

|                         |
|-------------------------|
| <b>BOAT</b>             |
| Name <b>HAWK</b>        |
| Sail Nr <b>PER 4698</b> |

|              |
|--------------|
| <b>GPH</b>   |
| <b>533,1</b> |

|  |
|--|
| <b>HULL</b>  |
| Length Overall <b>14,270 m</b>                                 |
| Maximum Beam <b>4,037 m</b>                                    |
| Displacement <b>8.988 kg</b>                                   |
| Draft <b>2,829 m</b>   |
| IMS Reg. Division <b>Cruiser/Racer</b>                         |
| Dynamic Allowance <b>0,000%</b>                                |
| Fwd Accommodation <b>Yes</b>                                   |
| Hull Construction <b>Cored</b>                                 |
| Carbon Rudder <b>Yes</b>                                       |
| Trim Tab <b>No</b>   |
| IMS L <b>12,843</b> VCGD <b>-0,124</b> VCGM <b>-0,093</b>      |
| Sink <b>28,42 kg/mm</b> Wetted Area <b>37,48 m<sup>2</sup></b> |



**2009**  
ORC International  
Certificate

|   |
|---|
| <b>GENERAL</b>  |
| Class <b>SYDNEY 46</b>                                |
| Designer <b>MURRY/BURNS/DOVELL</b>                    |
| Builder <b>SYDNEY YACHTS, AUS</b>                     |
| Series <b>06/1998</b>                                 |
| Age <b>06/1998</b>                                    |
| Age Allowance <b>0,715%</b>                           |
| Offset File <b>K19004m.off - 04/03/2001 16:25:18</b>  |
| Measurement by <b>PYM/R'SON/ANDERSON - 10/12/1999</b> |

|                        |   |   |
|------------------------|---|---|
| <b>SCORING OPTIONS</b> |   |   |
|                        | <b>OFFSHORE</b>   | <b>INSHORE</b>  |
|                        | <b>COASTAL / LONG DISTANCE</b>                            | <b>WINDWARD / LEEWARD</b>                                 |
| Time On Distance       | <b>533,1</b>  | <b>592,8</b>  |
| Time On Time           | <b>1,1256</b>   | <b>1,1388</b>   |
| Performance Line       | PLT <b>0,971</b> PLD <b>93,8</b>                          | PLT <b>1,173</b> PLD <b>288,7</b>                         |
| Triple Number          | Low <b>1,0998</b> Medium <b>1,4302</b> High <b>1,6245</b> | Low <b>0,8337</b> Medium <b>1,1409</b> High <b>1,3378</b> |

**Rating Office**  
Federacion Peruana Vela  
Bolognesi 761, Callao  
5, Peru  
Aguiles Rubina, Rat. Ofi.  
rubina@terra.com.pe

|                        |              |              |              |              |              |              |              |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>TIME ALLOWANCES</b> |              |              |              |              |              |              |              |
| Wind Velocity          | 6 kt         | 8 kt         | 10 kt        | 12 kt        | 14 kt        | 16 kt        | 20 kt        |
| Beat VMG               | <b>890,0</b> | <b>720,0</b> | <b>645,4</b> | <b>607,3</b> | <b>584,8</b> | <b>571,0</b> | <b>560,9</b> |
| 52°                    | <b>572,7</b> | <b>476,4</b> | <b>443,1</b> | <b>426,3</b> | <b>416,3</b> | <b>410,0</b> | <b>404,4</b> |
| 60°                    | <b>530,1</b> | <b>456,0</b> | <b>425,5</b> | <b>411,1</b> | <b>402,1</b> | <b>396,3</b> | <b>390,8</b> |
| 75°                    | <b>502,2</b> | <b>442,9</b> | <b>409,1</b> | <b>392,3</b> | <b>383,2</b> | <b>376,7</b> | <b>369,5</b> |
| 90°                    | <b>505,7</b> | <b>440,1</b> | <b>406,0</b> | <b>389,4</b> | <b>370,8</b> | <b>361,1</b> | <b>350,1</b> |
| 110°                   | <b>522,1</b> | <b>449,3</b> | <b>410,3</b> | <b>382,5</b> | <b>366,1</b> | <b>356,1</b> | <b>338,2</b> |
| 120°                   | <b>557,3</b> | <b>467,7</b> | <b>425,3</b> | <b>395,3</b> | <b>369,3</b> | <b>347,0</b> | <b>323,1</b> |
| 135°                   | <b>652,6</b> | <b>519,7</b> | <b>458,9</b> | <b>422,8</b> | <b>396,7</b> | <b>374,0</b> | <b>323,8</b> |
| 150°                   | <b>787,2</b> | <b>623,3</b> | <b>521,3</b> | <b>465,3</b> | <b>429,9</b> | <b>404,2</b> | <b>363,2</b> |
| Run VMG                | <b>909,0</b> | <b>719,7</b> | <b>601,9</b> | <b>533,4</b> | <b>484,2</b> | <b>447,8</b> | <b>398,6</b> |

