

|  |                            |  |
|--|----------------------------|--|
| <b>BOAT</b><br>Name <b>Nube</b><br>Sail Nr <b>CRO 1625</b>   | <b>GPH</b><br><b>561.0</b> | <b>HULL</b><br>Length Overall <b>12.350m</b><br>Maximum Beam <b>3.646m</b><br>Displacement <b>6,818kg</b><br>Draft <b>2.495m</b><br>IMS Reg. Division <b>Cruiser/Racer</b><br>Dynamic Allowance <b>0.046%</b><br>Fwd Accommodation <b>Yes</b><br>Hull Construction <b>Cored</b><br>Carbon Rudder <b>No</b><br>Crew Arm Extension |
| <b>GENERAL</b><br>Class <b>X 41</b><br>Designer <b>Jepessen</b><br>Builder <b>X Yachts</b><br>Series <b>01/2006</b><br>Age <b>06/2008</b><br>Age Allowance <b>0.422%</b><br>Offset File <b>X41.OFF - 23/02/2015 18:29:08</b><br>Measurement by - <b>28/04/2019</b> |                            | IMSL <b>11.092m</b> VCGD <b>-0.108m</b> Sink <b>22.99kg/mm</b><br>RL <b>10.320m</b> VCGM <b>-0.124m</b> WS <b>30.64m<sup>2</sup></b><br>LSM0 <b>10.998m</b> Displacement/Length ratio <b>5.1253</b>  |



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**Rating Office**

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| SCORING OPTIONS  |                         |               |               |                    |               |               |
|------------------|-------------------------|---------------|---------------|--------------------|---------------|---------------|
|                  | COASTAL / LONG DISTANCE |               |               | WINDWARD / LEEWARD |               |               |
| Time on Distance | <b>549.4</b>            |               |               | <b>618.9</b>       |               |               |
| Time on Time     | <b>1.0922</b>           |               |               | <b>1.0906</b>      |               |               |
| Triple Number    | Low                     | Medium        | High          | Low                | Medium        | High          |
| Time on Distance | <b>633.1</b>            | <b>499.5</b>  | <b>451.1</b>  | <b>829.4</b>       | <b>618.5</b>  | <b>550.3</b>  |
| Time on Time     | <b>1.0662</b>           | <b>1.3514</b> | <b>1.4965</b> | <b>0.8138</b>      | <b>1.0914</b> | <b>1.2266</b> |

| TIME ALLOWANCES |              |              |              |              |              |              |              |
|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Wind Velocity   | 6 kt         | 8 kt         | 10 kt        | 12 kt        | 14 kt        | 16 kt        | 20 kt        |
| Beat VMG        | <b>951.8</b> | <b>782.3</b> | <b>690.7</b> | <b>657.3</b> | <b>644.2</b> | <b>636.6</b> | <b>623.6</b> |
| 52°             | <b>624.7</b> | <b>524.2</b> | <b>479.3</b> | <b>464.5</b> | <b>459.0</b> | <b>456.3</b> | <b>448.5</b> |
| 60°             | <b>579.1</b> | <b>496.2</b> | <b>467.5</b> | <b>452.8</b> | <b>446.6</b> | <b>443.3</b> | <b>436.1</b> |
| 75°             | <b>522.4</b> | <b>465.7</b> | <b>450.5</b> | <b>440.1</b> | <b>428.5</b> | <b>421.5</b> | <b>415.5</b> |
| 90°             | <b>506.2</b> | <b>457.3</b> | <b>434.9</b> | <b>420.5</b> | <b>410.7</b> | <b>403.7</b> | <b>387.3</b> |
| 110°            | <b>538.6</b> | <b>470.8</b> | <b>439.3</b> | <b>417.5</b> | <b>393.0</b> | <b>378.1</b> | <b>358.1</b> |
| 120°            | <b>568.4</b> | <b>476.2</b> | <b>441.5</b> | <b>414.1</b> | <b>393.4</b> | <b>379.0</b> | <b>343.2</b> |
| 135°            | <b>642.2</b> | <b>510.9</b> | <b>459.3</b> | <b>431.0</b> | <b>402.7</b> | <b>375.3</b> | <b>320.9</b> |
| 150°            | <b>762.0</b> | <b>609.5</b> | <b>512.6</b> | <b>463.2</b> | <b>441.8</b> | <b>421.6</b> | <b>371.5</b> |
| Run VMG         | <b>879.9</b> | <b>703.8</b> | <b>591.9</b> | <b>534.4</b> | <b>509.2</b> | <b>476.8</b> | <b>428.9</b> |

