

<b>BOAT</b> Name <b>KUANKUN</b> Sail Nr <b>PER-482</b>	<b>GPH</b> <b>479.3</b>	<b>HULL</b> Length Overall <b>14.834m</b> Maximum Beam <b>3.930m</b> Displacement <b>7,955kg</b> Draft <b>3.071m</b> IMS Reg. Division <b>Performance</b> Dynamic Allowance <b>0.001%</b> Fwd Accommodation <b>No</b> Hull Construction <b>Carbon</b> Carbon Rudder <b>Yes</b> Crew Arm Extension
<b>GENERAL</b> Class <b>SOTO 48</b> Designer <b>JAVIER SOTO ACEBAL</b> Builder <b>M BOATS</b> Series <b>05/2014</b> Age <b>08/2014</b> Age Allowance <b>0.163%</b> Offset File <b>PER482.off - 20/08/2014 17:22:00</b> Measurement by <b>G LIZA / L YARLEQU - 22/08/2014</b>		IMSL <b>13.609m</b> VCGD <b>-0.813m</b> Sink <b>30.33kg/mm</b> RL <b>13.304m</b> VCGM <b>-0.814m</b> WS <b>40.64m<sup>2</sup></b> LSM0 <b>13.080m</b> Displacement/Length ratio <b>3.5548</b>



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Asociacion de Veleros  
Oceanicos del Peru  
Roberto Peschiera - RO  
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<b>SCORING OPTIONS</b>						
	<b>COASTAL / LONG DISTANCE</b>			<b>WINDWARD / LEEWARD</b>		
Time on Distance	<b>467.4</b>			<b>528.1</b>		
Time on Time	<b>1.2836</b>			<b>1.2782</b>		
Triple Number	Low	Medium	High	Low	Medium	High
Time on Distance	<b>542.6</b>	<b>427.7</b>	<b>373.7</b>	<b>705.8</b>	<b>533.7</b>	<b>458.1</b>
Time on Time	<b>1.2439</b>	<b>1.5782</b>	<b>1.8061</b>	<b>0.9564</b>	<b>1.2647</b>	<b>1.4734</b>

<b>TIME ALLOWANCES</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat VMG	<b>787.2</b>	<b>648.8</b>	<b>601.6</b>	<b>578.9</b>	<b>559.8</b>	<b>547.4</b>	<b>543.2</b>
52°	<b>510.9</b>	<b>432.3</b>	<b>412.3</b>	<b>403.5</b>	<b>397.3</b>	<b>388.7</b>	<b>383.0</b>
60°	<b>478.8</b>	<b>415.1</b>	<b>398.1</b>	<b>388.9</b>	<b>382.7</b>	<b>373.8</b>	<b>363.5</b>
75°	<b>455.0</b>	<b>403.3</b>	<b>379.4</b>	<b>365.3</b>	<b>356.3</b>	<b>350.6</b>	<b>333.5</b>
90°	<b>459.2</b>	<b>405.8</b>	<b>376.1</b>	<b>350.9</b>	<b>336.1</b>	<b>326.6</b>	<b>313.7</b>
110°	<b>484.3</b>	<b>407.4</b>	<b>380.7</b>	<b>358.9</b>	<b>341.5</b>	<b>318.1</b>	<b>278.7</b>
120°	<b>499.2</b>	<b>411.6</b>	<b>373.1</b>	<b>349.4</b>	<b>332.8</b>	<b>311.5</b>	<b>275.9</b>
135°	<b>563.1</b>	<b>441.3</b>	<b>393.5</b>	<b>357.0</b>	<b>321.9</b>	<b>292.1</b>	<b>258.0</b>
150°	<b>676.0</b>	<b>525.2</b>	<b>443.0</b>	<b>394.6</b>	<b>367.4</b>	<b>336.1</b>	<b>267.2</b>
Run VMG	<b>780.6</b>	<b>606.4</b>	<b>511.5</b>	<b>458.5</b>	<b>424.3</b>	<b>388.1</b>	<b>308.6</b>

**Certificate**  
Number **48202**  
ORC Ref **PER00000112**  
Issued On **4/10/2019**  
VPP Ver. **2019 1.01**  
Valid until **31/03/2020**

**Crew Weight**  
Default **1,009kg**  
Maximum **1,010kg**  
Minimum\* **758kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

