

BOAT Name Andela X Sail Nr CRO 1545	GPH 617.9	HULL Length Overall 11.345m Maximum Beam 3.468m Displacement 6,414kg Draft 2.010m IMS Reg. Division Cruiser/Racer Dynamic Allowance 0.205% Fwd Accommodation Yes Hull Construction Cored Carbon Rudder No Crew Arm Extension
GENERAL Class X 37 Designer Jeppesen Builder X Yachts Series 11/2004 Age 07/2007 Age Allowance 0.487% Offset File X37ND.OFF - 26/04/2005 10:46:14 Measurement by - 16/09/2007		IMSLS 10.144m VCGD 0.069m Sink 20.24kg/mm RL 8.793m VCGM 0.067m WS 27.32m² LSM0 10.066m Displacement/Length ratio 6.2887



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SCORING OPTIONS						
	COASTAL / LONG DISTANCE			WINDWARD / LEEWARD		
Time on Distance	600.4			670.6		
Time on Time	0.9993			1.0065		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	710.3	546.4	487.9	919.5	673.7	583.8
Time on Time	0.9503	1.2353	1.3834	0.7341	1.0020	1.1563

TIME ALLOWANCES							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	1048.1	867.3	761.8	712.1	695.6	689.6	675.9
52°	682.2	575.4	518.2	496.1	488.6	485.3	479.8
60°	642.9	547.2	502.9	483.9	475.3	471.7	467.8
75°	614.3	527.5	491.9	473.2	460.2	451.5	445.1
90°	622.3	526.3	484.4	464.2	454.0	440.6	419.5
110°	628.1	520.5	479.3	455.8	435.4	416.8	396.1
120°	647.6	532.5	484.7	459.6	436.8	415.2	379.2
135°	717.6	584.3	510.0	477.0	454.1	431.2	388.1
150°	850.5	675.8	572.0	508.7	477.9	456.4	414.3
Run VMG	982.1	780.3	659.9	580.4	525.6	488.4	445.3

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Number **015/19**
ORC Ref **CRO00090683**
Issued On **01/06/2019**
VPP Ver. **2019 1.01**
Valid until **31/12/2019**

Crew Weight
Default **695kg**
Maximum **790kg**
Minimum* **593kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

Special Scoring
ToD ToT
Non Spin GPH **649.4** **0.9239**
Non Spin OSN **629.9** **0.9525**

Selected Courses							
Windward / Leeward	1015.1	823.8	710.9	646.3	610.6	589.0	560.6
Circular Random	851.9	687.3	599.2	548.4	517.4	497.0	470.6
Coastal / Long Distance	1011.8	773.1	640.4	564.9	527.7	498.7	449.2
Non Spinnaker	909.1	727.6	629.0	571.3	535.7	512.6	483.0

Sails Limitations
Headsails **5** | Spinnakers **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	43.0°	41.4°	40.8°	39.8°	39.0°	38.9°	39.3°
Beat VMG	3.43	4.15	4.73	5.06	5.18	5.22	5.33
52°	5.28	6.26	6.95	7.26	7.37	7.42	7.50
60°	5.60	6.58	7.16	7.44	7.57	7.63	7.70
75°	5.86	6.83	7.32	7.61	7.82	7.97	8.09
90°	5.79	6.84	7.43	7.76	7.93	8.17	8.58
110°	5.73	6.92	7.51	7.90	8.27	8.64	9.09
120°	5.56	6.76	7.43	7.83	8.24	8.67	9.49
135°	5.02	6.16	7.06	7.55	7.93	8.35	9.28
150°	4.23	5.33	6.29	7.08	7.53	7.89	8.69
Run VMG	3.67	4.61	5.46	6.20	6.85	7.37	8.08
Gybe Angles	144.8°	149.4°	151.3°	156.5°	173.7°	180.0°	180.0°

Class Division Length
CDL = **9.470**

Storm Sails Areas
Heavy Weather Jib **32.86**
Storm Jib (JL=10.14) **12.17**
Storm Trysail **12.26**

Owner

BOAT				
Name Andela X	Sail Nr CRO 1545			
File CRO1545	Data in meters/kilograms			
RIG				
Forestay Tension Aft	Spreaders 2			
Inner Stay None Fitted	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 14.590	E 4.800	MDT1 0.125	MW 0.206	
IG 15.485	J 4.080	MDL1 0.206	GO 0.236	
ISP 15.525	SFJ 0.228	MDT2 0.113	BD 0.248	
BAS 1.733	SPL 4.040	MDL2 0.192	MWT	
FSP 0.068	TPS 4.360	TL 0.660	MCG	

