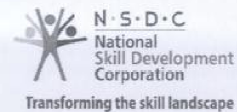




# Model Curriculum

## EOT Overhead Crane Operator

**SECTOR: IRON & STEEL**  
**SUB-SECTOR: STEEL, SPONGE IRON, FERRO ALLOYS,  
RE-ROLLERS, REFRACTORY**  
**OCCUPATION: OPERATIONS**  
**REF ID: ISC/Q0901**  
**NSQF LEVEL: 3**



## Certificate

### CURRICULUM COMPLIANCE TO QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

INDIAN IRON AND STEEL SECTOR SKILL COUNCIL

for the

### MODEL CURRICULUM

Complying to National Occupational Standards of

Job Role/ Qualification Pack: 'EOT / Overhead Crane Operator' QP No. 'ISC/Q 0901 NSQF Level 3'

Date of Issuance: December 22nd, 2015

Valid up to: December 21st, 2016

\* Valid up to the next review date of the Qualification Pack

  
Authorised Signatory  
(Indian Iron and Steel Sector Skill Council)



## TABLE OF CONTENTS

<b>1. Curriculum</b>	<b>04</b>
<b>2. Trainer Prerequisites</b>	<b>06</b>
<b>3. Annexure: Assessment Criteria</b>	<b>07</b>

# EOT Overhead Crane Operator

## CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “EOT Overhead Crane Operator”, in the “Iron & Steel” Sector/Industry and aims at building the following key competencies amongst the learner.

<b>Program Name</b>	<b>EOT Overhead Crane Operator</b>		
<b>Qualification Pack Name &amp; Reference ID.</b>	<b>EOT Overhead Crane Operator ISC/Q0901</b>		
<b>Version No.</b>	1.0	<b>Version Update Date</b>	30-12-2016
<b>Pre-requisites to Training</b>	Minimum qualification – 10 <sup>th</sup> standard		
<b>Training Outcomes</b>	<b>After completing this programme, participants will be able to:</b> <ul style="list-style-type: none"> <li>• Check the control systems of the crane</li> <li>• Operate the crane to transfer material</li> <li>• Use basic health and safety practices at the work place</li> <li>• Works effectively with others</li> </ul>		

This course encompasses 4 out of 4 National Occupational Standards (NOS) of “Operator EOT Overhead Crane Operator” Qualification Pack issued by “Indian Iron & Steel Sector Skill Council”.

Sr. No.	Module	Key Learning Outcomes	Equipment Required
1	<b>Over view of Iron &amp; Steel Industry</b>  <b>Theory Duration</b> (hh:mm) 04:00 <b>Practical Duration</b> (hh:mm) 00:00  <b>Corresponding NOS Code</b>	<ul style="list-style-type: none"> <li>• Understanding Iron &amp; steel industry</li> <li>• Understanding types of Iron &amp; Steel Industry</li> <li>• Understanding products of Iron &amp; Steel industry</li> <li>• Activities in Iron &amp; Steel Industry</li> </ul>	PPTs of Iron and steel manufacturing, Charts showing the same
2	<b>5S &amp; House keeping</b>  <b>Theory Duration</b> (hh:mm) 08:00 <b>Practical Duration</b> (hh:mm) 06:00	<ul style="list-style-type: none"> <li>• Identification of bottlenecks in functioning of work place</li> <li>• Various methods of housekeeping both pre-work &amp; post-work as well</li> </ul>	PPTs of 5S, Display Charts of 5S, Audit Checklists of 5S

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<b>Corresponding NOS Code</b> ISC/N0008		
3	<b>Check the control systems of the crane</b>  <b>Theory Duration</b> (hh:mm) 18:00  <b>Practical Duration</b> (hh:mm) 60:00  <b>Corresponding NOS Code</b> ISC/N0913	<ul style="list-style-type: none"> <li>Receive signal from Shop floor</li> <li>Inspect and prepare crane system as per Standard Operating Procedure (SOP)</li> </ul>	SOP for EOT crane setup and working, work instructions, Hand tools and power tools for EOT setup
4	<b>Operate the crane to transfer material</b>  <b>Theory Duration</b> (hh:mm) 24:00  <b>Practical Duration</b> (hh:mm) 114:00  <b>Corresponding NOS Code</b> ISC/N0914	<ul style="list-style-type: none"> <li>Operate crane to transfer material</li> </ul>	SOP for EOT crane setup and working, work instructions, Hand tools and power tools for EOT setup
5	<b>Use basic health and safety practices at the workplace</b>  <b>Duration</b> (hh:mm) 04:00  <b>Practical Duration</b> (hh:mm) 18:00  <b>Corresponding NOS Code</b> ISC/N0008	<ul style="list-style-type: none"> <li>Health and safety procedures</li> <li>Fire safety procedures</li> <li>Emergencies, rescue and first aid procedures</li> </ul>	PPE, Different Type of Safety Sign, First Aid Box, , Step Ladder, Sample Accident reports ,Fire Extinguishers, Items required for fire extinguisher and fire Safety
6	<b>Work effectively with others</b>  <b>Theory Duration</b> (hh:mm) 08:00  <b>Practical Duration</b> (hh:mm) 08:00	<ul style="list-style-type: none"> <li>Ensure appropriate communication with superiors, peers and others as applicable at work place</li> <li>Demonstrate appropriate behaviour and etiquette at work place</li> </ul>	Communication skills PPTs, Posters Team management posters