|                               |
|-------------------------------|
| <b>Certificate</b>            |
| Number <b>PERI08</b>          |
| ORC Ref <b>PER00000002</b>    |
| Issued On <b>05/05/2009</b>   |
| VPP Ver. <b>1.11</b>          |
| Valid until <b>30/03/2010</b> |

|                        |
|------------------------|
| <b>Crew Weight</b>     |
| Declared <b>945 kg</b> |
| Default* <b>945 kg</b> |

|                                   |
|-----------------------------------|
| <b>Special Scoring</b>            |
| ToD ToT                           |
| Double Handed <b>535,8 1,1198</b> |
| Non Spinnaker <b>569,7 1,0532</b> |

|                         |              |              |              |              |              |              |              |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>Selected Courses</b> |              |              |              |              |              |              |              |
| Windward / Leeward      | <b>915,9</b> | <b>732,0</b> | <b>633,7</b> | <b>577,3</b> | <b>540,7</b> | <b>515,1</b> | <b>484,7</b> |
| Circular Random         | <b>737,2</b> | <b>594,2</b> | <b>517,2</b> | <b>471,9</b> | <b>443,5</b> | <b>424,3</b> | <b>399,1</b> |
| Ocean for PCS           | <b>788,7</b> | <b>621,8</b> | <b>528,7</b> | <b>471,4</b> | <b>433,2</b> | <b>405,6</b> | <b>365,7</b> |
| Non Spinnaker           | <b>803,8</b> | <b>641,0</b> | <b>551,8</b> | <b>498,4</b> | <b>464,4</b> | <b>441,7</b> | <b>412,7</b> |

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

|                                   |
|-----------------------------------|
| <b>Storm Sails Areas</b>          |
| Heavy Weather Jib <b>50,56</b>    |
| Storm Jib (JL=12,58) <b>18,72</b> |
| Storm Triesail <b>18,23</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>44,2°</b>  | <b>43,6°</b>  | <b>39,5°</b>  | <b>37,4°</b>  | <b>36,4°</b>  | <b>35,8°</b>  | <b>35,6°</b>  |
| Beat VMG   | <b>4,04</b>   | <b>5,00</b>   | <b>5,58</b>   | <b>5,93</b>   | <b>6,16</b>   | <b>6,30</b>   | <b>6,42</b>   |
| 52°  | <b>6,29</b>   | <b>7,56</b>   | <b>8,12</b>   | <b>8,44</b>   | <b>8,65</b>   | <b>8,78</b>   | <b>8,90</b>   |
| 60°  | <b>6,79</b>   | <b>7,90</b>   | <b>8,46</b>   | <b>8,76</b>   | <b>8,95</b>   | <b>9,08</b>   | <b>9,21</b>   |
| 75°  | <b>7,17</b>   | <b>8,13</b>   | <b>8,80</b>   | <b>9,18</b>   | <b>9,39</b>   | <b>9,56</b>   | <b>9,74</b>   |
| 90°  | <b>7,12</b>   | <b>8,18</b>   | <b>8,87</b>   | <b>9,24</b>   | <b>9,71</b>   | <b>9,97</b>   | <b>10,28</b>  |
| 110°   | <b>6,89</b>   | <b>8,01</b>   | <b>8,77</b>   | <b>9,41</b>   | <b>9,83</b>   | <b>10,11</b>  | <b>10,64</b>  |
| 120°   | <b>6,46</b>   | <b>7,70</b>   | <b>8,47</b>   | <b>9,11</b>   | <b>9,75</b>   | <b>10,37</b>  | <b>11,14</b>  |
| 135°   | <b>5,52</b>   | <b>6,93</b>   | <b>7,85</b>   | <b>8,52</b>   | <b>9,07</b>   | <b>9,62</b>   | <b>11,12</b>  |
| 150°   | <b>4,57</b>   | <b>5,78</b>   | <b>6,91</b>   | <b>7,74</b>   | <b>8,37</b>   | <b>8,91</b>   | <b>9,91</b>   |
| Run VMG  | <b>3,96</b>   | <b>5,00</b>   | <b>5,98</b>   | <b>6,75</b>   | <b>7,44</b>   | <b>8,04</b>   | <b>9,03</b>   |
| Gybe Angles  | <b>140,9°</b> | <b>143,4°</b> | <b>148,3°</b> | <b>156,5°</b> | <b>163,6°</b> | <b>168,5°</b> | <b>172,3°</b> |

|   |
|---|
| <b>Owner</b>  |
| Javier Arribas<br>Pedro Venturo 431, Aurora<br>Miraflores, Lima 18<br>Peru            |
| I certify that I understand my<br>responsibilities under ORC Rules<br>and Regulations |
| Signature   |

|                      |                                 |
|----------------------|---------------------------------|
| <b>BOAT</b>          |                                 |
| Name <b>HAWK</b>     | Sail Nr <b>PER 4698</b>         |
| File <b>HAWK.dxt</b> | Data in <b>meters/kilograms</b> |

