

|                        |
|------------------------|
| <b>BOAT</b>            |
| Name <b>TUULE</b>      |
| Sail Nr <b>EST 408</b> |

|              |
|--------------|
| <b>GPH</b>   |
| <b>575,2</b> |

|  |
|--|
| <b>HULL</b>  |
| Length Overall <b>13,352 m</b>                                 |
| Maximum Beam <b>3,965 m</b>                                    |
| Displacement <b>10 105 kg</b>                                  |
| Draft <b>2,551 m</b>   |
| IMS Reg. Division <b>Cruiser/Racer</b>                         |
| Dynamic Allowance <b>0,327%</b>                                |
| Fwd Accommodation <b>Yes</b>                                   |
| Hull Construction <b>Solid</b>                                 |
| Carbon Rudder <b>No</b>  |
| Trim Tab <b>No</b>   |
| IMS L <b>12,144</b> VCGD <b>0,211</b> VCGM <b>0,226</b>        |
| Sink <b>28,34 kg/mm</b> Wetted Area <b>37,11 m<sup>2</sup></b> |



**2009**  
ORC International  
Certificate

|   |
|---|
| <b>GENERAL</b>                                    |
| Class <b>First 44.7</b>                           |
| Designer <b>B.Farr</b>                            |
| Builder <b>Beneteau S.A.</b>                      |
| Series <b>11.2003</b>                             |
| Age <b>05.2006</b>                                |
| Age Allowance <b>0,390%</b>                       |
| Offset File <b>F231.OFF - 10.02.2005 11:20:02</b> |
| Measurement by <b>A.Tetsmann - 10.07.2008</b>     |

|                        |   |   |
|------------------------|---|---|
| <b>SCORING OPTIONS</b> |   |   |
|                        | <b>OFFSHORE</b>   | <b>INSHORE</b>  |
|                        | <b>COASTAL / LONG DISTANCE</b>                            | <b>WINDWARD / LEEWARD</b>                                 |
| Time On Distance       | <b>575,2</b>  | <b>644,8</b>  |
| Time On Time           | <b>1,0431</b>   | <b>1,0468</b>   |
| Performance Line       | PLT <b>0,905</b> PLD <b>98,1</b>                          | PLT <b>1,059</b> PLD <b>280,1</b>                         |
| Triple Number          | Low <b>1,0188</b> Medium <b>1,3265</b> High <b>1,4982</b> | Low <b>0,7632</b> Medium <b>1,0537</b> High <b>1,2379</b> |

|                                 |
|---------------------------------|
| <b>Rating Office</b>            |
| <b>Estonian Yachting Union</b>  |
| <b>Veiko Rosme</b>              |
| <b>Regati 1, 11911, Tallinn</b> |
| <b>Estonia</b>                  |

|                        |              |              |              |              |              |              |              |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>TIME ALLOWANCES</b> |              |              |              |              |              |              |              |
| Wind Velocity          | 6 kt         | 8 kt         | 10 kt        | 12 kt        | 14 kt        | 16 kt        | 20 kt        |
| Beat VMG               | <b>980,3</b> | <b>801,2</b> | <b>709,4</b> | <b>668,3</b> | <b>644,3</b> | <b>629,6</b> | <b>618,1</b> |
| 52°                    | <b>630,1</b> | <b>522,0</b> | <b>477,6</b> | <b>458,4</b> | <b>447,4</b> | <b>440,8</b> | <b>435,3</b> |
| 60°                    | <b>574,8</b> | <b>490,0</b> | <b>458,1</b> | <b>439,8</b> | <b>431,1</b> | <b>425,7</b> | <b>420,7</b> |
| 75°                    | <b>518,8</b> | <b>457,8</b> | <b>432,0</b> | <b>420,1</b> | <b>411,9</b> | <b>405,9</b> | <b>398,8</b> |
| 90°                    | <b>508,3</b> | <b>453,7</b> | <b>426,0</b> | <b>408,7</b> | <b>396,6</b> | <b>389,5</b> | <b>378,9</b> |
| 110°                   | <b>550,6</b> | <b>481,9</b> | <b>442,2</b> | <b>418,1</b> | <b>398,2</b> | <b>382,5</b> | <b>362,2</b> |
| 120°                   | <b>604,7</b> | <b>502,2</b> | <b>456,1</b> | <b>427,7</b> | <b>407,3</b> | <b>387,3</b> | <b>355,5</b> |
| 135°                   | <b>707,2</b> | <b>564,1</b> | <b>491,3</b> | <b>451,9</b> | <b>426,6</b> | <b>407,8</b> | <b>371,0</b> |
| 150°                   | <b>852,8</b> | <b>668,1</b> | <b>558,3</b> | <b>494,2</b> | <b>456,2</b> | <b>430,6</b> | <b>394,5</b> |
| Run VMG                | <b>984,7</b> | <b>771,5</b> | <b>644,7</b> | <b>563,2</b> | <b>508,5</b> | <b>469,9</b> | <b>422,1</b> |