Sr. No.	Module	Key Learning Outcomes	Equipment Required
	<b>Corresponding NOS Code</b> ISC/N0009		
	<b>Total Duration</b>  <b>Theory Duration</b> 66:00  <b>Practical Duration</b> 206:00	<b>Unique Equipment Required:</b> <ul style="list-style-type: none"> <li>• Sample Fabrication drawings,</li> <li>• Basic hand tools such as spanner, pliers, pullers &amp; power tools</li> <li>• Measuring &amp; Precision measuring instruments such as a micro-meter, Vernier callipers,</li> <li>• SOP for EOT Operations</li> <li>• Material and Equipment for cleaning</li> <li>• Sample Documents for reporting's</li> <li>• Sample quality Controlling formats</li> <li>• Personal protective Equipment's and clothes</li> <li>• Different Type of Safety Sign, First Aid Box,</li> <li>• Safety instrument and clothing, Step Ladder, Sample Accident reports</li> <li>• Fire Extinguishers, Items required for fire extinguisher and fire Safety</li> </ul>	

Grand Total Course Duration: **272Hours, 0 Minutes**

(This syllabus/ curriculum has been approved by [Indian Iron and Steel Sector Skills Council](#))

### Trainer Prerequisites for Job role: “EOT Overhead Crane Operator” mapped to Qualification Pack: “ISC/Q0901”

Sr. No.	Area	Details
1	<b>Description</b>	To deliver accredited training service, mapping to the curriculum detailed above, in accordance with the Qualification Pack “ISC/Q0901”.
2	<b>Personal Attributes</b>	Aptitude for conducting training, and pre/ post work to ensure competent, employable candidates at the end of the training. Strong communication skills, interpersonal skills, ability to work as part of a team; a passion for quality and for developing others; well-organised and focused, eager to learn and keep oneself updated with the latest in the mentioned field
3	<b>Minimum Educational Qualifications</b>	Min. ITI Fitter pass and preferably CTI/ATI cleared/ Diploma Mechanical
4a	<b>Domain Certification</b>	Certified for Job Role: “EOT Overhead Crane Operator” mapped to QP: “ISC/Q0901”. Minimum accepted score is 80%.
4b	<b>Platform Certification</b>	Recommended that the Trainer is certified for the Job Role: “Trainer”, mapped to the Qualification Pack: “SSC/1402”. Minimum accepted score is 80%.
5	<b>Experience</b>	Min. 5 years relevant industry experience and minimum 3 years' experience as Trained or untrained for same Job Role/ Trade



## Annexure: Assessment Criteria

<b>Assessment Criteria</b>	
<b>Job Role</b>	<b>EOT Overhead Crane Operator</b>
<b>Qualification Pack</b>	<b>ISC/Q0901</b>
<b>Sector Skill Council</b>	<b>Indian Iron &amp; Steel Sector Skill Council</b>

Sr. No.	Guidelines for Assessment
1	Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2	The assessment for the theory part will be based on knowledge bank of questions created by the SSC
3	Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below)
4	Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on these criteria.
5	To pass the Qualification Pack, every trainee should score a minimum of 60% in every NOS.
6	In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.

Assessable Outcome	Assessment criteria	Total Marks 1000	Out Of	Marks Allocated	
				Theory	Practical
<b>ISC/N0913: Check the control systems of the crane</b>	PC1. Understand and interpret the different signals used in the shop floor	<b>350</b>	40	10	30
	PC2. Respond to the signal when received and prepare for transfer of material		40	10	30
	PC3. Check the condition of the ground (e.g. building site) before setting up the crane		60	20	40
	PC4. Check the movement of the crane – cross trolley and long trolley, lifting hook, break, before operating		70	20	50
	PC5. Check crane cabin/pendant/remote control instruments to make sure that loads hooked on their machines are within safe working limits		70	20	50
	PC6. Inspect working condition of brake system (hoist break, cross trolley brake and long travel brake)		70	20	50



