F_∇
1.42	0.152	2.50	1.50	0.552	1.72	15.91	0.19	-0.06	0.600
2.20	0.472	2.50	1.58	0.858	1.78	19.80	0.86	-0.17	0.929
2.52	0.683	2.46	1.67	0.964	1.80	21.66	2.01	-0.23	1.054
2.83	0.809	2.38	1.75	1.050	1.80	20.31	3.04	-0.16	1.195
3.62	0.967	2.33	1.67	1.315	1.73	15.40	3.63	+0.06	1.529
4.26	1.096	2.29	1.50	1.520	1.68	13.00	3.82	+0.20	1.799
5.11	1.232	2.29	1.33	1.823	1.61	10.61	4.21	+0.38	2.158
5.75	1.302	2.29	1.25	2.050	1.53	9.32	3.92	+0.57	2.429
6.60	1.422	2.25	1.17	2.313	1.45	8.16	3.54	+0.69	2.788
7.24	1.552	2.25	1.17	2.536	1.37	7.83	3.15	+0.76	3.058
8.02	1.742	2.25	1.08	2.811	1.34	7.32	2.58	+0.79	3.388
8.71	1.911	2.25	1.00	3.053	1.30	7.01	2.39	+0.85	3.679

PERFORMANCE CHARACTERISTICS



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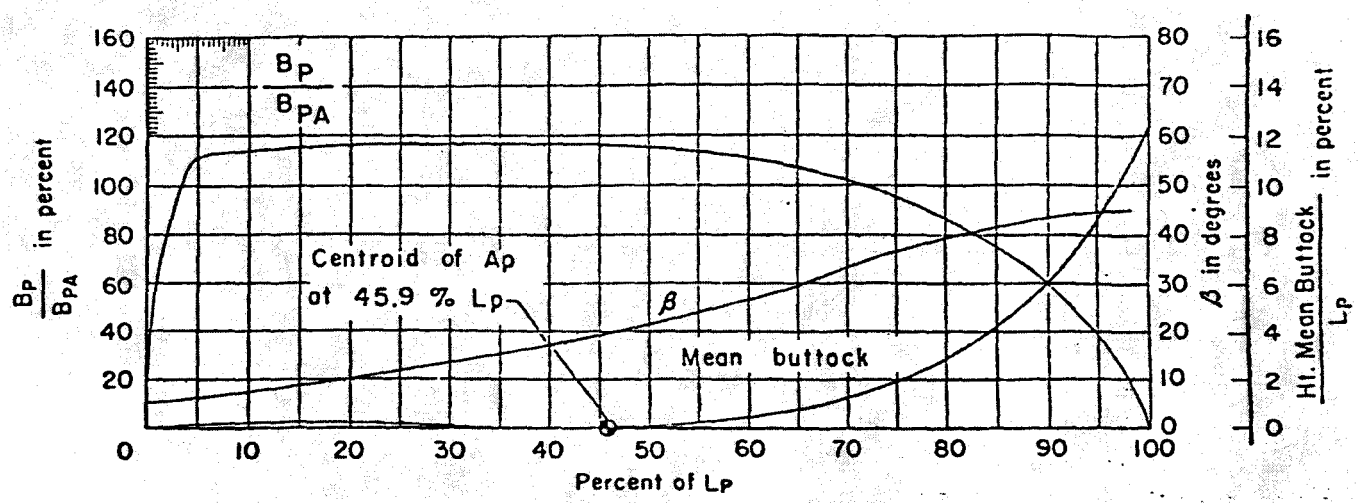