|                               |
|-------------------------------|
| <b>Certificate</b>            |
| Number <b>EST408</b>          |
| ORC Ref <b>EST00000204</b>    |
| Issued On <b>21.05.2009</b>   |
| VPP Ver. <b>1.11</b>          |
| Valid until <b>31.12.2009</b> |

|                        |
|------------------------|
| <b>Crew Weight</b>     |
| Declared <b>800 kg</b> |
| Default* <b>873 kg</b> |

|                                   |
|-----------------------------------|
| <b>Special Scoring</b>            |
| ToD ToT                           |
| Double <b>577,9 1,0383</b>        |
| Non Spinnaker <b>613,5 0,9780</b> |

|                         |               |              |              |              |              |              |              |
|-------------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>Selected Courses</b> |               |              |              |              |              |              |              |
| Windward / Leeward      | <b>1000,3</b> | <b>798,6</b> | <b>687,9</b> | <b>623,7</b> | <b>583,2</b> | <b>556,0</b> | <b>525,5</b> |
| Circular Random         | <b>794,9</b>  | <b>640,8</b> | <b>557,9</b> | <b>509,5</b> | <b>479,5</b> | <b>459,7</b> | <b>434,9</b> |
| Ocean for PCS           | <b>853,2</b>  | <b>672,1</b> | <b>571,0</b> | <b>509,2</b> | <b>468,6</b> | <b>440,0</b> | <b>400,3</b> |
| Non Spinnaker           | <b>867,5</b>  | <b>690,7</b> | <b>593,9</b> | <b>536,3</b> | <b>500,2</b> | <b>476,5</b> | <b>447,8</b> |

|   |
|---|
| <b>Sails Limitations</b>                          |
| Genoa <b>4</b> Jibs <b>3</b> Spinnakers <b>4</b>  |
| Spinnaker configuration <b>Symmetric + Code 0</b> |

|                                   |
|-----------------------------------|
| <b>Storm Sails Areas</b>          |
| Heavy Weather Jib <b>42,47</b>    |
| Storm Jib (JL=11,53) <b>15,73</b> |
| Storm Trysail <b>18,78</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>44,5°</b>  | <b>43,9°</b>  | <b>41,6°</b>  | <b>39,5°</b>  | <b>38,4°</b>  | <b>37,7°</b>  | <b>37,4°</b>  |
| Beat VMG   | <b>3,67</b>   | <b>4,49</b>   | <b>5,07</b>   | <b>5,39</b>   | <b>5,59</b>   | <b>5,72</b>   | <b>5,82</b>   |
| 52°  | <b>5,71</b>   | <b>6,90</b>   | <b>7,54</b>   | <b>7,85</b>   | <b>8,05</b>   | <b>8,17</b>   | <b>8,27</b>   |
| 60°  | <b>6,26</b>   | <b>7,35</b>   | <b>7,86</b>   | <b>8,18</b>   | <b>8,35</b>   | <b>8,46</b>   | <b>8,56</b>   |
| 75°  | <b>6,94</b>   | <b>7,86</b>   | <b>8,33</b>   | <b>8,57</b>   | <b>8,74</b>   | <b>8,87</b>   | <b>9,03</b>   |
| 90°  | <b>7,08</b>   | <b>7,94</b>   | <b>8,45</b>   | <b>8,81</b>   | <b>9,08</b>   | <b>9,24</b>   | <b>9,50</b>   |
| 110°   | <b>6,54</b>   | <b>7,47</b>   | <b>8,14</b>   | <b>8,61</b>   | <b>9,04</b>   | <b>9,41</b>   | <b>9,94</b>   |
| 120°   | <b>5,95</b>   | <b>7,17</b>   | <b>7,89</b>   | <b>8,42</b>   | <b>8,84</b>   | <b>9,30</b>   | <b>10,13</b>  |
| 135°   | <b>5,09</b>   | <b>6,38</b>   | <b>7,33</b>   | <b>7,97</b>   | <b>8,44</b>   | <b>8,83</b>   | <b>9,70</b>   |
| 150°   | <b>4,22</b>   | <b>5,39</b>   | <b>6,45</b>   | <b>7,28</b>   | <b>7,89</b>   | <b>8,36</b>   | <b>9,13</b>   |
| Run VMG  | <b>3,66</b>   | <b>4,67</b>   | <b>5,58</b>   | <b>6,39</b>   | <b>7,08</b>   | <b>7,66</b>   | <b>8,53</b>   |
| Gybe Angles  | <b>141,4°</b> | <b>145,8°</b> | <b>148,6°</b> | <b>158,9°</b> | <b>167,6°</b> | <b>171,8°</b> | <b>175,9°</b> |

