

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR AUTOMOTIVE INDUSTRY

What are Occupational Standards (OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

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Introduction

Qualifications Pack- Casting Line In-charge

SECTOR: AUTOMOTIVE

SUB-SECTOR: MANUFACTURING

OCCUPATION:CASTING

JOB ROLE: CASTING LINE IN CHARGE

REFERENCE ID: ASC/Q3207

ALIGNED TO : NCO-2004/ Nil

Casting line Supervisor: This role is similar for all types of sand related casting processes and can be performed both manually and through automated processes.

Brief Job Description: This role primarily involves supervising the sand and molten metal related casting operations, overseeing the setting up and operating the casting equipments and forming& finishing of the final output

Personal Attributes: Reading, writing and communication skills, ability to plan and prioritize, quality consciousness, high precision and sensitivity to problem solving, , quick decision making, safety orientation, ability to use internal ERP systems (if existing), managing teams, grievance management, listening skills, ability to train team members

Job Details

Qualifications Pack Code	ASC/Q3207		
Job Role	Casting line Supervisor		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	20/11/2013
Sub-sector	Manufacturing	Last reviewed on	30/11/2013
Occupation	Casting	Next review date	Under revision expected date of revised version 31-Dec-15
NSQC Clearance on	05/08/15		

Job Role	Casting In charge
Role Description	The role is responsible for supervising various types of pre and post sand casting operations, overseeing accurate process documentation of the same and ensuring production targets are met
NSQF level	6
Minimum Educational Qualifications	Diploma in Production/Foundry Engineering
Maximum Educational Qualifications	B.E/B. Tech
Training (Suggested but not mandatory)	<ul style="list-style-type: none"> • Latest casting techniques available in the market • Working of presses and dies • 5S and Safety aspects • Problem Solving Techniques • Quality Management Systems • Team Management skills • IT and ERP awareness
Minimum Job Entry Age	<p>1 ASDC recommends that candidates should seek full employment not before attaining an age of 18 years.</p> <p>2 However, as per Factories Act1948 :</p> <ul style="list-style-type: none"> - No one can be employed before attaining the age of 15 - A person between the age of 15 – 18 (both inclusive) could be employed only with employers who follow safety and security systems & processes and also that the employee in this bracket will be working under supervision. <p>3 Please note that under the Factories Act 1948, different States may have slightly varying provision which need to be adhered to.</p>
Experience	Casting line experience: 10- 12 years (ITI Background) and 2-3 year (diploma background)
Occupational Standards (OS)	<ol style="list-style-type: none"> 1. ASC/N3223: Manage end to end process related to metal casting process 2. ASC/N0016: Understand process requirements, ensure implementation and suggest process improvements 3. ASC/N0017: Manage and analyze production related operations of the shift/ line on a day to day basis 4. ASC/N0018: Finalize and manage the team on the line/ shift on a day to day basis 5. ASC/N0006B:Maintain a safe and healthy working environment 6. ASC/N00022: Ensure implementation of 5S activities at the shop floor and the office area
Performance Criteria	As described in the relevant NOS units

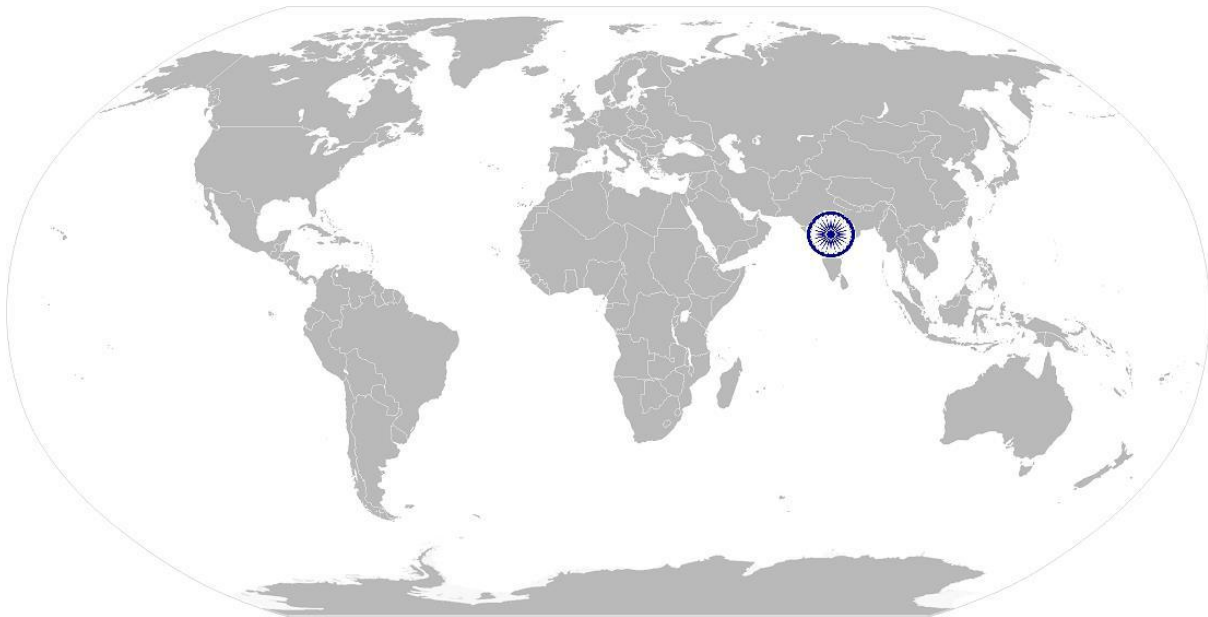
Definitions

Keywords /Terms	Description
Core Skills/Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the NOS, these include communication related skills that are applicable to most job roles.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of NOS.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Organisational Context	Organisational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
Qualifications Pack(QP)	Qualifications Pack comprises the set of NOS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Scope	Scope is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of performance required.
Sector	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.