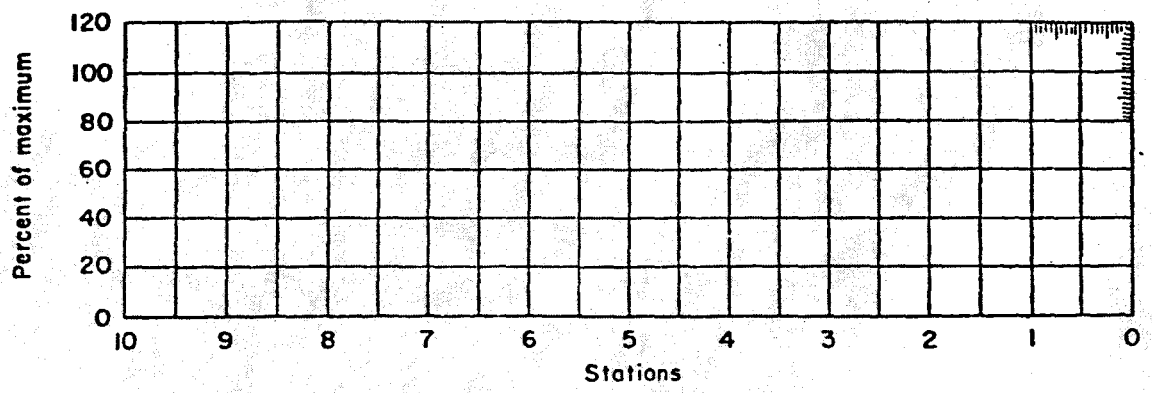

Notation

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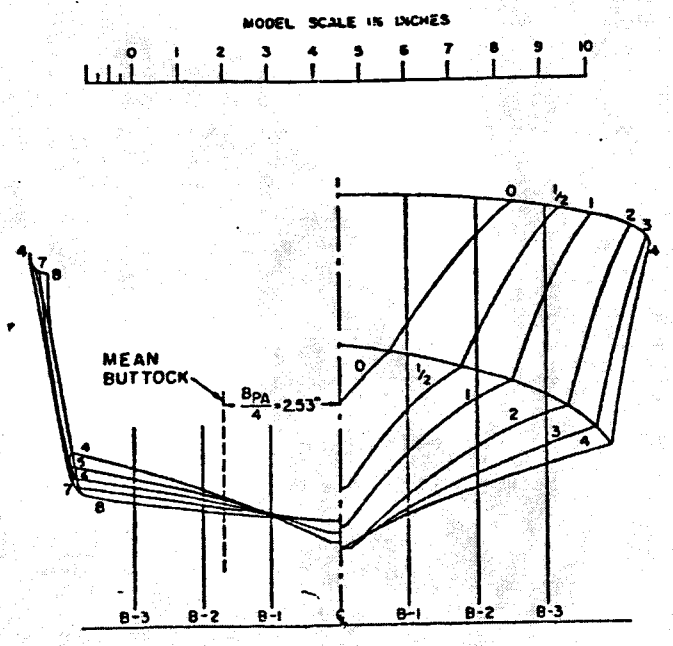
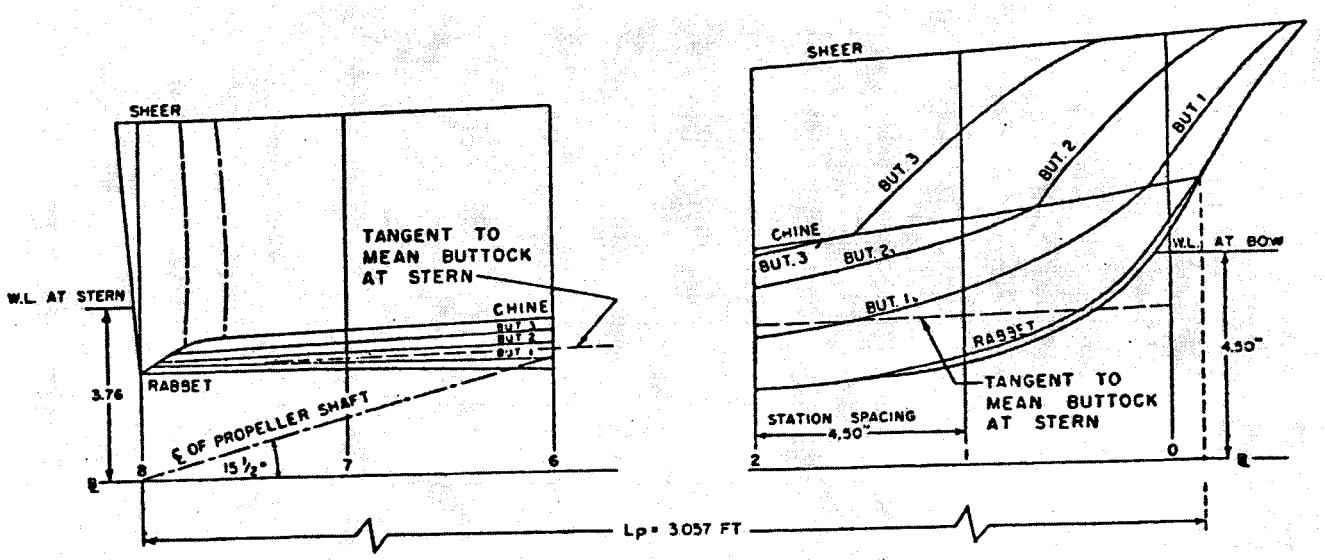
A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

Subscript *o* indicates value when hull is at rest in water.

SMALL CRAFT
DATA SHEET NO.3

S.N.A.M.E. Small Craft Data Sheet No. 3
Hard-chine boat, $L_P/B_{PX} = 4.02$
Model No. TMB-4744





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MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat 26 ft. Personnel Boat
Model Number 4744 (DTMB)
Appendages None

Laboratory Davidson Lab.
Basin Tank 1
Basin Size 100'X 9'X 4 1/2'
Model Length 3.057 ft.
Test LA2196-1E Date May 15, 1959

Water Temperature 70° F
Specific Weight 62.3 lb/ft^3
Model Material Wood
Model Finish Varnish (rubbed down)
Turbulence Stimul. 0.04" d. strut

Remarks: Model was towed in the shaft line shown in the profile drawing.
These lines and model test results were made available to the Society through the courtesy of the Bureau of Ships, U.S. Navy Department.

Planing Bottom Dimensions and Coefficients

L_P 3.057 ft.
B_{PX} 0.995 ft.
B_{PA} 0.844 ft.
A_P 2.580 ft.^{2}
$A_P/\nabla^{2/3}$ 7.00
$L_P/\nabla^{1/3}$ 5.14
L_P/B_{PA} 3.622

LWL Dimensions and Coefficients

L ____
B_X ____
H ____
L/B_X ____
$L/\nabla^{1/3}$ ____
C_B ____
C_P ____
C_W ____

