

| |
|---|
| BOAT |
| Name HAWK Sail Nr PER 4698 |

| |
|--------------|
| GPH |
| 519.2 |

| |
|--|
| HULL |
| Length Overall 14.270m |
| Maximum Beam 4.060m |
| Displacement 8,143kg |
| Draft 3.043m |
| IMS Reg. Division Cruiser/Racer |
| Dynamic Allowance 0.000% |
| Fwd Accommodation Yes |
| Hull Construction Cored |
| Carbon Rudder Yes |
| Crew Arm Extension |
| IMSL 12.532m VCGD -0.180m Sink 27.42kg/mm |
| RL 12.347m VCGM -0.295m WS 37.07m² |
| LSM0 12.222m Displacement/Length ratio 4.4602 |



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2019
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Certificate

| |
|---|
| GENERAL |
| Class SYDNEY 46 |
| Designer MURRY/BURNS/DOVELL |
| Builder SYDNEY YACHTS, AUS |
| Series 06/1998 |
| Age 06/1998 |
| Age Allowance 0.487% |
| Offset File PER4698.off - 19/06/2017 23:19:22 |
| Measurement by G Liza / L Yarlequ - 17/06/2010 |

Rating Office
Asociacion de Veleros
Oceanicos del Peru
Roberto Peschiera - RO
peschiera56@gmail.com

| | | | | | | |
|------------------------|--------------------------------|---------------|---------------|---------------------------|---------------|---------------|
| SCORING OPTIONS | | | | | | |
| | COASTAL / LONG DISTANCE | | | WINDWARD / LEEWARD | | |
| Time on Distance | 505.6 | | | 569.6 | | |
| Time on Time | 1.1868 | | | 1.1851 | | |
| Triple Number | Low | Medium | High | Low | Medium | High |
| Time on Distance | 588.2 | 461.3 | 412.9 | 762.7 | 570.4 | 502.4 |
| Time on Time | 1.1475 | 1.4631 | 1.6348 | 0.8850 | 1.1833 | 1.3436 |



| | | | | | | | |
|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| TIME ALLOWANCES | | | | | | | |
| Wind Velocity | 6 kt | 8 kt | 10 kt | 12 kt | 14 kt | 16 kt | 20 kt |
| Beat VMG | 836.7 | 686.4 | 626.6 | 600.9 | 586.5 | 579.5 | 565.2 |
| 52° | 548.9 | 461.6 | 436.8 | 427.6 | 422.5 | 419.6 | 410.6 |
| 60° | 518.4 | 446.2 | 424.7 | 415.7 | 410.1 | 406.3 | 397.7 |
| 75° | 496.4 | 436.9 | 413.9 | 398.8 | 390.0 | 384.3 | 377.8 |
| 90° | 502.2 | 438.4 | 412.7 | 392.1 | 375.0 | 363.8 | 352.2 |
| 110° | 536.2 | 443.2 | 409.1 | 390.6 | 374.6 | 362.1 | 334.3 |
| 120° | 550.3 | 449.0 | 411.3 | 383.0 | 362.7 | 348.0 | 319.6 |
| 135° | 619.9 | 486.2 | 430.0 | 400.2 | 371.3 | 343.4 | 290.3 |
| 150° | 738.7 | 584.2 | 486.2 | 432.5 | 408.5 | 385.2 | 333.1 |
| Run VMG | 853.0 | 674.6 | 561.4 | 499.9 | 471.4 | 444.8 | 384.6 |

Certificate
Number **PER108**
ORC Ref **PER00000085**
Issued On **22/05/2019**
VPP Ver. **2019 1.01**
Valid until **31/03/2020**

| | | | | | | | |
|-------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Selected Courses | | | | | | | |
| Windward / Leeward | 844.9 | 680.5 | 594.0 | 550.4 | 529.0 | 512.2 | 474.9 |
| Circular Random | 710.4 | 575.1 | 503.8 | 463.2 | 438.0 | 420.2 | 392.7 |
| Coastal / Long Distance | 845.7 | 640.3 | 536.9 | 479.2 | 449.0 | 423.6 | 378.0 |
| Non Spinnaker | 766.6 | 616.2 | 535.0 | 487.0 | 456.6 | 435.7 | 407.7 |

