

Model Curriculum

Casting or Foundry Assistant / Helper

SECTOR: AUTOMOTIVE
SUB-SECTOR: MANUFACTURING
OCCUPATION: CASTING
REF ID: ASC/Q3201 V1.0
NSQF LEVEL: 2

 Skill India शिक्षण मेर - कुशल मेर	 AUTOMOTIVE SKILLS DEVELOPMENT COUNCIL	 N-S-D-C National Skill Development Corporation Transforming the skill landscape
Certificate		
CURRICULUM COMPLIANCE TO QUALIFICATION PACK - NATIONAL OCCUPATIONAL STANDARDS		
is hereby issued by the		
AUTOMOTIVE SKILLS DEVELOPMENT COUNCIL		
for		
MODEL CURRICULUM		
Complying to National Occupational Standards of		
Job Role/Qualification Pack	"Foundry Assistant/Helper"	QP No: "ASC/Q3201, NSQF Level 2"
Date of Issuance: August 12th, 2018		
Valid up to: July 12th, 2020*		
*Valid up to the next review date of the Qualification Pack		
		 Authorised Signatory (Automotive Skills Development Council)

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Casting or Foundry Assistant / Helper

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Casting or Foundry Assistant / Helper”, in the “Automotive” Sector/ Industry and aims at building the following key competencies amongst the learner

Program Name	Casting or Foundry Assistant / Helper		
Qualification Pack Code	ASC/Q3201		
Version No.	1.0	Version Updated	18- 09- 2018
Pre-requisites to Training	Class 8		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Assist in cleaning the slag from the furnace: Clean the slag deposited on the molten metal surface either manually or through specialized techniques as per the given work order and the standards specified by the organization. • Clean and lubricate the dies: Clean and lubricate the dies being used for casting operations as per the standards specified by the organization. • Assist the operator in casting related operations: Pour the metal from holding furnace to the cast and support the operator in various casting operations as per the final output specifications and the standards specified by the organization. • Store the finished goods in the designated area: Remove the finished goods from the assembly line and store the finished goods in the designated area in the plant/ forwarding the finished pieces to the next process in the assembly process. • Maintain a safe and healthy working environment: Create a Safe and Healthy work place, adhering to the safety guidelines in the working area, following practices which are not impacting the environment in a negative manner. • Maintain 5S in the work premises: Ensure all 5S activities both at the shop floor and the office area to facilitate increase in work productivity. 		

Annexure: Assessment Criteria

Assessment Criteria	
Job Role	Casting or Foundry Assistant / Helper
Qualification Pack	ASC/Q3201
Sector Skill Council	Automotive

Sr. No.	Guidelines for Assessment
1	Assessment to be conducted by ASDC as per competency output defined in the NOS/QP and the assessment criteria provided in the NOS/QP.
2	Assessment to be carried out by a third party Assessment Body duly affiliated to the SSC.
3	ASDC assessments will be comprehensive and cover all aspects of acquired knowledge, practical skills and also basic ability to communicate. Accordingly, evaluation process would include: <ol style="list-style-type: none"> i. Theory/Knowledge test ii. Practical demonstration test iii. Face to Face Viva
4	Theory/Knowledge assessment will be carried out on line through a link provided for each assessment that generates a random paper from a bank of questions available at the back end. <ul style="list-style-type: none"> • Exception to an online test in favour of Paper Test would be subject to non-availability of requisite broad band and/or hardware. • On line test would be conducted in the presence of an ASDC assessor till web enabled proctoring is deployed.
5	ASDC assessor would be conducting Practical and Viva as per the criteria provided in the NOS/QP.
6	Cut off criteria for certification (Marks obtained in %): 75%

Annexure: Assessment Criteria

Job Role	Casting or Foundry Assistant / Helper
Qualification Pack	ASC/Q3201
No. Of NOS	4 Role specific, 2 generic