|   |
|---|
| <b>Owner</b>  |
| <b>OÜ ELLIS</b>   |
| <b>Kabeli 15</b>  |
| <b>Tartu, Estonia</b>   |
| <b>Pärnu JK</b>   |
| I certify that I understand my responsibilities under ORC Rules and Regulations |
| Signature   |

|                         |                                 |
|-------------------------|---------------------------------|
| <b>BOAT</b>             |                                 |
| Name <b>TUULE</b>       | Sail Nr <b>EST 408</b>          |
| File <b>Est0408.dxt</b> | Data in <b>meters/kilograms</b> |

|                                   |                        |                   |                   |
|-----------------------------------|------------------------|-------------------|-------------------|
| <b>RIG</b>                        |                        |                   |                   |
| Forestay Tension <b>Aft</b>       | Spreaders <b>2</b>     |                   |                   |
| Inner Forestay <b>None Fitted</b> | Runners <b>0</b>       |                   |                   |
| Carbon Mast <b>No</b>             | Jumpers <b>None</b>    |                   |                   |
| Taper Hollows <b>No</b>           | w/o Backstay <b>No</b> |                   |                   |
| P <b>17,210</b>                   | E <b>6,235</b>         | MDT1 <b>0,140</b> | TL <b>1,200</b>   |
| IG <b>17,615</b>                  | J <b>4,770</b>         | MDL1 <b>0,255</b> | MWT <b>347,00</b> |
| ISP <b>17,510</b>                 | SFJ <b>0,000</b>       | MDT2 <b>0,130</b> | MCG <b>6,300</b>  |
| SPS                               | SPL <b>4,770</b>       | MDL2 <b>0,200</b> | CPW               |
| BAS <b>1,800</b>                  | TPS <b>4,880</b>       | MW <b>0,255</b>   | BD                |
| BAL                               | FSP <b>0,050</b>       | GO <b>0,288</b>   | BWT <b>46,20</b>  |

|                        |                           |                         |  |
|------------------------|---------------------------|-------------------------|--|
| <b>HEAVY ITEMS</b>     |                           |                         |  |
| Bow Thruster <b>No</b> | Generator <b>No</b>       | Air Condition <b>No</b> |  |
| Windlass <b>No</b>     | Jib Furler <b>No</b>      | Desalinator <b>No</b>   |  |
| Heavy Deck <b>No</b>   | Main Furler <b>No</b>     |                         |  |
| Headliners <b>No</b>   | Water Heater <b>No</b>    |                         |  |
| Anchor Weight          | Heavy Items Adjustment    | <b>0,0000</b>           |  |
| Anchor LCG             | Total Gyradius Adjustment | <b>0,0534</b>           |  |

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

|                 |
|-----------------|
| <b>COMMENTS</b> |
|                 |

|   |                      |                    |
|---|----------------------|--------------------|
| <b>INCLINING TEST AND FREEBOARDS</b>    |                      |                    |
| Inclining Test <b>Current Inclining</b> |                      |                    |
| Flotation date <b>26.05.2006</b>        | SG <b>1,0020</b>     |                    |
| FFM <b>1,585</b>                        | FF <b>1,595</b>      | SFFP <b>0,322</b>  |
| FAM <b>1,080</b>                        | FA <b>1,087</b>      | SAFP <b>12,762</b> |
| W1 <b>125,0</b>                         | PD1 <b>210,0</b>     | WD <b>11,190</b>   |
| W2 <b>125,0</b>                         | PD2 <b>208,0</b>     | GSA <b>12,6</b>    |
| W3 <b>125,0</b>                         | PD3 <b>210,0</b>     | RSA <b>4298,7</b>  |
| W4 <b>125,0</b>                         | PD4 <b>209,0</b>     | PLM <b>2005,</b>   |
| Maximum beam station from stem          | <b>8,646</b>         |                    |
| RM Measured / Default                   | <b>233,9 / 270,4</b> |                    |
| Limit of positive stability             | <b>107,6°</b>        |                    |
| Stability Index                         | <b>114,1</b>         |                    |
| Freeboard at mast at 4,770              | <b>1,357</b>         |                    |

