

# Schedule of Accreditation

issued by

## United Kingdom Accreditation Service

2 Pine Trees, Chertsey Lane, Staines-upon-Thames, TW18 3HR, UK

|  |   |  |
|--|---|--|
|  <p><b>UKAS</b><br/>CALIBRATION<br/>9097</p> <p>Accredited to<br/><b>ISO/IEC 17025:2005</b></p> | <h3>Ashtead Technology Ltd</h3> <p><b>Issue No: 004    Issue date: 05 May 2017</b></p>              |  |
|  | <p><b>Ashtead House</b><br/>Discovery Drive<br/>Arnhall Business Park<br/>Westhill<br/>AB32 6FG</p> | <p><b>Contact: Neil Christie</b><br/>Tel: +44 (0)1224 771888<br/>Fax: +44 (0)1224 770129<br/>E-Mail: aberdeen@ashtead-technology.com<br/>Website: www.ashtead-technology.com</p> |
| <p><b>Calibration performed at the above address only</b></p>  |   |  |

### DETAIL OF ACCREDITATION

| Measured Quantity<br>Instrument or Gauge  | Range  | Calibration and<br>Measurement Capability<br>(CMC) Expressed as an<br>Expanded Uncertainty<br>(k = 2) | Remarks                              |
|---|--|---|--------------------------------------|
| Calibration of Survey,<br>positioning and<br>oceanographic sensors with<br>the following parameters |  |   |                                      |
| Hydraulic pressure (absolute)   | 600 kPa to 6 MPa<br>6 MPa to 120 MPa   | 0.0087 %<br>0.0077 %  |                                      |
| Temperature   | 2 °C<br>16 °C<br>35 °C   | 0.0087 °C<br>0.0087 °C<br>0.0086 °C   |                                      |
| Velocity of sound in pure<br>water  | 1410 m/s to 1470 m/s   | 0.030 m/s   | At temperatures of 2 °C and<br>16 °C |
| Conductivity of sea water   | 0 to 80 mS/cm  | 0.0085 mS/cm  | At between 19.5 °C and<br>22.5 °C    |
| Resistance  | Zero to 100 kΩ   | 0.02 % + 20 mΩ  |                                      |
| Electrical Verification of<br>Ultrasonic Flaw Detection<br>Equipment                                | As BS EN 12668-1:2010 and<br>including the following<br>calibrations and quantities: |   |                                      |
|   | Stability after warm up<br>(height)  | 1.8 % of screen height  |                                      |
|   | Stability after warm up<br>(width)   | 1.8 % of screen width   |                                      |
|   | Jitter - screen height   | 1.8 % of screen height  |                                      |
|   | Jitter - screen width  | 1.8 % of screen width   |                                      |
|   | Stability against voltage<br>variation (height)                                      | 1.8 % of screen height  |                                      |
|   | Stability against voltage<br>variation (width)                                       | 1.8 % of screen width   |                                      |



0000

Accredited to  
ISO/IEC 17025:2005

**Schedule of Accreditation DRAFT**  
issued by  
**United Kingdom Accreditation Service**  
21 - 47 High Street, Feltham, Middlesex, TW13 4UN, UK

**Issue No:** 000    **Issue date:** 05 May 2017

Calibration performed at main address only

| Measured Quantity<br>Instrument or Gauge   | Range   | Calibration and<br>Measurement Capability<br>(CMC) Expressed as an<br>Expanded Uncertainty<br>( $k = 2$ )   | Remarks |
|--|---|---|---------|
| Electrical Verification of<br>Ultrasonic Flaw Detection<br>Equipment<br>(cont'd) | As BS EN 12668-1:2010 and<br>including the following<br>calibrations and quantities:<br><br>Pulse Voltage<br>Pulse Risetime<br>Pulse Reverberation<br>Pulse duration<br><br>Frequency response<br>0.2 MHz to 30 MHz<br><br>Equivalent input noise<br>Calibrated attenuator<br>Vertical Linearity<br>Linearity of timebase | 2.5 %<br>2.5 ns<br>2.4 % of pulser voltage<br>1.9 ns<br><br>4.5 % at -3 dB point<br><br>1.7 x 10 <sup>-9</sup> V/ $\sqrt{\text{Hz}}$<br>1.9 dB<br>2.1 % of screen height<br>1.4 % of screen width |         |

END