Sub-Sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Sub-functions	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Unit Code	Unit Code is a unique identifier for a NOS unit, which can be denoted with an 'N'
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Vertical	Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry.
Keywords /Terms	Description
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
OEM	Original Equipment Manufacturer
OS	Occupational Standard(s)
QP	Qualifications Pack

Acronyms

National Occupational Standards



Overview

This unit is about supervising the various casting line operations like melting, pouring, casting operations and finishing and ensure that the production for the shift/ line is as per the requirement quality and quantity norms

ASC/N3223

Manage end to end process related to metal casting process

National Occupational Standard

Unit Code	ASC/N3223
Unit Title (Task)	Manage end to end process related to metal casting process
Description	This NOS is about supervising end to end operations to ensure that the final products manufactured by the casting team is as per the quality and production norms set by the organization
Scope	<p>The casting in charge will be responsible for</p> <ul style="list-style-type: none"> validating the process requirement of casting process monitor the end to end casting process in the line monitor final product quality <p>The role holder will interact with the assembly line, machine shop, heat treatment, maintenance team, HR, quality management and material management team.</p>
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Pressure Die Casting	<p>PC1. Ensure that the engineering drawing provided to the team is the latest version available to ensure accurate casting as per demand</p> <p>PC2. Ensure that the team members understand and follow all the do's and don'ts of the manufacturing process as defined in SOPs/ Work Instructions or defined by supervisors/ master technicians</p> <p>PC3. Ensure that various casting parameters like temperature etc. as well as equipment availability for executing the activity before starting the process</p> <p>PC4. Ensure that the specifications of the finished product are as per work instructions using devices like micrometers etc. and other inspection equipment and</p> <p>PC5. Ensure that the right casting and trimming methodology, process and parameters are in place for completing the work order before starting the casting and trimming process</p> <p>PC6. Ensure that the material required and the equipment is available for executing the scheduled activity</p> <p>PC7. Ensure that any modifications in the casting parameters are made within defined timelines (by selecting the right program from the machine control system) if required and ensure alignment with the prescribed standards</p> <p>PC8. Ensure that required processes are in place for slag/impurities removal from molten metal</p> <p>PC9. Ensure that the operator has input the correct temperature and other parameters are as per the casting requirement and the required operation code is set in the casting machine for it to cast the metal into desired shape</p> <p>PC10. Analyse any irregularities in the process and recommend</p>

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	<p>preventive steps as required</p> <p>PC11. Ensure that help or advice from specialists if the problem is outside the operator’s area of competence or experience</p> <p>PC12. Establish linkages between rejection of output and the pertinent causes for the same (process/material etc.)</p> <p>PC13. Ensure that first and last castings from each batch are sent to the lab for quality check on its composition, soundness, no dularity etc. and a batch clearance is obtained from the lab</p> <p>PC14. Escalate all issues related to change in colour, surface properties etc. so that the manufacturing target can be achieved</p> <p>PC15. Ensure that the defective pieces are separated into two categories – pieces which can be repaired/modified and pieces which are beyond repair. Ensure that pieces beyond repair are discarded as per work instructions</p> <p>PC16. Recommend the means for rejection control to operators whenever required</p>
Gravity Die Casting	<p>PC1. Ensure that the latest version of the available engineering drawing is available with the team and is adhered to ensure accurate casting</p> <p>PC2. Ensure that the required set of activities needed to complete the work order and final output are adhered to and that the process adopted in gravity casting is as per the Work Instructions/SOPs</p> <p>PC3. Ensure that the assistant operator has the correct set of instructions to operate the casting machines</p> <p>PC4. Ensure that the right components are loaded in the chamber of the shot blasting machine and the required operation code is fed in the pressing machine for it to prepare the core</p> <p>PC5. Ensure that the type of sand and apparatus to be used for making the mold is correctly identified and the casting apparatus for molten metal carrying etc. are function properly</p> <p>PC6. Ensure that the apparatus for the selected sand making/ core making/mould making/casting process is as per the standards used in the industry</p> <p>PC7. Oversee the sand feeding and mixing process and analyze the readings on various panels/meters to prevent machine breakdown/stoppages and deviations</p> <p>PC8. Oversee the quality checks on output sand in terms of grain compressive strength etc.</p> <p>PC9. Ensure that any minor defects like excess slag, holes etc. are rectified via processes like fettling, chipping etc.</p> <p>PC10. Ensure that the first and last casting from each batch is sent to the lab for quality check on its composition, soundness, no dularity etc.</p> <p>PC11. Ensure that the final metal casting is as prescribed in the work order and the latest engineering drawings</p>

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Manage end to end process related to metal casting process

	<p>PC12. In case the parts are not as per the given measurements, ensure that the same are sent for further processing in terms of chipping, fettling etc.</p> <p>PC13. Ensure that the final mould pattern is measured and compared with the dimensions as prescribed in the work order engineering drawing</p> <p>PC14. Ensure timely escalation of any machine related issues regarding die setting to the machine setter in the plant</p> <p>PC15. Ensure that specialists look into the problem if it is outside the operator’s area of competence or experience</p> <p>PC16. Analyse any irregularities in the processes and take preventive steps whenever required</p>
Knowledge and Understanding (K)w.r.t. the scope	
Element	Knowledge and Understanding
<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant standards and procedures followed in the company</p> <p>KA2. different types of products manufactured by the company</p> <p>KA3. functional processes like procurement, store management, inventory management, quality management as well as key contact points for query resolution</p> <p>KA4. quality norms and quality policy prescribed by the organization for casting jobs</p> <p>KA5. relevant standards specified for the manufacturing process</p> <p>KA6. basic process followed for inspection of the finished pieces</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. different types of cleaning techniques, casting processes and associated equipments</p> <p>KB2. different tools and equipments being used for trimming and casting</p> <p>KB3. final product output and hence decide on the key steps to be followed for casting and trimming</p> <p>KB4. basic principles of geometric and drawing</p> <p>KB5. key safety aspects related to casting and foundry industry</p> <p>KB6. different types of metallurgical processes</p> <p>KB7. different types of casting processes and associated equipments</p> <p>KB8. casting defects and how they are generated, how they can be prevented, knowledge of different raw materials, metals & alloys and consumables used in the melt shop</p> <p>KB9. measuring instruments like vernier callipers, micrometers and other</p> <p>KB10. effect of operators work on casting quality at in house and at customers, how to improve customers satisfaction</p> <p>KB11. different types of casting and trimming processes and associated equipments</p> <p>KB12. different types of automated processes pertinent to casting</p>

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Manage end to end process related to metal casting process

	KB13. mechanical laws and working of casting machines etc. KB14. safety precautions to be taken for all types of casting activities KB15. various casting standards in India (ISO)
Skills (S)w.r.t. the scope	
Elements	Skills
A. Core Skills/ Generic Skills	Writing and reading skills
	The user/ individual on the job needs to know and understand how to: SA1. create first level process manuals, Control Plans, Work Instructions in an manner that the operators can easily understand the process requirements and process steps SA2. create small notes/ work documents/ diagrams for supervisors ,operators and helpers to help them understand the process SA3. use emails and other business correspondence methods (internal memos, circular etc.) for communicating with other team members/ vendors/ suppliers etc. SA4. read equipment manuals and process documents given by the equipment supplier to understand the equipment and processes better
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA5. discuss task lists, schedules, and work-loads with the operative team members SA6. effectively explain supervisors, operators and helpers about equipment operations, process steps and other operational requirements SA7. answer the queries raised by the operative team as well as intercompany departments SA8. effectively communicate with the operators and helpers and make them aware of work expectations, targets, policies, processes etc. SA9. attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker
B. Professional Skills	Analytical Thinking
	The user/individual on the job needs to know and understand how to: SB1. break the problem into smaller issues and tasks to arrive at a solution SB2. understand inter process relationship and establish relationship between various parts of the problem SB3. leverage experience to find effective solutions to problems SB4. use basic analytical tools to arrive at solutions
	Plan and Organize
	The user/individual on the job needs to know and understand how to:

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Manage end to end process related to metal casting process

	<p>SB5. plan, organize and prioritize the work order and jobs received from the production manager</p> <p>SB6. manage the schedule plan for the operators and helpers on the line/shift</p> <p>SB7. validate all process/ equipment manuals so that the final process selected is correct</p> <p>SB8. organize information, tools, manuals etc. on the shop floor so that sorting becomes easy</p> <p>SB9. reorganize resources on the line/ shift in case of change of plans</p>
	Judgment and Critical Thinking
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB10. use common sense and make judgments during day to day basis</p> <p>SB11. use reasoning skills to identify and resolve problems</p> <p>SB12. use intuition to detect any potential problems which could arise during operations</p>
	Ownership
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB13. accept additional responsibility for self and the team</p> <p>SB14. encourage self and other to take greater responsibilities</p> <p>SB15. ensure that the work allocated to the team is completed as per timelines and quality norms</p> <p>SB16. identify obstacles and bottlenecks in the process and on own find basic level solutions for removing these obstacles</p>
	Quality Consciousness
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB17. identify defective parts in the manufacturing line by comparing manufactured pieces with the work standard</p> <p>SB18. link the defect observed with the overall impact on the performance of the component/ automobile</p> <p>SB19. support and contribute in monitoring and delivering high quality output from self and others</p> <p>SB20. train team members on maintaining quality standards set by the organization</p>
	Decision making
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB21. use previous experience in resolving problems and taking decisions</p> <p>SB22. make timely and independent decisions on the line/ shift within the boundaries of the delegation matrix of the organization</p>
	Out of Box thinking
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SB38. familiarise with leading practices available in the market</p> <p>SB39. think independently on new approaches to manufacturing</p>

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Manage end to end process related to metal casting process

	process, material management, data management and team management SB40. represent any new ideas/ approaches on process improvement and productivity improvement to the seniors in the team
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NOS Version Control

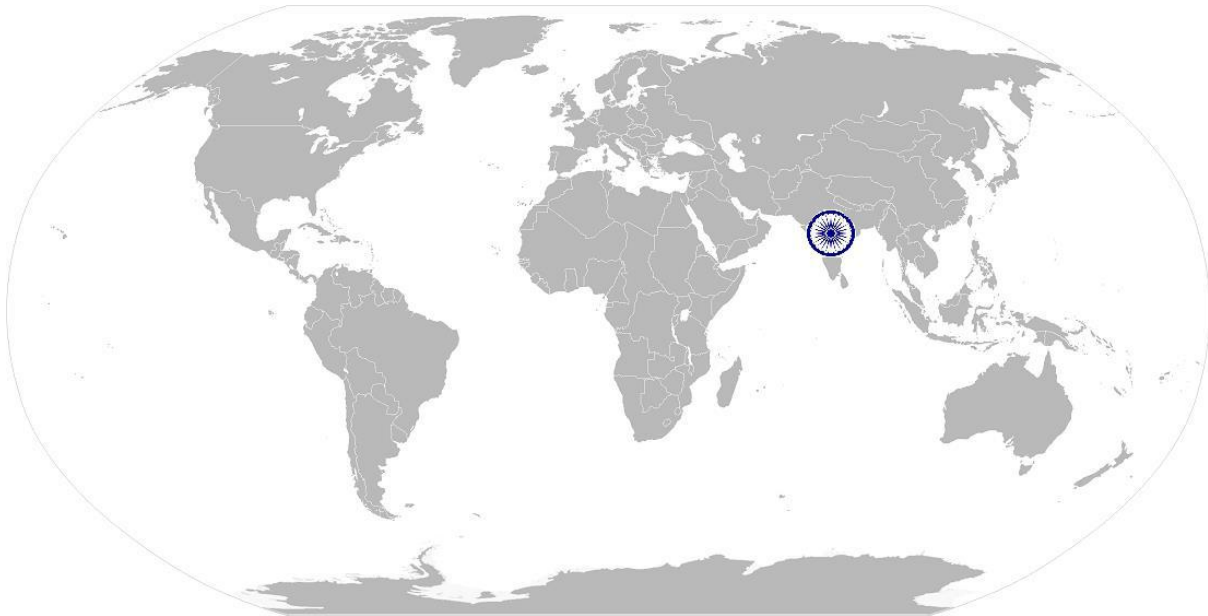
NOS Code	ASC/N3223		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	20/11/2013
Industry Sub-sector	Manufacturing	Last reviewed on	30/11/2013
Occupation	Casting	Next review date	Under revision expected date of revised version 31-Dec-15



ASC/N0016

Understand process requirements, ensure implementation and suggest process improvements

National Occupational Standard



Overview

This unit is about the understanding all the required processes, creating first level process documents, training operators on the process, ensuring process implementation and providing basic inputs for improvement

ASC/N0016

Understand process requirements, ensure implementation and suggest process improvements

National Occupational Standard

Unit Code	ASC /N0016
Unit Title (Task)	Understand process requirements, ensure implementation and suggest process improvements
Description	This NOS is about understanding for the required processes, ensuring implementation of processes as per the Work instruction/ SOPs/ Control Plan and also providing basic level of inputs for process improvement through deploying different tools/ participating in analysis
Scope	<p>The role will be responsible for</p> <ul style="list-style-type: none"> • understanding the required processes and ensuring implementation • first level design of process improvement initiatives • implementation of initiatives on the shop floor <p>The job holder will cover all types of manufacturing processes in the automobile industry. The role holder will interact with the different manufacturing process teams, maintenance team, material management team, industrial engineering team, Quality Control & Assurance team, Safety team and HR/IR team</p>
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Understanding all the requisite processes in detail and ensuring implementation	<p>PC1. Display detailed understanding of all the requisite processes to be adopted for completing the work order through reading the process manuals/ Work Instructions/Standard Operating Procedures for the production job</p> <p>PC2. Ensure first level drafting of process manuals, Work Instructions, Control Plans, process flow charts to enable the team to easily understand and implement the process</p> <p>PC3. Ensure proper display of Work Instructions, Control Plans and flow charts at the correct places on the shop floor to enable timely and proper view of the documents</p> <p>PC4. Share knowledge of processes , inputs and outputs with the operators and in order to enhance their skill levels</p> <p>PC5. Maintain work flow by monitoring steps of the processes, setting variables, observing control points and equipment</p> <p>PC6. Monitor various process parameters on a regular basis and ensure compliance to agreed standards (e.g. ambient air quality, stack monitoring, water quality monitoring etc.)</p> <p>PC7. Ensuring recording and reporting procedures and systems are in place</p> <p>PC8. Facilitating corrections to malfunctions within process control points</p> <p>PC9. Ensure that all the tools and measuring instruments used on the shop floor are inspected, tested and calibrated internally/ externally as per the schedule</p> <p>PC10. Support the Shop Head/ Process Head in arranging for the requisite usage certificates for the tools and equipment as per the internal</p>

