

BOAT Name AMITIE Sail Nr ECU-410	GPH 646,4	HULL Length Overall 12,380m Maximum Beam 4,236m Displacement 8.892kg Draft 1,576m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0,344% Fwd Accommodation Yes Hull Construction Solid Carbon Rudder Crew Arm Extension
GENERAL Class OCEANIS 41 Designer FINOT-CONQ Builder BENETEAU Series 01/2012 Age 01/2012 Age Allowance 0,163% Offset File OCEAN41PG.off - 04/10/2017 07:44:32 Measurement by P. GUTIERREZ - 26/09/2017		IMSL 11,709m VCGD 0,433m Sink 28,87kg/mm RL 7,177m VCGM 0,358m WS 35,91m² LSMO 11,982m Displacement/Length ratio 5,1691



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2017
ORC International
Certificate

Rating Office
Federación Ecuatoriana
de Vela
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SCORING OPTIONS	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
	Low	Medium	High	Low	Medium	High
Time On Distance	627,8			716,0		
Time On Time	0,9556			0,9428		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	761,8	567,4	493,9	998,7	723,7	612,1
Time on Time	0,8861	1,1896	1,3667	0,6759	0,9327	1,1027

TIME ALLOWANCES	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1204,7	980,0	861,2	788,2	737,8	715,0	704,4
52°	762,2	629,4	555,6	510,1	485,0	474,0	468,4
60°	703,5	587,9	520,5	485,1	466,1	455,8	449,7
75°	657,6	553,5	495,1	467,4	451,4	439,1	423,5
90°	656,5	541,4	479,3	451,7	439,6	433,0	409,3
110°	646,5	529,7	472,6	446,7	426,3	405,8	382,2
120°	666,3	545,8	481,0	451,6	431,1	410,1	368,6
135°	741,8	597,6	513,9	469,7	446,2	426,7	386,3
150°	877,9	689,7	586,0	519,7	483,3	461,0	430,5
Run VMG	1013,7	796,4	676,6	600,1	558,0	520,8	460,5

Certificate
Number **041001**
ORC Ref **ECU00005599**
Issued On **04/10/2017**
VPP Ver. **2017 1.00**
Valid until **31/03/2018**

Crew Weight
Declared **891kg**
Default* **891kg**
Non Manual Pwr

Special Scoring
ToD ToT
Non Spin GPH **684,8** **0,8762**
Non Spin OSN **662,2** **0,9061**

Selected Courses	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Windward / Leeward	1109,2	888,2	768,9	694,2	647,9	617,9	582,5
Circular Random	909,0	726,1	626,1	566,7	529,5	505,2	475,2
Ocean for PCS	1122,1	857,8	706,8	613,0	550,9	507,2	446,4
Non Spinnaker	981,4	776,5	662,4	593,1	549,1	520,3	486,7

Sails Limitations
Headsails **5** | Spinnakers **3**
Dacron Sails

Velocity Prediction in Knots for True Wind Speeds	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	46,4°	44,9°	44,3°	44,7°	44,3°	43,8°	43,4°
Beat VMG	2,99	3,67	4,18	4,57	4,88	5,04	5,11
52°	4,72	5,72	6,48	7,06	7,42	7,59	7,69
60°	5,12	6,12	6,92	7,42	7,72	7,90	8,01
75°	5,47	6,50	7,27	7,70	7,97	8,20	8,50
90°	5,48	6,65	7,51	7,97	8,19	8,31	8,79
110°	5,57	6,80	7,62	8,06	8,44	8,87	9,42
120°	5,40	6,60	7,49	7,97	8,35	8,78	9,77
135°	4,85	6,02	7,01	7,66	8,07	8,44	9,32
150°	4,10	5,22	6,14	6,93	7,45	7,81	8,36
Run VMG	3,55	4,52	5,32	6,00	6,45	6,91	7,82
Gybe Angles	144,7°	147,3°	147,3°	147,5°	149,1°	174,4°	177,6°

Class Division Length
CDL = **9,443**

Storm Sails Areas
Heavy Weather Jib **33,19**
Storm Jib (JL=10,19) **12,29**
Storm Trysail **12,50**

