

### SECTION:J-PDO APPROVED LABORATORIES WORLDWIDE

| SI # | Testing lab name             | Location       | Scope approved  | Conatct details   | Vendor Number | Remarks               |
|------|------------------------------|----------------|---|---|---------------|-----------------------|
| 1    | LONESTAR ALPHA LABORATORIES, | Muscat, Oman   | 1. Mechanical Testing;<br>2. failure investigation.<br>3.ASTM A262 Pr E;<br>4. ASTM G 48 Methods A and C;<br>5. ASTM G28 Method A   | S.Sivasubramanian, Metallurgy Manager; P.O. Box 1197, P.C 130, Muscat,Sultanate of Oman; Mobile : +968 99866907.Tel : +968 24501524, 24505590; sivasubramanian@lonestartalpa.com;Web : www.lonestartalpa.com  | 103940        | Third party laboraory |
| 2    | Exova (Oman) Ltd & Co. LLC   | Muscat, Oman   | 1. Mechanical Testing;<br>2. ASTM A262 Pr E;<br>3. ASTM G 48 Method A;  | Altaf Rehman<br>Lab Manager-Metallurgy<br>Bldg # 2507, Way # 6033 , Block # 260, Al Omran Street, Gala; P.O. Box 869, P.C. 130; Azaiba, Sultanate of Oman; T: +968 2450 1870; M: +968 99287057; F: +968 2459 5619; Abdul.Faizal@exova.com; http://www.exova.com | 103006        | Third party laboraory |
| 3    | Exova- Abu Dhabi             | Abu Dhabi, UAE | 1. Mechanical Testing;<br>2. Failure investigation.<br>3. ASTM A262 Pr E;<br>4. ASTM G 48 Method A;<br>5. ASTM G28 Method A;<br><b>6. Hydrogen Induced Cracking (HIC)</b><br>7. Sulphide Stress Corrosion Cracking- FPB for CS only | Kashif Salim<br>Business Development Manager - Energy Middle East & Asia / Asia Pacific<br>Exova<br>T: +971 (0) 4 439 5800<br>F: +971 (0) 4 439 3699<br>M: +971 (0) 50 615 9502<br>Kashif.Salim@exova.com<br>http://www.exova.com                               | 103006        | Third party laboraory |
| 4    | Exova -Dudley, UK            | Exova UK       | 1. Failure investigation.<br>2. ASTM A262 Pr E;<br>3. ASTM G 48 Method A;<br>4. ASTM G28 Method A;<br><b>5. Hydrogen Induced Cracking (HIC)</b>   | 8. Exova, UK<br>Operations Manager<br>Exova Corrosion Centre<br>182, Halesowen Road<br>Netherton,<br>Dudley,  | 103006        | Third party laboraory |

## Vendor Quality Requirement Form

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|   |                                 |                |  |  |        |                       |
|---|---------------------------------|----------------|--|--|--------|-----------------------|
|   |                                 |                | 6. Sulphide Stress Corrosion Cracking- FPB; UT; CSSRT for CS and CRA using autoclaves<br>7. Corrosion testing - Rotating Cage, Rotating Cylinder, Potentiodynamic polarization | West Midlands<br>DY2 9PL<br>Tel: +44(0)1384 455751<br>Mob: +44(0)7939 467976<br>Fax: +44(0)1384 239297<br><a href="http://www.exova.com">http://www.exova.com</a><br>Phil.Dent@Exova.com<br>Chris.fowler@exova.com   |        |                       |
| 5 | Emirates Industrial Laboratory, | Dubai, UAE     | 1. Mechanical Testing;<br>2. Failure investigation.<br>3. ASTM A262 Pr E;<br>4. ASTM G 48 Method A;<br><b>5. Hydrogen Induced Cracking (HIC)</b>                               | H.R. Sekar,<br>Manager - Metallurgy Department,<br>Emirates Industrial Laboratory,<br>Inside Dry-docks World Dubai.<br>P.O. Box: 6892, Dubai, UAE.<br>Off: 009714 3457480 - Ext. 220, Fax: 009714 3452336,<br>Mobile: 0097150 6547486,<br>Website: <a href="http://www.eilab.com">www.eilab.com</a><br>sekar@eil.ae  | 100892 | Third party laboraory |
| 6 | Lonestar Technical Services     | Dubai, UAE     | 1. Mechanical Testing;<br>2. Failure investigation.<br>3. ASTM A262 Pr E;<br>4. ASTM G 48 Method A;<br>5. ASTM G28 Method A;<br><b>6. Hydrogen Induced Cracking (HIC)</b>      | Curtis Grigg<br>Operations Manager<br>IH IAQ Department Manager<br>P.O. Box 8817<br>Inside Dubai Ship Docking Yard<br>Building # DY34, Al Jadaf<br>Dubai - United Arab Emirates<br>Tel: +971-4-324 3888 Ext: 118<br>Mobile: +971-50-654 0769<br><a href="mailto:curtis.lts@lonestar-lab.com">curtis.lts@lonestar-lab.com</a><br>Web site: <a href="http://www.lonestar-lab.com">www.lonestar-lab.com</a> |        | Third party laboraory |
| 7 | CAPCIS, UK                      | Manchester, UK | 1. Failure investigation.<br>2. ASTM A262 Pr E;<br>3. ASTM G 48;<br>4. ASTM G28;<br>5. Hydrogen Induced Cracking<br>6. Sulphide Stress Corrosion Cracking- FPB;                | CAPCIS, UK<br>Intertek-CAPCIS<br>Intertek Industry & Assurance Division<br>Bainbridge House, 86-90 London Road, Manchester, M1 2PW,<br>United Kingdom<br>Tel: +44(0) 161 933 4000<br>Fax: +44(0) 161 933 4001  | 101433 | Third party laboraory |