Model Test Condition

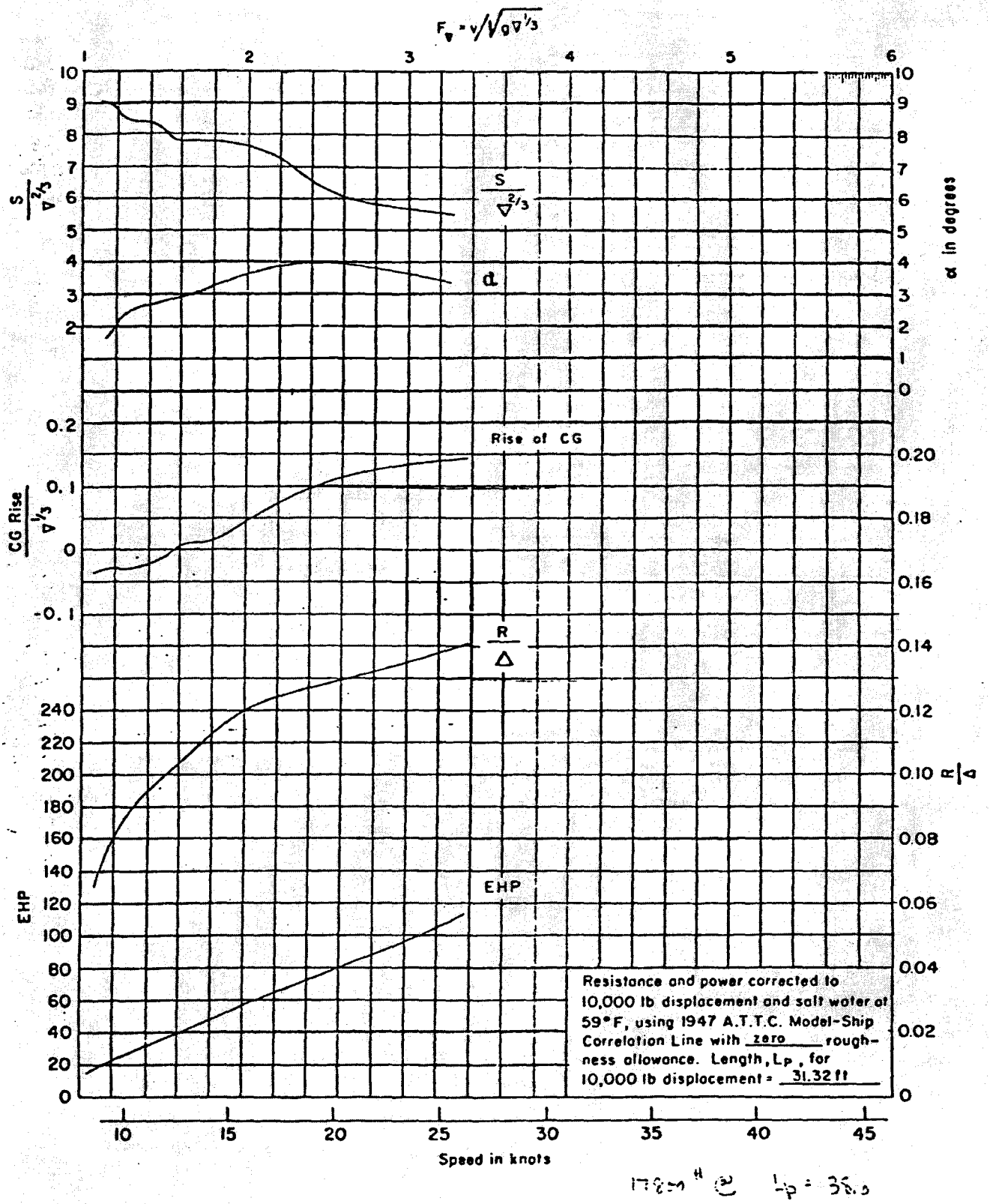
Δ, lb 13.96 τ_0 1.22 deg x bow α_0 0.20 deg.

LCG location 1.14 in forward of Station 5
(LCG location 6 percent L_P aft of centroid of A_P)

Model Test Results

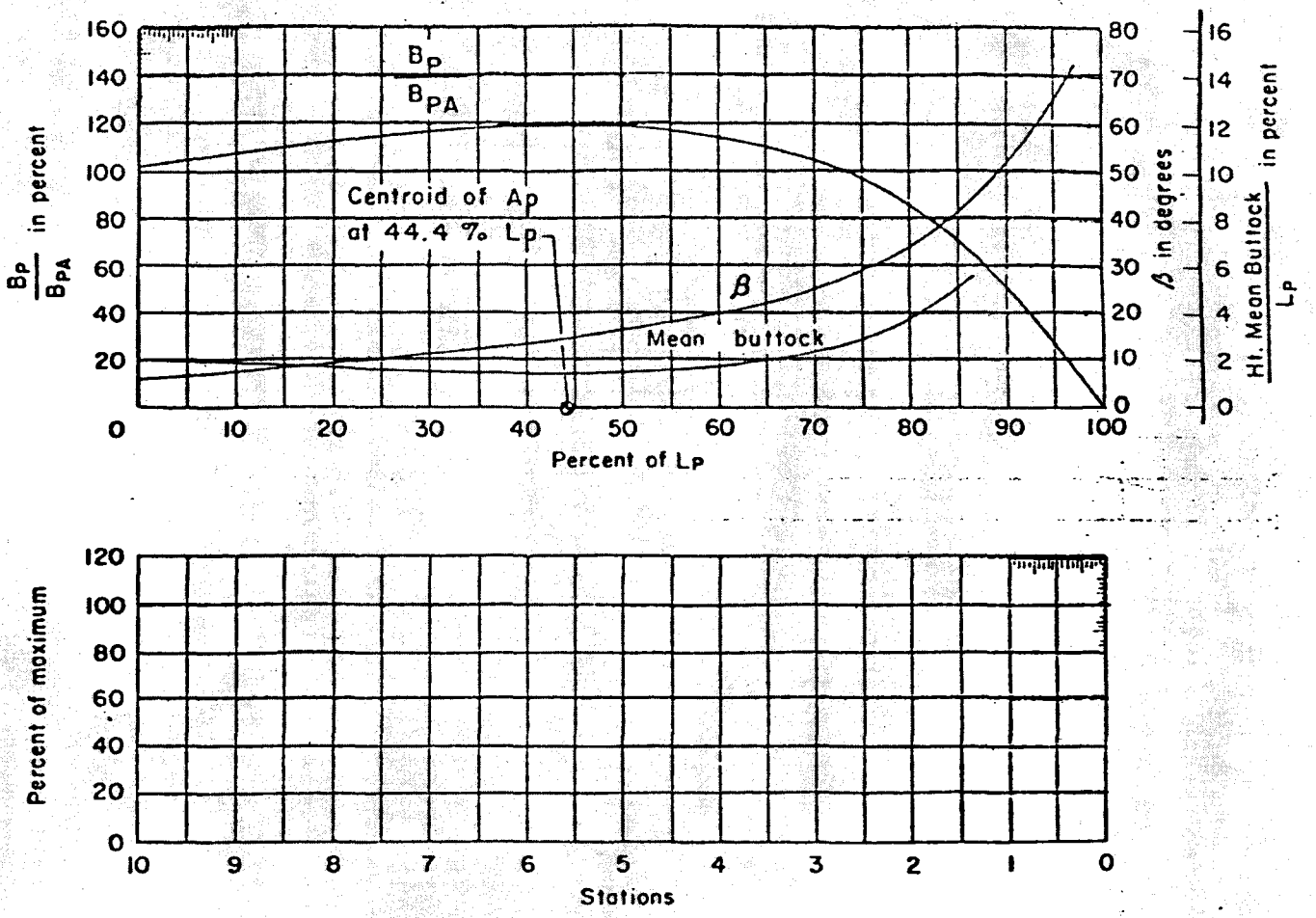
V, knots	R_t, lb	Wetted length of keel, ft	Wetted length of chine, ft	Rex10^{-6}	S, ft^2	10^3 C_t	Change of trim, deg	CG rise, in.	F_∇
3.505	1.66	2.92	2.08	1.637	2.824	17.35	3.58	-0.04	1.339
4.201	1.87	2.83	1.92	1.905	2.700	14.21	3.74	+0.11	1.605
5.237	2.15	2.83	1.67	2.376	2.628	10.81	4.22	+0.55	2.001
5.933	2.26	2.75	1.58	2.611	2.530	9.179	3.98	+0.77	2.267
6.974	2.39	2.75	1.50	3.070	2.290	7.776	3.82	+0.88	2.665
8.015	2.66	2.67	1.33	3.423	2.160	6.934	3.26	+0.98	3.063
8.710	2.88	2.75	1.25	3.835	2.160	6.359	2.95	+1.10	3.328
10.450	3.60	2.83	1.17	4.740	2.160	5.526	2.23	+1.17	3.993