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Understand process requirements, ensure implementation and suggest process improvements

	<p>guidelines of the organization</p> <p>PC11. Ensure 5S implementation in the production line by analysing possible areas of systems and process improvements and ensure implementation of the recommended measures to address the gaps</p> <p>PC12. Ensure successful implementation of the completed Poka Yoke and kaizen on the running line</p> <p>PC13. Support the Shop Head/ Process manager in conducting first level audit of the manufacturing process on the shop floor</p>
<p>Process Improvement</p>	<p>PC14. Ensure optimum resource utilization and wastage reduction through process improvements, Kaizens, TQM, Poka Yoke etc. in the shift</p> <p>PC15. Provide inputs for analysis of breakdown trends and current maintenance process to identify areas for improvement to achieve cost savings and reduce breakdown timing</p> <p>PC16. Identify areas of improvement in the existing processes/systems and take measures to adhere to the identified Kaizen/ process improvement initiatives</p> <p>PC17. Ensure inputs from the line operators are considered while designing for various Poka Yoke , kaizen initiatives</p> <p>PC18. Encourage team members/ Supervisor/ operators to suggest quality improvement measures through suggestion schemes, evaluate feasibility of the ideas and discuss their implementation with seniors</p> <p>PC19. Support in analysing internal & external rejection data, planning and ensuring implementation of the corrective measures</p> <p>PC20. Ensure team has understanding of basic analytical tools like Why analysis, 7 QC tools, TQM principles to analyse various problems and design process improvement activities</p> <p>PC21. Support the Process Engineering/ Industrial Engineering team in modifications of the process flow, process/ plant layout to improve the process TAT, operational ergonomics, work quality etc.</p>
<p>Implementation of various initiatives</p>	<p>PC22. Take overall responsibility to ensure adherence to Safety standards by all employees and establish zero accident practice in the section</p> <p>PC23. Implement various business excellence techniques like Kaizen, 5S initiatives, etc. to enhance productivity for the plant/ shift</p>
<p>Knowledge and Understanding (K)</p>	
<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant manufacturing standards and procedures followed in the company in detail</p> <p>KA2. different types of products manufactured by the company</p> <p>KA3. knowledge of functional processes like Procurement, Store management, inventory management, quality management and key contact points for query resolution</p> <p>KA4. quality norms and standards prescribed in the Quality Manual by the organization for painting</p>

ASC/N0016

Understand process requirements, ensure implementation and suggest process improvements

B. Technical Knowledge	<p>KA5. 5S and Safety norms practiced in the organization</p> <p>The user/individual on the job needs to know and understand:</p> <p>KB1. different types of manufacturing processes used</p> <p>KB2. requirement of raw materials used in the process</p> <p>KB3. about tools, jigs and fixtures , their usage and maintenance methods</p> <p>KB4. how to operate the machine in both, automatic and manual mode</p> <p>KB5. basic understanding of robotics, CNC operations, data acquisitions systems, automatic recording instruments</p> <p>KB6. using engineering drawings, sketches, control plan and work instructions in the plant</p> <p>KB7. usage of various measurement tools like Vernier Calipers, Micrometres, rulers, scales, weighing machines etc.</p> <p>KB8. basic arithmetic and calculation methods</p> <p>KB9. how to handle electrical equipment and circuits, rectifiers and control panel etc.</p> <p>KB10. different types of defects which may arise due to improper manufacturing and the impact of the defect on product performance</p> <p>KB11. metallurgical and chemical properties of material involved</p> <p>KB12. how to measure the correct specifications of the output in the terms of thickness, hardness, durability, tightness, finesse etc.</p> <p>KB13. various problems solving tools like 7QC, Why Analysis, Brain storming etc.</p> <p>KB14. key areas of power consumption/ steam consumption, compressed air consumption etc.</p> <p>KB15. various data entry tools and formats used in the organization</p> <p>KB16. ability to visualize the final product output and hence decide on the key steps and parameters to be followed</p> <p>KB17. usage of various business correspondence tools like Email, MS Office tools (Word, Excel, Power Point) etc.</p> <p>KB18. about the various hazards related to various chemicals if used in the processes, the hazards involved in the process operations and usage of PPEs</p>
Skills (s) [optional]	
A. Core Skills/ Generic Skills	<p>Writing and reading skills</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. create first level process manuals, Control Plans, Work Instructions in an manner that the operators can easily understand the process requirements and process steps</p> <p>SA2. create small notes/ work documents/ diagrams for supervisors ,operators and helpers to help them understand the process</p> <p>SA3. use emails and other business correspondence methods (internal memos, circular etc.) for communicating with other team members/ vendors/ suppliers etc.</p>

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Understand process requirements, ensure implementation and suggest process improvements

	SA4. read equipment manuals and process documents given by the equipment supplier to understand the equipment and processes better
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SA5. discuss task lists, schedules, and work-loads with the operative team members SA6. effectively explain supervisors, operators and helpers about equipment operations, process steps and other operational requirements SA7. answer the queries raised by the operative team as well as intercompany departments SA8. effectively communicate with the operators and helpers and make them aware of work expectations, targets, policies, processes etc. SA9. attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker
	B. Professional Skills
	Team Leadership
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SB1. communicate effectively to the team members SB2. identify conflicts in the team and try to resolve them at the earliest SB3. interact and engage with the team members on a day to day basis SB4. counsel and coach the operators and help them resolve issues SB5. timely highlight to the management about any good work/ achievement by the operators and helpers SB6. Train team members on the process, safety, quality and other behavioural aspects
	Analytical Thinking & Problem Solving
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SB7. identify problems occurring on the shop floor SB8. break the problem into smaller issues and tasks to arrive at a solution SB9. understand inter process relationship and establish relationship between various parts of the problem SB10. leverage experience and technical expertise to find effective solutions to problems SB11. use basic analytical tools to arrive at solutions SB12. collaborate with cross functional teams to resolve problems
	Plan and Organize
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SB13. plan, organize and prioritize the work order and jobs received from the production manager SB14. manage the schedule plan for the operators and helpers on the line/shift SB15. Periodically review all process/ equipment manuals so that the final process selected is correct

ASC/N0016

Understand process requirements, ensure implementation and suggest process improvements


