

**071505T4WAF**

**WELDING AND FABRICATION LEVEL 5**

**ENG/OS/WEF/CR/05/5**

**Perform Tungsten Inert Gas (TIG) Welding**

**July/August 2025**



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION  
COUNCIL (TVET CDACC)**

**PRACTICE ASSESSMENT**

**INSTRUCTIONS TO ASSESSOR**

1. Assess the candidate as the practical progresses observing the critical areas
2. You are required to mark the practical as the candidate performs the tasks
3. You are required to take video clips at critical points
4. Ensure the candidate has a name tag and registration code at the back and front

## OBSERVATION CHECKLIST

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |                       |                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|-----------------------|-----------------|
| <b>Candidate's Name &amp; Registration Code</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |                       |                 |
| <b>Assessors' Name &amp; Registration Code</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                        |                       |                 |
| <b>Venue of Assessment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                        |                       |                 |
| <b>Date of Assessment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                        |                       |                 |
| <b>Items to be Evaluated:</b> <i>Please award marks as appropriate. Give a brief comment on your observation</i>                                                                                                                                                                                                                                                                                                                                                                                        | <b>Marks Available</b> | <b>Marks Obtained</b> | <b>Comments</b> |
| 1. Adhered to prescribed safety; <ul style="list-style-type: none"> <li>Wore and used PPEs               <ul style="list-style-type: none"> <li>Overall</li> <li>TIG welding shield</li> <li>Safety boots</li> <li>Leather gloves</li> <li>Leather Apron</li> </ul> </li> <li>Demonstrated safe use of workshop tools</li> </ul> <i>(Award 1 or 0 mark for each)</i>                                                                                                                                    | 6                      |                       |                 |
| 2. Set up Tungsten Inert Gas (TIG) welding equipment as per the job specification; <ul style="list-style-type: none"> <li>Machine start up               <ul style="list-style-type: none"> <li>Connected cables to allow welding</li> <li>Set current to enable welding of the 5 mm thick flat bar and plates</li> <li>Set gas flow to allow welding</li> </ul> </li> <li>Machine shut down               <ul style="list-style-type: none"> <li>Turned off TIG welding machine</li> </ul> </li> </ul> | 6                      |                       |                 |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--|--|
| <ul style="list-style-type: none"> <li>• Closed gas</li> <li>• Hanged the cables</li> </ul> <p><i>(Award 1 or 0 mark for each)</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |  |  |
| 3. Performed housekeeping; <ul style="list-style-type: none"> <li>• Cleaned the work station</li> <li>• Disposed waste correctly</li> <li>• Wiped the tools clean</li> <li>• Returned the tools and accessories to the right place</li> </ul> <p><i>(Award 1 or 0 marks for each)</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 4         |  |  |
| <b>Sub-Total 1</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>16</b> |  |  |
| <b>PRODUCT CHECKLIST</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |  |  |
| 4. Prepared work pieces according to the task specifications; <ul style="list-style-type: none"> <li>• Dimensions: Linear tolerance: <math>\pm 1</math> mm</li> </ul> <p><b>All dimensions are in mm</b></p> <ul style="list-style-type: none"> <li>• 115 (</li> <li>• 100 (</li> <li>• 80 (<math>4 \times \frac{1}{2}</math>)</li> <li>• 50 (<math>8 \times \frac{1}{2}</math>)</li> <li>• 40 (<math>2 \times \frac{1}{2}</math>)</li> <li>• Squareness of work pieces               <ul style="list-style-type: none"> <li>• 115 <math>\times</math> 100 work piece (<math>4 \times \frac{1}{2}</math>)</li> <li>• 80 <math>\times</math> 50 work piece (<math>4 \times \frac{1}{2}</math>)</li> <li>• 100 <math>\times</math> 50 work piece (<math>8 \times \frac{1}{2}</math>)</li> <li>• 80 <math>\times</math> 40 work piece (<math>4 \times \frac{1}{2}</math>)</li> </ul> </li> </ul> <p><i>(Award <math>\frac{1}{2}</math> or 0 mark for each)</i></p> | 21        |  |  |
| <b>Sub-Total</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>21</b> |  |  |
| 5. Performed welding positions as per the job specifications; <ul style="list-style-type: none"> <li>• 1G</li> <li>• 2F</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4         |  |  |

