

# Assessment Evidence Guide

## For

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Level-2

**Module name**  
(Formative Assessment)

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



**National Vocational & Technical  
Training Commission**

<b>Title of Qualification:</b> Foreman in Metallurgy and Metal casting” Level-4	CS Code:	Level: 4	Version: 01
<b>Competency Standard Title:</b>  Perform Mounting Operation Perform Fine Grinding Operation Perform Fine Polishing Operation Perform Galvanizing Coating Perform rolling process Perform inspection	<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 Cold Mounting Operation</p> <p><b>Assessment Task 2:</b> Candidate is required to: Perform Hot Mounting Operation</p> <p><b>Assessment Task 3:</b> Candidate is required to: Perform Fine Grinding on Handy Met</p> <p><b>Assessment Task 4:</b> Candidate is required to: Perform Polishing Operation Manually</p> <p><b>Assessment Task 5:</b> Candidate is required to: Perform galvanizing coating operation</p> <p><b>Assessment Task 6:</b> Candidate is required to: Perform Cold rolling (2 roll) process as per given requirement</p> <p><b>Assessment Task 7:</b> Candidate is required to: Keep records</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>Performance Criteria</b></p> <p><b>P1.</b> Select the specimen side or face, which will be study.</p> <p><b>P2.</b> Place that side toward bottom of the mounting cup.</p> <p><b>P3.</b> Prepare the castable mounting material by mixing material A and B.</p> <p><b>P4.</b> Make past of mounting material by proper mixing.</p> <p><b>P5.</b> Lubricating the mounting cup by oil.</p> <p><b>P6.</b> Pour the mixture in mounting cup and leave it for settling.</p> <p>Remove the mounted specimen and ready for next step of metallography.</p> <p><b>P1.</b> Switch on the hot mounting machine.</p> <p><b>P2.</b> Select the area or side of specimen to be mounted.</p> <p><b>P3.</b> Place that side toward bottom of the mounting die.</p> <p><b>P4.</b> Measure the mounting material according to standard requirement.</p> <p><b>P5.</b> Transfer the mounting material into the mounting die.</p> <p><b>P6.</b> Select the mounting load according to standard and apply.</p> <p><b>P7.</b> Adjust the mounting temperature as per standard.</p> <p><b>P8.</b> Select the time for mounting.</p> <p>Remove the specimen from die and ready for next step.</p> <p><b>P1.</b> Adopt standard safety practice and procedure for handling.</p> <p><b>P2.</b> Select the set of emery or abrasive paper according to their grit size.</p> <p><b>P3.</b> Start grinding on paper from 60 to 1200 grit size.</p> <p><b>P4.</b> Use water during grinding operation.</p> <p><b>P5.</b> Rotate the specimen at 90 degree after short intervals in manual operation and continuously ground until the scratches from previous grinding direction are removed.</p> <p>Replace paper on requirement</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>
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	<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>Change the abrasive cloth if required.</p> <p><b>P1.</b> Identify galvanizing material specifications (Zn or Al %) according to standard and type of galvanizing coating on specimen.</p> <p><b>P2.</b> Adopt standard safety practice and procedure for handling process.</p> <p><b>P3.</b> Prepare molten metal bath to react specimen surface with molten material.</p> <p><b>P4.</b> Place specimen in the bath for given time</p> <p>Remove specimen from bath and detract the excess coating material through pressurized air</p> <p><b>P1.</b> Ensure occupation health safety and environment standards as per requirement</p> <p><b>P2.</b> Check the Property of Materials</p> <p><b>P3.</b> Measure the strip dimensions.</p> <p><b>P4.</b> Set parameters (pressure, current, speed, time temperature cycle, concentration, tension) according to coil specifications</p> <p><b>P5.</b> Handle command for carrying out the operation</p> <p>Perform Rolling operation with Two-High Rolling Mills</p> <p>Maintain records accurately using standard operating procedures</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
	<b>P6.</b> Label the identification number to recognize specimen identity.			
	<b>P7.</b> Perform proper documentation with date & time in log book.			
	<b>P8.</b> Record the initial conditions of Specimen.			
	<b>P9.</b> Use the measuring tool for marking.			
	<b>P10.</b> Mark the cutting area with permanent marker, to be sectioned or cut.			
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
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Title of Qualification:</b>	<b>CS Code:</b>	<b>Level:</b>	<b>Version:</b> 01
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Competency Standard Title:	Assessment Date (DD/MM/YY):
	Assessment Time: 30 min

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:</b>	CS Code:	Level:	Version: 01
<b>Competency Standard Title:</b>	<b>Assessment Date (DD/MM/YY):</b>  <b>Assessment Time:</b> 30 min		

### WRITTEN ASSESSMENT

Question	Candidate's answer
1. What is purpose of coating?	<ul style="list-style-type: none"> <li>• To protect metal surface</li> <li>• Lifetime</li> <li>• Enhance materiel properties</li> </ul>
2.	
3.	
4.	
5.	
6.	
7.	



Question	Candidate's answer
8.	
9.	