Crew Weight
Default **916kg**
Maximum **916kg**
Minimum* **687kg**
**when applied by the NoR and SI*
Non Manual Pwr **No**

| | | | | | | | |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 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 | 42.6° | 41.2° | 39.1° | 38.1° | 37.2° | 36.8° | 36.4° |
| Beat VMG | 4.30 | 5.24 | 5.75 | 5.99 | 6.14 | 6.21 | 6.37 |
| 52° | 6.56 | 7.80 | 8.24 | 8.42 | 8.52 | 8.58 | 8.77 |
| 60° | 6.94 | 8.07 | 8.48 | 8.66 | 8.78 | 8.86 | 9.05 |
| 75° | 7.25 | 8.24 | 8.70 | 9.03 | 9.23 | 9.37 | 9.53 |
| 90° | 7.17 | 8.21 | 8.72 | 9.18 | 9.60 | 9.90 | 10.22 |
| 110° | 6.71 | 8.12 | 8.80 | 9.22 | 9.61 | 9.94 | 10.77 |
| 120° | 6.54 | 8.02 | 8.75 | 9.40 | 9.92 | 10.35 | 11.27 |
| 135° | 5.81 | 7.40 | 8.37 | 8.99 | 9.69 | 10.48 | 12.40 |
| 150° | 4.87 | 6.16 | 7.40 | 8.32 | 8.81 | 9.35 | 10.81 |
| Run VMG | 4.22 | 5.34 | 6.41 | 7.20 | 7.64 | 8.09 | 9.36 |
| Gybe Angles | 142.7° | 144.6° | 145.9° | 151.5° | 150.8° | 148.2° | 143.8° |

Special Scoring
ToD ToT
Non Spin GPH **551.6** **1.0877**
Non Spin OSN **539.6** **1.1120**

| | |
|--------------------------|---------------------|
| Sails Limitations | |
| Headsails 7 | Spinnakers 5 |

Class Division Length
CDL = **12.441**

Storm Sails Areas
Heavy Weather Jib **50.14**
Storm Jib (JL=12.53) **18.58**
Storm Trysail **18.26**

Owner
JAVIER ARRIBAS L.
Pedro Venturo 431, Aurora
Miraflores, Lima 18
Peru

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

| | |
|---------------------|---------------------------------|
| BOAT | |
| Name HAWK | Sail Nr PER 4698 |
| File PER4698 | Data in meters/kilograms |

| | |
|--------------------------------|--|
| RIG | |
| Forestay Tension Aft | Spreaders 3 |
| Inner Stay None Fitted | Runners 2 |
| Carbon Mast Yes | 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 17.043 | E 6.120 MDT1 0.126 MW 0.211 |
| IG 19.188 | J 5.520 MDL1 0.249 GO 0.235 |
| ISP 19.125 | SFJ 0.000 MDT2 0.107 BD 0.275 |
| BAS 1.960 | SPL 0.190 MWT 243.00 |
| FSP 0.086 | TPS 7.970 TL 0.715 MCG 6.125 |

| | | | |
|--|------------------|-----------------------|--|
| INCLINING TEST AND FREEBOARDS | | | |
| Inclining Test Current Inclining | | | |
| Flotation date 16/06/2017 | | SG 1.0253 | |
| FFM 1.498 | FF 1.493 | SFFP 0.861 | |
| FAM 1.099 | FA 1.109 | SAFP 13.892 | |
| W1 150.0 | PD1 485.2 | WD 11.980 | |
| W2 150.0 | PD2 495.0 | GSA 1.0 | |
| W3 150.0 | PD3 505.0 | RSA 1.0 | |
| W4 150.0 | PD4 504.5 | PLM 9000.0 | |
| LCF from stem on CL / on sheer | | 7.692 / 7.945 | |
| Maximum beam station from stem | | 8.499 | |
| RM Measured | | 284.6kg-m | |
| RM Default | | 277.7kg-m | |
| Limit of positive stability / Stab.Index | | 130.1° / 132.6 | |
| Freeboard at mast at 5.520 | | 1.271 | |



