

IMS RATING CERTIFICATE No. 335211  
Based on: FULL MEASUREMENT (Metric)

IMS AMENDED TO JANUARY 2003  
Offshore Racing Council  
Ipswich, England  
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IMS AMENDED TO JANUARY 2003 VPP: 14/MAY/03 15:38:57  
Cert No 335211 F33521\_C.DAT 14/MAY/03 15:28:16  
OFF Meas'd: 14/APR/92 E201.OFF 29/JAN/97 18:45:20

NOT VALID AFTER 31/01/2004

GPH  
726.8

--- YACHT DESCRIPTION ---  
Name: LITTLE WING \*\*CLUB\*\*  
Sail No: FRA-33521-C  
Class: FIRST 30  
LOA: 8.758m Beam(MB) 2.832m  
Designer: MAURICE  
Builder: BENETEAU  
Rig: MASTHEAD SLOOP 156% Jib  
Keel/CB: FIXED KEEL  
PropInst: Pre-1988 STRUT DRIVE  
FwdAccom: YES SPIN: SYMMETRIC  
HullCnst: SOLID RudCnst: STNDRD  
Forestay: ADJST AFT BoomMtl: HEAVY  
Spreadrs: 1 Set InrFsty: FIXED  
Runners: 1 Set Jumpers: NONE  
Dates: AGE:3/1981 SERIES : 1/1973  
COMMENTS  
HELICE PLEGABLE

RATING OFFICE:  
Issued: REAL FEDERACION  
14/MAY/03 ESPAÑOLA DE VELA  
Measured: c/Luis de Salazar, 9  
00/000/00 28002 MADRID  
Revalidation Authority: R.F.E.V.  
Measurer:  
"I CERTIFY THAT I UNDERSTAND MY  
RESPONSIBILITIES UNDER THE IMS."  
OWNER:.....  
JEAN VAURY  
URIBITARTE, 7  
48009 BILBAO  
R.C.M.ABRA & R.S.CLUB  
CERTIFICADO DE CLUB

---CENTERBOARD AND DRAFT---  
ECM 0.000 CBRC 0.000 CBMC 0.000 CBTC 0.000  
WCBA 0.0 CBDA 0.000 KCDA 0.000 ECE 0.000  
WCBB 0.0 CBDB 0.000 ENDPLATE ADJ (KEDA) 0.000

---PROPELLER AND INSTALLATION---  
PIPA was entered directly. This is a class average  
or sister ship PIPA for CLUB racing.  
PIPA 0.0030

---FLOTATION DATA---  
FFPS 0.970 AFPS 0.930 FGO 0.490 LBG 8.493  
FFM 1.025 FAM 0.973 FFPV 0.000 AFPV 0.000  
FF 1.023 FA 0.972 RMdr 47.5

---INCLINING TESTS---  
RM was entered directly.  
SMB 4.882 RM 47.5 RMC 47.5

RM2 49.9 RM20 49.9 RM40 47.2 RM60 40.5  
RM90 24.1 WBV 0.0 CREW ARM (CRA) 0.940  
CALCULATED LIMIT OF POSITIVE STABILITY: 133.1 DEGREES  
RATIO STABILITY CURVE AREAS, POSITIVE/NEGATIVE 7.762

---HYDROSTATICS---MEASUREMENT TRIM---SAILING TRIM---  
KEEL DRAFT (DHKO) 1.689 (DHKA) 1.738  
2ND MOMENT LENGTH (LSM0) 7.402 (LSM1) 7.426  
DISPLACEMENT (WEIGHT) (DSPM) 3452 (DSPS) 3873  
WETTED SURFACE (WSM) 16.67 (WSS) 17.54  
VCG FROM OFFSETS DATUM (For CLUB RM) (VCGD) -0.234  
VCG FROM MEASUREMENT TRIM WATERLINE (VCGM) -0.187  
INTEGRATED BEAM ATTENUATED WITH DEPTH (B) 2.148  
MAXIMUM SECTION AREA (AMS1) 0.982  
BEAM/DEPTH RATIO (BTR) 3.328  
EFFECTIVE DRAFT (D) 1.481  
2° HEEL (LSM2) 7.424 25° HEEL (LSM3) 7.166  
SUNK (LSM4) 8.183 AVG LENGTH (L) 7.356  
TRIM: 1mm/3.465m-kg SINK: 1mm/10.908kg

SAIL AREAS: MAIN+FORE+MIZZEN: 43.73 MAIN: 22.75  
GENOA: 34.29 SYM: 69.18 ASYM: 0.00 MIZ'N: 0.00

---FORETRIANGLE---MAIN & SPARS---  
IG 11.400 SPL 3.600 HB 0.000 TH NO  
MW 0.120 J 3.600 MGT 0.00 TL 0.000  
GO 0.200 LPG 5.58 MGU 0.00 MDT1 0.120  
ISP 11.400 FSP 0.040 MGM 0.00 MDL1 0.180  
IM 11.659 LP 5.62 MGL 0.00 MDT2 0.120  
HBI 1.003 JR 0.00 MSW 11.0 MDL2 0.180  
SFJ 0.000 P 10.200 MWT 0.0  
MSL 11.36 MSF 6.48 E 3.600 MCG 0.000  
SL 0.00 ASL 3.600 EC 3.600 BD 0.100  
SMW 0.00 AMG BAS 1.160 CPW 0.000  
SF ASF SPS 1.510 BAL 0.150