|                                   |                        |                   |                   |
|-----------------------------------|------------------------|-------------------|-------------------|
| <b>RIG</b>                        |                        |                   |                   |
| Forestay Tension <b>Aft</b>       | Spreaders <b>3</b>     |                   |                   |
| Inner Forestay <b>None Fitted</b> | Runners <b>2</b>       |                   |                   |
| Carbon Mast <b>Yes</b>            | Jumpers <b>None</b>    |                   |                   |
| Taper Hollows <b>No</b>           | w/o Backstay <b>No</b> |                   |                   |
| P <b>17,052</b>                   | E <b>6,108</b>         | MDT1 <b>0,126</b> | TL <b>3,440</b>   |
| IG <b>19,306</b>                  | J <b>5,525</b>         | MDL1 <b>0,265</b> | MWT <b>243,00</b> |
| ISP <b>19,306</b>                 | SFJ <b>-0,005</b>      | MDT2 <b>0,105</b> | MCG <b>6,125</b>  |
| SPS <b>3,986</b>                  | SPL <b>5,523</b>       | MDL2 <b>0,219</b> | CPW <b>2,680</b>  |
| BAS <b>2,001</b>                  | TPS                    | MW <b>0,219</b>   | BD <b>0,274</b>   |
| BAL <b>0,210</b>                  | FSP <b>0,084</b>       | GO <b>0,232</b>   | BWT <b>40,00</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>Yes</b>   |                         |
| Anchor Weight          | Heavy Items Adjustment    | <b>0,0003</b>           |
| Anchor LCG             | Total Gyradius Adjustment | <b>0,0084</b>           |

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

|                     |  |
|---------------------|--|
| <b>COMMENTS</b>     |  |
| Modified Keel 11/98 |  |

|   |                  |                      |
|---|------------------|----------------------|
| <b>INCLINING TEST AND FREEBOARDS</b>    |                  |                      |
| Inclining Test <b>Current Inclining</b> |                  |                      |
| Flotation date <b>27/11/1998</b>        |                  | SG <b>1,0250</b>     |
| FFM <b>1,470</b>                        | FF <b>1,470</b>  | SFFP <b>0,320</b>    |
| FAM <b>1,090</b>                        | FA <b>1,090</b>  | SAFP <b>13,892</b>   |
| W1 <b>26,750</b>                        | PD1 <b>52,2</b>  | WD <b>14,600</b>     |
| W2 <b>53,500</b>                        | PD2 <b>104,5</b> | GSA <b>38,0</b>      |
| W3 <b>80,250</b>                        | PD3 <b>156,8</b> | RSA <b>7800,0</b>    |
| W4 <b>107,00</b>                        | PD4 <b>209,0</b> | PLM <b>2130,0</b>    |
| Maximum beam station from stem          |                  | <b>8,837</b>         |
| RM Measured / Default                   |                  | <b>277,2 / 286,0</b> |
| Limit of positive stability             |                  | <b>122,1°</b>        |
| Stability Index                         |                  | <b>126,3</b>         |
| Freeboard at mast at 0,000              |                  | <b>1,232</b>         |

|                                 |                    |                  |
|---------------------------------|--------------------|------------------|
| <b>PROPELLER</b>                |                    |                  |
| Installation <b>Strut Drive</b> | PRD <b>0,464</b>   |                  |
| Type <b>Folding</b>             | PBW <b>0,116</b>   |                  |
| Twin Screw <b>No</b>            | PIPA <b>0,0038</b> |                  |
| ST1 <b>0,042</b>                | ST3 <b>0,179</b>   | ST5 <b>0,258</b> |
| ST2 <b>0,179</b>                | ST4 <b>0,113</b>   | EDL <b>1,658</b> |

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

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

|                              |       |       |      |      |      |       |        |  |  |
|------------------------------|-------|-------|------|------|------|-------|--------|--|--|
| <b>SAILS (Maximum Areas)</b> |       |       |      |      |      |       |        |  |  |
| <b>Mainsail</b>              | HB    | MGT   | MGU  | MGM  | MGL  | MSW   | Area   | Formula  |  |
|                              | 0,205 | 1,22  | 2,24 | 3,91 | 5,03 | 25,00 | 61,11  | P/8 · (E + 2·MGL+ 2·MGM + 1.5·MGU + MGT + 0.5·HB)    |  |
| <b>Jib/Genoa</b>             | JH    | JGT   | JGU  | JGM  | JGL  | JL    | LPG    |  |  |
|                              | 0,00  | 0,96  | 1,92 | 3,84 | 5,76 | 20,12 | 7,68   | 0.1125·JL·(1.445·LPG+2·JGL+2·JGM+1.5·JGU+JGT+0.5·JH) |  |
| <b>Symmetric</b>             | SL    | SMG   | SF   |      |      |       | 159,09 | SL · (SF + 4·SMG) / 6                                |  |
|                              | 19,02 | 10,06 | 9,95 |      |      |       |        |  |  |



World Leader in Rating Technology

**2009**  
IMS Measurement  
Certificate

**Certificate**

Number **PERI08**  
 ORC Ref **PER00000002**  
 Issued On **05/05/2009**  
 VPP Ver. 1.11  
 Valid until **30/03/2010**