**Certificate**  
Number **037/19**  
ORC Ref **CRO00090682**  
Issued On **01/06/2019**  
VPP Ver. **2019 1.01**  
Valid until **31/12/2019**

**Crew Weight**  
Default **788kg**  
Maximum **840kg**  
Minimum\* **630kg**  
*\*when applied by the NoR and SI*  
Non Manual Pwr **No**

**Special Scoring**

|                           |               |
|---------------------------|---------------|
| ToD                       | ToT           |
| Non Spin GPH <b>607.1</b> | <b>0.9883</b> |
| Non Spin OSN <b>590.7</b> | <b>1.0158</b> |

| Selected Courses        |              |              |              |              |              |              |              |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Windward / Leeward      | <b>915.8</b> | <b>743.0</b> | <b>641.3</b> | <b>595.9</b> | <b>576.7</b> | <b>556.7</b> | <b>526.3</b> |
| Circular Random         | <b>762.7</b> | <b>619.9</b> | <b>544.7</b> | <b>502.2</b> | <b>476.3</b> | <b>458.5</b> | <b>432.1</b> |
| Coastal / Long Distance | <b>912.2</b> | <b>696.4</b> | <b>579.3</b> | <b>518.9</b> | <b>489.3</b> | <b>463.2</b> | <b>414.7</b> |
| Non Spinnaker           | <b>848.6</b> | <b>679.8</b> | <b>588.2</b> | <b>534.4</b> | <b>500.9</b> | <b>478.7</b> | <b>449.7</b> |

**Sails Limitations**

|           |            |
|-----------|------------|
| Headsails | Spinnakers |
| <b>6</b>  | <b>4</b>   |

| 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                                       | <b>42.6°</b>  | <b>41.2°</b>  | <b>39.9°</b>  | <b>38.2°</b>  | <b>38.2°</b>  | <b>37.7°</b>  | <b>37.7°</b>  |
| Beat VMG  | <b>3.78</b>   | <b>4.60</b>   | <b>5.21</b>   | <b>5.48</b>   | <b>5.59</b>   | <b>5.66</b>   | <b>5.77</b>   |
| 52°   | <b>5.76</b>   | <b>6.87</b>   | <b>7.51</b>   | <b>7.75</b>   | <b>7.84</b>   | <b>7.89</b>   | <b>8.03</b>   |
| 60°   | <b>6.22</b>   | <b>7.25</b>   | <b>7.70</b>   | <b>7.95</b>   | <b>8.06</b>   | <b>8.12</b>   | <b>8.25</b>   |
| 75°   | <b>6.89</b>   | <b>7.73</b>   | <b>7.99</b>   | <b>8.18</b>   | <b>8.40</b>   | <b>8.54</b>   | <b>8.66</b>   |
| 90°   | <b>7.11</b>   | <b>7.87</b>   | <b>8.28</b>   | <b>8.56</b>   | <b>8.77</b>   | <b>8.92</b>   | <b>9.29</b>   |
| 110°  | <b>6.68</b>   | <b>7.65</b>   | <b>8.19</b>   | <b>8.62</b>   | <b>9.16</b>   | <b>9.52</b>   | <b>10.05</b>  |
| 120°  | <b>6.33</b>   | <b>7.56</b>   | <b>8.15</b>   | <b>8.69</b>   | <b>9.15</b>   | <b>9.50</b>   | <b>10.49</b>  |
| 135°  | <b>5.61</b>   | <b>7.05</b>   | <b>7.84</b>   | <b>8.35</b>   | <b>8.94</b>   | <b>9.59</b>   | <b>11.22</b>  |
| 150°  | <b>4.72</b>   | <b>5.91</b>   | <b>7.02</b>   | <b>7.77</b>   | <b>8.15</b>   | <b>8.54</b>   | <b>9.69</b>   |
| Run VMG   | <b>4.09</b>   | <b>5.12</b>   | <b>6.08</b>   | <b>6.74</b>   | <b>7.07</b>   | <b>7.55</b>   | <b>8.39</b>   |
| Gybe Angles                                       | <b>143.2°</b> | <b>146.2°</b> | <b>147.7°</b> | <b>151.2°</b> | <b>151.2°</b> | <b>175.8°</b> | <b>142.7°</b> |