	<p>SB16. organize information, tools, manuals etc. on the shop floor so that sorting becomes easy</p> <p>SB17. reorganize resources on the line/ shift in case of change of plans</p>
	Judgment and Critical Thinking
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB18. use common sense and make judgments during day to day basis</p> <p>SB19. use reasoning skills to identify and resolve problems</p> <p>SB20. use intuition to detect any potential problems which could arise during operations</p> <p>SB21. critically analyse solutions/ recommendations shared by operatives and supervisors for implementation</p>
	Ownership
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB22. accept additional responsibility for self and the team</p> <p>SB23. encourage self and other to take greater responsibilities</p> <p>SB24. ensure that the work allocated to the team is completed as per timelines and quality norms</p> <p>SB25. identify obstacles and bottlenecks in the process and on own find basic level solutions for removing these obstacles</p>
	Team Work
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB26. motivate and provide support for the team on the shop floor</p> <p>SB27. encourage collaboration between team members</p> <p>SB28. resolve team issues and grievances to manage conflicts within the team</p> <p>SB29. create an environment of approachability, trust and openness within the team</p> <p>SB30. ensure role clarity for all operators and helpers on the line/ shift</p> <p>SB31. escalate any team related issues to the concerned person at the right time</p>
	Quality Consciousness
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB32. identify defective parts in the manufacturing line by comparing manufactured pieces with the work standard</p> <p>SB33. link the defect observed with the overall impact on the performance of the component/ automobile</p> <p>SB34. support and contribute in monitoring and delivering high quality output from self and others</p> <p>SB35. train team members on maintaining quality standards set by the organization</p>
	Decision making
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB36. use previous experience in resolving problems and taking decisions</p>

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Understand process requirements, ensure implementation and suggest process improvements

	SB37. make timely and independent decisions on the line/ shift within the boundaries of the delegation matrix of the organization
	Out of Box thinking
	The user/ individual on the job needs to know and understand how to: SB38. familiarise with leading practices available in the market SB39. think independently on new approaches to manufacturing process, material management, data management and team management SB40. represent any new ideas/ approaches on process improvement and productivity improvement to the seniors in the team

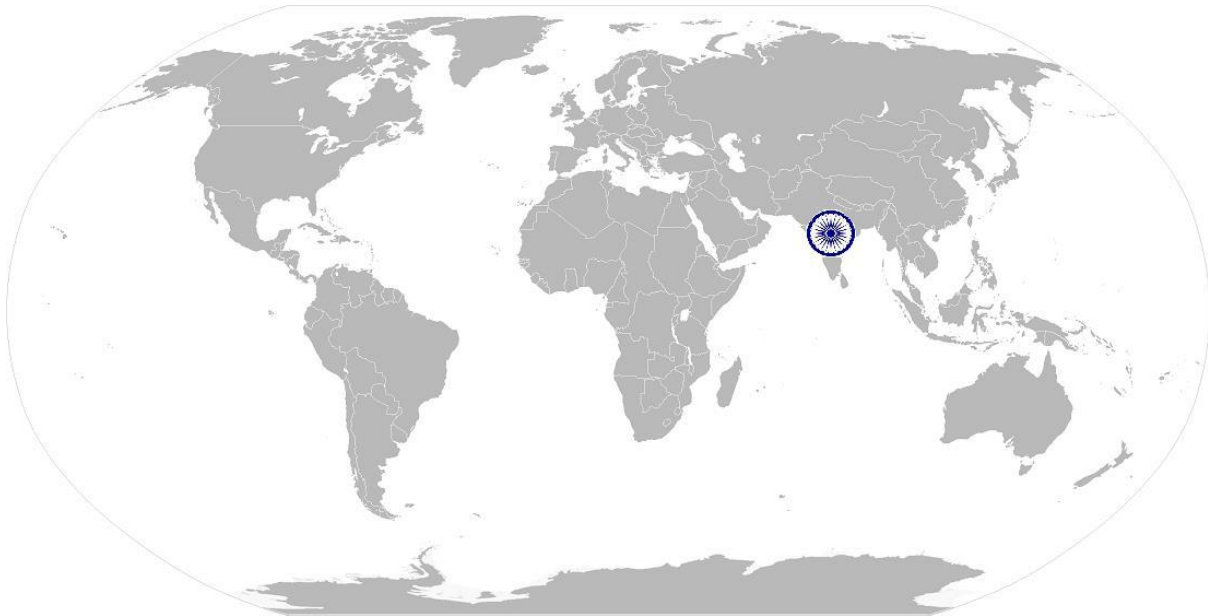
NOS Version Control

NOS Code	ASC/N0016 		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	25/11/2013
Industry Sub-sector	Manufacturing	Last reviewed on	15/12/2013
Occupation	Casting	Next review date	Under revision expected date of revised version 31-Dec-15

ASC/N0017

Manage and analyze production related operations of the shift/ line
on a day to day basis

National Occupational Standard



Overview

This unit is about the ensuring the effective, efficient and safe production output in a shift/
process shop

ASC/N0017

Manage and analyze production related operations of the shift/ line on a day to day basis

National Occupational Standard	Unit Code	ASC /N0017
	Unit Title (Task)	Manage and analyze production related operations of the shift/ line on a day to day basis
	Description	This NOS is about ensuring Operational Productivity
	Scope	<p>The role will be responsible for</p> <ul style="list-style-type: none"> managing operations in the shift/ Process manpower and material management in the shift/ process ensure conformance to quality parameters and norms analyse data on production, maintenance, quality, manpower deployment etc. <p>The job holder will cover all types of manufacturing processes in the automobile industry. The role holder will interact with the different manufacturing process teams, maintenance team, material management team, industrial engineering team, Quality Control & Assurance team, Safety team and HR/IR team</p>
	Performance Criteria(PC) w.r.t. the Scope	
	Element	Performance Criteria
	Manpower Management	<p>PC1. Undertake effective shift planning based on manpower allocation and shift handling of place right manpower on the right workstation in coordination with Production In-charge to achieve production targets</p> <p>PC2. Support the Shop Head/ Process head in finalizing the shift rosters for the week and month based on the production plan available</p>
	Material Management	<p>PC3. Send inventory requirements to Stores and Purchase department and follow up with stores and purchase to ensure timely receipt of material (Spares, Consumables)</p> <p>PC4. Ensure that the incoming raw material quality is inspected and meets the production requirement</p> <p>PC5. Ensure that the material and work piece movement on the shop floor conforms to the TAT time prescribed in the SOP/ Work Plans so that production targets are met for the line/ shift</p>
	Supervise Production Operations	<p>PC6. Ensure that the production plan shared by the PPC team is fulfilled during the shift/ across lines</p> <p>PC7. Coordinate with various functions like material management, stores, paint shop, assembly line, quality, safety, production planning etc. to ensure communication of required information and resolution of queries</p> <p>PC8. Responsible for End of Line Inspection under supervision</p> <p>PC9. Ensure that the operators and helpers have the required tools and equipment at the start of the process</p> <p>PC10. Identify & implement action steps to reduce losses and wastages during shift operation and ensure minimum rejection of components</p> <p>PC11. Observe and note the consumption of energy, fuel, steam on the production line and utilize these inputs for optimization of various factors of production</p>

