

BOAT Name ANDREA Sail Nr ESP-7174	GPH 782,1	HULL Length Overall 6,578m Maximum Beam 2,488m Displacement 1.530kg Draft 1,169m IMS Reg. Division Sportboat Dynamic Allowance 0,316% Fwd Accommodation No Hull Construction Solid Carbon Rudder No Crew Arm Extension IMSL 6,370m VCGD 0,191m Sink 8,71kg/mm RL 5,165m VCGM 0,135m WS 11,42m² LSM0 6,537m Displacement/Length ratio 5,4772
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		



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2018
ORC International
Certificate

Rating Office
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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	760,0			847,9		
Time on Time	0,7895			0,7961		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	892,3	693,0	625,4	1148,2	850,0	753,3
Time on Time	0,7565	0,9740	1,0793	0,5879	0,7941	0,8960

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1352,0	1130,9	1005,5	929,2	908,9	908,6	928,3
52°	884,7	748,8	673,0	640,7	628,1	625,2	627,8
60°	837,9	710,7	650,6	623,9	609,8	604,7	606,5
75°	802,5	683,6	634,2	609,5	590,1	575,4	566,0
90°	773,5	652,7	609,2	584,6	569,4	560,1	528,6
110°	769,2	650,7	606,7	574,4	543,7	519,1	491,9
120°	797,2	665,6	614,5	582,7	550,5	520,9	474,0
135°	879,9	720,5	639,2	602,7	571,8	540,7	485,4
150°	1017,3	812,1	692,2	631,5	599,3	570,3	514,6
Run VMG	1174,6	935,3	793,9	696,0	636,2	603,6	547,6

Certificate
Number **717401**
ORC Ref **ESP00027397**
Issued On **24/01/2018**
VPP Ver. **2018 1.00**
Valid until **31/12/2018**

Crew Weight
Default **375kg**
Maximum **260kg**
Minimum* **175kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Double H.GPH	783,4	0,7659
Double H.OSN	762,5	0,7869
Non Spin GPH	818,1	0,7334
Non Spin OSN	789,2	0,7602

Selected Courses							
Windward / Leeward	1263,3	1033,1	899,7	812,6	772,5	756,1	737,9
Circular Random	1072,3	867,8	758,8	696,4	659,3	636,4	609,6
Coastal / Long Distance	1254,5	968,5	811,7	717,3	670,9	636,8	574,9
Non Spinnaker	1136,7	913,2	792,7	723,0	681,4	655,9	627,6

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	43,5°	42,1°	42,3°	40,9°	40,7°	40,8°	42,2°
Beat VMG	2,66	3,18	3,58	3,87	3,96	3,96	3,88
52°	4,07	4,81	5,35	5,62	5,73	5,76	5,73
60°	4,30	5,07	5,53	5,77	5,90	5,95	5,94
75°	4,49	5,27	5,68	5,91	6,10	6,26	6,36
90°	4,65	5,52	5,91	6,16	6,32	6,43	6,81
110°	4,68	5,53	5,93	6,27	6,62	6,93	7,32
120°	4,52	5,41	5,86	6,18	6,54	6,91	7,59
135°	4,09	5,00	5,63	5,97	6,30	6,66	7,42
150°	3,54	4,43	5,20	5,70	6,01	6,31	7,00
Run VMG	3,06	3,85	4,53	5,17	5,66	5,96	6,57
Gybe Angles	148,8°	153,1°	156,0°	180,0°	180,0°	180,0°	180,0°

Class Division Length
CDL = **5,768**

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



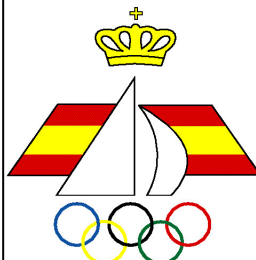
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IMS Measurement Certificate

Certificate

Number **717401**
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MIZZEN RIG AND SAILS	
N/A	

PROPELLER	
Type No Propeller	

COMMENTS	

MOVABLE 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 $P/8 \cdot (E + 2 \cdot MQW + 2 \cdot MHW + 1.5 \cdot MTW + MUW + 0.5 \cdot MHB)$
Symmetric	SLU	SLE	SL	SHW	SFL	30,78 $SL \cdot (SFL + 4 \cdot SHW) / 6$
	8,53	8,53	8,53	4,34	4,29	
Asymmetric	SLU	SLE	SL	SHW	SFL	30,34 $AS \cdot (SFL + 4 \cdot SHW) / 6$
	9,58	8,00	8,79	3,89	5,15	