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2019
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Certificate

| | |
|-----------------------------|--|
| MIZZEN RIG AND SAILS | |
| N/A | |

| | | | |
|------------------------------|--------------------|------------------|--|
| PROPELLER | | | |
| Installation Strut | PRD 0.450 | | |
| Type Folding 2 blades | PBW 0.116 | | |
| Twin Screw No | PIPA 0.0038 | | |
| ST1 0.043 | ST3 0.180 | ST5 0.270 | |
| ST2 0.181 | ST4 0.113 | EDL 1.620 | |

Certificate

Number **PERI08**
ORC Ref **PER00000085**
Issued On **22/05/2019**
VPP Ver. **2019 1.01**
Valid until **31/03/2020**



| | |
|---|--|
| COMMENTS | |
| Modified keel and new bowsprit 07/11 modified bulb 09/15 new OFFSET | |

| | |
|------------------------|--|
| MOVABLE BALLAST | |
| N/A | |

| | |
|--------------------|--|
| CENTERBOARD | |
| N/A | |

| | | | | | | | | | |
|------------------------------|-------|-------|-------|-------|-------|--------|------------------------|---|--|
| SAILS (Maximum Areas) | | | | | | | | | |
| Mainsail | MHB | MUW | MTW | MHW | MQW | Area | Area (r) | Formula | |
| | 0.240 | 1.26 | 2.27 | 3.89 | 5.15 | 61.75 | 63.01 | 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 | | |
| | 21.84 | 18.17 | 20.00 | 12.32 | 11.92 | 204.05 | AS · (SFL + 4·SHW) / 6 | | |

| | | | | | | | | | | | | |
|---|------|------|------|------|------|-------|-------|-----|-----|------------|----------|---------|
| HEADSAILS | | | | | | | | | | | | |
| Area = 0.1125·HLU · (1.445·HLP + 2·HQW + 2·HHW + 1.5·HTW + HUW + 0.5·HHB) | | | | | | | | | | | | |
| HBB | HUW | HTW | HHW | HQW | HLP | HLU | Area | Btn | Fly | Meas.Date | Material | Comment |
| 0.09 | 0.95 | 1.84 | 3.70 | 5.64 | 7.60 | 19.48 | 73.23 | | | 29/09/2015 | Carbon | NUEVA |
| 0.08 | 0.91 | 1.77 | 3.61 | 5.55 | 7.60 | 19.49 | 72.15 | | | 29/09/2015 | Carbon | NUEVA |
| 0.09 | 0.91 | 1.78 | 3.60 | 5.56 | 7.63 | 19.40 | 71.95 | | | 02/10/2013 | Carbon | |
| 0.09 | 0.90 | 1.76 | 3.61 | 5.59 | 7.63 | 19.35 | 71.86 | | | 17/06/2010 | Carbon | |
| 0.09 | 0.91 | 1.76 | 3.56 | 5.51 | 7.61 | 19.30 | 71.06 | | | 18/06/2010 | Carbon | |
| 0.10 | 0.67 | 1.28 | 2.62 | 3.96 | 5.32 | 19.38 | 51.21 | Y | | 24/08/2011 | Carbon | |
| 0.06 | 0.64 | 1.25 | 2.47 | 3.64 | 4.85 | 18.43 | 45.14 | Y | | 02/10/2013 | Nylon | |

| | | | | |
|------------------------------------|--------|--------|-------------|-----------------|
| MEASUREMENT INVENTORY | | | | |
| Measurer Patricio Gutierrez | | | | |
| Date 16/06/2017 | | | | |
| Comment | | | | |
| Id | Item | Weight | Distance | VCG Description |
| Id | Item | Maker | Model | |
| 3A | Engine | YANMAR | 48hp | |
| Id | Item | Weight | Description | |

