

IMS AMENDED MARCH 1987

RATING CERTIFICATE# 18682
BASED ON FULL MEASUREMENTYACHT: ELAN
SAIL#: US-40330
CLASS: ELT37

NOT VALID AFTER 12/87

SLOOP BY HOLLAND
MASTHEAD RIG, 155% JIB
FIXED KEEL
EXPOSED, FOLDING PROPI CERTIFY THAT I UNDERSTAND MY
RESPONSIBILITIES UNDER THE IMS.OWNER: *John W. Wright*
MR JERRY E METZGER
160 HANSEN CT
WOODDALE IL 60191

---CENTERBOARD---COMMENTS---

KCDA .000
ECM .000
CBRC .000
CBMC .000
CBTC .000

---FREEBOARDS---

FF 4.020 SFFP 2.000 PSA 23.000 PHD1 .150 PHD2 .000 APH .000
FA 3.160 SAFF 32.900 PHL .560 PSD .080 SHL .400 APT .000
SG .998 PSL 1.670 SHD .180 PRD .000 APE .000

---FORETRIANGLE---

IM 48.852 SPL 14.900 P 41.990 BL1 2.160 MDT1 .430
J 14.750 SL 48.000 E 13.270 BL2 2.290 MDL1 .650
LPG 22.700 SMW 26.000 BAL .500 BL3 2.500 MDT2 .430
LPIS .000 HBS .000 BD .460 BL4 2.500 MDL2 .650
FSP .220 SPS 8.560 BAS 5.310 BL5 .000 TL .000
LP 22.920 SFJ .000 HB .530 BLP 8.800 HBI 3.325
FBI .000 ISP 48.350 MW .650 MGU 4.900 PC 41.990
IG 48.620 BTNS .000 GO .720 MGM 8.300 EC 13.270

---MIZZEN---

IY .000 PY .000 BY1 .000 MDT1Y .000 HBY .000
EB .000 EY .000 BY2 .000 MDL1Y .000 BLPY .000
YSD .000 BAY .000 BY3 .000 MDT2Y .000 HBIY .000
YSF .000 BAY .000 BY4 .000 MDL2Y .000 PYC .000
YSMG .000 BDY .000 BY5 .000 TLY .000 EYC .000

--- TIME ALLOWANCES IN SECONDS PER MILE ---

GENERAL PURPOSE (LINEAR RANDOM 10)	TRUE WINDWD/ OLYMPIC CIRCULAR LINEAR NON- WIND LEeward (6-LEG) RANDOM RANDOM NAKER				
	8 KT:	10 KT:	12 KT:	14 KT:	16 KT:
587.9 SEC/MI	903.3	774.9	699.9	653.2	624.9
	846.1	735.6	677.0	641.1	618.4
	685.5	606.3	562.6	535.8	517.8
	657.1	587.9	548.3	522.9	504.8
	724.0	637.8	586.9	552.3	529.9

MEAS# 34

MR JEFFREY S CURRIE
562 FOREST AVE
RIVER FOREST IL 60305

OTHER MEAS: 31/CURRIE

MEASURED: 5/24/86 KENNETH B. WELLER
INP RCVD: 9/15/86 USYRU OFFSHORE
ISSUED: 3/ 6/87 BOX 209
FLOTAT*N: 5/24/86 NEWPORT, RI 02840
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CERT# 18682 SAIL# US-40330

RUN DATE: 3/ 6/87
INP RCVD: 9/15/86

YACHT: ELAN

FORMER:

---INCLINING TEST---
 AW 56.0 AWD 19.800 APD 28.5 PL 1500.0 LIMIT OF
 BW 112.0 BWD 19.800 BPD 58.0 RMC 1017.8 POSITIVE
 CW 56.0 CWD 19.750 CPD 28.5 RM2 1080.9 STABILITY:
 DW 112.0 DWD 19.750 DPD 56.5 RM20 964.8 114 DEGREES
 RM40 784.3

---CALCULATED STABILITY---
 HEEL IN DEGREES: 25 60 90 120 150 165
 RIGHT ARM IN FT: 1.518 2.063 1.194 -.285 -1.453 -1.444
 RATIO OF STABILITY CURVE AREAS, POSITIVE/NEGATIVE = 2.398