|                                 |                    |                  |
|---------------------------------|--------------------|------------------|
| <b>PROPELLER</b>                |                    |                  |
| Installation <b>Strut Drive</b> | PRD <b>0,470</b>   |                  |
| Type <b>Folding</b>             | PBW                |                  |
| Twin Screw <b>No</b>            | PIPA <b>0,0031</b> |                  |
| ST1 <b>0,047</b>                | ST3                | ST5 <b>0,275</b> |
| ST2                             | ST4 <b>0,098</b>   | EDL <b>2,630</b> |

|                      |  |
|----------------------|--|
| <b>WATER BALLAST</b> |  |
| N/A                  |  |

|                    |
|--------------------|
| <b>CENTERBOARD</b> |
| N/A                |



**2009**  
IMS Measurement  
Certificate

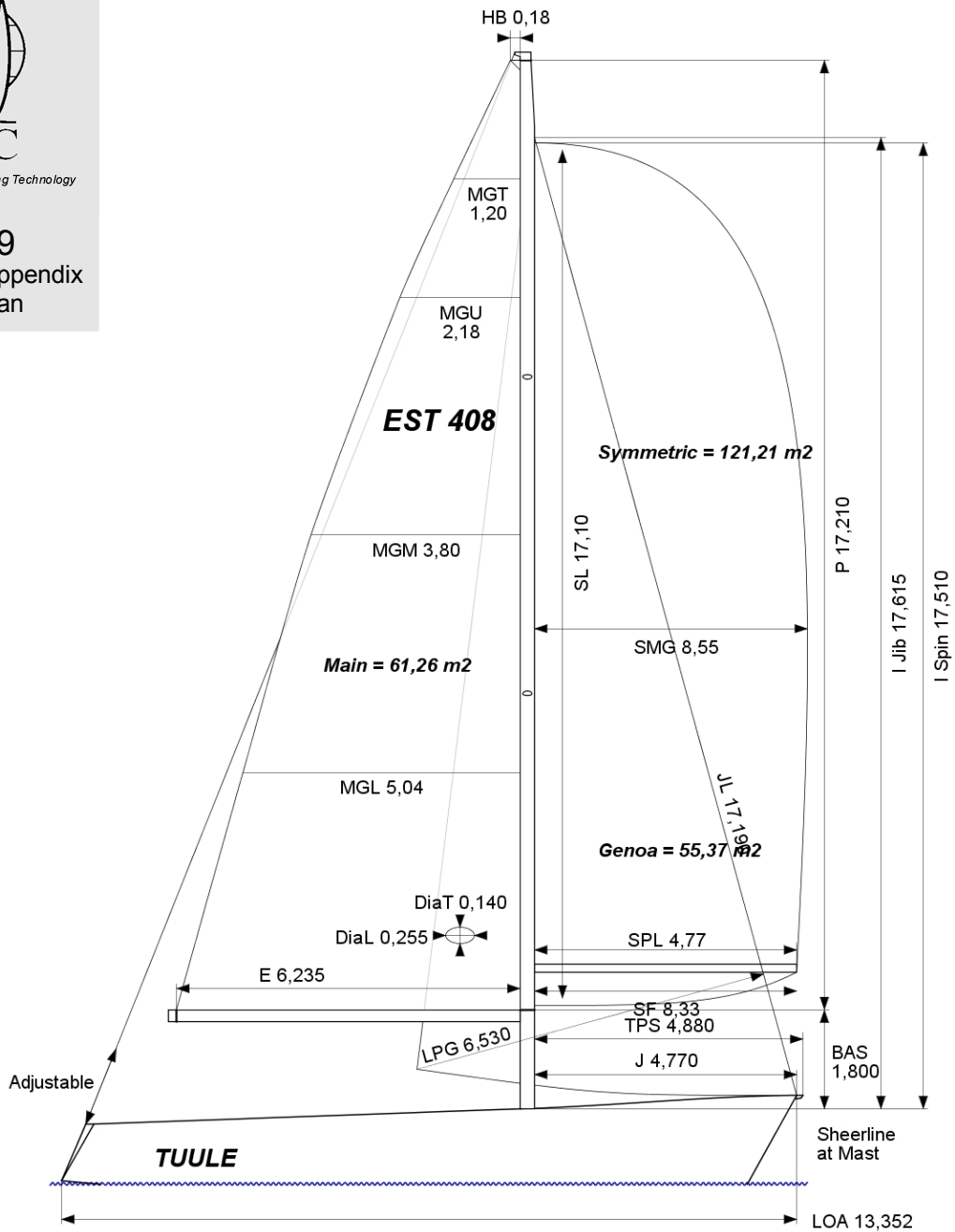
|                               |
|-------------------------------|
| <b>Certificate</b>            |
| Number <b>EST408</b>          |
| ORC Ref <b>EST00000204</b>    |
| Issued On <b>21.05.2009</b>   |
| VPP Ver. <b>1.11</b>          |
| Valid until <b>31.12.2009</b> |

