

BOAT Name ANDREA Sail Nr ESP-7174	GPH 786,5	HULL Length Overall 6,578m Maximum Beam 2,488m Displacement 1.530kg Draft 1,169m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0,319% Fwd Accommodation No Hull Construction Solid Carbon Rudder No Crew Arm Extension
GENERAL Class FIRST 235 Designer FINOT Builder BENETEAU Series 12/1986 Age 01/1989 Age Allowance 0,487% Offset File e153.off - 08/01/1994 18:29:00 Measurement by DEVESA/MORELL - 02/05/2006		IMSL 6,370m VCGD 0,191m Sink 8,71kg/mm RL 5,003m VCGM 0,135m WS 11,42m² LSM0 6,537m Displacement/Length ratio 5,4772



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2017
ORC International
Certificate

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SCORING OPTIONS	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	Time On Distance	764,9			854,6	
Time On Time	0,7844			0,7899		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	899,0	697,0	624,1	1162,0	859,0	753,3
Time on Time	0,7508	0,9684	1,0816	0,5809	0,7858	0,8961

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1371,7	1146,7	1023,8	944,1	914,7	907,0	918,9
52°	888,3	750,4	674,6	640,2	625,6	621,1	621,7
60°	834,3	706,9	648,2	621,3	605,6	599,2	598,8
75°	790,6	675,5	629,6	605,1	584,4	567,0	555,3
90°	775,8	654,2	609,4	582,4	567,0	555,2	520,8
110°	774,3	653,5	609,1	577,7	545,4	518,0	492,1
120°	803,7	669,5	617,1	586,0	554,7	524,4	474,4
135°	888,9	727,1	642,7	605,7	575,6	544,9	490,3
150°	1027,4	819,1	697,3	634,4	602,1	573,7	518,4
Run VMG	1186,3	942,9	799,5	699,1	638,4	605,6	550,5

Certificate
Number **717401**
ORC Ref **ESP00021522**
Issued On **15/02/2017**
VPP Ver. **2017 1.00**
Valid until **31/12/2017**

Crew Weight
Declared **260kg**
Default* **375kg**
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	788,2	0,7612
Double H.OSN	767,4	0,7818
Non Spin GPH	819,7	0,7320
Non Spin OSN	792,2	0,7574

Selected Courses							
Windward / Leeward	1279,0	1044,8	911,7	821,6	776,5	756,3	734,7
Circular Random	1080,4	873,8	763,1	699,1	660,3	635,7	606,4
Ocean for PCS	1319,7	1023,3	856,1	753,6	686,7	639,4	571,0
Non Spinnaker	1139,2	915,4	794,4	723,9	681,2	654,3	623,7

Sails Limitations

Headsails	Spinnakers
5	3

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	44,0°	42,8°	43,3°	42,2°	41,4°	41,2°	42,2°
Beat VMG	2,62	3,14	3,52	3,81	3,94	3,97	3,92
52°	4,05	4,80	5,34	5,62	5,75	5,80	5,79
60°	4,32	5,09	5,55	5,79	5,95	6,01	6,01
75°	4,55	5,33	5,72	5,95	6,16	6,35	6,48
90°	4,64	5,50	5,91	6,18	6,35	6,48	6,91
110°	4,65	5,51	5,91	6,23	6,60	6,95	7,32
120°	4,48	5,38	5,83	6,14	6,49	6,86	7,59
135°	4,05	4,95	5,60	5,94	6,25	6,61	7,34
150°	3,50	4,39	5,16	5,67	5,98	6,27	6,94
Run VMG	3,03	3,82	4,50	5,15	5,64	5,94	6,54
Gybe Angles	148,9°	153,5°	156,7°	180,0°	180,0°	180,0°	180,0°

Class Division Length
CDL = **5,687**

Storm Sails Areas


Heavy Weather Jib	10,53
Storm Jib (JL=5,74)	3,90
Storm Trysail	4,32

Owner

BOAT	
Name ANDREA	Sail Nr ESP-7174
File E7174	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS			
Inclining Test Current Inclining			
Flotation date 13/01/2012		SG 1,0270	
FFM 0,993	FF 0,992	SFFP 0,150	
FAM 0,800	FA 0,800	SAFP 6,310	
W1 22,0	PD1 586,3	WD 8,700	
W2 22,0	PD2 586,6	GSA 1,0	
W3 22,0	PD3 587,1	RSA 1,0	
W4 22,0	PD4 587,3	PLM 9000,0	
LCF from stem on CL / on sheer		3,719 / 3,895	
Maximum beam station from stem		4,745	
RM Measured		25,7kg·m	
RM Default		27,6kg·m	
Limit of positive stability / Stab.Index		106,5° / 100,5	
Freeboard at mast at 2,440		0,891	

RIG			
Forestay Tension Aft	Spreaders 1		
Inner Stay Fixed	Runners 0		
Carbon Mast No	Jumper Struts None		
Taper Hollows No	Jib Furler No		
Fiber Rigging No	Main Furler No		
Lenticular Rigging No	Without Backstay No		
Articulated Bowsprit No			
P 8,180	E 3,020	MDT1 0,087	MW 0,119
IG 8,830	J 2,440	MDL1 0,119	GO 0,119
ISP 8,955	SFJ 0,000	MDT2 0,087	BD 0,090
BAS 1,030	SPL 2,410	MDL2 0,119	MWT
FSP 0,000	TPS 2,440	TL	MCG



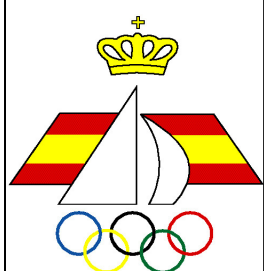
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IMS Measurement Certificate