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Manage and analyze production related operations of the shift/ line on a day to day basis

	<p>PC12.Support the maintenance team in finalizing the preventive maintenance schedule for the shop</p> <p>PC13. Ensure that the operator and helper are using the required Personal Protective Equipment like Goggles, masks, gloves and other PPE’s at the time of conducting the painting operation</p>
<p>Conformance to Product and Process Quality</p>	<p>PC14.Conduct random incoming quality inspection of material and provide the relevant feedback on the same to the store</p> <p>PC15.Conduct quality inspection of the process parameters, lab parameters and WIP products and provide necessary feedback to the line leaders</p> <p>PC16.Conduct quality inspection of the first sample/batch to ensure that the quality of the product produced meet customer requirements</p> <p>PC17.Conduct inspection and analysis of the defects observed in the process and products</p>
<p>Data Collation and Analysis</p>	<p>PC18.Prepare daily and monthly production MIS reports to match actual performance vis-à-vis the targets and report the same to Production In-chart</p> <p>PC19.Verify the production and material movement related data entries in the system (manual/ ERP) for the shift and ensure correctness of the data</p> <p>PC20.Ensure compilation of data of breakdown maintenance and reporting the same to the maintenance team</p> <p>PC21.Collaborate with the maintenance team in conducting detailed breakdown analysis to understand problems, look out for process/ machine modifications and resolve the issues</p> <p>PC22.Conduct random sampling of the process parameters, finished goods and WIP products and provide necessary feedback to the line leaders</p> <p>PC23.Collaborate with the Quality Management and Inspection team in conducting detailed analysis to resolve issues</p> <p>PC24.Collaborate with various supervisors to capture process data points as mentioned in the internal operating guidelines for data analytics</p> <p>PC25.Support the Shop Head/ Process Head in analysing the various data points related to production, maintenance, manpower deployment, material management, costs etc.</p> <p>PC26.Support the Shop Head/ Process Head in creating various analytical presentations required for process/ shop/ plant review</p>
<p style="text-align: center;">Knowledge and Understanding (K)</p>	
<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant manufacturing standards and procedures followed in the company in detail</p> <p>KA2. different types of products manufactured by the company</p> <p>KA3. knowledge of functional processes like Procurement, Store management, inventory management, quality management and key contact points for query resolution</p> <p>KA4. quality norms and standards prescribed in the Quality Manual by the</p>

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Manage and analyze production related operations of the shift/ line on a day to day basis

	<p>organization for painting</p> <p>KA5. 5S and Safety norms practiced in the organization</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. different types of manufacturing processes</p> <p>KB2. requirement of raw materials used in the process</p> <p>KB3. about tools, jigs and fixtures , their usage and maintenance</p> <p>KB4. how to operate both in automatic and manual mode</p> <p>KB5. basic understanding of robotics, CNC operations, data acquisitions systems, automatic recording instruments</p> <p>KB6. different types of defects which may arise due to improper manufacturing</p> <p>KB7. basic Arithmetic and calculation methods</p> <p>KB8. ability to visualize the final product output and hence decide on the key steps to be followed</p> <p>KB9. about handling of electrical equipment and circuits, rectifiers and control panel etc.</p> <p>KB10. metallurgical and chemical properties of the material under usage</p> <p>KB11. how to measure the correct specifications of the output in the terms of thickness, hardness, durability, tightness etc</p> <p>KB12. how to visualize the final product output and hence decide on the parameters of temperature, pressure, current and voltage</p> <p>KB13. various problems solving tools like 7QC, Why Analysis, Brain storming</p> <p>KB14. usage of various business correspondence tools like Email, MS Office tools (Word, Excel, Power Point) etc.</p> <p>KB15. about the various hazards related to various chemicals if used in the processes, the hazards involved in the process operations and usage of PPEs</p>
Skills (s) [optional]	
A. Core Skills/ Generic Skills	Writing and reading skills
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. create first level process manuals, Control Plans, Work Instructions in an manner that the operators can easily understand the process requirements and process steps</p> <p>SA2. create small notes/ work documents/ diagrams for supervisors ,operators and helpers to help them understand the process</p> <p>SA3. use emails and other business correspondence methods (internal memos, circular etc.) for communicating with other team members/ vendors/ suppliers etc.</p> <p>SA4. read equipment manuals and process documents given by the equipment supplier to understand the equipment and processes better</p>
	Oral Communication (Listening and Speaking skills)
	<p>The user/individual on the job needs to know and understand how to:</p>

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	<p>SA5. discuss task lists, schedules, and work-loads with the operative team members</p> <p>SA6. effectively explain supervisors, operators and helpers about equipment operations, process steps and other operational requirements</p> <p>SA7. answer the queries raised by the operative team as well as intercompany departments</p> <p>SA8. effectively communicate with the operators and helpers and make them aware of work expectations, targets, policies, processes etc.</p> <p>SA9. attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker</p>
B. Professional Skills	Team Leadership
	The user/individual on the job needs to know and understand:
	SB1. communicate effectively to the team members
	SB2. identify conflicts in the team and try to resolve them at the earliest
	SB3. interact and engage with the team members on a day to day basis
	SB4. counsel and coach the operators and help them resolve issues
	SB5. timely highlight to the management about any good work/ achievement by the operators and helpers
Analytical Thinking and Problem Solving	
The user/individual on the job needs to know and understand how to:	
SB6. identify problems occurring on the shop floor	
SB7. break the problem into smaller issues and tasks to arrive at a solution	
SB8. understand inter process relationship and establish relationship between various parts of the problem	
SB9. leverage experience and technical expertise to find effective solutions to problems	
SB10. use basic analytical tools to arrive at solutions	
SB11. collaborate with cross functional teams to resolve problems	
Plan and Organize	
The user/individual on the job needs to know and understand how to:	
SB12. plan, organize and prioritize the work order and jobs received from the production manager	
SB13. manage the schedule plan for the operators and helpers on the line/shift	
SB14. validate all process/ equipment manuals so that the final process selected is correct	
SB15. organize information, tools, manuals etc. on the shop floor so that sorting becomes easy	
SB16. reorganize resources on the line/ shift in case of change of plans	
Judgment and Critical Thinking	
The user/individual on the job needs to know and understand how to:	
SB17. use common sense and make judgments during day to day basis	

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Manage and analyze production related operations of the shift/ line on a day to day basis

