BOAT

Name **ÁVREGO**
Sail Nr **ESP-10095**

GPH

723.2

GENERAL

Class	**MALBEC 240**
Designer	**JAVIER SOTO ACEBAL**
Builder	**OCEANTECH**
Series	**01/1997**
Age	**01/2005**
Age Allow ance	**0.487%**
Offset File	**MALBEC24.off - 27/02/2019 21:07:46**
Measurement by	**- 20/02/2019**

HULL

Length Overall	**7.110m**
Maximum Beam	**2.688m**
Displacement	**1,577kg**
Draft	**1.379m**
Plan Review	
IMS Reg. Division	**Sportboat**
Dynamic Allow ance	**0.186%**
Hull Construction	**Solid**
Carbon Rudder	**No**
Crew Arm Extension	

IMSL	**6.797m**	VCGD	**0.014m**	Sink	**9.34kg/mm**
RL	**6.142m**	VCGM	**0.131m**	WS	**11.60m²**
LSM0	**6.692m**	Displacement/Length ratio			**5.2622**

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SCORING OPTIONS

	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	**703.0**			**782.5**		
Time on Time	**0.8535**			**0.8626**		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	**818.5**	**644.0**	**577.7**	**1054.0**	**783.2**	**694.7**
Time on Time	**0.8247**	**1.0482**	**1.1684**	**0.6404**	**0.8618**	**0.9717**

TIME ALLOWANCES

Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	**1245.1**	**1043.0**	**918.9**	**852.0**	**834.8**	**833.6**	**844.4**
52°	**808.6**	**685.5**	**630.1**	**603.3**	**592.5**	**589.5**	**589.3**
60°	**763.2**	**653.6**	**612.5**	**589.3**	**575.4**	**570.7**	**570.8**
75°	**732.1**	**635.2**	**598.8**	**575.8**	**554.8**	**539.4**	**530.9**
90°	**714.7**	**615.1**	**578.8**	**563.4**	**547.0**	**524.6**	**492.5**
110°	**700.2**	**604.8**	**565.5**	**530.8**	**506.3**	**490.9**	**464.6**
120°	**718.3**	**613.0**	**571.0**	**533.7**	**499.0**	**469.9**	**435.0**
135°	**785.5**	**651.3**	**592.2**	**556.9**	**521.2**	**487.3**	**412.7**
150°	**926.4**	**743.3**	**639.6**	**588.5**	**556.2**	**523.4**	**460.1**
Run VMG	**1069.7**	**858.4**	**731.7**	**647.4**	**597.7**	**566.3**	**505.7**
Selected Courses							
Windward / Leeward	**1157.4**	**950.7**	**825.3**	**749.7**	**716.2**	**699.9**	**675.0**
Circular Random	**985.0**	**800.5**	**702.5**	**645.8**	**611.1**	**588.3**	**558.4**
Coastal / Long Distance	**1148.6**	**891.8**	**748.5**	**665.8**	**623.2**	**588.7**	**530.9**
Non Spinnaker	**1060.5**	**853.5**	**741.9**	**677.0**	**637.4**	**612.2**	**582.0**

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°**	**42.9°**	**41.1°**	**39.0°**	**38.6°**	**38.6°**	**39.8°**
Beat VMG	**2.89**	**3.45**	**3.92**	**4.23**	**4.31**	**4.32**	**4.26**
52°	**4.45**	**5.25**	**5.71**	**5.97**	**6.08**	**6.11**	**6.11**
60°	**4.72**	**5.51**	**5.88**	**6.11**	**6.26**	**6.31**	**6.31**
75°	**4.92**	**5.67**	**6.01**	**6.25**	**6.49**	**6.67**	**6.78**
90°	**5.04**	**5.85**	**6.22**	**6.39**	**6.58**	**6.86**	**7.31**
110°	**5.14**	**5.95**	**6.37**	**6.78**	**7.11**	**7.33**	**7.75**
120°	**5.01**	**5.87**	**6.31**	**6.75**	**7.22**	**7.66**	**8.28**
135°	**4.58**	**5.53**	**6.08**	**6.46**	**6.91**	**7.39**	**8.72**
150°	**3.89**	**4.84**	**5.63**	**6.12**	**6.47**	**6.88**	**7.82**
Run VMG	**3.37**	**4.19**	**4.92**	**5.56**	**6.02**	**6.36**	**7.12**
Gybe Angles	**147.0°**	**151.0°**	**154.0°**	**174.0°**	**180.0°**	**180.0°**	**180.0°**

