

# Assessment Evidence Guide

## For

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Level-4

**Module name**  
(Formative Assessment)

*8<sup>th</sup> -12<sup>th</sup> March 2021*



**National Vocational & Technical  
Training Commission**

<b>Title of Qualification:</b> Metallography Technician-I	CS Code:	Level: 4	Version: 01
<b>Competency Standard Title:</b>  <b>Perform Fine Polishing Operation</b>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b>		

Candidate Details	Name: .....  Registration/Roll Number:.....
Guidance for Candidate	<p><b>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration &amp; assessment):</b></p> <p><b>Assessment Task 1:</b> Candidate is required to: Perform Polishing Operation Manually</p> <p><b>Assessment Task 2:</b> Candidate is required to: Perform Polishing Operation Automatically</p> <p><b>And complete:</b></p> <ol style="list-style-type: none"> <li><b>1. Knowledge assessment test (Written or Oral)</b></li> <li><b>2. Portfolios at the time of assessment (if any)</b></li> </ol>
Minimum Evidence Required	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <p><b>Assessment Task 1</b></p> <p><b>P1.</b> Identify polishing material specifications (micron number) according to metallographic standard and type of specimen.</p> <p><b>P2.</b> Adopt standard safety practice and procedure for handling.</p> <p><b>P3.</b> Attach napped polishing cloth on wheel of machine.</p> <p><b>P4.</b> Polishing is accomplished by decreasing down the abrasive micron number (09 to 01).</p> <p><b>P5.</b> Lubricating the grinding operation with special oil.</p> <p><b>P6.</b> Rotate the specimen at 90 degree after short intervals in manual operation and continuously ground until the scratches from previous polishing direction are removed.</p> <p><b>P7.</b> Change the abrasive cloth if required.</p>

	<p><b>Assessment Task 2</b></p> <p><b>P1.</b> Identify polishing material specifications (micron number) according to metallographic standard and type of specimen.</p> <p><b>P2.</b> Adopt standard safety practice and procedure for handling.</p> <p><b>P3.</b> Attach napped polishing cloth on wheel of machine.</p> <p><b>P4.</b> Polishing is accomplished by decreasing down the abrasive micron number (09 to 01).</p> <p><b>P5.</b> Lubricating the grinding operation with special oil.</p> <p><b>P6.</b> Thoroughly clean the specimen between each abrasive grit size in automated operation.</p> <p><b>P7.</b> Change the abrasive cloth if required.</p> <p><b>Portfolios required at the time of assessment (if any) for</b></p>
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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 <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> 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		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
	Identify polishing material specifications (micron number) according to metallographic standard and type of specimen.			
	Adopt standard safety practice and procedure for handling.			
	Attach napped polishing cloth on wheel of machine.			
	Polishing is accomplished by decreasing down the abrasive micron number (09 to 01).			
	Lubricating the grinding operation with special oil.			
	Rotate the specimen at 90 degree after short intervals in manual operation and continuously ground until the scratches from previous polishing direction are removed.			
	Change the abrasive cloth if required.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 2		Description of assessment task 2		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
	Identify polishing material specifications (micron number) according to metallographic standard and type of specimen.			
	Adopt standard safety practice and procedure for handling.			
	Attach napped polishing cloth on wheel of machine.			
	Polishing is accomplished by decreasing down the abrasive micron number (09 to 01).			
	Lubricating the grinding operation with special oil.			
	Thoroughly clean the specimen between each abrasive grit size in automated operation.			
	Change the abrasive cloth if required.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Title of Qualification: Metallography Technician-I</b>	CS Code:	Level:	Version: 01
<b>Competency Standard Title: Perform Fine Polishing Operation</b>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time: 30 min</b>		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
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**Assessors 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: .....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: ..... Assessor's code: Signature of the Assessor: .....

<b>Title of Qualification: Metallography Technician-I</b>	<b>CS Code:</b>	<b>Level:4</b>	<b>Version:</b> 01
<b>Competency Standard Title: Perform Fine Polishing Operation</b>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time: 30 min</b>		

#### WRITTEN ASSESSMENT

Question	Candidate's answer
Define purpose of fine polishing in Metallography.	<ul style="list-style-type: none"> <li>• Smooth surface</li> <li>• Bulge free surface</li> <li>• For further Final Polishing</li> </ul>
How fine polishing techniques used	<ul style="list-style-type: none"> <li>• By hands</li> <li>• Automatic</li> </ul>
Define General micron size ranges	<ul style="list-style-type: none"> <li>• 1-6 Micron</li> <li>• Diamond paste</li> </ul>
Define polishing cloths.	<ul style="list-style-type: none"> <li>• Used for fine polishing</li> <li>• Velvet</li> </ul>



