

BOAT
Name ANDREINA Sail Nr PER 2355

GPH
646.0

HULL					
Length Overall	12.260 m				
Maximum Beam	3.854 m				
Displacement	8,465 kg				
Draft	2.115 m				
IMS Reg. Division	Cruiser/Racer				
Dynamic Allowance	0.865%				
Fwd Accommodation	Yes				
Hull Construction	Cored				
Carbon Rudder	No				
Crew Arm Extension					
IMS L	10.404	VCGD	-0.046	VCGM	0.052
Sink	22.59 kg/mm	Wetted Area	31.38 m²		



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GENERAL
Class SUN LEGEND 41
Designer PETERSON
Builder JEANNEAU
Series 04/1985
Age 05/1989
Age Allowance 0.975%
Offset File IJNN41.OFF - 29/12/1990 09:15:24 a.m.
Measurement by G Liza / L Yarlequ - 08/06/2010

SCORING OPTIONS						
	OFFSHORE			INSHORE		
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time On Distance	646.0			700.4		
Time On Time	0.9289			0.9637		
Performance Line	PLT	PLD		PLT	PLD	
	0.799	93.6		0.757	162.5	
Triple Number	Low	Medium	High	Low	Medium	High
	0.8967	1.1874	1.3459	0.6831	0.9577	1.1255

Rating Office

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Oceanicos del Peru



TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1127.9	913.3	795.4	742.9	712.6	693.6	681.0
52°	719.9	588.3	537.5	511.8	498.8	490.7	482.0
60°	667.5	558.8	518.5	494.5	480.9	473.6	465.2
75°	627.0	539.0	503.7	480.7	463.5	451.4	441.1
90°	636.6	543.8	501.9	478.3	466.0	450.4	427.6
110°	660.7	543.9	499.5	471.2	448.3	430.7	414.3
120°	686.1	557.5	508.4	478.7	455.6	435.5	404.0
135°	778.7	616.6	538.7	501.2	475.2	453.6	417.1
150°	929.3	726.2	604.0	538.6	503.0	477.7	438.0
Run VMG	1073.1	838.5	697.4	607.4	551.2	514.4	467.0

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VPP Ver. 2011 1.02
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Selected Courses							
Windward / Leeward	1119.5	888.3	758.8	684.4	639.6	610.9	579.8
Circular Random	901.8	722.5	625.8	569.4	534.6	511.9	484.2
Ocean for PCS	962.5	755.2	639.8	569.7	524.3	492.5	448.2
Non Spinnaker	955.3	759.5	652.4	588.9	549.4	523.6	492.4

Crew Weight	
Declared	700 kg
Default*	736 kg
Non Manual Power	No

Special Scoring		
	ToD	ToT
Double Handed	648.2	0.9257
Non Spinnaker	674.2	0.8899
N/S Perf. Line	62.7	0.721

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	44.5°	43.8°	42.2°	40.2°	38.3°	37.4°	37.8°
Beat VMG	3.19	3.94	4.53	4.85	5.05	5.19	5.29
52°	5.00	6.12	6.70	7.03	7.22	7.34	7.47
60°	5.39	6.44	6.94	7.28	7.49	7.60	7.74
75°	5.74	6.68	7.15	7.49	7.77	7.98	8.16
90°	5.66	6.62	7.17	7.53	7.73	7.99	8.42
110°	5.45	6.62	7.21	7.64	8.03	8.36	8.69
120°	5.25	6.46	7.08	7.52	7.90	8.27	8.91
135°	4.62	5.84	6.68	7.18	7.58	7.94	8.63
150°	3.87	4.96	5.96	6.68	7.16	7.54	8.22
Run VMG	3.35	4.29	5.16	5.93	6.53	7.00	7.71
Gybe Angles	143.7°	146.4°	149.4°	161.2°	170.6°	174.2°	175.9°

Sails Limitations		
Genoa	Jibs	Spinnakers
1	0	3
Spinnaker configuration Symmetric		

Storm Sails Areas	
Heavy Weather Jib	36.03
Storm Jib (JL=10.62)	13.35
Storm Triesail	11.10

Owner

Enrique Chiappori
Osa Mayor 230
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I certify that I understand my responsibilities under ORC Rules and Regulations