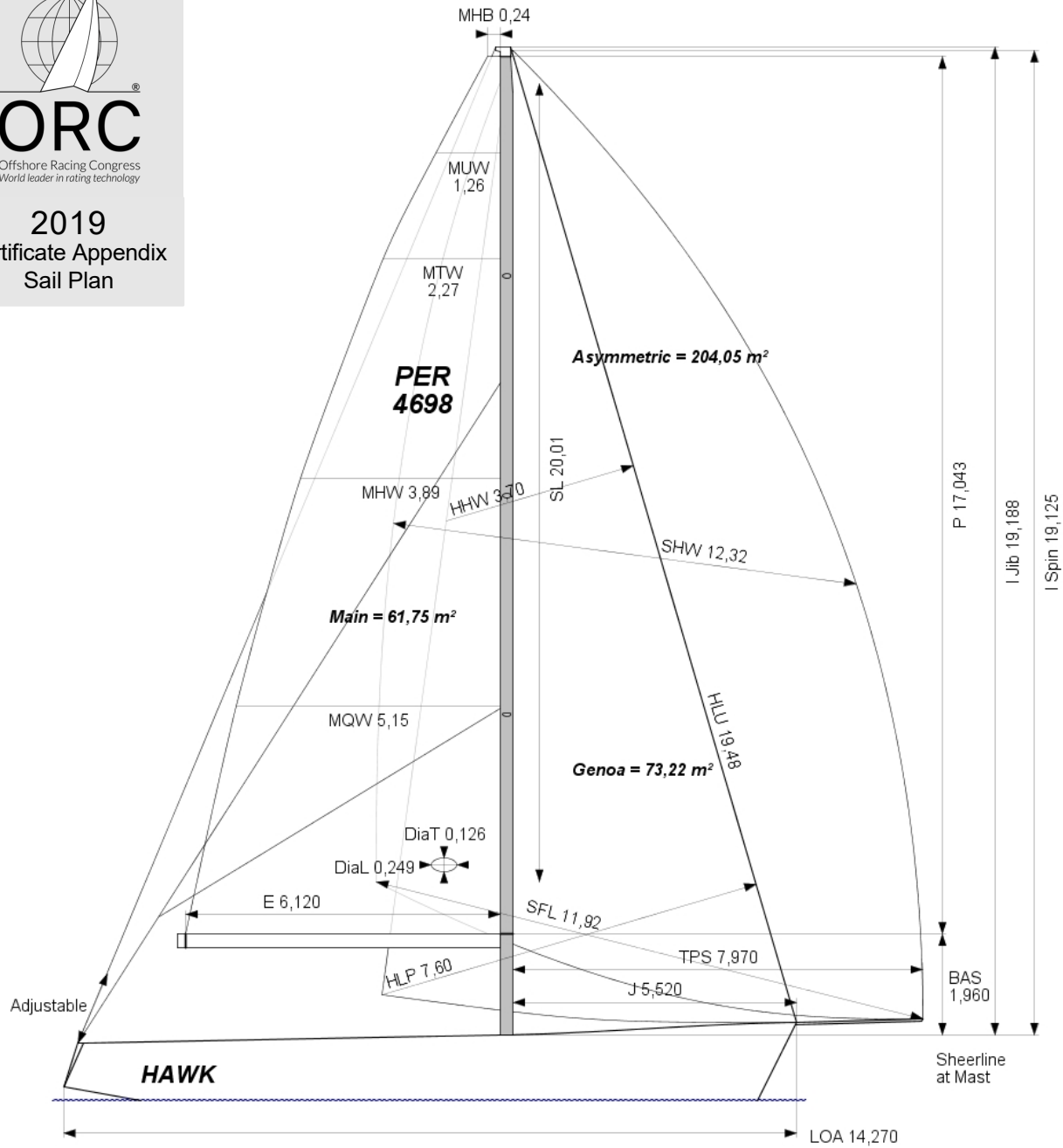
| | | | | | | | | | |
|------------------------------|---------|----------|------------|------------------------------------|-------|------|-----------------|----------------|--|
| MEASUREMENT INVENTORY | | | | | | | | | |
| Id | Item | Tank Use | Tank Type | Capcty | Dist. | VCG | Condtn | Description | |
| C3 | Tank | PETROLEO | ACERO INOX | 125.0 | 11.25 | 0.20 | 75.0 | CRUJIA POPA | |
| B6 | Tank | AGUA | FLEXIBLE | 150.0 | 6.52 | 0.20 | 0.0 | A BABOR DEBAJO | |
| C2 | Tank | TERMOTAN | ACERO INOX | 35.0 | 10.69 | 0.20 | 0.0 | | |
| E6 | Tank | AGUA | FLEXIBLE | 150.0 | 6.52 | 0.20 | 0.0 | A ESTRIBOR | |
| Id | Item | Weight | Distance | VCG Description | | | | | |
| B7 | Ballast | 330.0 | 5.42 | 0.00 placa plomo 34x49x18cm | | | | | |
| E7 | Ballast | 75.0 | 5.42 | 0.00 placa plomo 40x17x10 | | | | | |
| E5 | Battery | 36.0 | 7.88 | 0.20 3 baterias 12 placas estribor | | | | | |
| B2 | Misc | 2.0 | 10.65 | 0.70 BOTELLA DE GAS POPA BABOR | | | | | |