	<p>SB18. use reasoning skills to identify and resolve problems</p> <p>SB19. use intuition to detect any potential problems which could arise during operations</p> <p>SB20. critically analyse solutions/ recommendations shared by operatives and supervisors for implementation</p>
	Ownership
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB21. accept additional responsibility for self and the team</p> <p>SB22. encourage self and other to take greater responsibilities</p> <p>SB23. ensure that the work allocated to the team is completed as per timelines and quality norms</p> <p>SB24. identify obstacles and bottlenecks in the process and on own find basic level solutions for removing these obstacles</p>
	Team Work
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB25. motivate and provide support for the team on the shop floor</p> <p>SB26. encourage collaboration between team members</p> <p>SB27. resolve team issues and grievances to manage conflicts within the team</p> <p>SB28. create an environment of approachability, trust and openness within the team</p> <p>SB29. ensure role clarity for all operators and helpers on the line/ shift</p> <p>SB30. escalate any team related issues to the concerned person at the right time</p>
	Quality Consciousness
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB31. identify defective parts in the manufacturing line by comparing</p> <p>SB32. manufactured pieces with the work standard</p> <p>SB33. link the defect observed with the overall impact on the performance of the component/ automobile</p> <p>SB34. support and contribute in monitoring and delivering high quality output from self and others</p> <p>SB35. train team members on maintaining quality standards set by the organization</p>
	Decision making
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB36. use previous experience in resolving problems and taking decisions</p> <p>SB37. make timely and independent decisions on the line/ shift within the boundaries of the delegation matrix of the organization</p>
	Out of Box thinking

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Manage and analyze production related operations of the shift/ line on a day to day basis

	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SB38. Familiarise with leading practices available in the market</p> <p>SB39. Think independently on new approaches to manufacturing process, material management, data management and team management</p> <p>SB40. Represent any new ideas/ approaches on process improvement and productivity improvement to the seniors in the team</p>
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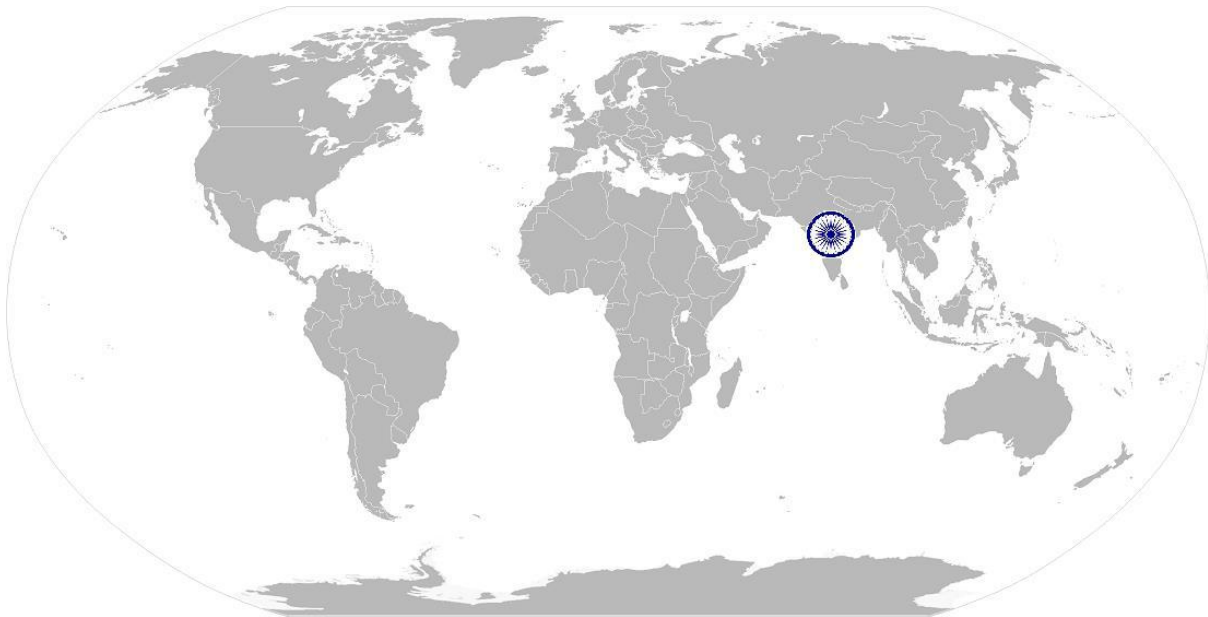
NOS Version Control

NOS Code	ASC/N0017		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	25/11/2013
Industry Sub-sector	Manufacturing	Last reviewed on	15/12/2013
Occupation	Casting	Next review date	Under revision expected date of revised version 31-Dec-15

ASC/N/N0018

Finalize and manage the team on the line/ shift on a day to day basis

National Occupational Standard



Overview

This unit is about effective management of the team of operators and helpers for day to day operations in the line/shift

ASC/N/N0018

Finalize and manage the team on the line/ shift on a day to day basis

National Occupational Standard	Unit Code	ASC /N0018
	Unit Title (Task)	Finalize and manage the team on the line/ shift on a day to day basis
	Description	This NOS is about managing the team of operatives and helpers on day to day basis, ensuring their shift deployment, motivating them by involving them in various engagement initiatives at the shop floor, helping them improve the skills levels and managing their grievances in the best possible manner in order to maximize the people productivity at the shop floor
	Scope	<p>The role will be responsible for</p> <ul style="list-style-type: none"> engaging the workforce through employee engagement and communication finalizing manpower deployment measuring operator performance, sharing feedback and training of helpers and operators managing grievances of the team members <p>The job holder will cover all types of manufacturing processes in the automobile industry. The role holder will interact with the different manufacturing process teams, maintenance team, material management team, industrial engineering team, Quality Control & Assurance team, Safety team and HR/IR team</p>
Performance Criteria(PC) w.r.t. the Scope		
Element	Performance Criteria	
Engaging the shop floor work force through employee communication and employee engagement	<p>PC1. Ensure operators and helpers on the production line/ shift are aware of the job expectations on a daily basis</p> <p>PC2. Ensure that the operators are aware of the production targets and the timelines required to process a work order as finalized in the production plan</p> <p>PC3. Involve operators and helpers for the daily floor meeting/ morning meetings/ staff meetings to communicate information intended for them</p> <p>PC4. Ensure communication to line operators/ helpers on any changes in policies/ processes by the organization through required verbal/ written mechanisms</p> <p>PC5. Ensure participation of employees in various engagement initiatives organized at the plant and other place by the organization</p> <p>PC6. Involve operators and helpers in Quality Circles, TQM & Kaizen meets, Brainstorming sessions, safety drills etc. to increase their involvement in manufacturing operations</p> <p>PC7. Ensure availability of tea, snacks, drinking water and basic hygiene facilities at the shop floor for the operative workforce</p> <p>PC8. Escalate issues to concerned staff in case of any issue related to operative deployment and engagement</p>	

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Finalize and manage the team on the line/ shift on a day to day basis