**Class Division Length**  
CDL = **10.707**

**Storm Sails Areas**  
Heavy Weather Jib **39.39**  
Storm Jib (JL=11.11) **14.59**  
Storm Trysail **15.15**

**Owner**

|                     |                                 |
|---------------------|---------------------------------|
| <b>BOAT</b>         |                                 |
| Name <b>Nube</b>    | Sail Nr <b>CRO 1625</b>         |
| File <b>CRO1625</b> | Data in <b>meters/kilograms</b> |

|                                |  |
|--------------------------------|--|
| <b>RIG</b>                     |  |
| Forestay Tension <b>Aft</b>    | Spreaders <b>2</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>No</b>        | Main Furler <b>No</b>                              |
| Lenticular Rigging <b>No</b>   | Without Backstay <b>No</b>                         |
| Articulated Bowsprit <b>No</b> |  |
| P <b>15.940</b>                | E <b>5.430</b> MDT1 <b>0.130</b> MW <b>0.240</b>   |
| IG <b>16.995</b>               | J <b>4.940</b> MDL1 <b>0.240</b> GO <b>0.265</b>   |
| ISP <b>18.188</b>              | SFJ <b>0.290</b> MDT2 <b>0.115</b> BD <b>0.270</b> |
| BAS <b>1.868</b>               | SPL <b>0.190</b> MDT2 <b>0.115</b> BD <b>0.270</b> |
| FSP <b>0.080</b>               | TPS <b>6.300</b> TL <b>0.870</b> MCG <b>5.735</b>  |

|  |                  |                       |
|--|------------------|-----------------------|
| <b>INCLINING TEST AND FREEBOARDS</b>     |                  |                       |
| Inclining Test <b>Current Inclining</b>  |                  |                       |
| Flotation date <b>28/04/2019</b>         |                  | SG <b>1.0250</b>      |
| FFM <b>1.450</b>                         | FF <b>1.451</b>  | SFFP <b>0.200</b>     |
| FAM <b>1.095</b>                         | FA <b>1.095</b>  | SAFP <b>11.995</b>    |
| W1 <b>100.0</b>                          | PD1 <b>514.3</b> | WD <b>12.810</b>      |
| W2 <b>100.0</b>                          | PD2 <b>507.1</b> | GSA <b>1.0</b>        |
| W3 <b>100.0</b>                          | PD3 <b>506.7</b> | RSA <b>1.0</b>        |
| W4 <b>100.0</b>                          | PD4 <b>509.3</b> | PLM <b>9000.0</b>     |
| LCF from stem on CL / on sheer           |                  | <b>6.918 / 7.130</b>  |
| Maximum beam station from stem           |                  | <b>8.432</b>          |
| RM Measured                              |                  | <b>198.1kg-m</b>      |
| RM Default                               |                  | <b>198.4kg-m</b>      |
| Limit of positive stability / Stab.Index |                  | <b>125.6° / 129.0</b> |
| Freeboard at mast at 5.230               |                  | <b>1.212</b>          |