INCLINING TEST AND FREEBOARDS				
Inclining Test Current Inclining				
Flotation date 15/05/2019		SG 1.0160		
FFM 1.406	FF 1.407	SFFP 0.250		
FAM 1.087	FA 1.093	SAFP 10.800		
W1 90.9	PD1 556.3	WD 11.060		
W2 90.9	PD2 560.9	GSA 1.0		
W3 90.9	PD3 562.9	RSA 1.0		
W4 90.9	PD4 564.8	PLM 9000.0		
LCF from stem on CL / on sheer		6.370 / 6.579		
Maximum beam station from stem		7.700		
RM Measured		141.1kg-m		
RM Default		159.6kg-m		
Limit of positive stability / Stab.Index		117.3° / 121.2		
Freeboard at mast at 4.308		1.198		



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MIZZEN RIG AND SAILS				
N/A				

PROPELLER				
Installation Strut	PRD 0.401			
Type Folding 2 blades	PBW			
Twin Screw No	PIPA 0.0034			
ST1 0.042	ST3 0.180	ST5 0.266		
ST2 0.180	ST4 0.112	EDL 2.415		

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COMMENTS				

MOVABLE BALLAST				
N/A				

CENTERBOARD				
N/A				



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SAILS (Maximum Areas)									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	0.150	1.07	1.90	3.18	4.13	42.70	43.58	P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric	SLU	SLE	SL	SHW	SFL				
	14.96	14.96	14.96	7.39	7.13	91.48		SL · (SFL + 4·SHW) / 6	
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL				
	15.00	13.79	14.39	4.80	6.40	61.42		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
0.07	0.62	1.23	2.30	3.26	4.16	15.09	33.33	Y		10/04/2013	Unknow	C1
0.07	0.60	1.19	2.16	3.25	4.21	15.24	33.13	Y		02/04/2014	Carbon	C2 (4T)
0.07	0.58	1.16	2.21	3.21	4.19	15.20	32.92	Y		08/04/2011	Carbon	C2
0.07	0.50	0.99	1.98	2.98	3.95	15.13	30.04	Y		08/04/2011	Carbon	C3

MEASUREMENT INVENTORY				
Measurer CRO5				
Date 10/04/2013				
Comment				
Id	Item	Weight	Distance	VCG Description
Id	Item	Maker	Model	
1	Engine	Yanmar	3YM30CV	
Id	Item	Weight Description		