PERFORMANCE CHARACTERISTICS



17800 # @ L_P = 38.0

FORM CHARACTERISTICS



Notation

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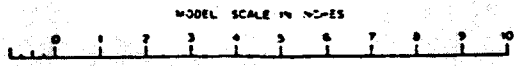
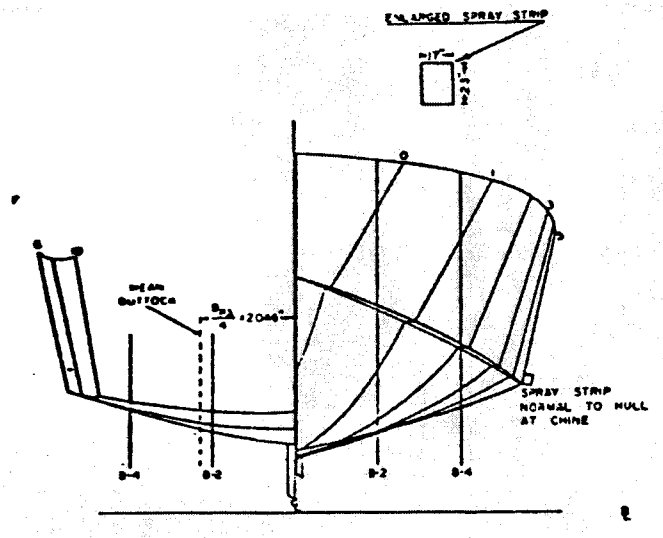
A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

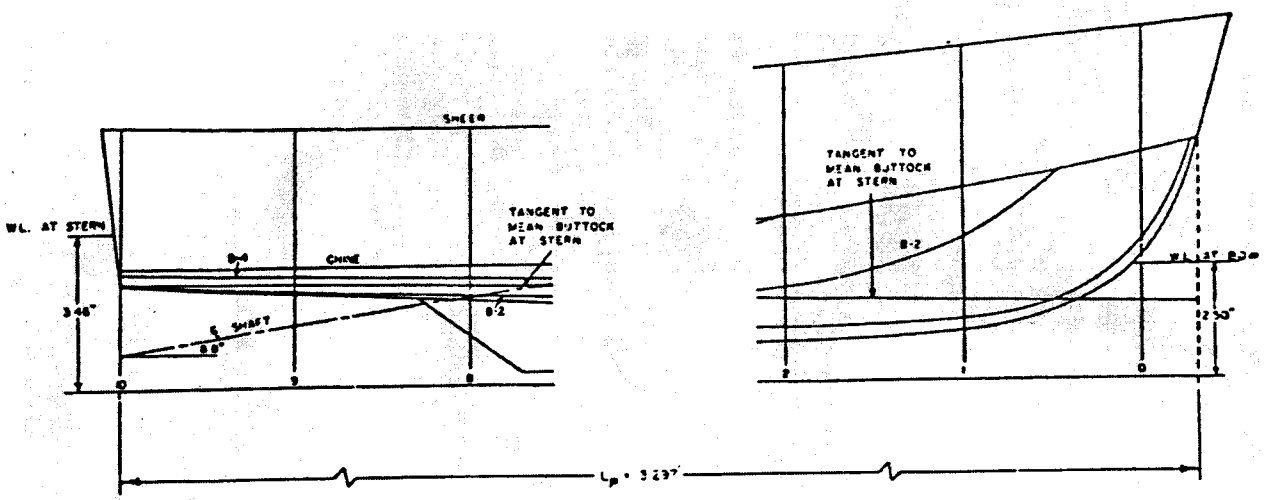
Subscript 0 indicates value when hull is at rest in water.

SMALL CRAFT
DATA SHEET NO.2

S.N.A.M.E. Small Craft Data Sheet No.2
Hard-chine boat, $L_p/B_{px} = 4.02$
Model No. TMB-4709







Page 1

MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat 45 ft. Steel Utility Boat
Model Number 4708 (DTMB)
Appendages Skeg and Spray Strips

Laboratory Davidson Lab.
Basin Tank 1
Basin Size 100'X9'X4½'
Model Length 3.297 ft
Test 2P Date July 3, 1958

Water Temperature 73° F
Specific Weight 62.3 lb/ft³
Model Material Wood
Model Finish Varnish (rubbed down)
Turbulence Stimul. 0.04" d. Strut

Remarks: Model was towed in the shaft line shown in the profile drawing. These lines and model test results were made available to the Society through the courtesy of the Bureau of Ships, U.S. Navy Department.