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

|                              |                    |                  |
|------------------------------|--------------------|------------------|
| <b>PROPELLER</b>             |                    |                  |
| Installation <b>Strut</b>    | PRD <b>0.450</b>   |                  |
| Type <b>Folding 2 blades</b> | PBW                |                  |
| Twin Screw <b>No</b>         | PIPA <b>0.0040</b> |                  |
| ST1 <b>0.065</b>             | ST3 <b>0.180</b>   | ST5 <b>0.320</b> |
| ST2 <b>0.180</b>             | ST4 <b>0.110</b>   | EDL <b>1.890</b> |

|                               |  |
|-------------------------------|--|
| <b>Certificate</b>            |  |
| Number <b>037/19</b>          |  |
| ORC Ref <b>CRO00090682</b>    |  |
| Issued On <b>01/06/2019</b>   |  |
| VPP Ver. <b>2019 1.01</b>     |  |
| Valid until <b>31/12/2019</b> |  |

|                 |  |
|-----------------|--|
| <b>COMMENTS</b> |  |
| SPL = 4.94      |  |

|                        |  |
|------------------------|--|
| <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   |  |
|                              | 0.220 | 1.13  | 1.97  | 3.37  | 4.42  | 50.22  | 51.05                  | P/8 · (E + 2·MQW + 2·MHW + 1.5·MTW + MUW + 0.5·MHB) |  |
| Symmetric<br>Not Available   |       |       |       |       |       |        |                        |   |  |
| Asymmetric on centerline     | SLU   | SLE   | SL    | SHW   | SFL   | Area   | Formula                |   |  |
|                              | 20.05 | 18.02 | 19.04 | 11.04 | 10.86 | 174.55 | 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> |
| 0.10  | 1.50       | 2.90       | 5.25       | 7.00       | 8.26       | 18.60      | 88.58       |            | Y          | 24/05/2019       | Unknow          | HSF 2          |
| 0.05  | 1.14       | 2.25       | 4.26       | 5.70       | 6.62       | 18.06      | 69.13       |            | Y          | 15/05/2019       | Polyest         | HSF 1          |
| 0.17  | 0.75       | 1.39       | 2.63       | 3.90       | 5.13       | 16.76      | 44.11       | Y          |            | 11/05/2019       | Carbon          | 4T No1         |
| 0.17  | 0.75       | 1.38       | 2.64       | 3.86       | 5.13       | 16.79      | 44.04       | Y          |            | 11/05/2019       | Carbon          | 4T No2         |
| 0.12  | 0.55       | 1.06       | 2.14       | 3.36       | 4.61       | 16.03      | 35.82       | Y          |            | 11/05/2019       | Carbon          | Milenium No3   |
| 0.12  | 0.63       | 1.16       | 2.19       | 3.17       | 3.98       | 14.73      | 31.32       |            |            | 11/05/2019       | Carbon          | Staysail       |

|                              |             |                           |                 |                        |
|------------------------------|-------------|---------------------------|-----------------|------------------------|
| <b>MEASUREMENT INVENTORY</b> |             |                           |                 |                        |
| Measurer <b>CROAK6</b>       |             |                           |                 |                        |
| Date <b>28/04/2019</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>    |                        |
| 1                            | Engine      | VOLVO                     | D2-40           |                        |
| <b>Id</b>                    | <b>Item</b> | <b>Weight Description</b> |                 |                        |