Signature

BOAT	
Name ANDREINA File PER2355.dxt	Sail Nr PER 2355 Data in meters/kilograms

INCLINING TEST AND FREEBOARDS		
Inclining Test Current Inclining		
Flotation date 08/06/2010		SG 1.0250
FFM 1.267	FF 1.267	SFFP 0.524
FAM 1.028	FA 1.028	SAFP 11.030
W1 100.20	PD1 518.3	WD 11.670
W2 100.20	PD2 507.8	GSA 1.0
W3 100.20	PD3 509.8	RSA 1.0
W4 100.20	PD4 515.2	PLM 9000.0
Maximum beam station from stem		7.178
RM Measured / Default		179.6 / 167.8
Limit of positive stability		113.2°
Stability Index		117.2
Freeboard at mast at 4.610		1.136



2011
IMS Measurement
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RIG				
Forestay Tension Aft	Spreaders 2		Runners 0	
Inner Forestay None Fitted	Jumper Struts None		Jib Furler Yes	
Carbon Mast No	Main Furler No		Without Backstay No	
Taper Hollows No	Articulated Bowsprit No			
Fiber Rigging No				
Lenticular Rigging No				
P 14.090	E 4.500	MDT1 0.140	TL 0.000	
IG 16.125	J 4.610	MDL1 0.210	MWT	
ISP 16.085	SFJ 0.000	MDT2 0.140	MCG	
SPS 2.865	SPL 4.370	MDL2 0.210	CPW 2.500	
BAS 1.765	TPS	MW 0.210	BD 0.180	
BAL 0.050	FSP 0.080	GO 0.270	BWT	

PROPELLER			
Installation Shaft	PRD 0.475		
Type Folding	PBW 0.120		
Twin Screw No	PIPA 0.0053		
PSA 12.000	PHL 0.120	ST3 0.120	ESL 1.100
PSD 0.030	ST1 0.025	ST4 0.060	
PHD 0.078	ST2 0.102	ST5 0.220	

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MIZZEN RIG AND SAILS	
N/A	

WATER BALLAST			
N/A			

COMMENTS

CENTERBOARD	
N/A	



SAILS (Maximum Areas)									
Mainsail	HB	MGT	MGU	MGM	MGL	MSW	Area	Area (r)	Formula
	0.175	0.86	1.55	2.71	3.67	0.00	36.16	36.62	$P/8 \cdot (E + 2 \cdot MGL + 2 \cdot MGM + 1.5 \cdot MGU + MGT + 0.5 \cdot HB)$
Jib/Genoa	JH	JGT	JGU	JGM	JGL	JL	LPG	51.19	$0.1125 \cdot JL \cdot (1.445 \cdot LPG + 2 \cdot JGL + 2 \cdot JGM + 1.5 \cdot JGU + JGT + 0.5 \cdot JH)$
	0.08	0.84	1.63	3.29	5.01	15.28	6.82		
Symmetric	SL	SMG	SF	104.89	$SL \cdot (SF + 4 \cdot SMG) / 6$				
	15.21	8.27	8.30						