Planing Bottom Dimensions and Coefficients

L_P 3.297 ft.
B_{PX} 0.820 ft.
B_{PA} 0.682 ft.
A_P 2.251 ft.²
$A_P/\nabla^{2/3}$ 7.00
$L_P/\nabla^{1/3}$ 5.818
L_P/B_{PA} 4.830

LWL Dimensions and Coefficients

L
B_X
H
L/B_X
$L/\nabla^{1/3}$
C_B
C_P
C_W

Model Test Condition

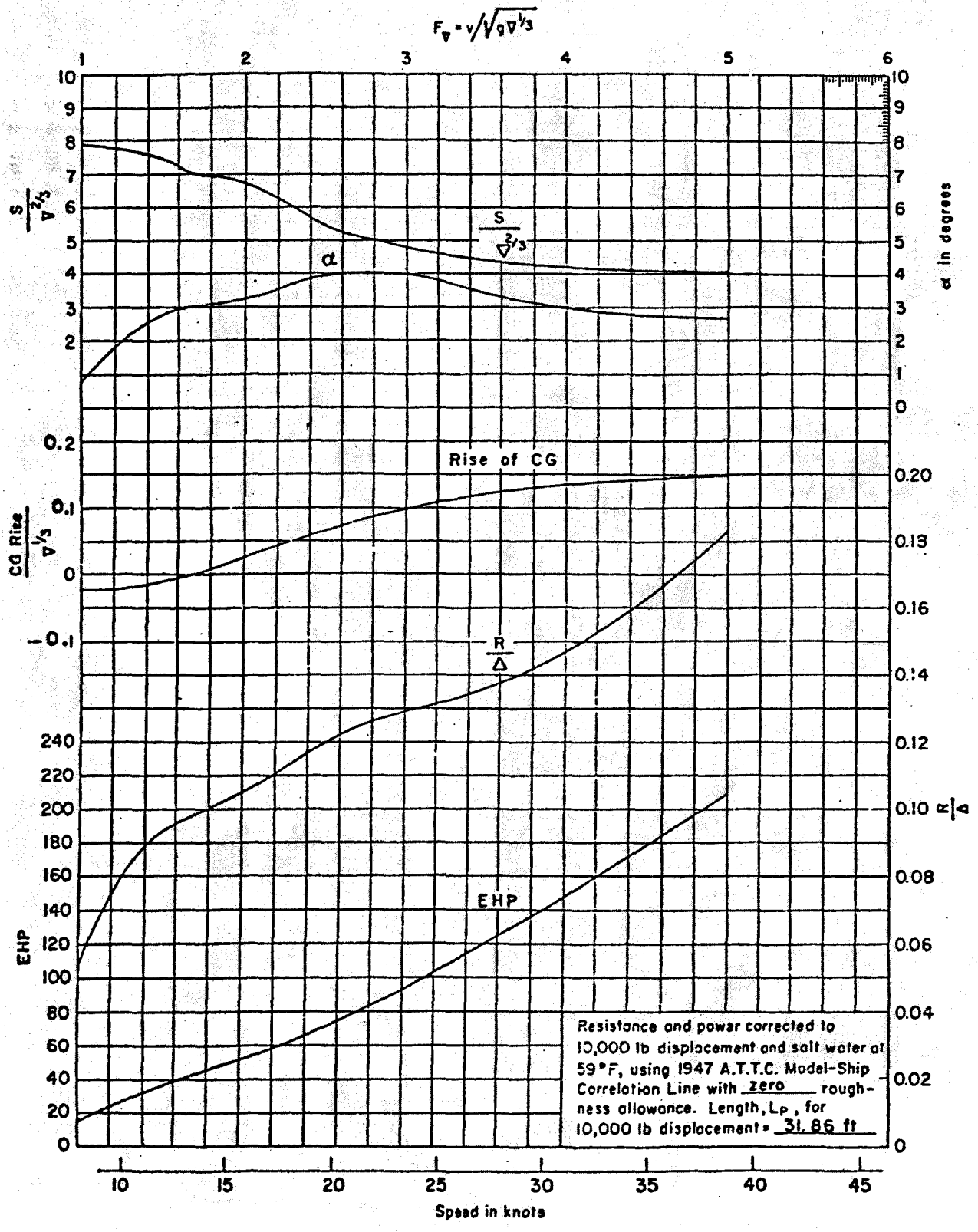
Δ, lb 11.35 τ_0 1.5 deg x stern α_0 0.6 deg

LCG location 1.26ft forward of Station 10
(LCG location 6 percent L_P aft of centroid of A_P)

