

071505T4MTP

MECHANICAL PRODUCTION TECHNICIAN LEVEL 5

ENG/OS/ME/CR/01/5/A

FABRICATE SHEET METAL PARTS

March/April 2025



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

PRACTICAL ASSESEMENT

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

Candidate's Name & Registration Code				
Assessors Name & Registration Code				
Venue of Assessment				
Date of Assessment				
Items to be Evaluated: <i>Please award marks as appropriate.</i> <i>Give a brief comment on your observation.</i>		Max. Marks	Actual Marks	Comment
1.	Adhered to prescribed safety measures: a. Wore PPE i. Gas welding goggles ii. Safety boots iii. Leather gloves iv. Apron/ overall/ dust b. Inspected machine safety; i. Drill guard in position ii. Gas welding hose pipe leakage (no leaks) (Award 1 mark or zero)	1 1 1 1 1 1		
2.	Prepared operation Plan as per the working drawing. (Steps as in attached appendix 2.) (Award ½ Mark for each operation and ½ for correct tool)	6		
3.	Performed fabrication operations as per the operation plan: a. Marked out the workpiece i. Assembled the required marking out tools(divider, centre punch, scriber, engineers square) ii. Laid out the pattern	1 1		

	iii. Scribed the dimensions on the workpiece (Award 1 Mark or zero)	1		
	b. Performed shearing operation i. Used the tinsnips to shear all sides as per the pattern markings (3 × 1) (Award 1 Mark or zero for each part)	3		
	c. Performed drilling i. Marked the hole centres using centre punch ii. Secured the workpiece on worktable and set spindle speed iii. Drilled the required holes (Award 1 Mark or zero)	1 1 1		
	d. Bent the workpiece as per the working drawing (Award 2 marks or zero)	2		
	e. Joined the workpieces b i. Brazed the sides ii. Brazed the handle (Award 1 marks or zero)	2 2		
4.	Inspected and filled the inspection checklist (as per attached candidate inspection checklist appendix 1.) (Award ½ Mark for every inspected dimension)	3		
5.	Performed house keeping a. Cleaned the machines using cotton waste and work area using broom b. Segregated waste and disposed in the respective bins c. Returned the tools to their designated storage areas.	1 1 1		
Sub total		33		

PRODUCT CHECKLIST

Items to be evaluated: Please award marks as appropriate. Give a brief comment on your observation.		Max-Marks	Marks obtained	Comment
6.	Produced the component as per the working drawing: • <i>All dimensions are in mm,</i> • <i>Tolerance ± 0.5</i>			
	Part No.1: BODY			
	a. Linear: i. 380 (2×1) ii. 330 (2×1) <i>(Award full marks or zero for each dimension)</i>	2 2 4		
	b. Squareness of folded box c. Straight edges <i>(Award full marks or zero for each item)</i>	4		
	Part No.2: HANDLE			
	a. Linear dimensions i. 320 <i>(Award full Marks for dimension)</i>	1		
	Part No.3: SIDES (2 OFF)			
	a. Linear dimensions i. 160 (2×1) ii. 130 (2×1) iii. 80 (2×1) iv. 118 (2×1) <i>(Award full marks for each correct dimension)</i>	2 2 2 2		
	b. Squareness of edges 6 × 1	6		

	c. Straightness of edges 10 × 1 d. Quality of drilled/punched hole i. No burrs (2 × 1) (Award full marks for each quality)	10 2		
7.	Assembled the parts as per the working drawing a. Overall dimensions: (Tolerance: ± 1.0 mm) i. 320 (2 × 2) ii. 160 (2 × 2) b. Brazed the sides to body (6 × 1) c. Brazed the handle to the sides (2 × 1) (Award full marks or zero) d. Quality of brazed joint i. uniform beads 2× 1 ii. no slag 2× 1 (Award 2 marks for eac	4 4 6 2 2 2		
	-total	59		
	GRAND T	92		
	Candidate Overall Score Candidate Score $\frac{x}{92} \times 100$			
ASSESSMENT OUTCOME				
The candidate was found to be: Competent ☐ Not yet competent ☐ <i>(Please tick as appropriate)</i> <i>(The candidate is competent if the candidate obtains at least 50%)</i>				
Feedback from candidate:				
Feedback to candidate:				

Candidate's Signature _____	Date _____
Assessor's Signature _____	Date _____

Appendix 2

OPERATION PLAN

Serial No.	Operation	Tool
1.	Marking out	Scriber, steel rule
2.	Shearing	Tinmans snips
3.	Drilling	Drill bit Ø 6
4.	Bending	Bench vice, mallet
5.	Gas welding	Gas welding equipment
6.	Edge treatment	Assorted files