Rating Office

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Certificate

Number **100951**
ORC Ref **03510000EN6**
Issued On **10/03/2020**
VPP Ver. **2020 1.01**
Valid until **31/12/2020**

Crew Weight

Default	388kg
Maximum	**360kg**
Minimum*	**270kg**

**when applied by the NoR and SI*

Non Manual Pwr **No**

Special Scoring

	ToD	ToT
Non Spin GPH	**765.2**	**0.7841**
Non Spin OSN	**740.0**	**0.8108**

Sails Limitations

Headsails	Spinnakers
5	**4**

Woven Polyester

Class Division Length

CDL = **6.465**

Storm Sails Areas

Heavy Weather Jib	**12.97**
Storm Jib (JL=6.37)	**4.81**
Storm Trysail	**5.06**

Owner

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BOAT

Name **ÁVREGO** Sail Nr **ESP-10095**
File **E10095** Data in **meters/kilograms**

RIG

Forestay Tension	**Aft**	Spreaders	**1**
Inner Stay	**Fixed**	Runners/Checkstays	**0**
Carbon Mast	**No**	Jib Furler	**No**
Fiber Rigging	**No**	Main Furler	**No**
Non-Circular Rigging	**No**		
Articulated Bowsprit	**No**		

P	**9.115**	E	**3.170**	MDT1	**0.082**	MW	**0.115**
IG	**9.800**	J	**2.860**	MDL1	**0.115**	GO	**0.115**
ISP	**9.930**	SFJ		MDT2	**0.082**	BD	**0.117**
BAS	**1.130**	SPL	**3.000**	MDL2	**0.115**	MWT	
FSD		TPS		TL		MCG	

INCLINING TEST AND FREEBOARDS

Inclining Test **Current Inclining**
Flotation date **25/02/2019** SG **1.0250**

FFM	**0.965**	FF	**0.965**	SFFP	**0.090**
FAM	**0.762**	FA	**0.762**	SAFP	**6.840**
W1	**27.5**	PD1	**591.6**	WD	**8.250**
W2	**27.5**	PD2	**600.3**	GSA	**1.0**
W3	**27.5**	PD3	**597.1**	RSA	**1.0**
W4	**27.5**	PD4	**592.5**	PLM	**9000.0**

LCF from stem on CL / on sheer	**3.970 / 4.151**
Maximum beam station from stem	**4.928**
RM Measured	**30.0kg·m**
RM Default	**32.7kg·m**
Limit of positive stability / Stab.Index	**104.6° / 97.1**
Freeboard at mast at 2.860	**0.831**

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MIZZEN RIG AND SAILS

N/A

PROPELLER

Type **No Propeller**

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VPP Ver. **2020 1.01**
Valid until **31/12/2020**

COMMENTS

NO SE INCLUYE MOTORFUERABORDA FOQUE CON GARRUCHO.

MOVABLE BALLAST

N/A

CENTERBOARD

N/A

SAILS (Maximum Areas)

Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula
	0.15	0.60	1.08	1.94	2.63	16.64	16.90	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)
Symmetric	**SLU**	**SLE**	**SL**	**SHW**	**SFL**			
	9.62	9.62	9.62	5.92	6.25	47.99		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	Flying	Meas.Date	Material	Comment
0.06	0.38	0.72	1.44	2.23	3.03	9.80	14.57	Y	No	25/02/2019	Dacron	
0.06	0.30	0.57	1.12	1.70	2.32	9.70	11.11	Y	No	25/02/2019	Dacron	

MEASUREMENT INVENTORY

Measurer **ESP 842-825**
Date **25/02/2019**
Comment
Internal Ballast total = 0.0

Id	*Item*	*Weight*	*Distance*	*VCG*	*Description*

Id	*Item*	*Maker*	*Model*
01	Engine	TOHATSU	MFS 6CV

Id	*Item*	*Weight*	*Description*

MEASUREMENT INVENTORY

Id	*Item*	*Weight*	*Distance*	*VCG*	*Description*
01	Battery	17.9	4.27		
01	Misc				Se mide estabilidad y francobordos sin motor