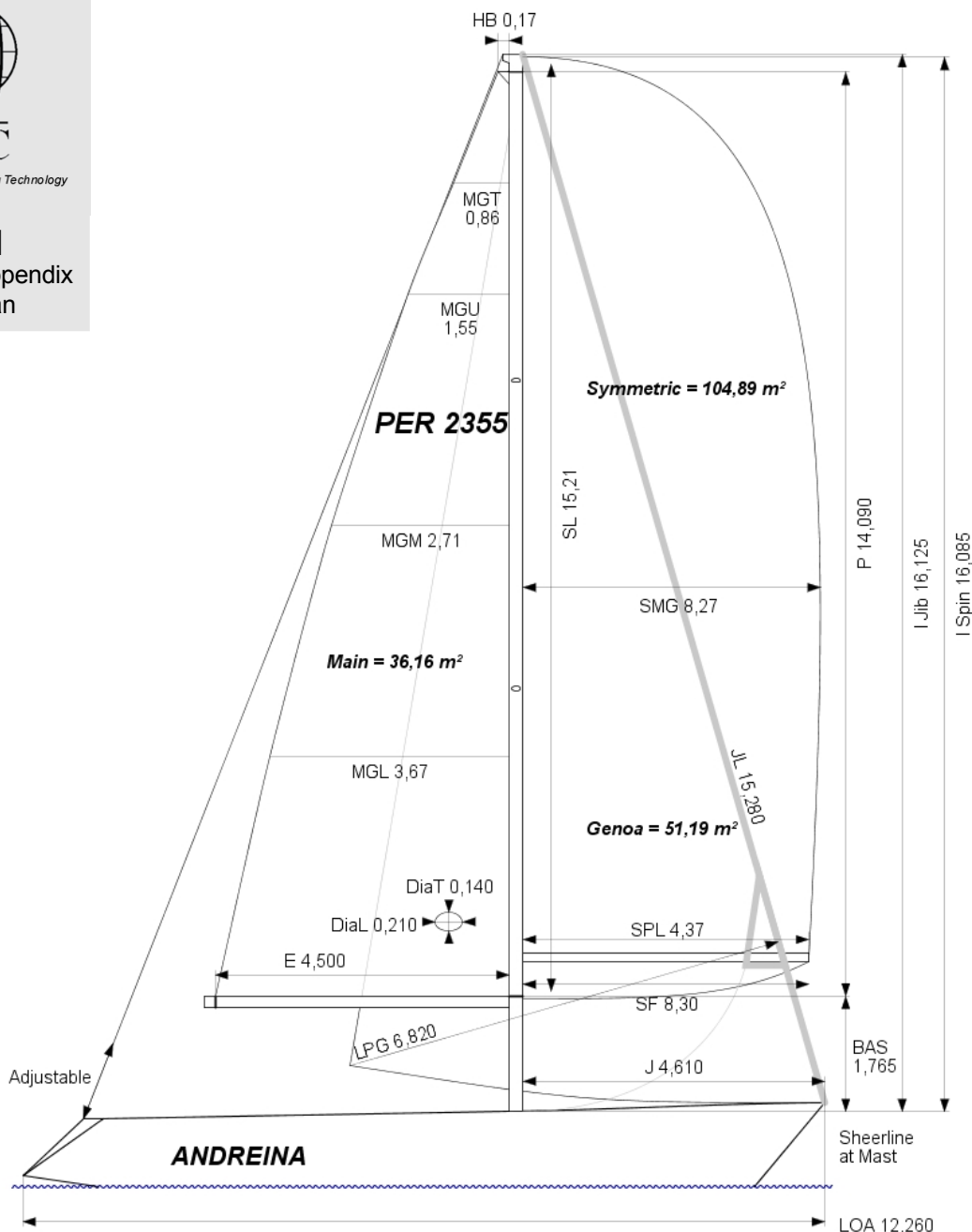
MEASUREMENT INVENTORY			
Measurer G.Liza/L.Yarlaque Date 08/06/2010 Comment			
Id	Item	Weight	Distanc Description
2	Anchor	14.8	en proa
1	Anchor	9.9	en popa babor
2	Chain	10.4	6.50 en proa
1	Chain	5.7	4.00 en popa babor
1	Tools		pequeña en
Id	Item	Maker	Model
1	Engine	Perkins	42 HP
Id	Item	Weight	Description

MEASUREMENT INVENTORY					
Id	Item	Tank Use	Tank Type	Capct	Dist. Condt Description
4	Liquid Tank	Agua		30.0	0.0 popa estribor
3	Liquid Tank	Agua		30.0	0.0 babor centro
2	Liquid Tank	Agua		30.0	0.0 estribor centro
1	Liquid Tank	Combustible		40.0	5.0 en estribor centro
Id	Item	Weight	Distanc Description		
2	Ballast		1 grupo electrogeno en popa estribor		
1	Ballast		2 equipos de aire acondicionado en centro		
2	Battery	30.0	en popa estribor		
1	Battery	30.0	en popa estribor		



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Certificate Appendix
Sail Plan



SAILS INVENTORY														
MANSAIL														
Id	HB	MGT	MGU	MGM	MGL	MSW	Area	Measurer	Meas.Date	Manufacture	Material	Comment		
ORC	0.175	0.86	1.55	2.71	3.67	0.00	36.16					* Copied from legacy		
JIBS / GENOAS														
Id	JH	JGT	JGU	JGM	JGL	LPG	JL	Ovrlp	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.08	0.84	1.63	3.29	5.01	6.82	15.28	148%	51.19	G.Liza	08/06/2010		Dacron	
SYMMETRIC SPINNAKERS														
Id	SL	SMG	SF	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
ORC	15.21	8.27	0.00	104.89					* Copied from legacy *					
ASYMMETRIC SPINNAKERS														
Id	SLU	SLE	ASL	AMG	ASF	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment		