

# Schedule

ANSA WENS Quality Assurance (Singapore) Pte Ltd  
25 Woodlands Industrial Park E1  
#02-01  
Singapore 757743

Certificate No. : LA-2017-0667-D  
Issue No. : 8  
Date : 04 September 2023  
Expiry of Certificate : 23 July 2025  
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FIELD OF TESTING : Non-Destructive Testing

NDT TECHNIQUES	MATERIALS/ PRODUCTS TESTED	STANDARD METHODS/ TECHNIQUES/EQUIPMENT
<p>1. <b>Penetrant Testing (PT)</b></p> <p>a. Portable Fluorescent &amp; Visible</p> <p>Solvent Removable</p>	<p>All Materials / Products covered under the general standards</p> <p>Weld Joints</p> <p>Castings &amp; Forgings</p>	<p><b><u>General Standards</u></b> ASME Section V Article 1, 6, 24: 2021 ASTM E165: 2018 ASTM E1417: 2021 AS 2062: 1997 BS EN 1011 - 1: 2009 BS EN 1011 - 2: 2001 BS EN ISO 3452-1: 2021 AWS D1.1/ D1.1M: 2020 API 1104: 2016 API 650: 2020 ASME B31.1/B31.3: 2020</p> <p><b><u>Specific Standards</u></b> ASME Section VIII DIV I: 2021 ASME Section IX: 2021 BS EN ISO 23277: 2015</p> <p><b><u>Specific Standards</u></b> ASTM E1209: 2021 ASTM E1418: 2021 ISO 3452-1: 2013</p>
<p>2. <b>Magnetic Particle Testing (MT)</b></p> <p>a. Portable Fluorescent &amp; Visible</p> <p>Wet Particle Dry Particle</p>	<p>All Materials/ Products covered under the general standards</p>	<p><b><u>General Standards</u></b> ASME Section V Article 1,7,25: 2021 ASTM E1444: 2021 ASTM E 709: 2021 AS 1171: 1998 BS EN ISO 9934-1: 2016 BS EN ISO 17638: 2016 AWS D1.1/ D1.1M: 2020 API 650: 2020 API 1104: 2016 ASME B31.1/B31.3: 2021</p>

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<p>3. <b>Ultrasonic Test (UT)</b> Contact Method</p> <p><b>Application</b></p> <p>a. Flaw Detection</p> <p>b. Thickness Measurement (UTG)</p>	<p>Welded Joints</p> <p>All Materials / Products covered under the general standards</p> <p>Welded joints</p> <p>Steel Forging</p> <p>Castings</p>	<p><b><u>Specific Standards</u></b> ASME Section VIII Division I: 2021 ASME Section IX: 2021 BS EN ISO 23278: 2015 API 650: 2020</p> <p><b><u>General Standards</u></b> ASME Section V Article 1,4,5,23: 2021 ASTM E114: 2020 ASTM E797: 2021 (Thickness) BS EN ISO 16810: 2014 BS EN ISO 17640: 2018 ASME B 31.1: 2020 ASME B 31.3: 2020 ASTM E 213: 2022</p> <p><b><u>Specific Standards</u></b> AWS D1.1/D1.1M: 2020 ASTM E 164: 2019 AS 2207: 2007 BS EN ISO 11666: 2018 BS EN ISO 17640: 2018 ASME Section VIII Division I: 2021 ASME Section IX: 2021 API 1104: 2016 API 650: 2020 BS EN 10160: 1999</p> <p>ASTM A 388: 2019 BS EN 10228-3: 2016 BS EN 10228-4: 2016 BS EN ISO 10893 - 8,10,11: 2011, A1: 2020 ASTM A 435: 2017 ASTM A 578: 2017</p> <p>BS EN 12680-1: 2003 BS EN 12680-2: 2003 BS EN 12680-3: 2011 BS EN 10228-3: 2016 BS EN 10228-4: 2016</p>

