

BOAT Name Irony Sail Nr ROU 409	GPH 607.1	HULL Length Overall 11.924m Maximum Beam 3.770m Displacement 7,096kg Draft 2.378m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.160% Fwd Accommodation Yes Hull Construction Solid Carbon Rudder No Crew Arm Extension
GENERAL Class First 40I.7 Designer Farr Builder Benneteau Series 01/2006 Age 12/2006 Age Allowance 0.357% Offset File F407NK10.off - 14/04/2010 15:05:00 Measurement by Marinov - 21/04/2010		IMSL 10.616m VCGD -0.219m Sink 22.30kg/mm RL 9.173m VCGM 0.028m WS 29.86m² LSMO 10.471m Displacement/Length ratio 6.1809



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	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	Low	Medium	High	Low	Medium	High
Time On Distance	588.9			658.0		
Time On Time	1.0188			1.0258		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	705.2	535.6	471.1	916.4	664.1	564.7
Time on Time	0.9572	1.2602	1.4329	0.7366	1.0164	1.1953

Wind Velocity	TIME ALLOWANCES						
	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1047.9	864.8	760.0	697.2	672.0	659.2	643.6
52°	682.0	570.2	508.4	481.8	471.9	467.0	461.3
60°	640.2	537.9	490.2	469.0	458.1	452.8	448.9
75°	605.9	514.3	477.6	457.7	442.0	430.3	420.9
90°	606.2	513.4	471.5	455.2	438.4	421.4	396.0
110°	625.5	513.4	468.7	443.7	421.2	408.8	388.8
120°	645.0	527.5	475.4	449.6	425.8	402.3	373.5
135°	715.1	578.9	501.8	467.0	444.3	421.6	377.7
150°	847.7	670.4	565.7	500.2	468.0	446.4	404.5
Run VMG	978.8	774.1	653.0	572.1	518.1	479.5	436.1

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Number **004/17**
ORC Ref **ROU00076008**
Issued On **16/05/2017**
VPP Ver. **2017 1.00**
Valid until **31/12/2017**

Crew Weight

Declared **850kg**
Default* **735kg**
Non Manual Pwr **No**

Special Scoring

ToD ToT
Non Spin GPH **636.4 0.9428**
Non Spin OSN **616.9 0.9726**

Selected Courses							
Windward / Leeward	1013.4	819.5	706.5	634.7	595.1	569.3	539.8
Circular Random	844.2	678.4	588.6	535.8	502.8	481.0	453.1
Ocean for PCS	1037.0	797.3	661.4	577.9	523.6	485.8	433.9
Non Spinnaker	896.6	715.6	616.3	557.2	520.0	495.3	463.8

Sails Limitations	
Headsails	Spinnakers
6	4

Velocity Prediction in Knots for True Wind Speeds							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	43.3°	41.9°	41.9°	40.3°	39.0°	38.9°	38.3°
Beat VMG	3.44	4.16	4.74	5.16	5.36	5.46	5.59
52°	5.28	6.31	7.08	7.47	7.63	7.71	7.80
60°	5.62	6.69	7.34	7.68	7.86	7.95	8.02
75°	5.94	7.00	7.54	7.87	8.15	8.37	8.55
90°	5.94	7.01	7.64	7.91	8.21	8.54	9.09
110°	5.76	7.01	7.68	8.11	8.55	8.81	9.26
120°	5.58	6.82	7.57	8.01	8.46	8.95	9.64
135°	5.03	6.22	7.17	7.71	8.10	8.54	9.53
150°	4.25	5.37	6.36	7.20	7.69	8.06	8.90
Run VMG	3.68	4.65	5.51	6.29	6.95	7.51	8.26
Gybe Angles	144.7°	149.2°	151.1°	155.5°	170.3°	180.0°	180.0°

Class Division Length

CDL = **9.895**

Storm Sails Areas

Heavy Weather Jib **32.79**
Storm Jib (JL=10.13) **12.15**
Storm Triesail **13.69**