---MEASUREMENT TRIM---

KEEL DRAFT (DHKO) 5.95 MAXIMUM BEAM (MB) 12.20
 ENDPLATE ADJ (KEDA) .00 2ND MOMENT LGTH (LSM0) 29.91
 DISPLACEMENT (DISP) 13278 WETTED SURFACE (WS0) 278.3
 SAIL AREA (SA) 640 PROP PROJ AREA (PIPA) .056

---SAILING TRIM (CREW & GEAR ABOARD)---

SECT AREA 3 MAX (AMS1) 15.86 RATED BEAM (B) 10.04
 BEAM/DEPTH (BTR) 4.35 SINK FORWARD (SKF) -.01
 KEEL DRAFT (DHKA) 6.08 SINK AFT (SKA) .26
 CENTERBOARD EXT (ECMA) .00 WETTED SURF (WS) 296.9
 EFFECTIVE DRAFT (D) 5.09 DISPLACEMENT (DISP) 15184

2ND MOMENT LENGTHS: 0 DEG HEEL (LSM1) 30.72
 2 DEG HEEL (LSM2) 30.71
 AVG LENGTH (L) 30.72 25 DEG HEEL (LSM3) 29.85
 SUNK CONDITION (LSM4) 34.74

OPTIONAL REGULATIONS:

MINIMUM DISPLACEMENT IN MEASUREMENT TRIM: 7470 LBS.
 MAXIMUM CREW: NUMBER LIMIT= 9 WEIGHT LIMIT=1519 LBS.

-----SPEED AS A FUNCTION OF SAILING CONDITION-----

OPTIMUM BEAT				OPTIMUM RUN			
VTW	BTW	V	VMG HEEL	BTW	V	VMG	
8	46	5.478	3.804 11	143	5.224	4.185	
10	44	6.015	4.319 17	147	5.992	5.026	
12	42	6.219	4.628 20	161	6.121	5.788	
14	41	6.339	4.816 22	168	6.580	6.440	
16	40	6.416	4.928 24	172	6.998	6.933	
20	40	6.514	5.018 26	174	7.757	7.714	
REACH		REACH		REACH		RUN	
BTW = 80		BTW = 110		BTW = 135		BTW=180	
VTW	V HEEL	V HEEL		V HEEL		V	
8	6.684 13	6.712 6		5.773 2		3.872	
10	7.137 11	7.241 10		6.650 3		4.763	
12	7.472 16	7.637 15		7.174 4		5.607	
14	7.717 21	7.945 20		7.601 4		6.362	
16	7.878 27	8.174 25		7.989 6		6.895	
20	8.070 29	8.483 29		8.687 11		7.687	

USYRU IMS AMENDED MARCH 1986
LPP - RUN: 1/28/87 19:17: 1

CERT# 18682 SAIL# US-40330

YACHT: ELAN

CLASS: ELT37

OWNER:

MR JERRY E METZGER

160 HANSEN CT

WOODDALE IL 60191

HYDROSTATICS & THEORETIC STABILITY

VCG = VERTICAL CENTER GRAVITY

VCB = VERTICAL CENTER BUOYANCY

LCB = LONGITUDINAL CENTER BUOYANCY

----- HYDROSTATIC DATA -----

FLOTATION CONDITION:	--- MEAS TRIM --- (NO CREW WGT)		----- SAILING TRIM ----- (WITH CREW WEIGHT)			
	0	2	0	2	25	0
HEEL IN DEGREES:						
DISPL'T LBS-SW:	13278	13278	14943	14943	14943	29607
WETTED AREA:	278.3	278.2	295.3	295.1	278.6	386.0
RIGHTING MOM'T/DEG:	1022	1022	1070	1070	912	0
VCG ABOVE MEASM'T WL:	.02	.02	.31	.31	.31	.31
VCB ABOVE MEASM'T WL:	-.78	-.79	-.68	-.69	-1.72	-.00
LCB AFT OF STEM:	19.20	19.20	19.70	19.70	19.70	20.36
PRISMATIC COEF:	.477	.476	.487	.487	.479	.512
2ND MOMENT WL LENGTH:	29.91	29.90	30.61	30.61	29.69	34.69