	ToD	ToT
Non Spin GPH	<b>513.3</b>	<b>1.1689</b>
Non Spin OSN	<b>503.9</b>	<b>1.1906</b>

<b>Selected Courses</b>							
Windward / Leeward	<b>783.9</b>	<b>627.6</b>	<b>556.6</b>	<b>518.7</b>	<b>492.0</b>	<b>467.8</b>	<b>425.9</b>
Circular Random	<b>656.9</b>	<b>532.0</b>	<b>465.7</b>	<b>426.6</b>	<b>400.8</b>	<b>381.5</b>	<b>351.4</b>
Coastal / Long Distance	<b>783.6</b>	<b>590.0</b>	<b>500.9</b>	<b>447.5</b>	<b>415.3</b>	<b>384.8</b>	<b>334.5</b>
Non Spinnaker	<b>714.1</b>	<b>574.2</b>	<b>498.2</b>	<b>452.4</b>	<b>422.4</b>	<b>401.2</b>	<b>371.8</b>

**Sails Limitations**

Headsails	Spinnakers
<b>7</b>	<b>5</b>

<b>Velocity Prediction in Knots for True Wind Speeds</b>							
Wind Velocity	6 kt	8 kt	10 kt	12 kt	14 kt	16 kt	20 kt
Beat Angles	<b>43.5°</b>	<b>41.6°</b>	<b>39.8°</b>	<b>39.5°</b>	<b>38.4°</b>	<b>37.7°</b>	<b>38.0°</b>
Beat VMG	<b>4.57</b>	<b>5.55</b>	<b>5.98</b>	<b>6.22</b>	<b>6.43</b>	<b>6.58</b>	<b>6.63</b>
52°	<b>7.05</b>	<b>8.33</b>	<b>8.73</b>	<b>8.92</b>	<b>9.06</b>	<b>9.26</b>	<b>9.40</b>
60°	<b>7.52</b>	<b>8.67</b>	<b>9.04</b>	<b>9.26</b>	<b>9.41</b>	<b>9.63</b>	<b>9.90</b>
75°	<b>7.91</b>	<b>8.93</b>	<b>9.49</b>	<b>9.85</b>	<b>10.10</b>	<b>10.27</b>	<b>10.79</b>
90°	<b>7.84</b>	<b>8.87</b>	<b>9.57</b>	<b>10.26</b>	<b>10.71</b>	<b>11.02</b>	<b>11.48</b>
110°	<b>7.43</b>	<b>8.84</b>	<b>9.46</b>	<b>10.03</b>	<b>10.54</b>	<b>11.32</b>	<b>12.92</b>
120°	<b>7.21</b>	<b>8.75</b>	<b>9.65</b>	<b>10.30</b>	<b>10.82</b>	<b>11.56</b>	<b>13.05</b>
135°	<b>6.39</b>	<b>8.16</b>	<b>9.15</b>	<b>10.08</b>	<b>11.18</b>	<b>12.32</b>	<b>13.95</b>
150°	<b>5.33</b>	<b>6.86</b>	<b>8.13</b>	<b>9.12</b>	<b>9.80</b>	<b>10.71</b>	<b>13.47</b>
Run VMG	<b>4.61</b>	<b>5.94</b>	<b>7.04</b>	<b>7.85</b>	<b>8.49</b>	<b>9.28</b>	<b>11.67</b>
Gybe Angles	<b>141.4°</b>	<b>139.5°</b>	<b>146.1°</b>	<b>152.5°</b>	<b>149.9°</b>	<b>147.5°</b>	<b>143.2°</b>

**Class Division Length**  
CDL = **13.457**

**Storm Sails Areas**

Heavy Weather Jib	<b>52.10</b>
Storm Jib (JL=12.77)	<b>19.30</b>
Storm Trysail	<b>23.63</b>

**Owner**  
EDUARDO WONG  
PERU

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

Signature

<b>BOAT</b>	
Name <b>KUANKUN</b>	Sail Nr <b>PER-482</b>
File <b>PER482</b>	Data in <b>meters/kilograms</b>