Owner

BOAT	
Name Irony	Sail Nr ROU 409
File ROU409	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 15/07/2013		SG 1.0250	
FFM 1.379	FF 1.378	SFFP 0.292	
FAM 1.106	FA 1.110	SAFP 11.313	
W1 95.0	PD1 535.8	WD 12.430	
W2 95.0	PD2 530.4	GSA 1.0	
W3 95.0	PD3 532.2	RSA 1.0	
W4 95.0	PD4 530.6	PLM 9000.0	
LCF from stem on CL / on sheer		6.518 / 6.758	
Maximum beam station from stem		7.502	
RM Measured		174.7kg·m	
RM Default		176.9kg·m	
Limit of positive stability / Stab.Index		118.6° / 121.1	
Freeboard at mast at 4.410		1.227	

RIG			
Forestay Tension Aft	Spreaders 2		
Inner Stay None Fitted	Runners 0		
Carbon Mast Yes	Jumper Struts None		
Taper Hollows No	Jib Furler No		
Fiber Rigging Yes	Main Furler No		
Lenticular Rigging No	Without Backstay No		
Articulated Bowsprit No			
P 14.490	E 5.399	MDT1 0.123	MW 0.242
IG 15.480	J 4.410	MDL1 0.242	GO 0.272
ISP 15.650	SFJ	MDT2 0.112	BD 0.249
BAS 1.710	SPL 4.370	MDL2 0.175	MWT 156.00
FSP 0.082	TPS	TL 0.900	MCG 5.248



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IMS Measurement Certificate

Certificate	
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MIZZEN RIG AND SAILS	
N/A	

PROPELLER			
Installation Strut	PRD 0.410		
Type Folding 2 blades	PBW 0.112		
Twin Screw No	PIPA 0.0035		
ST1 0.042	ST3 0.180	ST5 0.295	
ST2 0.180	ST4 0.112	EDL 2.265	

COMMENTS	

MOVEABLE BALLAST	
N/A	

CENTERBOARD	
N/A	



Invalid for Racing

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SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.530	1.34	2.17	3.54	4.54	47.85	49.07	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL	102.79		SL · (SFL + 4·SHW) / 6	
Asymmetric	Not Available								

HEADSAILS												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
HHB	HUW	HTW	HHW	HQW	HLP	HLU	Area	Btn	Fly	Meas.Date	Material	Comment
0.09	0.74	1.39	2.50	3.54	4.52	15.11	36.52	Y			Unknow	Reacher
0.13	0.77	1.41	2.49	3.48	4.49	15.16	36.46	Y		20/06/2014	Unknow	#1
0.09	0.65	1.24	2.30	3.44	4.60	15.19	35.34	Y			Unknow	#3
0.07	0.54	1.04	2.13	3.24	4.37	15.18	32.77			13/09/2008	Unknow	#4