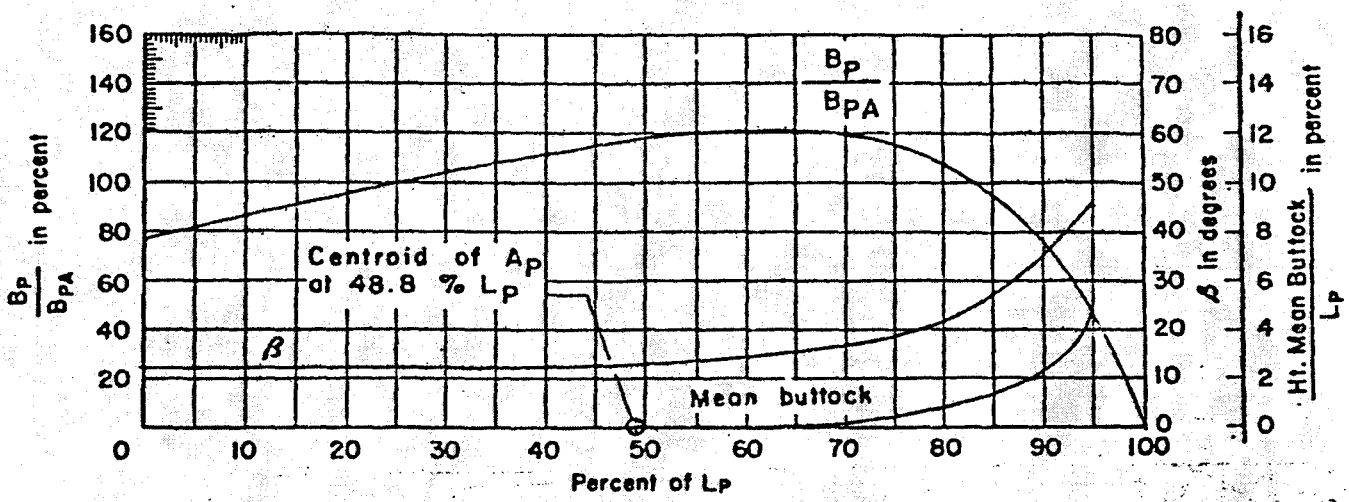
Model Test Results

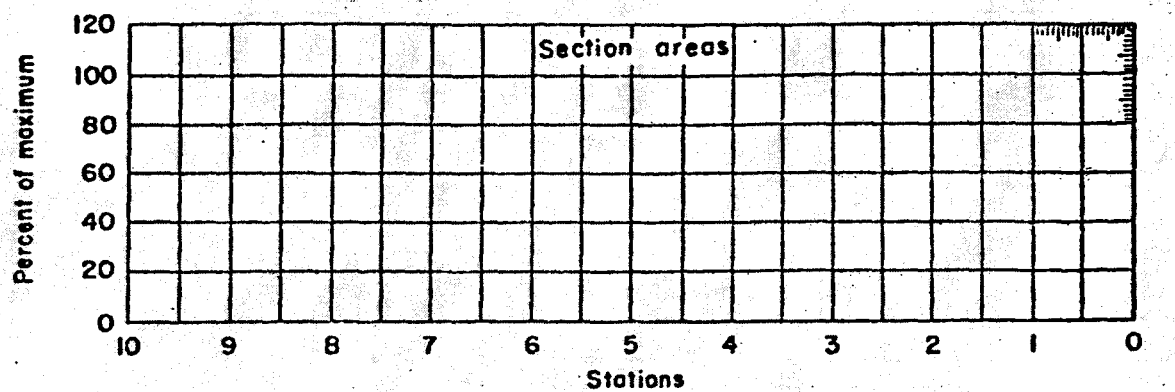
V, knots	R_T, lb	Wetted length of keel, ft	Wetted length of chine, ft	Rex10^{-6}	S, ft²	10^3 C_T	Change of trim, deg	CG rise, in.	F_∇
2.778	0.880	3.15	2.48	1.456	2.908	14.20	1.94	-0.25	1.099
2.990	1.014	3.11	2.55	1.548	2.894	14.18	2.25	-0.22	1.183
3.199	1.105	3.08	2.33	1.640	2.773	14.08	2.84	-0.22	1.265
3.624	1.254	3.00	2.25	1.809	2.696	12.82	3.22	-0.15	1.433
4.048	1.355	2.93	2.03	1.974	2.546	11.75	3.44	+0.03	1.601
4.686	1.545	2.93	1.88	2.285	2.524	10.09	3.82	+0.13	1.853
5.534	1.711	2.63	1.80	2.422	2.350	8.602	4.34	+0.46	2.189
6.811	1.858	2.55	1.50	2.890	1.930	7.513	4.34	+0.81	2.594
8.365	2.089	2.40	1.35	3.340	1.780	6.074	3.74	+0.96	3.308

PERFORMANCE CHARACTERISTICS



FORM CHARACTERISTICS





Notation

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A_P	Projected planing bottom area, excluding area of external spray strips
B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of after portion of mean buttock in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

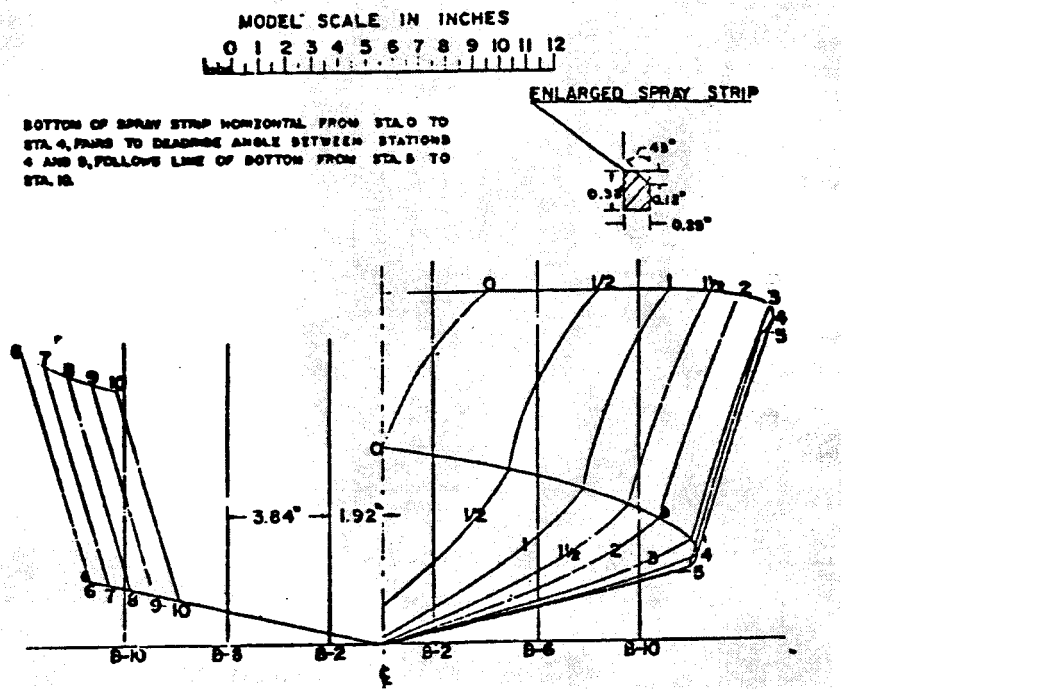
Subscript 0 indicates value when hull is at rest in water.

