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|------------------------|---|---|---|---|-----|--|---|
| 1. Title               | Non-destructive test ( NDT ) - ultrasonic testing   |   |   |   |     |  |   |
| 2. Code                | EMCUMA202A  |   |   |   |     |  |   |
| 3. Range               | Use ultrasonic testing instruments, at servicing centres or locations with operating equipment, to detect and examine internal damages of metallic equipment and material thickness.  |   |   |   |     |  |   |
| 4. Level               | 2   |   |   |   |     |  |   |
| 5. Credit              | 3   |   |   |   |     |  |   |
| 6. Competency          | <p style="text-align: center;"><u>Performance Requirements</u></p> <table border="0"> <tr> <td style="vertical-align: top;">6.1</td> <td style="vertical-align: top;">Techniques and working principles of applying ultrasound to inspect internal damages of metallic equipment and material thickness</td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>◆ Understand the principles of ultrasonic detection and examination technology used to inspect internal damages of metallic equipment and material thickness</li> <li>◆ Understand the processing requirements for work piece surface before conducting ultrasonic inspection</li> </ul> </td> </tr> <tr> <td style="vertical-align: top;">6.2</td> <td style="vertical-align: top;">Methods and procedures of inspecting internal damages of metallic equipment and material thickness</td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>◆ Capable to process work piece surface properly according to work pieces that need ultrasonic inspection</li> <li>◆ Capable to use ultrasonic testing instruments to detect and examine internal damages of metallic equipment and material thickness</li> <li>◆ Capable to use ultrasonic testing instruments to measure and calculate crack positions and size</li> <li>◆ Capable to mark the position with cracks clearly</li> </ul> </td> </tr> </table> | 6.1   | Techniques and working principles of applying ultrasound to inspect internal damages of metallic equipment and material thickness | <ul style="list-style-type: none"> <li>◆ Understand the principles of ultrasonic detection and examination technology used to inspect internal damages of metallic equipment and material thickness</li> <li>◆ Understand the processing requirements for work piece surface before conducting ultrasonic inspection</li> </ul> | 6.2 | Methods and procedures of inspecting internal damages of metallic equipment and material thickness | <ul style="list-style-type: none"> <li>◆ Capable to process work piece surface properly according to work pieces that need ultrasonic inspection</li> <li>◆ Capable to use ultrasonic testing instruments to detect and examine internal damages of metallic equipment and material thickness</li> <li>◆ Capable to use ultrasonic testing instruments to measure and calculate crack positions and size</li> <li>◆ Capable to mark the position with cracks clearly</li> </ul> |
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| 7. Assessment Criteria | <p>The integrated outcome requirement of this unit of competency is:</p> <p>(i) Capable to use ultrasonic testing technology correctly to inspect internal damages of metallic equipment and material thickness; measure and calculate crack positions and size; and record and mark the positions and size of the cracks.</p>  |   |   |   |     |  |   |
| 8. Remarks             | The credit value of this unit of competency is set on the presumption that the person is familiar with liquid penetration inspection.   |   |   |   |     |  |   |