HEADSAILS												
Area = $0.1125 \cdot HLU \cdot (1.445 \cdot HLP + 2 \cdot HQW + 2 \cdot HHW + 1.5 \cdot HTW + HUW + 0.5 \cdot HHB)$												
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			Unknown	

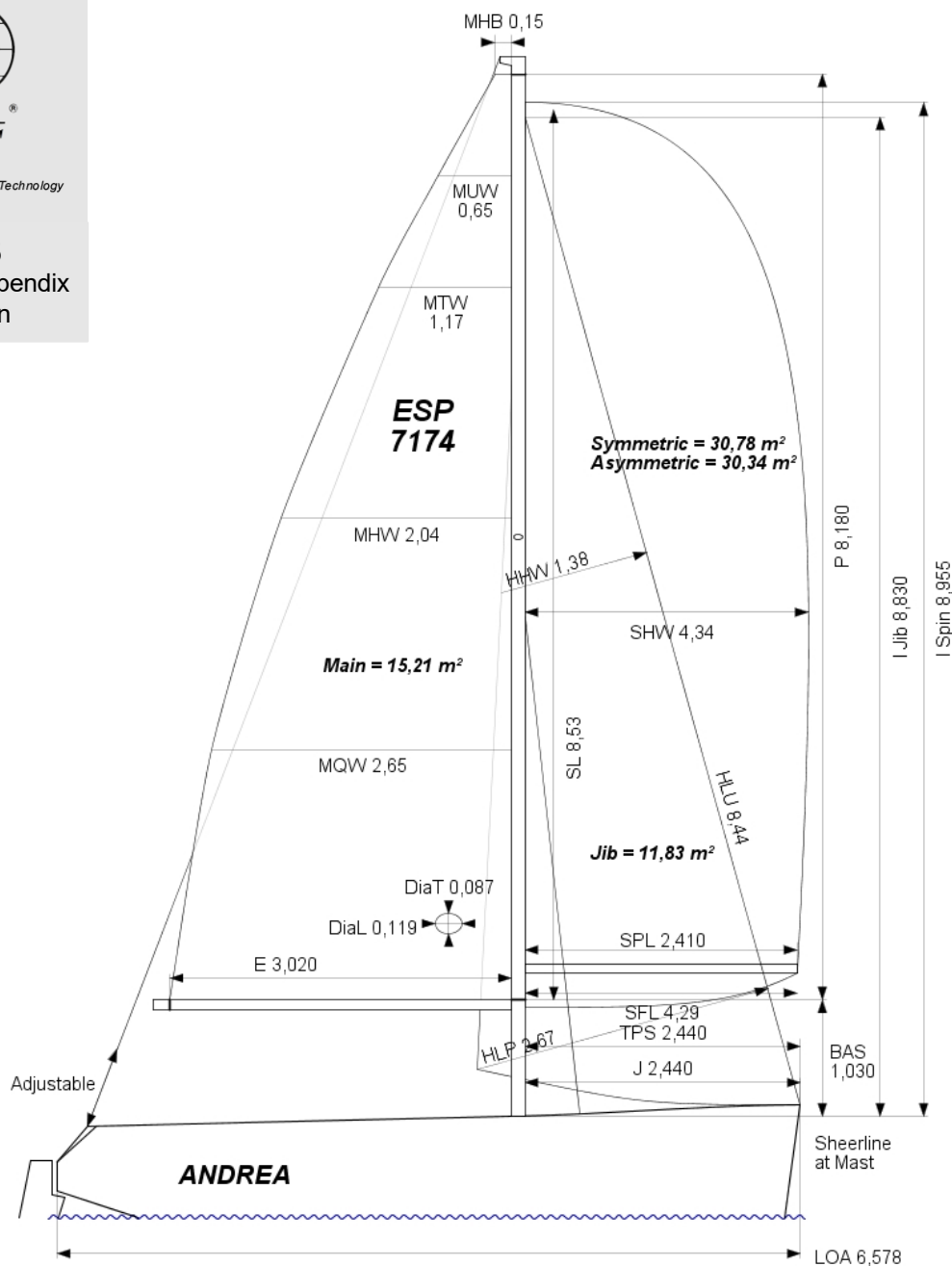
MEASUREMENT INVENTORY				
Measurer CGD/MGD/JJBeltran esp 002				
Date 13/01/2012				
Comment				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
4	Tools	2,0	5,44	
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
1	Engine	15cv FB	HONDA	
<i>Id</i>	<i>Item</i>	<i>Weight Description</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</i>	<i>Description</i>
1	Tank fuel		aluminio	10,0	5,54			0,0 vacio
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>				
1	Battery	2,0	4,44					



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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	jbeltran			Unknown	