NOS Title/ NOS Elements	NOS & Performance Criterion Description	Marks allocation	
		Viva	Practical
ASC/N3201	Support in cleaning the slag		
Clean the Slag (Manually)	PC1.Pour the molten metal obtained from the holding furnace into the container PC2.Remove the slag deposition of the metal surface by tilting the container and removing the slag off using tools like spatula etc. PC3.Dispose the slag off or send for further processing and metal recovery	20	50
Clean the Slag (Automated Technique)	PC4.Check for the apparatus to be used for slag removal on the operation settings and placement PC5.Take instructions from operator to operate the apparatus to remove the slag from the molten metal surface	10	10
	Total	30	60
ASC/N 3202	Clean & lubricate the dies		
Clean and Lubricate the Die	PC1.Inspect the die after casting operations for left over metal or other impurities PC2.Load the die into cleaning tank with chemicals or manually spray the cleaning agents like caustic solution etc; Use chippers or spatulas to remove spatters etc. from die (if required) PC3.Lubricate the dies with oil/ grease in order to prepare it for the next cycle of casting operations PC4.In case of automatic cleaning, adjustable cleaning times are preset and dies are left to be cleaned and lubricated automatically PC5.Examine dies to ensure they are clean, smooth, and coated as per the specification / visual sample to be used for next set of operations	10	40
	Total	10	40
ASC/N3203	Support the operator in casting related		
		Viva	Practical

	operations		
Pour the metal	PC1.Pull the molten metal from holding furnace with the use of tools like spatulas etc. PC2.Pour the metal into casting while adhering to the standards pertinent to various parameters like speed, angle, temperature etc.	20	40
	PC3.Hand over the cast to the operator for performing casting operations	10	10
Conduct the actual casting process	PC4.Unload the cast from die PC5.Stamp the cast with the identifying information (wherever required) and send the same for further processing PC6.Clearly understanding the does and don'ts of the manufacturing process as defined in SOPs/ Work Instructions or defined by supervisors	10	20
	Total	40	70
ASC/N 3204	Store the finished goods in the designated area	Viva	Practical
Removing the finished goods from the casting block	PC1.Hold the finished Goods with necessary equipment like clamps, cranes, hoist etc. for unloading from the casting block PC2.Safely lift the Finished Goods and move them to a designated area to prevent any damage to the finished goods PC3.In case the metal castings are to be moved forward in the assembly line, ensure that the right hangers are used for transportation of finished goods in a safe manner	10	20
Storing the finished goods in the designated area	PC4.Tag the finished Goods with Job number, piece number and other markings for identification PC5.Arrange the goods as per the batch number, piece number etc. into designated packing boxes PC6.In case of assembly line, transport the finished goods to the next assembly line process	20	30
	Total	30	50
ASC/N0006	Maintain a safe and healthy working environment at the work place	Viva	Practical

	lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc. PC13. Make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions		
Ensure cleaning of self and the work place	PC14. Check whether safety glasses are clean and in good condition PC15. Keep all outside surfaces of recycling containers are clean PC16. Ensure that the area has floors swept, machinery clean and generally clean. In case of cleaning, ensure that proper displays are maintained on the floor which indicate potential safety hazards PC17. Check whether all hoses, cabling & wires are clean, in good condition and clamped to avoid any mishap or mix up PC18. Ensure workbenches and work surfaces are clean and in good condition PC19. Follow the cleaning schedule for the lighting system to ensure proper illumination PC20. Store the cleaning material and equipment in the correct location and in good condition PC21. Ensure self-cleanliness -clean uniform, clean shoes, clean gloves, clean helmets, personal hygiene	10	40
Ensure sustenance	PC22. Follow the daily cleaning standards and schedules to create a clean working environment PC23. Attend all training programs for employees on 5S PC24. Support the team during the audit of 5S PC25. Participate actively in employee work groups on 5S and encourage team members for active participation PC26. Follow the guidelines for What to do and What not to do to build sustainability in 5S as mentioned in the 5S check lists/ work instructions	10	20
	Total	50	120
	Grand Total	230	420