---MIZZEN---  
IY 0.000 PY 0.000 HBY 0.000 TLY 0.000  
EB 0.000 EY 0.000 MGTY 0.000 MDT1Y 0.000  
YSD 0.00 ECY 0.000 MGUY 0.000 MDL1Y 0.000  
YSF 0.00 BASY 0.000 MGMY 0.000 MDT2Y 0.000  
YSMG 0.00 BALY 0.000 MGLY 0.000 MDL2Y 0.000  
HBIY 0.000 BDY 0.000



RFEV

SAIL LIMITATION  
MOD.REGULATION 205-ESP

Genoas	:	3
Jibs	:	2
Spinnakers	:	3

MAXIMUM STORM SAILS  
AREAS FOR SPECIAL REGS

Heavy Weather Jib	18.4
Storm Jib JL= 7.58	6.8
Storm Trysail	6.4

Default Crew Weight 444

HEAVY ITEMS

Bow Thruster	No
Anchor Windlass	No
Heavy Deck	No
Deck Int. Headliners	No
High Superstructures	No
Electric Generator	No
Air C.+Diss.+Water H	No
Liferafts on Deck	No
Radar on Stern/*Mast	No
Jib Furler	Yes
*Main Furler	No

\*(if not included in MWT)



LIMITS AND REGULATIONS

Limit of Positive Stability: MEETS REQ Measurement Inventory: NOT REQ'D  
Minimum Displacem't 1671kg: MEETS REQ Accommodation Length: 8.758m  
Maximum Crew Weight: 350 kg. Accom Certificate: C/R DA= 0.33%  
Stability Index: 134.4 Plan Approval: NONE FILED  
C/R HeavyItems Pitch Adjustm't 0.00290 Anchor(s) Weight: 15 Dist: 0.50  
Applied Age Allowance: 1.00%

NOTE TO OWNER: The range available to revise crew weight is 288- 532 kg.

TIME ALLOWANCES IN SEC/MI BY TRUE WIND VELOCITY & ANGLE

(NOT WIND-AVERAGED)

Wind Velocity:	6kt	8kt	10kt	12kt	14kt	16kt	20kt	CHECKSUM
BEAT ANGLES:	45.0°	43.2°	42.0°	41.3°	40.8°	40.6°	41.2°	( 294.1)
BEAT VMG:	1176.3	1016.2	941.8	903.5	881.8	870.2	871.0	(6660.8)
52°:	756.2	665.6	630.1	611.8	601.1	594.7	591.3	(4450.8)
R 60°:	708.4	632.0	602.8	587.1	577.3	571.1	566.0	(4244.7)
E 75°:	673.0	606.7	575.4	558.4	547.9	540.5	532.1	(4034.0)
A 90°:	671.6	598.8	567.0	547.8	531.3	519.8	507.6	(3943.9)
C 110°:	686.6	602.7	561.7	534.5	515.4	501.9	485.0	(3887.8)
H 120°:	723.2	619.3	570.0	537.3	512.8	494.1	469.1	(3925.8)
135°:	818.6	669.6	600.0	558.9	527.8	502.5	464.6	(4142.0)
150°:	970.5	769.2	656.6	596.9	558.5	528.5	481.3	(4561.5)
RUN VMG:	1120.6	888.2	749.6	657.9	601.4	563.7	509.0	(5090.4)
GYBE ANGLES:	144.8°	149.9°	159.3°	172.5°	173.0°	173.1°	173.0°	(1145.6)

NOTE: To convert any time allowance above to speed in knots: Kt = 3600/TA

TIME ALLOWANCES FOR SELECTED COURSES (AFTER WIND-AVERAGING)

Wnd/Lwd VMG	1174.5	968.1	857.5	791.1	750.3	724.8	696.6	(5962.9)
CircularRandom	974.3	798.8	707.0	654.9	623.4	603.0	578.7	(4940.1)
Ocean for PCS	1109.7	880.2	752.0	672.7	620.0	582.6	531.2	(5148.4)
Non-Spinnaker	966.1	800.9	716.3	667.6	637.8	618.3	595.4	(5002.4)

SIMPLIFIED SCORING OPTIONS

	Time-on-Distance (sec/mi)	Time-on-Time TMF	Performance Line PLT PLD
OFFSHORE	726.8 (=GPH)	0.8255 (=600/GPH)	0.706 111.1 (Ocean)
INSHORE	817.3 (=ILC)	0.8259 (=675/ILC)	1.085 487.1 (Olympic)

Performance Line Corrected Time = (PLT x Elapsed Time)-(PLD x Distance)