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|    |                  |                       |   |   |        |                       |
|----|------------------|-----------------------|---|---|--------|-----------------------|
|    |                  |                       | UT for CS and CRA using autoclaves<br>7. Corrosion testing - Rotating Cage, Rotating Cylinder, Potentiodynamic polarization   | Mobile: +44(0) 7796 675522<br>graeme.dicken@intertek.com<br><a href="http://www.capcis.com">http://www.capcis.com</a>   |        |                       |
| 8  | TWI, UK          | Cambridge, UK         | 1. Failure investigation.<br>2. ASTM A262 Pr E;<br>3. ASTM G 48;<br>4. ASTM G28;<br>5. Hydrogen Induced Cracking<br>6. Sulphide Stress Corrosion Cracking- FPB;<br>UT for CS and CRA using autoclaves | 7. TWI, UK<br>TWI limited<br>Granta Park<br>Great Abington<br>Cambridge CB21 6AL, UK<br>joanna.nicholas@twi.co.uk<br>TWI Website: <a href="http://www.twi.co.uk">www.twi.co.uk</a><br>chi.lee@twi.co.uk   |        | Third party laboraory |
| 9  | CNPC, China      | Xi'an, Shannxi, China | <b><u>1. Hydrogen Induced Cracking (HIC)</u></b>  | CNPC<br>Research Institute of Tubular Goods (TGRC)<br>Corrosion and prevention research center<br>Yin Chengxian, Vice Director<br>No.32, Dianzier road, Xi'an, Shannxi, China 710066<br>Tel: 86-29-88726085<br>Mobile: 13991 183913<br>Fax: 86-29-88223416<br>Email:<br>yincx@tgrc.org<br>yinchengxian@yahoo.com.cn<br>Website: <a href="http://www.tgrc.org">http://www.tgrc.org</a> |        | Third party laboraory |
| 10 | CRC Shell Canada | Calgary, Canada       | 1. Failure investigation.<br>2. ASTM A262 Pr E;<br>3. ASTM G 48;<br>4. ASTM G28;<br><b><u>5. Hydrogen Induced Cracking (HIC)</u></b><br>6. Sulphide Stress Corrosion Cracking- FPB;                   | Shell Global Solutions Canada<br>A Div. of Shell Chemicals Americas Inc.<br>3655 36 Street NW, Calgary, Alberta T2L 1Y8, Canada<br>Tel: +1 403 384 6560<br>Cell: 403-607-0986<br>Email: <a href="mailto:irina.ward@shell.com">irina.ward@shell.com</a><br>Internet: <a href="http://www.shell.ca">http://www.shell.ca</a>   | 610033 | Shell laboratory      |

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|    |                        |                |   |   |   |
|----|------------------------|----------------|---|---|---|
|    |                        |                | UT for CS and CRA using autoclaves<br>7. Corrosion testing - Rotating Cage, Rotating Cylinder, Potentiodynamic polarization |   |   |
| 11 | GIPI, Sohar, Oman      | Muscat, Oman   | <b><u>1. Hydrogen Induced Cracking (HIC)</u></b>  | Sohar industrial Estate, Sohar, Sultanate of Muscat.<br>Website: www.gipi.co.om   | Company in house laboratory. HIC tested coupon evaluation to be carried out in presence of UEOC1 team member. |
| 12 | Metallurgical Services | Mumbai, India  | <b><u>1. Hydrogen Induced Cracking (HIC)</u></b><br>2. CTOD   | METALLURGICAL SERVICES, Mehta House; Ashok Silk Mills Lane, Opp. Damodar Park, Off L.B.S. Marg, Ghatkopar (W), Mumbai-400 086 Phone : 022 25000240 / 41; Fax : 022 2500 1740; metallurgicalservices@gmail.com | Third party laboraory   |
| 13 | Dillinger Hutte        | Saar, Germany  | <b><u>1. Hydrogen Induced Cracking (HIC)</u></b>  | Dillinger Hütte GTS; Saar; Dillingen; Germany; Tel.: +49 (0) 68 31 - 47 37 51; Fax: +49 (0) 68 31 - 47 99 26 85; Mail: marc-pierre.heiz@dillinger.biz; Web: http://www.dillinger.de                           | Company in house lab  |
| 14 | Sider Test S.r.l       | Picenza, Italy | <b><u>1. Hydrogen Induced Cracking (HIC)</u></b>  | Paolo Amani; Sider Test s.r.l.; Tel. +39 0523 881.900; p.amani@sider-test.it  | Third party laboraory   |