Owner
EDUARDO JURADO


I certify that I understand my responsibilities under ORC Rules and Regulations

Signature

BOAT	
Name AMITIE	Sail Nr ECU-410
File ECU410	Data in meters/kilograms

INCLINING TEST AND FREEBOARDS		
Inclining Test Current Inclining		
Flotation date 26/09/2017		SG 1,0253
FFM 1,542	FF 1,541	SFFP 0,324
FAM 1,047	FA 1,054	SAFP 11,567
W1 130,0	PD1 469,9	WD 11,850
W2 130,0	PD2 470,0	GSA 1,0
W3 130,0	PD3 468,7	RSA 1,0
W4 130,0	PD4 468,7	PLM 9000,0
LCF from stem on CL / on sheer		7,048 / 7,354
Maximum beam station from stem		8,878
RM Measured		258,5kg·m
RM Default		241,6kg·m
Limit of positive stability / Stab.Index		99,8° / 101,8
Freeboard at mast at 5,170		1,298

RIG			
Forestay Tension Fixed	Spreaders 2		
Inner Stay None Fitted	Runners 0		
Carbon Mast	Jumper Struts None		
Taper Hollows	Jib Furler Yes		
Fiber Rigging	Main Furler		
Lenticular Rigging	Without Backstay Yes		
Articulated Bowsprit No			
P 15,200	E 4,700	MDT1 0,137	MW 0,222
IG 15,565	J 5,170	MDL1 0,222	GO 0,260
ISP 16,635	SFJ 0,000	MDT2 0,137	BD 0,170
BAS 2,215	SPL 0,000	MDL2 0,222	MWT
FSP 0,090	TPS 5,445	TL 0,000	MCG




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IMS Measurement Certificate

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MIZZEN RIG AND SAILS	
N/A	

PROPELLER		
Installation Strut	PRD 0,475	
Type Folding 3 blades	PBW 0,133	
Twin Screw	PIPA 0,0042	
ST1 0,052	ST3 0,201	ST5 0,360
ST2 0,201	ST4 0,112	EDL 3,058

COMMENTS	

MOVEABLE BALLAST	
N/A	

CENTERBOARD	
N/A	

SAILS (Maximum Areas)						
Mainsail	MHB	MUW	MTW	MHW	MQW	Area Area (r) Formula
	0,080	0,80	1,46	2,67	3,72	38,97 39,28 P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)
Symmetric Not Available						
Asymmetric	SLU	SLE	SL	SHW	SFL	Area Formula
	17,23	14,69	15,96	9,30	8,88	122,57 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
0,09	0,87	1,60	3,02	4,35	5,57	15,45	45,37	Y		26/09/2017	Technor	NEGRA