Assessable Outcome	Assessment criteria	Total Marks 1000	Out Of	Marks Allocated	
				Theory	Practical
	<b>NOS Total Marks</b>	<b>Total</b>	<b>350</b>	<b>100</b>	<b>250</b>
<b>ISC/N0914: Operate the crane to transfer material</b>	PC1. Understand and aware on how much material can be safely hoisted in each load according to the crane's capacity	<b>400</b>	105	25	80
	PC2. Observe and follow the signals given by shop floor who direct the moving and positioning of the loads		105	25	80
	PC3. Move the crane and position the hook so that shop floor personnel can attach loads, slings, shackles and chains		105	25	80
	PC4. Maintain cranes by inspecting them for defects or wear, lubricate ropes and winches, and replace worn cables		85	25	60
	<b>NOS Total Marks</b>	<b>Total</b>	<b>400</b>	<b>100</b>	<b>300</b>
<b>ISC/N0008: Use basic health and safety practices at the workplace</b>	PC1. Use protective clothing/equipment for specific tasks and work conditions	<b>150</b>	9	4	5
	PC2. State the name and location of people responsible for health and safety in the workplace		6	1	5
	PC3. State the names and location of documents that refer to health and safety in the workplace		2	1	1
	PC4. Identify job-site hazardous work and state possible causes of risk or accident in the workplace		8	4	4
	PC5. Carry out safe working practices while dealing with hazards to ensure the safety of self and others state methods of accident prevention in the work environment of the job role		6	1	5
	PC6. State location of general health and safety equipment in the workplace		6	1	5
	PC7. Inspect for faults, set up and safely use steps and ladders in general use		6	1	5
	PC8. Work safely in and around trenches, elevated places and confined areas		6	1	5





Assessable Outcome	Assessment criteria	Total Marks 1000	Out Of	Marks Allocated	
				Theory	Practical
	PC9. Lift heavy objects safely using correct procedures		6	1	5
	PC10. Apply good housekeeping practices at all times		2	1	1
	PC11. Identify common hazard signs displayed in various areas		6	5	1
	PC12. Retrieve and/or point out documents that refer to health and safety in the workplace		5	1	4
	PC13. Use the various appropriate fire extinguishers on different types of fires correctly		9	4	5
	PC14. Demonstrate rescue techniques applied during fire hazard		8	4	4
	PC15. Demonstrate good housekeeping in order to prevent fire hazards		2	1	1
	PC16. Demonstrate the correct use of a fire extinguisher		6	1	5
	PC17. Demonstrate how to free a person from electrocution		6	1	5
	PC18. Administer appropriate first aid to victims as required e.g. in case of bleeding, burns, choking, electric shock, poisoning etc.		8	3	5
	PC19. Demonstrate basic techniques of bandaging		6	1	5
	PC20. Respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments		7	2	5
	PC21. Perform and organize loss minimization or rescue activity during an accident in real or simulated environments		6	1	5
	PC22. Administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock, before the arrival of emergency services in real or simulated cases		6	1	5



Assessable Outcome	Assessment criteria	Total Marks 1000	Out Of	Marks Allocated	
				Theory	Practical
	PC23. Demonstrate the artificial respiration and the CPR Process		6	1	5
	PC24. Participate in emergency procedures		6	1	5
	PC25. Complete a written accident/incident report or dictate a report to another person, and send report to person responsible		4	1	3
	PC26. Demonstrate correct method to move injured people and others during an emergency		2	1	1
	<b>NOS Total Marks</b>	<b>Total</b>	<b>150</b>	<b>45</b>	<b>105</b>
<b>ISC/N0009: Work effectively with others</b>	PC1. Accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required	<b>100</b>	10	5	5
	PC2. Accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt		9	4	5
	PC3. Provide information to others clearly, at a pace and in a manner that helps them to understand		11	1	10
	PC4. Display helpful behaviour by assisting others in performing tasks in a positive manner, where required and possible		10	5	5
	PC5. Consult with and assist others to maximize effectiveness and efficiency in carrying out tasks		10	5	5
	PC6. Display appropriate communication etiquette while working		11	1	10
	PC7. Display active listening skills while interacting with others at work		11	1	10
	PC8. Use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism		8	3	5
	PC9. Demonstrate responsible and disciplined behaviours at the workplace		14	4	10



Assessable Outcome	Assessment criteria	Total Marks 1000	Out Of	Marks Allocated	
				Theory	Practical
	PC10. Escalate grievances and problems to supervisor		6	1	5
	<b>NOS Total Marks</b>	<b>Total</b>	<b>100</b>	<b>30</b>	<b>70</b>
	<b>Grand Total</b>	<b>1000</b>	<b>1000</b>	<b>275</b>	<b>725</b>
	<b>Percentage Weightage:</b>			<b>50%</b>	<b>50%</b>
	<b>Minimum Pass% to qualify (aggregate):</b>			<b>60%</b>	