<b>RIG</b>	
Forestay Tension <b>Aft</b>	Spreaders <b>3</b>
Inner Stay <b>None Fitted</b>	Runners <b>0</b>
Carbon Mast <b>Yes</b>	Jumper Struts <b>None</b>
Taper Hollows <b>No</b>	Jib Furler <b>No</b>
Fiber Rigging <b>Yes</b>	Main Furler <b>No</b>
Lenticular Rigging <b>No</b>	Without Backstay <b>No</b>
Articulated Bowsprit <b>No</b>	
P <b>19.285</b>	E <b>7.000</b> MDT1 <b>0.136</b> MW <b>0.250</b>
IG <b>19.644</b>	J <b>5.840</b> MDL1 <b>0.276</b> GO <b>0.250</b>
ISP <b>21.171</b>	SFJ <b>0.299</b> MDT2 <b>0.092</b> BD <b>0.293</b>
BAS <b>1.901</b>	SPL <b>0.183</b> MWT <b>266.00</b>
FSP <b>0.080</b>	TPS <b>8.010</b> TL <b>2.300</b> MCG <b>8.103</b>

<b>INCLINING TEST AND FREEBOARDS</b>			
Inclining Test <b>Current Inclining</b>			
Flotation date <b>05/09/2017</b>		SG <b>1.0253</b>	
FFM <b>1.502</b>	FF <b>1.501</b>	SFFP <b>0.677</b>	
FAM <b>1.255</b>	FA <b>1.258</b>	SAFP <b>14.838</b>	
W1 <b>199.8</b>	PD1 <b>518.7</b>	WD <b>12.414</b>	
W2 <b>199.8</b>	PD2 <b>515.1</b>	GSA <b>1.0</b>	
W3 <b>199.8</b>	PD3 <b>517.5</b>	RSA <b>1.0</b>	
W4 <b>199.8</b>	PD4 <b>519.7</b>	PLM <b>9000.0</b>	
LCF from stem on CL / on sheer		<b>7.860 / 8.155</b>	
Maximum beam station from stem		<b>11.725</b>	
RM Measured		<b>377.3kg-m</b>	
RM Default		<b>333.1kg-m</b>	
Limit of positive stability / Stab.Index		<b>145.8° / 149.0</b>	
Freeboard at mast at 6.139		<b>1.412</b>	



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<b>MIZZEN RIG AND SAILS</b>	
N/A	

<b>PROPELLER</b>			
Installation <b>Strut</b>	PRD <b>0.490</b>		
Type <b>Folding 2 blades</b>	PBW <b>0.133</b>		
Twin Screw <b>No</b>	PIPA <b>0.0042</b>		
ST1 <b>0.053</b>	ST3 <b>0.200</b>	ST5 <b>0.316</b>	
ST2 <b>0.213</b>	ST4 <b>0.114</b>	EDL <b>0.823</b>	

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<b>COMMENTS</b>	

<b>MOVABLE BALLAST</b>	
N/A	

<b>CENTERBOARD</b>	
N/A	

<b>SAILS (Maximum Areas)</b>									
Mainsail	MHB	MUW	MTW	MHW	MQW	Area	Area (r)	Formula	
	1.970	2.52	3.46	4.86	6.00	90.19	92.83	P/8 · (E + 2·MQW+ 2·MHW + 1.5·MTW + MUW + 0.5·MHB)	
Symmetric Not Available									
Asymmetric on centerline	SLU	SLE	SL	SHW	SFL	Area	Formula		
	24.24	20.74	22.49	13.90	13.30	258.26	AS · (SFL + 4·SHW) / 6		

<b>HEADSAILS</b>												
Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB)												
<b>HBB</b>	<b>HUW</b>	<b>HTW</b>	<b>HHW</b>	<b>HQW</b>	<b>HLP</b>	<b>HLU</b>	<b>Area</b>	<b>Btn</b>	<b>Fly</b>	<b>Meas.Date</b>	<b>Material</b>	<b>Comment</b>
0.14	1.03	1.85	3.32	4.69	6.05	19.98	64.37	Y		01/02/2018	Carbon	NUEVA
0.14	0.99	1.82	3.32	4.67	6.07	20.02	64.28	Y		27/06/2017	Carbon	NUEVO
0.14	1.08	1.88	3.33	4.70	6.08	19.80	64.18	Y		28/08/2014	Carbon	
0.14	1.02	1.82	3.30	4.66	6.04	19.70	63.09	Y		02/06/2016	Carbon	REMEDICION
0.14	1.05	1.85	3.30	4.67	6.02	19.60	62.91	Y		02/06/2016	Carbon	REMEDICION
0.15	0.91	1.63	3.03	4.43	5.99	18.38	55.84	Y		28/08/2014	Carbon	
0.05	0.74	1.44	2.83	4.26	5.75	18.16	51.92			28/08/2014	Nylon	
0.10	0.75	1.44	2.45	3.35	4.21	14.69	34.12	Y	Y	27/06/2017	Kevlar	staysail