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<p>4. <b>Phased Array Ultrasonic Testing (PAUT)</b></p> <p>a. Weld</p> <p>b. Corrosion Mapping</p>	<p>All materials/ products covered under the General Standard</p> <p>Ferrous/ Non-ferrous material component &amp; welding</p>	<p><b><u>General Standards</u></b> ASME Section V Article 4: 2021 BS EN ISO 13588: 2019</p> <p><b><u>Specific Standards</u></b> ASME Section VIII: 2021 ASTM E2491: 2018 ASTM E317: 2021 BS EN ISO 19285: 2017</p> <p><b><u>General Standards</u></b> ASME Section V Article 4: 2021 ASME Section VIII: 2021 ASTM E317: 2021 ASTM E2491-13: 2018</p>
<p>5. <b>Time of Flight Diffraction (TOFD)</b></p>	<p>Weldments</p>	<p><b><u>General Standards</u></b> ASME Section V Article 4: 2021 BS EN ISO 10863: 2020</p> <p><b><u>Specific Standards</u></b> ASME Section VIII: 2021 ASTM E2373: 2019 ASTM E317: 2021 BS EN ISO 16828: 2014</p>
<p>6. <b>Visual Testing (VT)</b> Direct Visual Testing</p>	<p>All Materials/ Products covered under the general standards</p>	<p><b><u>General Standards</u></b> ASME Section V Article 9: 2021 BS EN ISO 5817: 2014 BS EN 1011-1: 2009 BS EN 1011-2: 2001 BS EN ISO 17637: 2016 BS EN 13018: 2016</p> <p><b><u>Specific Standards</u></b> AWS D1.1/D1.1M: 2020 ASME B31.1/B31.3 :2021</p>

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<p>7. <b>Positive Material Identification (PMI)</b> X-Ray Florescent</p>	<p>All Materials of Atomic Number 22 and above</p>	<p><b><u>General Standards</u></b> ASTM A751: 2021</p> <p><b><u>Specific Standards</u></b> ASME Section II: 2021 ASTM E1476 - 04: 2014 ASTM E1085: 2016 ASTM E1621: 2021 AWS A5.5/A5.5M: 2014</p>
<p>8. <b>Eddy Current Testing (ET)</b> Ferrous Materials</p>	<p>Materials Components &amp; Structures</p>	<p><b><u>General Standards</u></b> ASME Section V Article 8, 26: 2021 ASME Section VIII: 2021 BS EN ISO 15549: 2019</p> <p><b><u>Specific Standards</u></b> BS EN ISO 17643: 2015</p>
<p>9. <b>Radiographic Testing (RT)</b>  <b>X – Ray</b> Detection Medium Film</p>	<p>All Materials / Products covered under the general standards</p> <p>Welded Joints</p>	<p><b><u>General Standards</u></b> ASME Section V Article 1,2,22: 2021 ASTM E94 – 2017 ASTM E 1742 - 2018 BS EN ISO 5579: 2013 API 1104: 2016 API 650: 2020 ASTM E1030: 2021 ASME B 31.1: 2020 ASME B 31.3: 2020</p> <p><b><u>Specific Standards</u></b> AWS D1.1/D1.1M: 2020 AS 2177 Pt 1: 2006 BS EN ISO 17636 - 1: 2013 BS EN ISO 10675 - 1: 2021 ASME Section VIII DIV I: 2021 ASME Section IX: 2021 ASTM E1032: 2019</p>

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## Approved signatories

1. Mr Sajeesh Kumar Babu - For all items
2. Mr Sasikumar Palaiya - MT, PT, RT, UT, PMI
3. Mr Hanuman Namdeo Mane - MT, PT, VT, PAUT, ToFD
4. Mr Edwin Antony Raj Selvaraj - UT (a) Flaw Detection (ASME Sect V / ASME B31.3)  
- PAUT (a) Weld (ASME Sect V / ASME Sect VIII Div 8)

## Note:

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025. A laboratory's fulfilment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results. The management system requirements in ISO/IEC 17025 are written in language relevant to laboratory operations and operate generally in accordance with the principles of ISO 9001.