

**071504T4WLD**

**WELDING LEVEL 4**

**ENG/OS/WEF/CR/04/4/A**

**PERFORM GAS WELDING IN ALL POSITIONS WITH VARIOUS METAL WORK  
PIECES**

**July/August 2024**



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

**ASSESSOR GUIDE  
PRACTICAL ASSESSMENT**

**INSTRUCTIONS TO THE ASSESSOR:**

1. You are required to mark the practical as the candidate performs the task;
2. You are required to take video clips at critical points;
3. Ensure the candidate has an identification tag pinned at the back and front near the shoulders showing candidates name and registration code.

*Note: Assessor is required to plan for hold points/stoppage points to check, observe or verify items in a manner that do not interfere with the candidate's progress during practice session.*

**This guide consists of SIX (6) printed pages.**

**Turn Over**

| OBSERVATION CHECKLIST                                                                                                                                                                                                                                            |                   |                     |                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------|----------------|
| Candidate's Name:                                                                                                                                                                                                                                                |                   |                     |                |
| Candidates' registration code:                                                                                                                                                                                                                                   |                   |                     |                |
| Assessor's Name:                                                                                                                                                                                                                                                 |                   |                     |                |
| Assessors' registration code:                                                                                                                                                                                                                                    |                   |                     |                |
| Venue of assessment:                                                                                                                                                                                                                                             |                   |                     |                |
| Date of assessment:                                                                                                                                                                                                                                              |                   |                     |                |
| <b>Items to be evaluated.</b> Award marks appropriately. <i>Give a brief comment where less marks are awarded.</i>                                                                                                                                               | <b>Max. marks</b> | <b>Actual marks</b> | <b>Comment</b> |
| 1. Adhered to prescribed safety as per workplace procedure and OSHA:<br>a) Wore and used PPEs correctly<br>i) Welding shield/ goggles<br>ii) Safety boots<br>iii) Leather gloves<br>iv) Leather apron/ Overall/ Dust coat<br><b>(Award 1 or 0 mark for each)</b> | 1<br>1<br>1<br>1  |                     |                |
| <b>SUB- TOTAL</b>                                                                                                                                                                                                                                                | <b>4</b>          |                     |                |
| 2. Welding equipment set up as per task specifications:<br>a) Connected gas hoses correctly<br>b) Set working gas pressure to enable welding, on both cylinders<br>c) Closed the gas cylinder valve after welding<br><b>(Award 1 or 0 mark for each)</b>         | 1<br>1<br>1       |                     |                |
| <b>SUB- TOTAL</b>                                                                                                                                                                                                                                                | <b>3</b>          |                     |                |
| 3. Performed welding positions as per the job specifications:                                                                                                                                                                                                    |                   |                     |                |

|                                                              |           |  |  |
|--------------------------------------------------------------|-----------|--|--|
| a) 1G                                                        | 1         |  |  |
| b) 2F                                                        | 1         |  |  |
| c) 2G                                                        | 1         |  |  |
| d) 3F                                                        | 1         |  |  |
| e) 3G                                                        | 1         |  |  |
| f) 5F                                                        | 1         |  |  |
| g) 5G                                                        | 1         |  |  |
| <b>(Award 1 or 0 mark for each)</b>                          |           |  |  |
| <b>SUB - TOTAL</b>                                           | <b>7</b>  |  |  |
| 4. Performed housekeeping:                                   |           |  |  |
| a) Left the work area in a safe, clean and tidy state        | 1         |  |  |
| b) Segregated waste and disposed as per workplace procedures | 1         |  |  |
| c) Returned tools and unused materials                       | 1         |  |  |
| <b>(Award 1 or 0 mark for each)</b>                          |           |  |  |
| <b>SUB-TOTAL</b>                                             | <b>3</b>  |  |  |
| <b>TOTAL (observation)</b>                                   | <b>17</b> |  |  |
| <b>PRODUCT CHECKLIST</b>                                     |           |  |  |
| 5. Prepared work pieces according to task specifications:    |           |  |  |
| a) Dimensions: Linear tolerance: $\pm 1$ mm                  |           |  |  |
| <b>All dimensions are in mm</b>                              |           |  |  |
| i) 100 (20 $\times$ ½ )                                      | 10        |  |  |
| ii) 50 (4 $\times$ ½ )                                       | 2         |  |  |
| iii) 50 (on pipes) (2 $\times$ ½ )                           | 1         |  |  |
| <b>(Award ½ or 0 mark for each)</b>                          |           |  |  |
| b) Squareness of work pieces:                                |           |  |  |
| i) 100 $\times$ 100 (8 $\times$ ½ )                          | 4         |  |  |
| ii) 100 $\times$ 50 (4 $\times$ ½ )                          | 2         |  |  |
| <b>(Award ½ or 0 mark for each)</b>                          |           |  |  |

|                                                                                                                                                                                                                                                   |                                    |  |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|--|--|
| c) Performed edge preparation:<br>i) Created bevel on each workpieces ( $8 \times \frac{1}{2}$ )<br><b>(Award <math>\frac{1}{2}</math> or 0 mark for each)</b>                                                                                    | 4                                  |  |  |
| <b>SUB - TOTAL</b>                                                                                                                                                                                                                                | <b>23</b>                          |  |  |
| 6. Butt joint (in at least one of the butt joints):<br>a) Alignment<br>b) Weld quality<br>i) No undercut<br>ii) No cavities<br>iii) No cracks<br>iv) Proper fusion<br>v) No distortion<br><b>(Award 2 or 0 marks for each)</b>                    | 2<br><br><br>2<br>2<br>2<br>2<br>2 |  |  |
| <b>SUB - TOTAL</b>                                                                                                                                                                                                                                | <b>12</b>                          |  |  |
| 7. Corner joint (in at least one of the butt joints):<br>a) Alignment $90^\circ \pm 1$<br>b) Weld quality<br>i) No undercut<br>ii) No cavities<br>iii) No cracks<br>iv) No distortion<br>v) Proper fusion<br><b>(Award 2 or 0 marks for each)</b> | 2<br><br>2<br>2<br>2<br>2<br>2     |  |  |
| <b>SUB - TOTAL</b>                                                                                                                                                                                                                                | <b>12</b>                          |  |  |
| 8. Butt joint: (On two pipes joint)<br>a) Alignment $180^\circ \pm 1$<br>b) Weld quality<br>i) No undercut                                                                                                                                        | 2<br><br>2                         |  |  |

|                                                                          |             |  |  |
|--------------------------------------------------------------------------|-------------|--|--|
| ii) No cavities                                                          | 2           |  |  |
| iii) No cracks                                                           | 2           |  |  |
| iv) Proper fusion                                                        | 2           |  |  |
| v) No distortion                                                         | 2           |  |  |
| <b>(Award 2 marks or 0 for each)</b>                                     |             |  |  |
| <b>SUB - TOTAL</b>                                                       | <b>12</b>   |  |  |
| 9. Tee joint: (of pipe and plate)                                        |             |  |  |
| a) Weld quality                                                          |             |  |  |
| i) No undercut                                                           | 2           |  |  |
| ii) No cavities                                                          | 2           |  |  |
| iii) No cracks                                                           | 2           |  |  |
| iv) Proper fusion                                                        | 2           |  |  |
| v) No distortion                                                         | 2           |  |  |
| <b>(Award 2 marks or 0 for each)</b>                                     |             |  |  |
| b) Welded to 90° with the horizontal plate:                              | 2           |  |  |
| <b>(Award 2 or 0 marks)</b>                                              |             |  |  |
| <b>SUB - TOTAL</b>                                                       | <b>12</b>   |  |  |
| 10. Assembly:                                                            |             |  |  |
| a) Welded as per working drawing                                         | 2           |  |  |
| b) Welded as per weld symbols                                            | 2           |  |  |
| <b>(Award 2 or 0 marks for each)</b>                                     |             |  |  |
| <b>SUB-TOTAL</b>                                                         | <b>4</b>    |  |  |
| <b>TOTAL (product)</b>                                                   | <b>75</b>   |  |  |
| <b>GRAND TOTAL (Observation + Product)</b>                               | <b>92</b>   |  |  |
| <b>Candidate percentage Score = <math>\frac{x}{92} \times 100</math></b> | <b>100%</b> |  |  |

|                                                                   |                          |
|-------------------------------------------------------------------|--------------------------|
| <b>The candidate was found to be:</b>                             |                          |
| <input type="checkbox"/>                                          | <input type="checkbox"/> |
| Competent                                                         | Not yet competent        |
| <i>(Please tick as appropriate)</i>                               |                          |
| <i>(The candidate is competent if he/she gets 50% and above.)</i> |                          |
| <b>Feedback from candidate:</b>                                   |                          |
| -----                                                             |                          |
| -----                                                             |                          |
| <b>Feedback to candidate:</b>                                     |                          |
| -----                                                             |                          |
| -----                                                             |                          |
| <b>Candidate’s signature:</b>                                     | <b>Date:</b>             |
| -----                                                             | -----                    |
| <b>Assessor’s signature:</b>                                      | <b>Date:</b>             |
| -----                                                             | -----                    |

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