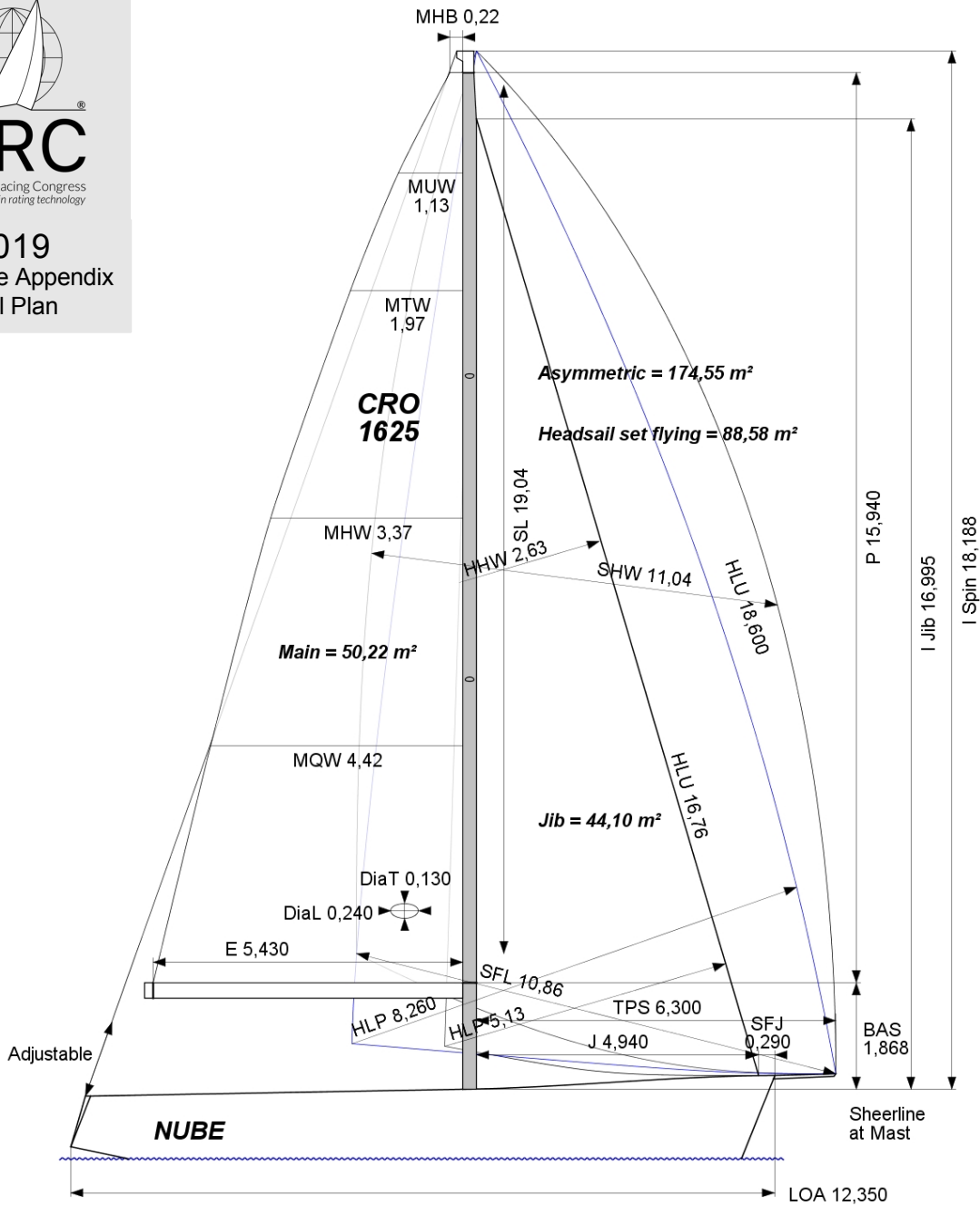
|                              |             |                 |                  |                        |              |                               |
|------------------------------|-------------|-----------------|------------------|------------------------|--------------|-------------------------------|
| <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 Condtn Description</b> |
| 1                            | Tank        | HOLDING         | Rigid            | 20.0                   | 4.50         | 0-0                           |
| 2                            | Tank        | FUEL            | Inox             | 120.0                  | 6.00         | 10-0 SB                       |
| 3                            | Tank        | Water           | PVC              | 150.0                  | 6.00         | 0-0 Port                      |
| <b>Id</b>                    | <b>Item</b> | <b>Weight</b>   | <b>Distance</b>  | <b>VCG Description</b> |              |                               |
| 1                            | Battery     | 20.0            | 8.00             | 8.00                   | Engine SB    |                               |
| 2                            | Battery     | 15.0            | 5.00             | 5.00                   | Service SB   |                               |
| 3                            | Battery     | 15.0            | 5.00             | 5.00                   | Service SB   |                               |