|                                                                                                                                                                                                                                                                                                                                                            |           |  |  |
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| <ul style="list-style-type: none"> <li>• 3F</li> <li>• 4F</li> </ul> <p>(Award 1 or 0 mark for each)</p>                                                                                                                                                                                                                                                   |           |  |  |
| <b>Sub-Total</b>                                                                                                                                                                                                                                                                                                                                           | <b>4</b>  |  |  |
| 6. Open corner joint; <ul style="list-style-type: none"> <li>• Alignment <math>90^\circ \pm 1</math></li> <li>• Weld quality             <ul style="list-style-type: none"> <li>• Proper fusion</li> <li>• No undercut</li> <li>• Uniform bead</li> </ul> </li> </ul> <p>(Award 2 or 0 marks for each)</p>                                                 | 8         |  |  |
| <b>Sub-Total</b>                                                                                                                                                                                                                                                                                                                                           | <b>8</b>  |  |  |
| 7. Tee joint; <ul style="list-style-type: none"> <li>• Alignment <math>90^\circ \pm 1</math></li> <li>• Weld quality             <ul style="list-style-type: none"> <li>• Proper fusion</li> <li>• No undercut</li> <li>• No cavities</li> <li>• Uniform bead</li> <li>• Start</li> <li>• Stop</li> </ul> </li> </ul> <p>(Award 2 or 0 marks for each)</p> | 14        |  |  |
| <b>Sub-Total</b>                                                                                                                                                                                                                                                                                                                                           | <b>14</b> |  |  |
| 8. Lap joint; <ul style="list-style-type: none"> <li>• Alignment – Overlapping distance 25 mm <math>\pm 1</math></li> <li>• Weld quality             <ul style="list-style-type: none"> <li>• No undercut</li> <li>• No slag inclusions</li> <li>• Uniform bead</li> <li>• Proper fusion</li> <li>• Start</li> </ul> </li> </ul>                           | 14        |  |  |

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--|--|
| <ul style="list-style-type: none"> <li>• Stop</li> </ul> <i>(Award 2 or 0 marks for each)</i>                                                                                                                                                                                                                                                          |           |  |  |
| <b>Sub-Total</b>                                                                                                                                                                                                                                                                                                                                       | <b>14</b> |  |  |
| 9. Butt joint; <ul style="list-style-type: none"> <li>• Weld quality               <ul style="list-style-type: none"> <li>• No undercut</li> <li>• No slag inclusions</li> <li>• Uniform bead</li> <li>• Proper fusion</li> <li>• Start</li> <li>• Stop</li> </ul> </li> </ul> <i>(Award 2 or 0 marks for each)</i>                                    | 12        |  |  |
| <b>Sub-Total</b>                                                                                                                                                                                                                                                                                                                                       | <b>12</b> |  |  |
| 10. Assembly; <ul style="list-style-type: none"> <li>• Welded as per working drawing</li> </ul> <i>(Award 2 marks)</i>                                                                                                                                                                                                                                 | 2         |  |  |
| <b>Sub-Total</b>                                                                                                                                                                                                                                                                                                                                       | <b>2</b>  |  |  |
| 11. Quality of finished product; <i>(Award 4 marks)</i>                                                                                                                                                                                                                                                                                                | 4         |  |  |
| <b>Sub-Total</b>                                                                                                                                                                                                                                                                                                                                       | <b>4</b>  |  |  |
| <b>Sub-Total 2</b>                                                                                                                                                                                                                                                                                                                                     | <b>79</b> |  |  |
| <b>GRAND TOTAL</b>                                                                                                                                                                                                                                                                                                                                     | <b>95</b> |  |  |
| <b>ASSESSMENT OUTCOME</b>                                                                                                                                                                                                                                                                                                                              |           |  |  |
| The candidate was found to be: <div style="display: flex; justify-content: space-around; align-items: center;"> <div>Competent <input type="checkbox"/></div> <div>Not yet Competent <input type="checkbox"/></div> </div> <p><i>(Please tick as appropriate)</i></p> <p><i>(The candidate is competent if the candidate obtains at least 50%)</i></p> |           |  |  |
| <b>Feedback from the Candidate:</b>                                                                                                                                                                                                                                                                                                                    |           |  |  |

|                                           |                           |
|-------------------------------------------|---------------------------|
| <b>Feedback to the Candidate:</b>         |                           |
| <b>Candidate Signature:</b><br><br>_____  | <b>Date:</b><br><br>_____ |
| <b>Assessor's Signature:</b><br><br>_____ | <b>Date:</b><br><br>_____ |