

# Schedule

CCIC Singapore Pte Ltd  
48 Banyan Drive  
Singapore 627769

Certificate No. : LA-2015-0598-D  
Issue No. : 10  
Date : 14 September 2023  
Expiry of Certificate : 14 September 2027  
Page : 1 of 3

FIELD OF TESTING: Non-Destructive Testing

| NDT TECHNIQUES  | MATERIALS / PRODUCTS TESTED   | STANDARD METHODS / TECHNIQUES  |
|---|---|--|
| <p><b>1. Penetrant Testing (PT)</b></p> <p>a. Visible &amp; Fluorescent (Solvent Removable Method)</p>  | Non-porous metallic material  | <p><b><u>General Standards:</u></b><br/>ASME Sec V: 2021<br/>ASTM SE 165: 2018<br/>ISO BS EN 3452 Part 1: 2021<br/>ISO BS EN 3452 Part 2: 2021<br/>ISO BS EN 3452 Part 3: 2021</p> <p><b><u>Specific Standards:</u></b><br/>ASME Sec I: 2021<br/>ASME Sec VIII DIV 1: 2021<br/>ASME Sec IX: 2021<br/>ASME B31.1: 2022<br/>ASME B31.3: 2022<br/>API 5L: 2018<br/>API 650: 2021<br/>AWS D1.1: 2020<br/>BS EN ISO 23277: 2015</p> |
| <p><b>2. Magnetic Particle Testing (MT)</b></p> <p>a. Visible &amp; Fluorescent Method</p> <p>b. Magnetization Method AC &amp; Permanent Magnet</p> | <p>Ferromagnetic material<br/>Welding, Casting, Forging, Rolling</p> <p>Weld Joints</p> | <p><b><u>General Standards:</u></b><br/>ASME Sec V: 2021<br/>ASTM E709: 2015<br/>BS EN 17638: 2016</p> <p><b><u>Specific Standards:</u></b><br/>ASME Sec I: 2021<br/>ASME Sec VIII DIV 1: 2021<br/>ASME Sec IX: 2021<br/>ASME B31.3: 2022<br/>AWS D1.1: 2020<br/>BS EN ISO 23278: 2015</p>   |

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Certificate No.: LA-2015-0598-D

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Page: 2 of 3

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|--|--|--|
| <p><b>3. Ultrasonic Test Application</b></p> <p>a. Ultrasonic Thickness Gauging (UTG)</p> <p>b. Flaw Detection/ Thickness measurement (Contact method – Manual and Crawler)</p> <p>c. Thickness measurement using robotic crawler on tank shell plates and roof plates</p> <p><b>4. Magnetic Flux Leakage (MFL):</b><br/>Scanning for tank bottom plates</p> | <p>All Materials / Products under the general / specific standards</p> <p>For ferromagnetic tank shell plates / tank roof plates</p> <p>For ferromagnetic tank bottom plates</p> | <p><b><u>General Standards:</u></b><br/>ASME Sec V: 2021<br/>ASTM E797: 2021<br/>BS EN 1714: 2003</p> <p><b><u>General Standards:</u></b><br/>ASME Sec V: 2021<br/>ASTM E164: 2019<br/>ASTM E114: 2020<br/>ASTM E213: 2021<br/>ASTM A578: 2017<br/>ASTM B594: 2013<br/>ASTM E797: 2021<br/>BS EN 17640: 2010</p> <p><b><u>Specific Standards:</u></b><br/>ASME Sec I: 2021<br/>ASME Sec VIII DIV 1: 2021<br/>ASME Sec IX: 2021<br/>ASME B31.1: 2022<br/>ASME B31.3: 2022<br/>AWS D1.1: 2020<br/>BS EN ISO 11666: 2018<br/>EN 14730-1: 2017</p> <p>SGP-NDT-SOP-044 rev 2.0 (In-house procedure) as per ASME Sec V: 2021</p> <p><b><u>Specific Standards:</u></b><br/>SGP-NDT-SOP-025 rev 3.0 (In-house procedure) as per ASME Sec V: 2021</p> |

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Page: 3 of 3

## Approved Signatories

Thirunavukkarasu Sundar - For all tests

Sandeep Singh Johal - For MT, PT & MFL

## Note :

This laboratory is accredited in accordance with the recognised 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 (Section 4) are written in language relevant to laboratory operations and meet the principles of ISO 9001 **Quality Management Systems — Requirements** and are aligned with its pertinent requirements.