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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  |          |            |             |          |              |
| 1                         | 0.22  | 1.13  | 1.97  | 3.37  | 4.42  | 50.23  |          | 11/05/2019 | One sails   | Carbon      | 4T       |          |            |             |          |              |
| HEADSAILS (6)             |       |       |       |       |       |        |          |            |             |             |          |          |            |             |          |              |
| Id                        | HHB   | HUW   | HTW   | HHW   | HQW   | HLP    | HLU      | Ovrlp      | Area        | Btn         | Fly      | Measurer | Meas.Date  | Manufacture | Material | Comment      |
| 6                         | 0.10  | 1.50  | 2.90  | 5.25  | 7.00  | 8.26   | 18.60    | 167%       | 88.58       |             | Y        |          | 24/05/2019 | North Sails | Unknow   | HSF 2        |
| 5                         | 0.05  | 1.14  | 2.25  | 4.26  | 5.70  | 6.62   | 18.06    | 134%       | 69.13       |             | Y        |          | 15/05/2019 | One sails   | Polyest  | HSF 1        |
| 1                         | 0.17  | 0.75  | 1.39  | 2.63  | 3.90  | 5.13   | 16.76    | 104%       | 44.11       |             | Y        |          | 11/05/2019 | One sails   | Carbon   | 4T No1       |
| 2                         | 0.17  | 0.75  | 1.38  | 2.64  | 3.86  | 5.13   | 16.79    | 104%       | 44.04       |             | Y        |          | 11/05/2019 | One sails   | Carbon   | 4T No2       |
| 3                         | 0.12  | 0.55  | 1.06  | 2.14  | 3.36  | 4.61   | 16.03    | 93%        | 35.82       |             | Y        |          | 11/05/2019 | One sails   | Carbon   | Milenium No3 |
| 4                         | 0.12  | 0.63  | 1.16  | 2.19  | 3.17  | 3.98   | 14.73    | 81%        | 31.32       |             |          |          | 11/05/2019 | One sails   | Carbon   | Staysail     |
| SYMMETRIC SPINNAKERS (0)  |       |       |       |       |       |        |          |            |             |             |          |          |            |             |          |              |
| Id                        | SLU   | SLE   | SL    | SHW   | SFL   | Area   | Measurer | Meas.Date  | Manufacture | Material    | Comment  |          |            |             |          |              |
|                           |       |       |       |       |       |        |          |            |             |             |          |          |            |             |          |              |
| ASYMMETRIC SPINNAKERS (3) |       |       |       |       |       |        |          |            |             |             |          |          |            |             |          |              |
| Id                        | SLU   | SLE   | SL    | SHW   | SFL   | Area   | Kind     | Measurer   | Meas.Date   | Manufacture | Material | Comment  |            |             |          |              |
| 3                         | 20.05 | 18.02 | 19.04 | 11.04 | 10.86 | 174.56 | asym     |            | 11/05/2019  | One sails   | Nylon    | A1       |            |             |          |              |
| 2                         | 20.43 | 17.80 | 19.12 | 10.88 | 10.47 | 172.01 | asym     |            | 11/05/2019  | North       | Nylon    | A2       |            |             |          |              |
| 4                         | 19.20 | 16.90 | 18.05 | 10.47 | 11.22 | 159.75 | asym     |            | 11/05/2019  | Doyle       | Nylon    | A3       |            |             |          |              |