----- THEORETIC STABILITY -----

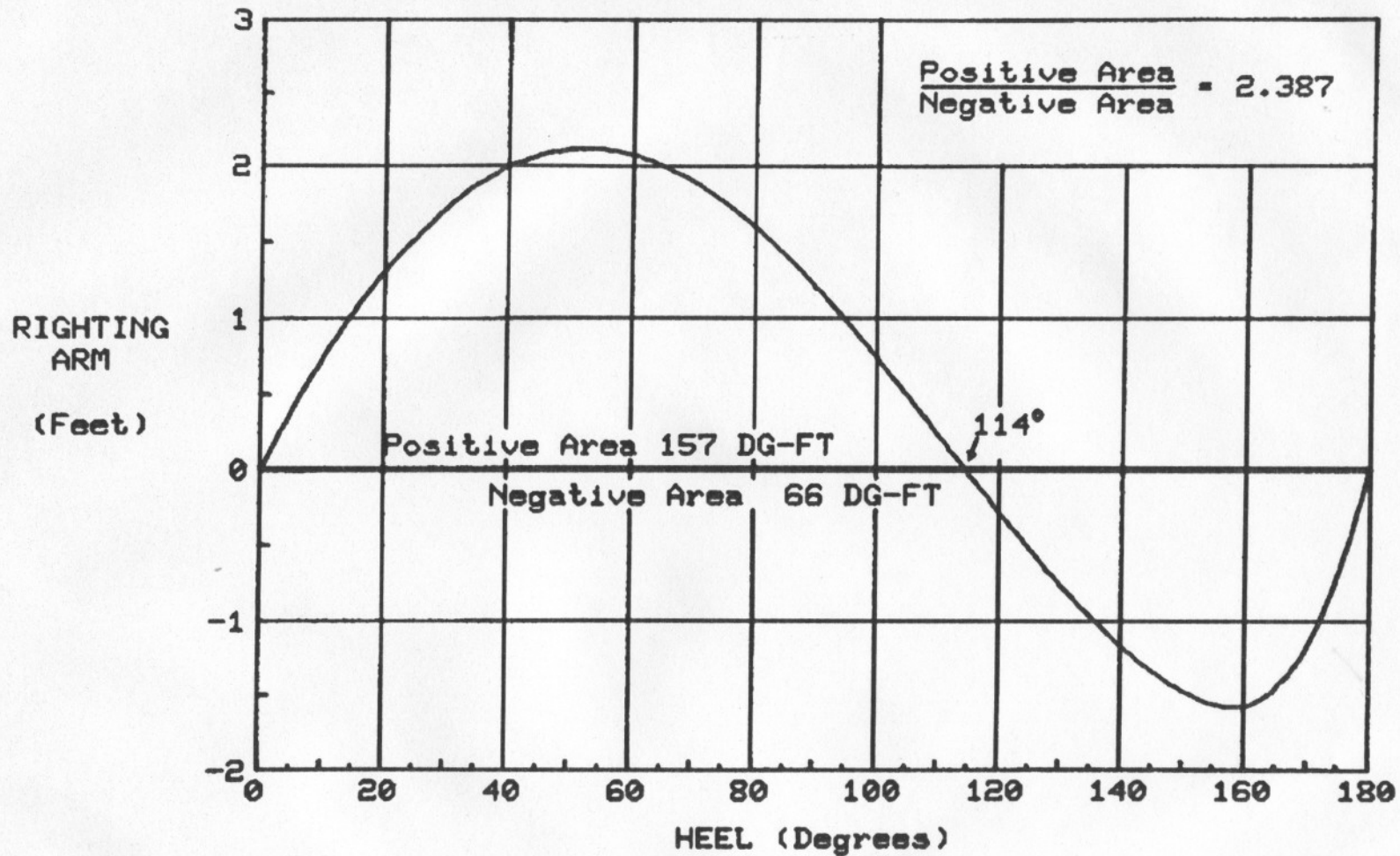
HEEL IN DEGREES	RT ARM IN FT	RANGE OF POSITIVE STABILITY
25	1.525	
60	2.079	0 - 114
90	1.204	DEGREES
120	-.287	
150	-1.467	
165	-1.464	

AREA POS STAB CURVE: 157 DG-FT
AREA NEG STAB CURVE: 66 DG-FT
POS AREA / NEG AREA: 2.387

EFFECTIVE BEAM: 10.009
BEAM/DEPTH RATIO: 4.371
KEEL DRAFT: 6.064
CENTERBOARD EXTENSION: .000
POUNDS PER INCH OF IMMERSION: 1067
MOMENT TO CHANGE TRIM 1 INCH: 1550

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USYRU
Box 209
Newport, RI

CALCULATED STATIC STABILITY



Yacht ELAN

ELT37

US-40330

Run: 1/29/87 13: 1: 7 Cert 18682

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 Box 209
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