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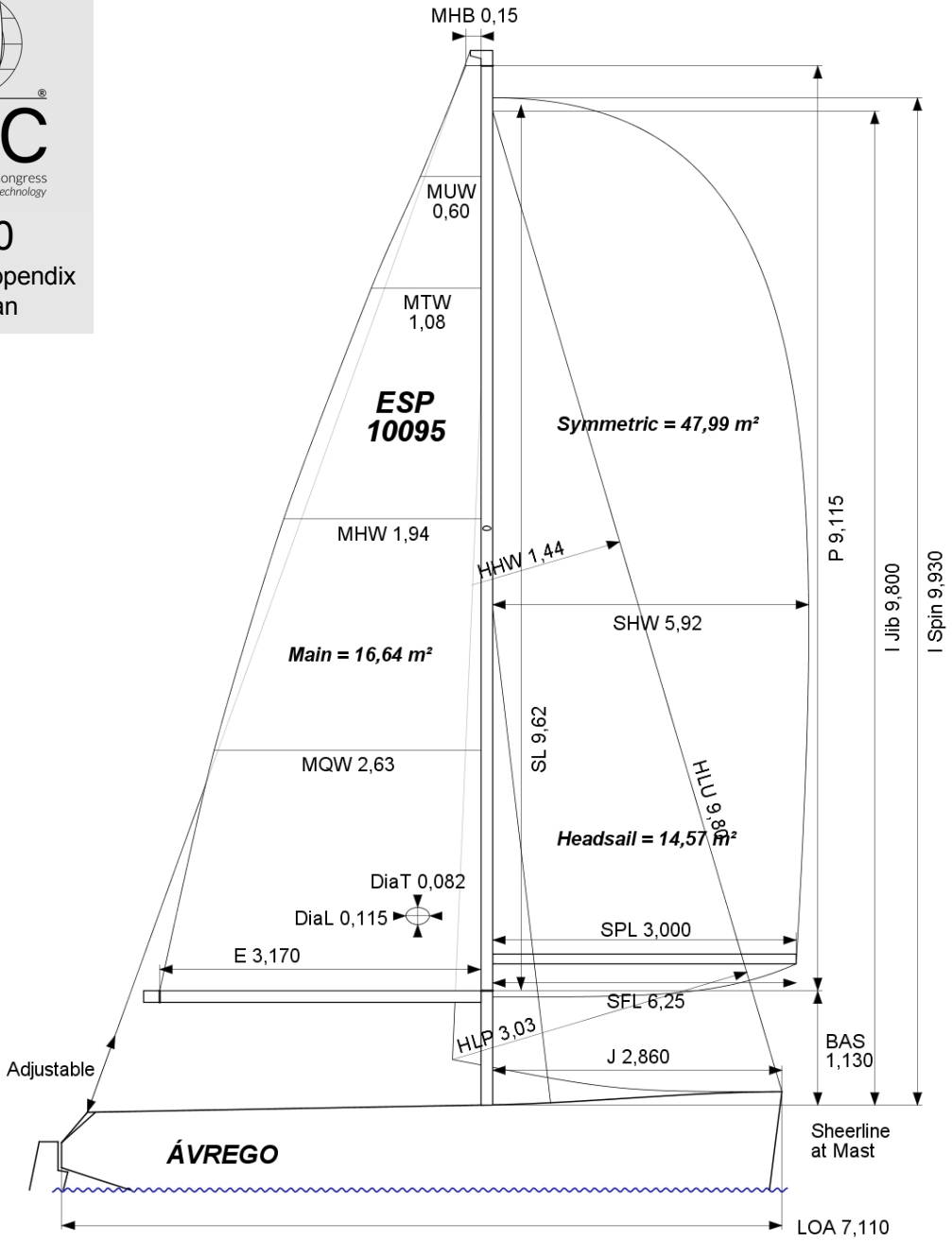
Certificate Appendix
Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
01	0.15	0.60	1.08	1.94	2.63	16.65		25/02/2019		Dacron	

HEADSAILS (2)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Flying	Measurer	Meas.Date	Manufacture	Material	Comment
GENOV	0.06	0.38	0.72	1.44	2.23	3.03	9.80	106%	14.57	Y	No		25/02/2019		Dacron	
FOQUE	0.06	0.30	0.57	1.12	1.70	2.32	9.70	81%	11.11	Y	No		25/02/2019		Dacron	

SYMMETRIC SPINNAKERS (1)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1	9.62	9.62	9.62	5.92	6.25	47.99					

ASYMMETRIC SPINNAKERS (0)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment

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