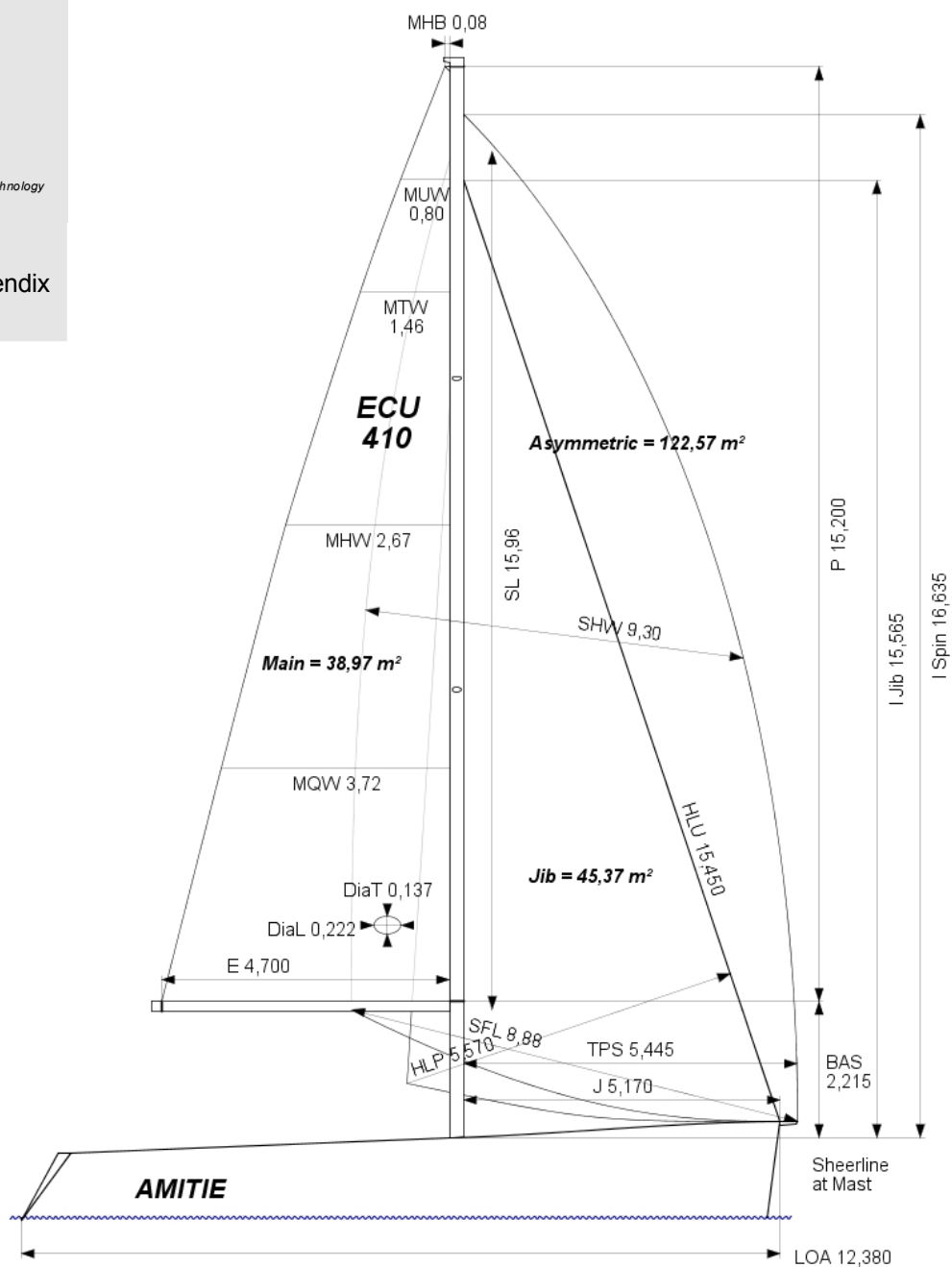
MEASUREMENT INVENTORY				
Measurer PATRICIO GUTIERREZ P G				
Date 26/09/2017				
Comment				
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>
<i>Id</i>	<i>Item</i>	<i>Maker</i>	<i>Model</i>	
C4	Engine	YANMAR	40 HP	
<i>Id</i>	<i>Item</i>	<i>Weight Description</i>		

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>
E5	Tank	HOLDING	PVC RIGIDO	55,0	8,00	0,70	55,0	
E4	Tank	AGUA	PVC RIGIDO	220,0	9,00	0,00	0,0	
C10	Tank	AGUA	PVC RIGIDO	350,0	2,00	0,00	0,0	
B4	Tank	PETROLEO	PVC RIGIDO	170,0	9,00	0,00	57,0	
<i>Id</i>	<i>Item</i>	<i>Weight</i>	<i>Distance</i>	<i>VCG Description</i>				
C10	Battery	30,0	1,00	0,00 2 X 12 V / 110 AMP				
E4	Battery	30,0	8,50	0,00 2 X 12 v / 110 AMP				
B4	Battery	45,0	2,00	0,00 3 X 12V / 110 AMP				
B5	Misc	15,0	8,00	0,00 HELADERA EXTRAS				



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Certificate Appendix
Sail Plan



SAILS INVENTORY																
MANSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
M2	0,080	0,80	1,46	2,67	3,72	38,97	P GUTIERREZ	26/09/2017	UK	Technora	NEGRA					
HEADSAILS (1)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
G1	0,09	0,87	1,60	3,02	4,35	5,57	15,45	108%	45,37	Y		P	26/09/2017	UK	Technor	NEGRA
SYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
ASYMMETRIC SPINNAKERS (1)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
A1	17,23	14,69	15,96	9,30	8,88	122,57	asym	P GUTIERREZ	26/09/2017	UK	Nylon	NUEVA				