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MIZZEN RIG AND SAILS	
N/A	

PROPELLER	
Type No Propeller	

COMMENTS	

MOVEABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0,150	0,65	1,17	2,04	2,65	15,21	15,61	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL				
	8,53	8,53	8,53	4,34	4,29	30,78		SL · (SFL + 4·SHW) / 6	
Asymmetric	SLU	SLE	SL	SHW	SFL				
	9,58	8,00	8,79	3,89	5,15	30,34		AS · (SFL + 4·SHW) / 6	

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
0,05	0,37	0,70	1,38	2,20	2,67	8,44	11,83	Y			Unknow	

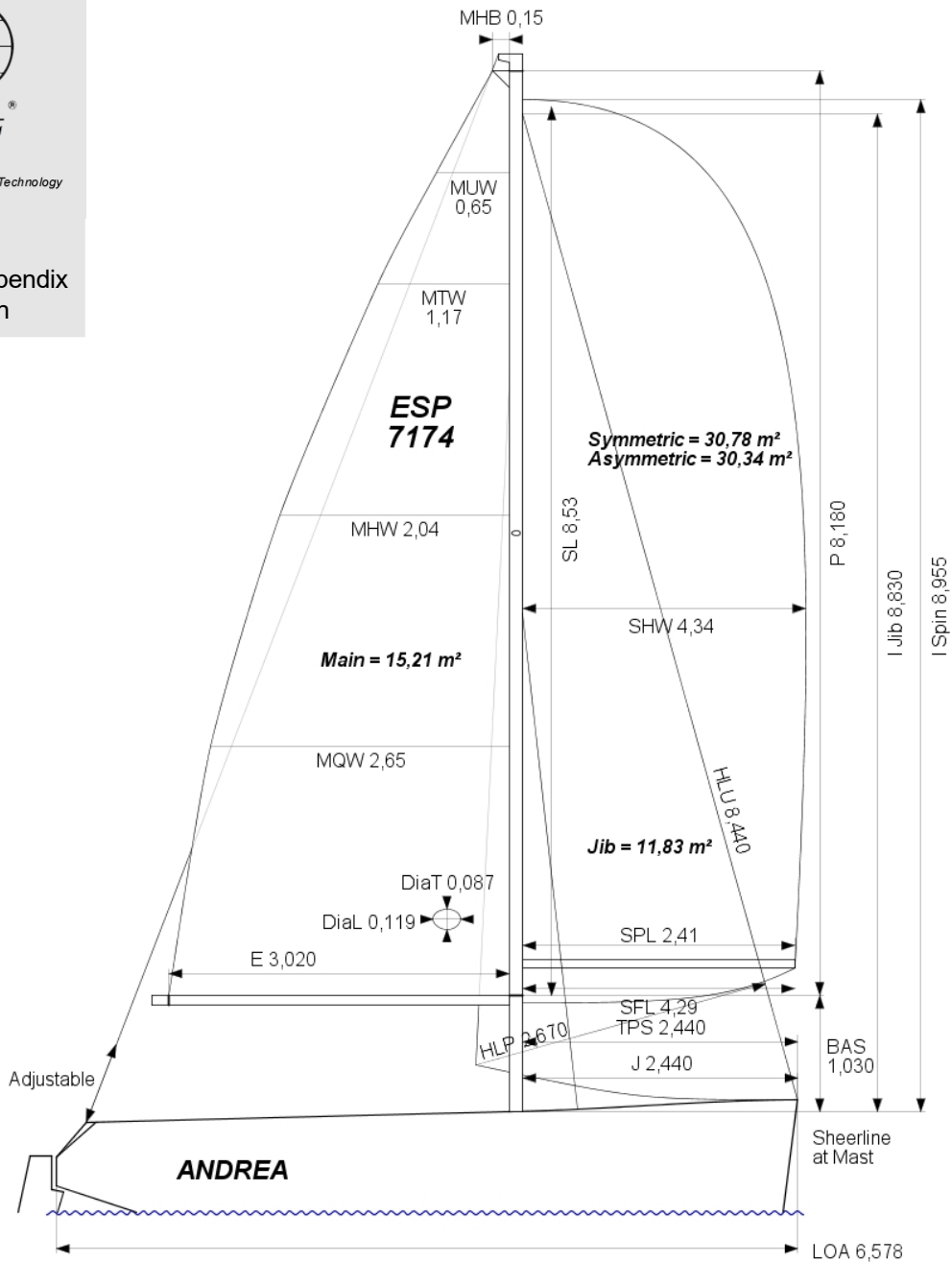
MEASUREMENT INVENTORY				
Measurer CGD/MGD/JJBeltran				
Date 13/01/2012				
Comment				
Id	Item	Weight	Distance	VCG Description
1	Tools	2,0	5,44	
Id	Item	Maker	Model	
1	Engine	15cv FB	HONDA	
Id	Item	Weight Description		

MEASUREMENT INVENTORY									
Id	Item	Tank	Use	Tank Type	Capcty	Dist.	VCG	Condtn	Description
1	Tank	fuel		aluminio	10,0	5,54			0,0 v vacio
Id	Item	Weight	Distance	VCG Description					
1	Battery	2,0	4,44						



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Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
001	0,150	0,65	1,17	2,04	2,65	15,21				Unknown						
HEADSAILS (1)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
003	0,05	0,37	0,70	1,38	2,20	2,67	8,44	109%	11,83	Y		E759			Unknown	
SYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
001	8,53	8,53	8,53	4,34	4,29	30,78										
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
001	9,58	8,00	8,79	3,89	5,15	30,34	asym	jibeltran			Unknown					