

Assessment Evidence Guide

For

Dies and Mould Technology”

Level-4

Perform Advance Grinding Operations
(Formative Assessment)

1st -5th March 2021



**National Vocational & Technical
Training Commission**

Title of Qualification: National Vocational Certificate Level 4, (Dies and Mould Technology) "CAD/CAM Supervisor	CS Code:	Level: 4	Version: 01
Competency Standard Title: Perform Advance Grinding Operations	Assessment Date (DD/MM/YY): Assessment Time: 3hrs		

Candidate Details	Name: Registration/Roll Number:.....
Guidance for Candidate	To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment): Assessment Task 1: Candidate is required to perform Cylindrical Grinding operations on workpiece according to the drawing given by assessor. Assessment Task 2: Candidate is required to perform Tool and Cutter Grinding operations on workpiece according to the drawing given by assessor. Assessment Task 3: Candidate is required to perform Jig Grinding operations on workpiece according to the drawing given by assessor. And complete: Knowledge assessment test (Written or Oral) Portfolios at the time of assessment (if any)
Minimum Evidence Required	During a practical assessment, under observation by an assessor, you will complete: Assessment Task 1 Performance Criteria 1: Switch on the machine. Performance Criteria 2: Check the safety measures as per SOPs. Performance Criteria 3: Check and maintain coolant level. Performance Criteria 4: Run machine warm-up cycle. Performance Criteria 5: Select appropriate grinding wheel according to the work piece material. Performance Criteria 6: Mount the grinding wheel as per standard procedure. Performance Criteria 7: Dress the grinding wheel as per standard procedure. Performance Criteria 8: Select appropriate tool & clamping device according to the job requirement. Performance Criteria 9: Manage the measuring instruments as per job requirement. Performance Criteria 10: Check the grinding machine safety covers before starting the process. Performance Criteria 11: Set travel length of grinding wheel as per workpiece requirement.

	Performance Criteria 12: Set the appropriate RPM according to the requirement Performance Criteria 13: Perform centre to centre alignment of machine. Performance Criteria 14: Mount the work piece between centres as per requirement. Performance Criteria 15: Apply coolant on cylindrical grinding process. Performance Criteria 16: Perform Cylindrical grinding as per standard procedure. Performance Criteria 17: Check quality of the component at suitable intervals.
	Assessment Task 2 Performance Criteria 1: Select the suitable size, type and shape of grinding wheel. Performance Criteria 2: Mount work piece onto correct attachment for required procedure. Performance Criteria 3: Adjust the attachments according to different types of tools and cutter grinding. Performance Criteria 4: Follow procedure for sharpening of tools and cutter that is safe and appropriate. Performance Criteria 5: Check quality of the component at suitable intervals.
	Assessment Task 3 Performance Criteria 1: Select appropriate tool & clamping device according to the job requirement. Performance Criteria 2: Manage the measuring instruments as per job requirement. Performance Criteria 3: Mount the grinding tool as per SOPs. Performance Criteria 4: Check the grinding machine safety covers before starting the process. Performance Criteria 5: Execute Jig grinding operation according to SOPs as per requirement. Performance Criteria 6: Check quality of the component at suitable intervals. Performance Criteria 7: Perform cleaning of the job using appropriate tool. Performance Criteria 8: Inspect the job using appropriate measuring tool.

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Assessors Judgment Guide (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name:Registration/Roll Number: Candidate Signature:
Assessment Outcome	COMPETENT ☐ NOT YET COMPETENT ☐ Name of the Assessor:Assessor's code: Signature of the Assessor:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1 Candidate is required to perform Cylindrical Grinding operations on workpiece according to the drawing given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Switch on the machine.			
2.	Check the safety measures as per SOPs.			
3.	Check and maintain coolant level.			
4.	Run machine warm-up cycle.			
5.	Select appropriate grinding wheel according to the work piece material.			
6.	Mount the grinding wheel as per standard procedure			
7.	Dress the grinding wheel as per standard procedure.			
8.	Select appropriate tool & clamping device according to the job requirement.			
9.	Manage the measuring instruments as per job requirement.			
10.	Check the grinding machine safety covers before starting the process.			
11.	Set travel length of grinding wheel as per workpiece requirement.			
12.	Set the appropriate RPM according to the requirement			
13.	Perform centre to centre alignment of machine.			
14.	Mount the work piece between centres as per requirement.			
15.	Apply coolant on cylindrical grinding process.			
16.	Perform Cylindrical grinding as per standard procedure.			
17.	Check quality of the component at suitable intervals			
Competent ☐		Not Yet Competent ☐		

Assessment Task 2		Description of assessment task 2 Candidate is required to perform Tool and Cutter Grinding operations on workpiece according to the drawing given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Select the suitable size, type and shape of grinding wheel.			
2.	Mount work piece onto correct attachment for required procedure.			
3.	Adjust the attachments according to different types of tools and cutter grinding.			
4.	Follow procedure for sharpening of tools and cutter that is safe and appropriate.			
5.	Check quality of the component at suitable intervals.			
Competent ☐		Not Yet Competent ☐		

Assessment Task 3		Description of assessment task 3 Candidate is required to perform Jig Grinding operations on workpiece according to the drawing given by assessor.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Select appropriate tool & clamping device according to the job requirement.			
2.	Manage the measuring instruments as per job requirement.			
3.	Mount the grinding tool as per SOPs.			
4.	Check the grinding machine safety covers before starting the process.			
5.	Execute Jig grinding operation according to SOPs as per requirement.			
6.	Check quality of the component at suitable intervals.			
7.	Perform cleaning of the job using appropriate tool.			
8.	Inspect the job using appropriate measuring tool.			
Competent ☐		Not Yet Competent ☐		