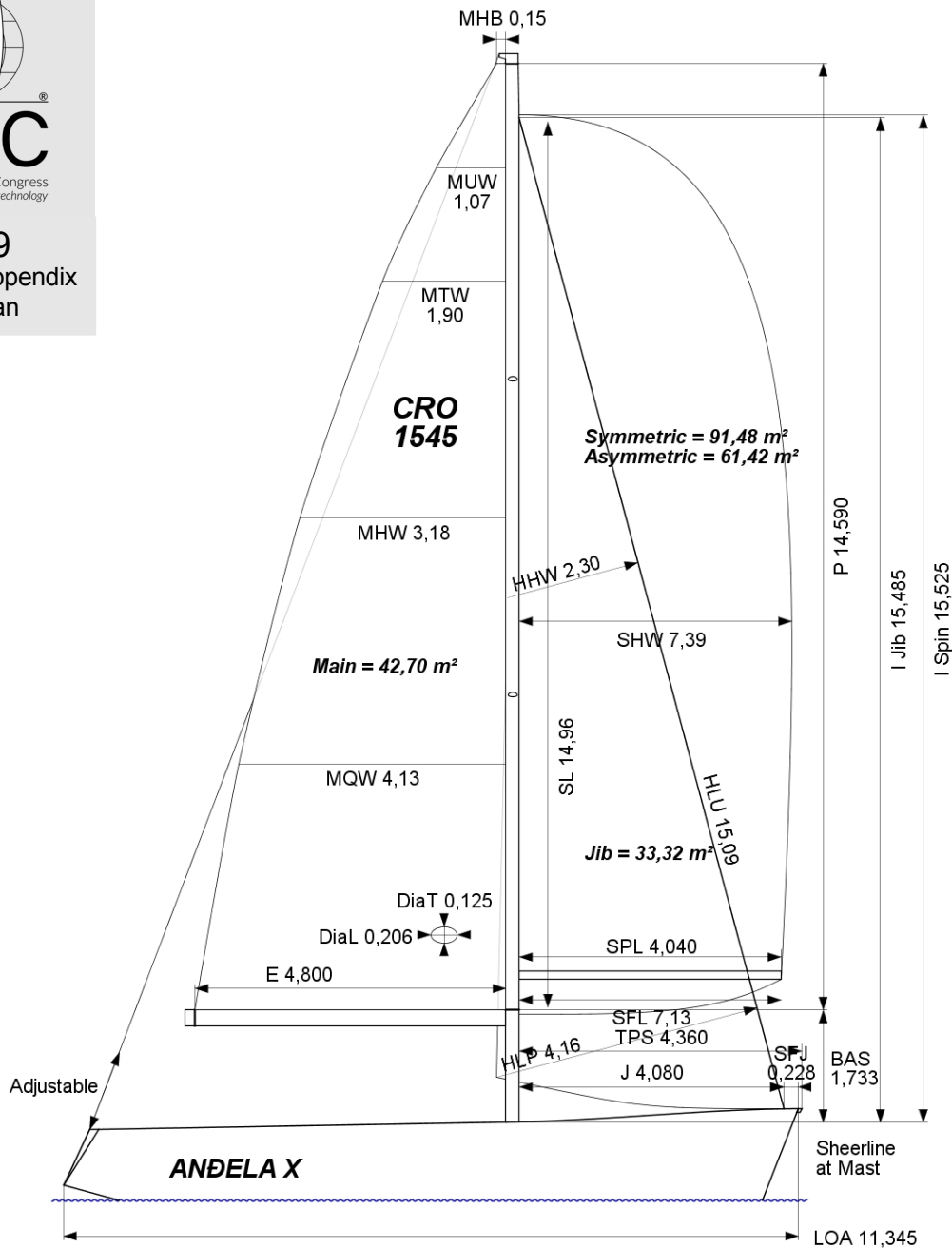
MEASUREMENT INVENTORY							
Id	Item	Tank Use	Tank Type	Capcty	Dist.	VCG	Condtn Description
1	Tank	Water	Inox	180.0	5.10		0-0
2	Tank	Diesel	Inox	80.0	8.60		30-0
Id	Item	Weight	Distance	VCG Description			
1	Ballast	34.2	7.20	1x17,6 kg, 1x16,6 kg centerline			
2	Ballast	31.5	6.80	1x15 kg, 1 x 16,5kg centerline			
1	Battery	0.0	7.50	75 Ah			
2	Battery	0.0	5.20	125 Ah			



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Sail Plan



SAILS INVENTORY

MAINSAIL (1)

Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.15	1.07	1.90	3.18	4.13	42.71		16/03/2015	One sails	Carbon	4T

HEADSAILS (4)

Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
1	0.07	0.62	1.23	2.30	3.26	4.16	15.09	102%	33.33	Y			10/04/2013	One Milenium	Unknow	C1
4	0.07	0.60	1.19	2.16	3.25	4.21	15.24	103%	33.13	Y			02/04/2014	One sails	Carbon	C2 (4T)
2	0.07	0.58	1.16	2.21	3.21	4.19	15.20	103%	32.92	Y			08/04/2011	One Milenium	Carbon	C2
3	0.07	0.50	0.99	1.98	2.98	3.95	15.13	97%	30.04	Y			08/04/2011	One Milenium	Carbon	C3

SYMMETRIC SPINNAKERS (5)

Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment
5	14.96	14.96	14.96	7.39	7.13	91.49		08/06/2013	One Sails	Nylon	
4	14.96	14.96	14.96	7.39	7.13	91.49		20/06/2013	One Milenium	Nylon	
6	14.98	14.98	14.98	7.39	7.06	91.43		16/03/2015	One Sails	Nylon	New
1	15.07	15.07	15.07	7.27	7.30	91.38		24/02/2009	North	Nylon	S3
3	14.98	14.98	14.98	7.35	7.06	91.03		12/06/2011	One Milenium	Nylon	S2

ASYMMETRIC SPINNAKERS (1)

Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment
1	15.00	13.79	14.39	4.80	6.40	61.42	asym		22/05/2019	Dustom sails	Unknown	