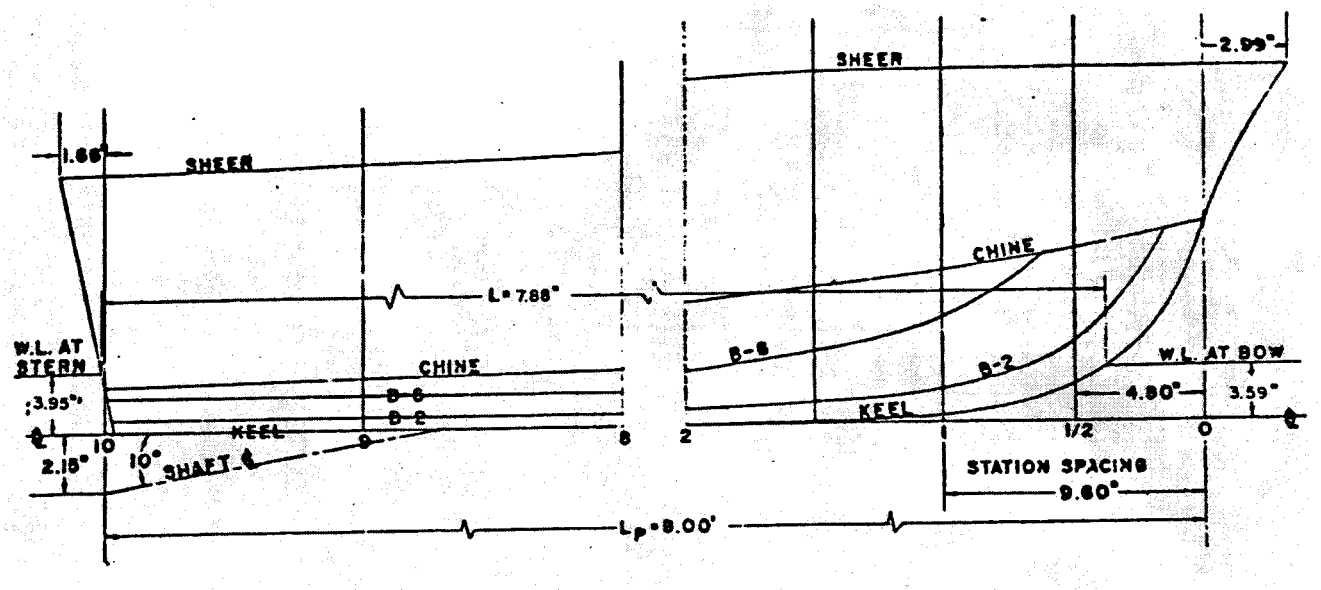
SMALL CRAFT
DATA SHEET NO. 1

S.N.A.M.E. Small Craft Data Sheet No. 1

Hard-chine boat, L_P/B_{PX}=4.09

Model No. TMB-4667





MODEL PARTICULARS, TEST CONDITIONS, AND RESULTS

Boat: Parent Model for Planing Boat Series
Model Number: 4667
Appendages: Spray Strips

Laboratory: Datmobas
Basin: High-Speed
Basin Size: 2698' x 21' x (10'8 16')
Model Length: 8.00 ft
Test: 0 Date: 4 Nov. 57

Water Temperature: 72° F
Specific Weight: 62.3 lb/ft^3
Model Material: Wood
Model Finish: Paint
Turbulence Stimul.: None

Remarks: Model was towed in the shaft line shown in the profile drawing

Planing Bottom Dimensions and Coefficients

L_P	8.00 ft
B_{PX}	1.955 ft
B_{PA}	1.600 ft
A_P	12.80 ft^2
$A_P/\nabla^{2/3}$	7.00
$L_P/\nabla^{1/3}$	5.917
L_P/B_{PA}	5.000

LWL Dimensions and Coefficients

L	
B_X	
H	
L/B_X	
$L/\nabla^{1/3}$	
C_B	
C_P	
C_W	

Model Test Condition

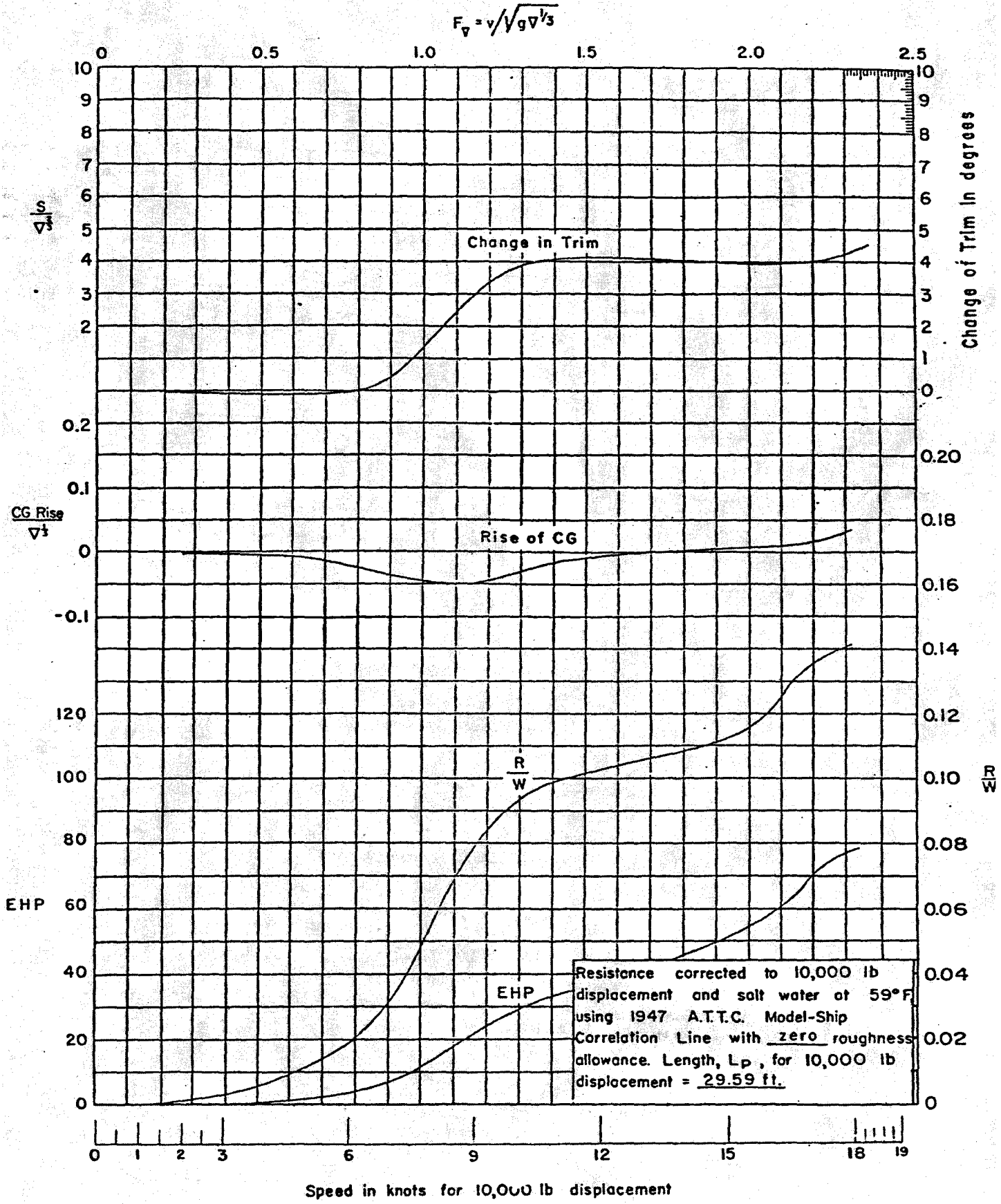
Δ, lb 153.9 τ_0 0.20 deg x stern α_0 0.20 deg