<b>MEASUREMENT INVENTORY</b>				
Measurer <b>Patricio Gutierrez</b>				
Date <b>05/09/2017</b>				
Comment				
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>
<b>Id</b>	<b>Item</b>	<b>Maker</b>	<b>Model</b>	
C4	Engine	YANMAR	54 HP	
<b>Id</b>	<b>Item</b>	<b>Weight Description</b>		

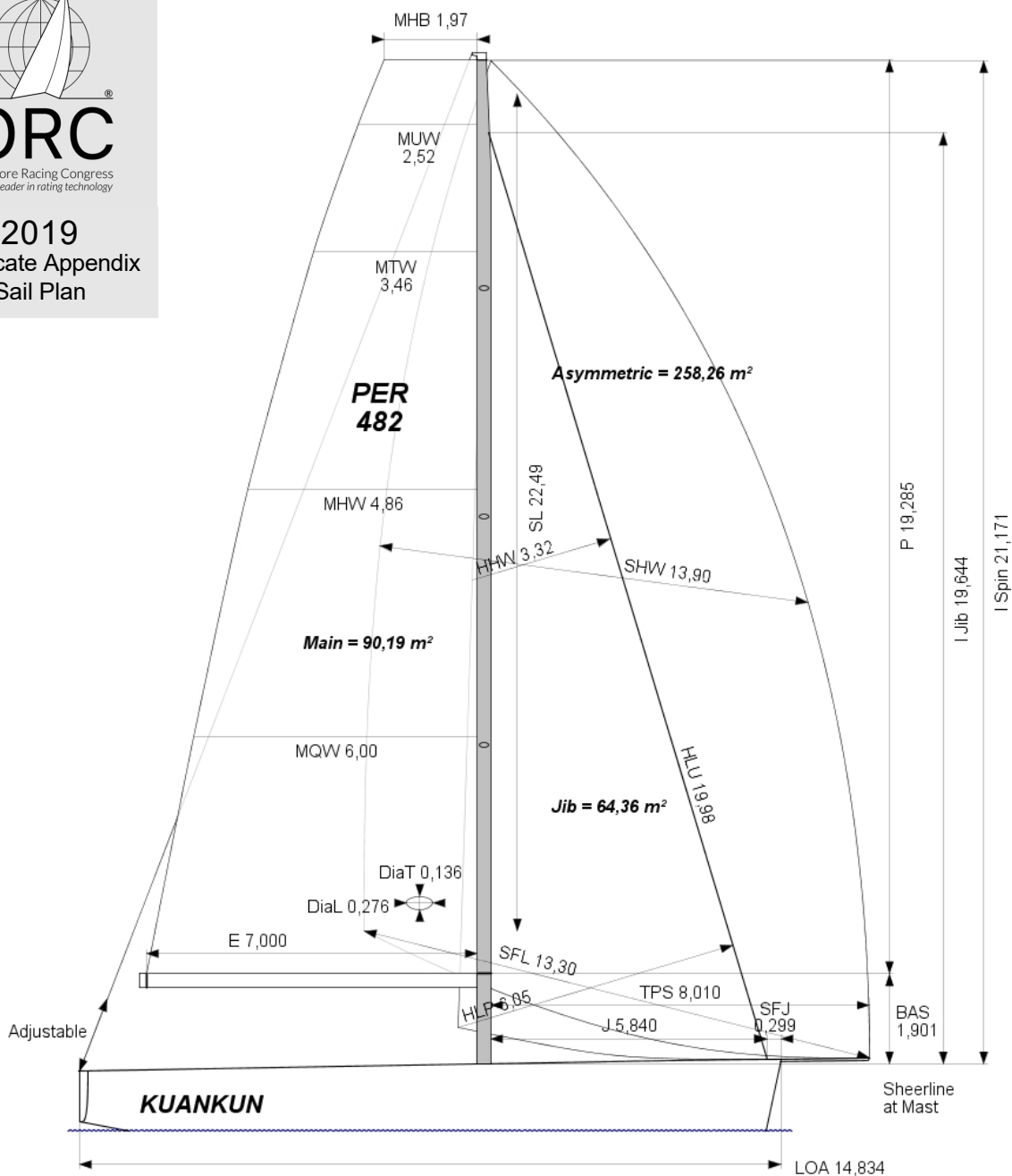
<b>MEASUREMENT INVENTORY</b>							
<b>Id</b>	<b>Item</b>	<b>Tank Use</b>	<b>Tank Type</b>	<b>Capcty</b>	<b>Dist.</b>	<b>VCG</b>	<b>Condtn Description</b>
6A	Tank	PETROLEO	PVC	84.0	9.82	0.10	42-0 EN CRUJIA A POPA
6B	Tank	AGUA	FLEX	100.0	6.68	0.15	0-0 A ESTRIBOR
<b>Id</b>	<b>Item</b>	<b>Weight</b>	<b>Distance</b>	<b>VCG Description</b>			
001	Ballast	55.0	10.50	2 longotes de plomo			
C5	Battery	52.0	7.77	0.00 3 BATERIAS DE 12 PLACAS C/U			
5D	Misc	2.0	6.14	0.58 GATA HIDRAULICA			