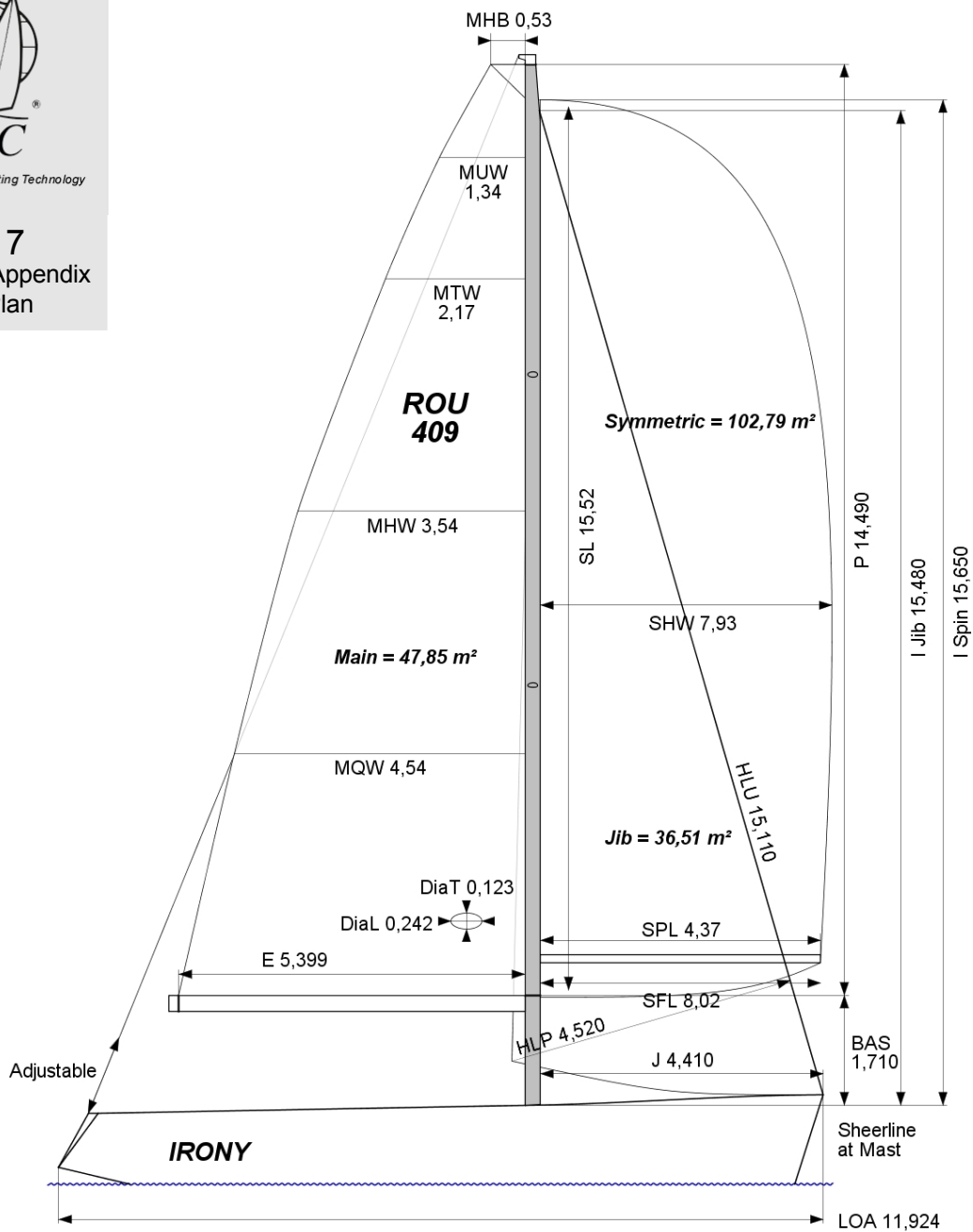
MEASUREMENT INVENTORY				
Measurer PARRA110				
Date 15/07/2013				
Comment				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
A	Engine	YANMAR	3 JH 4 E	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

MEASUREMENT INVENTORY							
<i>Id</i>	<i>Item</i>	<i>Tank Use</i>	<i>Tank Type</i>	<i>Capcty</i>	<i>Dist.</i>	<i>VCG</i>	<i>Condtn Description</i>
A	Tank	WATER	PVC	150.0	5.50		0-0 EMPTY
B	Tank	WATER	PVC	150.0	5.50		0-0 EMPTY
C	Tank	DIESEL	PVC	135.0	9.20		10-0 LITRI
D	Tank	HOT WATER	INOX	22.0	8.20		22-0 BOILER
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>			
A	Battery	25.0	7.22	90 Ah			
B	Battery	25.0	7.22	90 Ah			
C	Battery	18.0	7.15	70 Ah			



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Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (2)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
1	0.530	1.34	2.17	3.54	4.54	47.85	V.RAMOS	01/07/2014		Unknown						
2	0.430	1.29	2.16	3.55	4.50	47.53	Marinov	10/10/2011	North Sails	Kev lar	off shore					
HEADSAILS (4)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
3	0.09	0.74	1.39	2.50	3.54	4.52	15.11	102%	36.52	Y						Unknown Reacher
JLM1	0.13	0.77	1.41	2.49	3.48	4.49	15.16	102%	36.46	Y		CESAR	20/06/2014			Unknown #1
2	0.09	0.65	1.24	2.30	3.44	4.60	15.19	104%	35.34	Y						Unknown #3
1	0.07	0.54	1.04	2.13	3.24	4.37	15.18	99%	32.77			Marinov	13/09/2008			Unknown #4
SYMMETRIC SPINNAKERS (4)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
2	15.52	15.52	15.52	7.93	8.02	102.79	Marinov	11/04/2011	North Sails	Nylon	S2					
1	15.44	15.44	15.44	7.82	7.98	101.03	Marinov	21/04/2010	North sails	Nylon	S1					
4	15.25	15.25	15.25	7.98	7.70	100.70	CESAR CALVO	20/06/2014		Nylon						
3	15.37	15.37	15.37	7.71	7.78	98.93	Marinov	10/04/2007	North sails	Nylon	S3					
ASYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				