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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 | | | | | |
| M2 | 0.24 | 1.26 | 2.27 | 3.89 | 5.15 | 61.75 | G LIZA/L | 02/10/2013 | QUANTUM | Kevlar | NUEVA | | | | | |
| HEADSAILS (7) | | | | | | | | | | | | | | | | |
| Id | HHB | HUW | HTW | HHW | HQW | HLP | HLU | Ovrlp | Area | Btn | Fly | Measurer | Meas.Date | Manufacture | Material | Comment |
| J2 | 0.09 | 0.95 | 1.84 | 3.70 | 5.64 | 7.60 | 19.48 | 138% | 73.23 | | | G LIZA | 29/09/2015 | QUANTUM | Carbon | NUEVA |
| J1 | 0.08 | 0.91 | 1.77 | 3.61 | 5.55 | 7.60 | 19.49 | 138% | 72.15 | | | G LIZA | 29/09/2015 | QUANTUM | Carbon | NUEVA |
| C2 | 0.09 | 0.91 | 1.78 | 3.60 | 5.56 | 7.63 | 19.40 | 138% | 71.95 | | | G LIZA/L | 02/10/2013 | QUANTUM | Carbon | |
| C1 | 0.09 | 0.90 | 1.76 | 3.61 | 5.59 | 7.63 | 19.35 | 138% | 71.86 | | | G Liza / J | 17/06/2010 | Quantum | Carbon | |
| JT | 0.09 | 0.91 | 1.76 | 3.56 | 5.51 | 7.61 | 19.30 | 138% | 71.06 | | | G Liza | 18/06/2010 | Quantum | Carbon | |
| JIB | 0.10 | 0.67 | 1.28 | 2.62 | 3.96 | 5.32 | 19.38 | 96% | 51.21 | Y | | GLIZA / L | 24/08/2011 | QUANTUM | Carbon | |
| STAYSA | 0.06 | 0.64 | 1.25 | 2.47 | 3.64 | 4.85 | 18.43 | 88% | 45.14 | | Y | G LIZA/L | 02/10/2013 | QUANTUM | Nylon | |
| SYMMETRIC SPINNAKERS (0) | | | | | | | | | | | | | | | | |
| Id | SLU | SLE | SL | SHW | SFL | Area | Measurer | Meas.Date | Manufacture | Material | Comment | | | | | |
| ASYMMETRIC SPINNAKERS (5) | | | | | | | | | | | | | | | | |
| Id | SLU | SLE | SL | SHW | SFL | Area | Kind | Measurer | Meas.Date | Manufacture | Material | Comment | | | | |
| A2-3 | 21.84 | 18.17 | 20.01 | 12.32 | 11.92 | 204.06 | asym | G LIZA | 10/10/2016 | QUANTUM | Nylon | NVO AZUL | | | | |
| A2 | 21.29 | 17.90 | 19.59 | 11.27 | 11.30 | 184.13 | asym | G LIZA | 29/09/2015 | QUANTUM | Nylon | NUEVA | | | | |
| A1 | 21.16 | 17.99 | 19.57 | 10.56 | 11.05 | 173.86 | asym | G LIZA / L | 24/08/2011 | QUANTUM | Nylon | | | | | |
| A5 | 20.95 | 18.15 | 19.55 | 10.18 | 11.30 | 169.50 | asym | G LIZA / L | 24/08/2011 | QUANTUM | Nylon | | | | | |
| A0 | 20.42 | 18.24 | 19.33 | 8.00 | 10.59 | 137.22 | asym | G LIZA/L | 04/10/2013 | QUANTUM | Nylon | | | | | |