LCG location 3.42 ft forward of station 10
(LCG location 6 percent L_P aft of centroid of A_P)

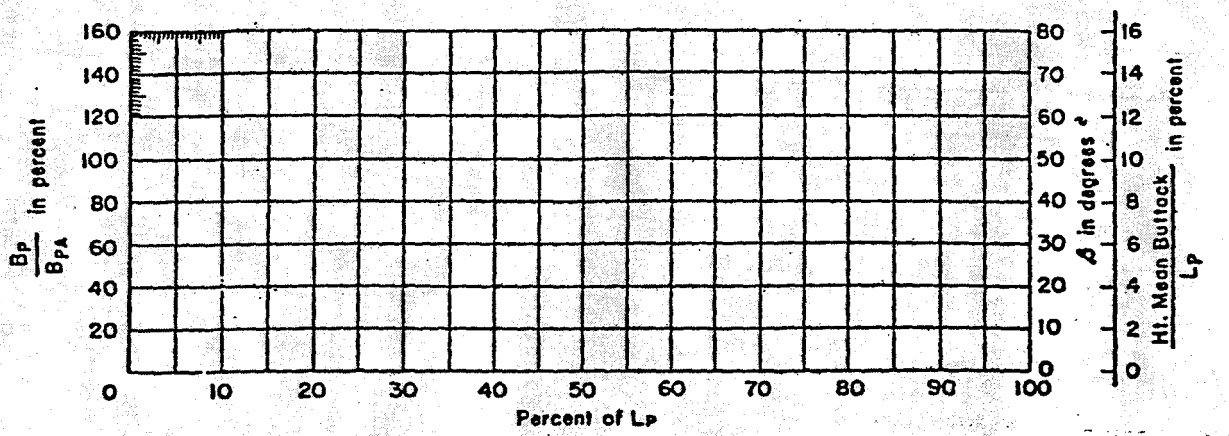
Model Test Results

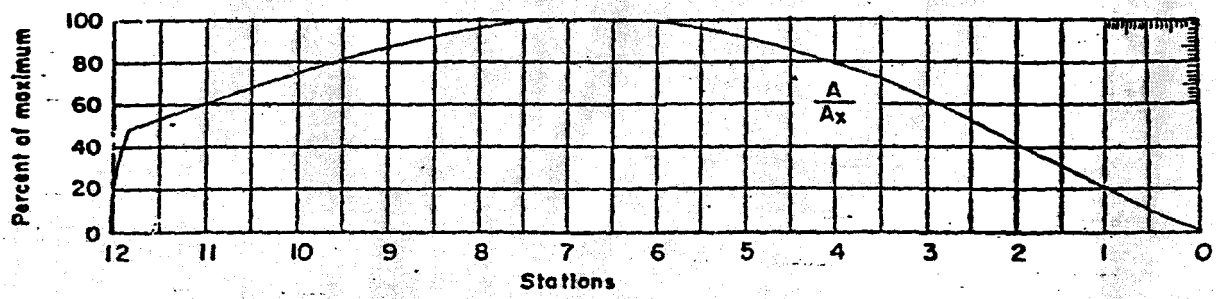
V, knots	R_t, lb	Wetted length of keel, ft	Wetted length of chine, ft	Rex10^{-6}	S, ft^2	10^3 C_t	Change of trim, deg	CG rise, in.	F_∇
0	—	7.80	5.40	—	—	—	0.00	0.00	0.00
3.90	8.57	7.80	7.50	4.966	14.52	14.056	0.48	-0.38	1.00
4.88	13.33	7.80	6.60	5.774	14.36	14.122	2.00	-0.55	1.25
5.85	15.12	7.70	6.10	6.632	13.42	11.926	2.62	-0.23	1.50
6.84	16.40	7.60	5.80	7.531	12.95	9.803	2.77	0.04	1.75
7.83	17.79	7.40	5.40	8.234	12.44	8.448	3.07	0.29	2.01
8.81	19.19	7.10	5.00	8.758	11.45	7.821	3.57	0.58	2.26
9.77	20.31	6.60	4.60	8.893	9.93	7.761	3.78	1.01	2.50
10.75	21.26	6.20	4.40	9.363	9.28	7.173	3.80	1.31	2.76
11.74	22.11	6.00	4.20	9.837	8.85	6.565	3.67	1.55	3.01
12.70	22.96	5.80	4.00	10.25	8.43	6.123	3.53	1.68	3.25
13.64	23.95	5.80	3.80	10.76	8.23	5.672	3.32	1.98	3.50
14.66	25.17	5.70	3.60	11.20	7.93	5.356	3.12	2.09	3.76
15.66	26.17	5.70	3.40	11.71	7.73	5.013	3.97	2.17	4.01
16.60	27.54	5.70	3.30	12.27	7.62	4.757	2.73	2.26	4.25
17.60	29.43	5.70	3.20	12.87	7.53	4.582	2.65	2.30	4.51
18.55	31.23	5.70	3.10	13.41	7.42	4.436	2.53	2.35	4.75

PERFORMANCE CHARACTERISTICS



FORM CHARACTERISTICS





Notation

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B_P	Beam or breadth over chines, excluding external spray strips
B_{PA}	Mean breadth over chines, A_P/L_P
B_{PX}	Maximum breadth over chines, excluding external spray strips
L_P	Projected chine length
S	Area of wetted surface (This is the actual wetted surface underway including the area of the sides which is wetted at low speeds and the wetted bottom area of external spray strips; however, the area wetted by spray is excluded).
α	Angle of attack of stern portion of planing bottom in degrees
β	Dead rise angle of planing bottom in degrees. This angle is obtained by approximating each body plan section by a straight line.
Δ	Displacement at rest, weight of
τ	Trim angle of hull with respect to attitude as drawn in degrees
∇	Displacement at rest, volume of

Subscript o indicates value when hull is at rest in water.