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Sail Plan



**SAILS INVENTORY**

MAINSAIL (1)																
Id	MHB	MUW	MTW	MHW	MQW	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
MY3	1.97	2.52	3.46	4.86	6.00	90.20	G LIZA	24/08/2018	NORTH	Carbon	NUEVA					
HEADSAILS (8)																
Id	HHB	HUW	HTW	HHW	HQW	HLP	HLU	Ovrlp	Area	Btn	Fly	Measurer	Meas.Date	Manufacture	Material	Comment
L-2	0.14	1.03	1.85	3.32	4.69	6.05	19.98	104%	64.37	Y		G LIZA	01/02/2018	NORTH	Carbon	NUEVA
LM-17-1	0.14	0.99	1.82	3.32	4.67	6.07	20.02	104%	64.28	Y		G LIZA	27/06/2017	NORTH	Carbon	NUEVO
LM-1	0.14	1.08	1.88	3.33	4.70	6.08	19.80	104%	64.18	Y		G LIZA	28/08/2014	NORTH	Carbon	REMEDICION
JLM	0.14	1.02	1.82	3.30	4.66	6.04	19.70	103%	63.09	Y		G LIZA	02/06/2016	NORTH	Carbon	REMEDICION
MH-1	0.14	1.05	1.85	3.30	4.67	6.02	19.60	103%	62.91	Y		G LIZA	02/06/2016	NORTH	Carbon	REMEDICION
3-1	0.15	0.91	1.63	3.03	4.43	5.99	18.38	103%	55.84	Y		G LIZA	28/08/2014	NORTH	Carbon	
SS1	0.05	0.74	1.44	2.83	4.26	5.75	18.16	98%	51.92			G LIZA	28/08/2014	NORTH	Nylon	
SYMMETRIC SPINNAKERS (0)																
Id	SLU	SLE	SL	SHW	SFL	Area	Measurer	Meas.Date	Manufacture	Material	Comment					
ASYMMETRIC SPINNAKERS (7)																
Id	SLU	SLE	SL	SHW	SFL	Area	Kind	Measurer	Meas.Date	Manufacture	Material	Comment				
A2-3	24.24	20.74	22.49	13.90	13.30	258.27	asym	G LIZA	30/04/2016	NORTH	Nylon	ROJO				
A2-17	24.00	20.83	22.41	13.92	13.32	257.78	asym	G LIZA	27/06/2017	NORTH	Nylon	ROJO NUEVO				
A1-17	21.24	22.99	22.11	12.63	14.78	240.69	asym	G LIZA	04/10/2019	NORTH	Nylon	ROJO				
A4	24.22	20.40	22.31	12.30	12.25	228.50	asym	G LIZA	02/06/2016	NORTH	Nylon	USADA MODIF				
A3	22.90	20.27	21.59	11.30	12.93	209.13	asym	G LIZA	24/06/2016	NORTH	Nylon	BLANCO				