| <b>SAILS (Maximum Areas)</b> |       |       |       |      |      |       |        |  |                         |
|------------------------------|-------|-------|-------|------|------|-------|--------|--|-------------------------|
| Mainsail                     | HB    | MGT   | MGU   | MGM  | MGL  | MSW   | Area   | Formula  |                         |
|                              | 0,180 | 1,20  | 2,18  | 3,80 | 5,04 | 26,00 | 61,26  | P/8 · (E + 2·MGL+ 2·MGM + 1.5·MGU + MGT + 0.5·HB)    |                         |
| Jib/Genoa                    | JH    | JGT   | JGU   | JGM  | JGL  | JL    | LPG    | Formula  |                         |
|                              | 0,11  | 0,80  | 1,55  | 3,16 | 4,85 | 17,19 | 6,53   | 0.1125·JL·(1.445·LPG+2·JGL+2·JGM+1.5·JGU+JGT+0.5·JH) |                         |
| Symmetric                    | SL    | SMG   | SF    |      |      |       | Area   | Formula  |                         |
|                              | 17,10 | 8,55  | 8,33  |      |      |       | 121,21 | SL · (SF + 4·SMG) / 6                                |                         |
| Code Zero                    | SLU   | SLE   | ASL   | AMG  | ASF  |       |        | Area   | Formula                 |
|                              | 16,70 | 15,85 | 16,27 | 6,63 | 8,85 |       |        | 95,94  | ASL · (ASF + 4·AMG) / 6 |



World Leader in Rating Technology

2009  
Certificate Appendix  
Sail Plan



**SAILS INVENTORY**

**MAINSAIL**

| Id | HB    | MGT  | MGU  | MGM  | MGL  | MSW   | Area  | Measurer | Meas.Dat   | Manufacturer | Material | Comment |
|----|-------|------|------|------|------|-------|-------|----------|------------|--------------|----------|---------|
| 1  | 0,180 | 1,20 | 2,18 | 3,80 | 5,04 | 26,00 | 61,26 | AT       | 18.05.2009 |              | Unknown  |         |

**JIBS / GENOAS**

| Id | JH   | JGT  | JGU  | JGM  | JGL  | LPG  | JL    | Ovrlp | Area  | Measurer | Meas.Dat   | Manufacturer | Material | Comment |
|----|------|------|------|------|------|------|-------|-------|-------|----------|------------|--------------|----------|---------|
| 1  | 0,09 | 0,66 | 1,28 | 2,45 | 3,72 | 4,99 | 16,50 | 105%  | 41,16 |          | 18.05.2009 |              | Unknown  |         |
| 2  | 0,11 | 0,80 | 1,55 | 3,16 | 4,85 | 6,53 | 17,19 | 137%  | 55,37 |          | 18.05.2009 |              | Unknown  |         |

**SYMMETRIC SPINNAKERS**

| Id | SL    | SMG  | SF   | Area   | Measurer | Meas.Dat   | Manufacturer | Material | Comment |
|----|-------|------|------|--------|----------|------------|--------------|----------|---------|
| 1  | 17,10 | 8,55 | 8,33 | 121,21 | AT       | 18.05.2009 |              | Unknown  |         |
| 2  | 17,00 | 8,28 | 8,40 | 117,64 | AT       | 18.05.2009 |              | Unknown  |         |

**ASYMMETRIC SPINNAKERS**

| Id | SLU   | SLE   | ASL   | AMG  | ASF  | Area  | Kind  | Measurer | Meas.Dat   | Manufacturer | Material | Comment |
|----|-------|-------|-------|------|------|-------|-------|----------|------------|--------------|----------|---------|
| 1  | 16,70 | 15,85 | 16,27 | 6,63 | 8,85 | 95,91 | code0 | AT       | 18.05.2009 |              | Unknown  |         |