<p>Finalizing manpower deployment</p>	<p>PC9. Finalize along with the process manager, the shift planning and manpower deployment for the shift/ line as per the proposed production plan</p> <p>PC10. Support the process manager in creating week wise shift rosters for the shift/ line manpower and ensure rotation of manpower as per the organizational norms and guidelines</p> <p>PC11. Maintain the information on leaves/ IN Out time keeping and shift/ line overtime for the operatives and helpers and share the information with the concerned as and when required</p> <p>PC12. Identify skilled manpower for the process and ensure periodic up - dation of Skill Matrix/ Skill Chart for the shift/ line/ process area</p> <p>PC13. Ensure identification and deployment of right skilled people at the right places on the line/ process area</p>
<p>Employee Performance Measurement and Employee Development</p>	<p>PC14. Ensure that all the operative manpower is aware of the production targets, production plan and daily productivity targets</p> <p>PC15. Track the daily performance of the operators and helpers during the shift and note the achievement levels in a manual register/ online IT enabled system</p> <p>PC16. Provide feedback to the operators and helper in case of any process deviation observed</p> <p>PC17. Provide feedback to managers pertaining to performance appraisals of operators and helpers</p> <p>PC18. Ensure that the operatives are trained and are aware of the processes which need to be followed on the shop floor during the production process</p> <p>PC19. Support the manager and the training team in training of entry level operators and helpers in the plant</p> <p>PC20. Share knowledge of processes , inputs and outputs with the operators to enhance their skill levels</p> <p>PC21. Other than technical trainings, support the team by delivering trainings related to quality and safety for the operators and helpers</p> <p>PC22. Drive a culture of creativity and innovation in the team by given the team members opportunity to think out of box and express their thoughts</p>
<p>Grievance Management for Operators and Helpers</p>	<p>PC23. In case the operating staff has any queries, ensure that the queries are resolved either by self or escalated to the concerned person</p> <p>PC24. Listen to issues related to workmen problems/ work men grievances/ Complaints/ Personal Problems etc. for the operators and helpers</p> <p>PC25. Resolve issues which are under the purview of the supervisor and escalate the ones which need higher intervention to the concerned team</p> <p>PC26. Counsel employees for any work related issues or any personal problems highlighted by the employee</p>
<p>Knowledge and Understanding (K)</p>	

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Finalize and manage the team on the line/ shift on a day to day basis

B. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. relevant HR Policies and Processes followed by the organization KA2. different types of products manufactured by the company KA3. knowledge of functional processes like Procurement, Store management, inventory management, quality management and key contact points for query resolution KA4. 5S and Safety norms practiced in the organization
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. different types of manufacturing processes KB2. various grievance management tools available in the organization KB3. various problems solving tools like 7QC, Why Analysis, Brain storming KB4. different types of communication channels practiced by the organization KB5. the method of noting observations, maintaining records and sharing them with the concerned in the required format KB6. knowledge of shift roster norms and guidelines KB7. how and when to measure performance of the operators KB8. how to share feedback with team members
Skills (s) [optional]	
A. Core Skills/ Generic Skills	<div style="background-color: #e6f2ff; padding: 5px;">Writing and reading skills</div> <p>The user/ individual on the job needs to know and understand how to:</p> SA1. document information from the manuals, discussion notes, process charts etc. SA2. create small notes/ work documents/ diagrams for operators and helpers to help them understand the process SA3. use emails and other business correspondence methods (internal memos, circular etc.) for communicating with other team members/ vendors/ suppliers etc SA4. read internal information memos send by internal customers (other functions within the organization) <div style="background-color: #e6f2ff; padding: 5px;">Oral Communication (Listening and Speaking skills)</div> <p>The user/individual on the job needs to know and understand how to:</p> SA5. discuss task lists, schedules, and work-loads with the operative team members SA6. answer the queries raised by the operative team as well as intercompany departments SA7. effectively communicate with the operators and helpers and make them aware of work expectations, targets, policies, processes etc. SA8. attentively listen with full attention the queries and grievances raised by the operative team and comprehend the information given by the speaker
B. Professional Skills	<div style="background-color: #e6f2ff; padding: 5px;">People Development</div> <p>The user/individual on the job needs to know and understand how to:</p>

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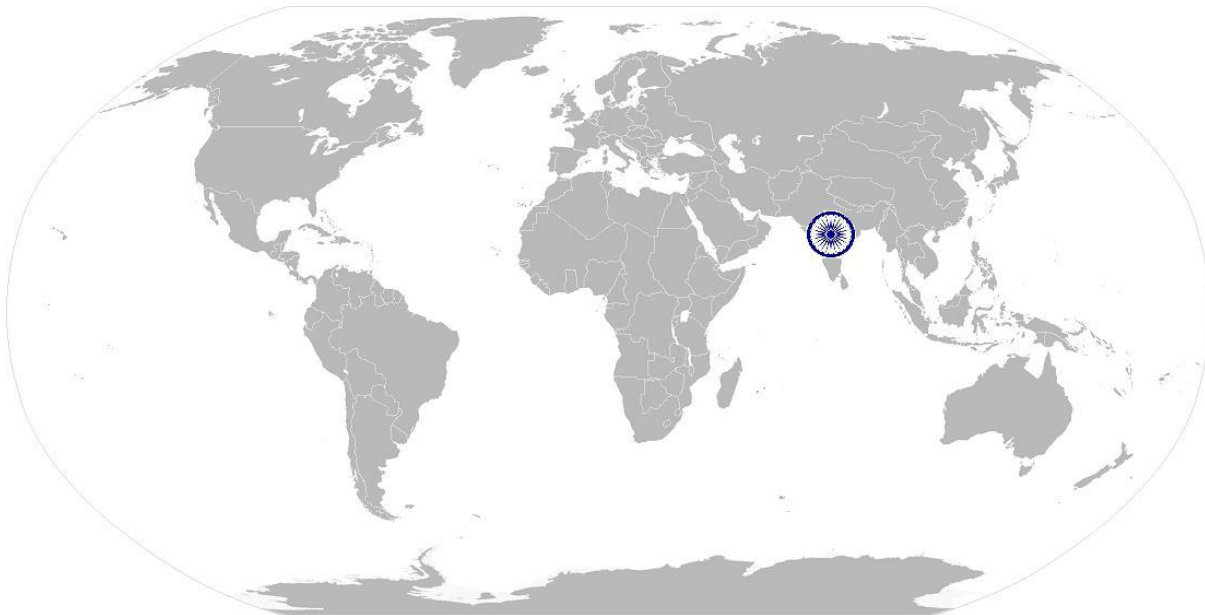
Finalize and manage the team on the line/ shift on a day to day basis

	<p>SB1. identify the strengths and weaknesses of the subordinate team members (operators and helpers)</p> <p>SB2. provide constructive and genuine feedback</p> <p>SB3. motivate the team to take independently responsibilities in their work areas</p> <p>SB4. provide training to the operators and helpers for technical and behavioural areas</p>
	Team Leadership
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB5. communicate effectively to the team members</p> <p>SB6. identify conflicts in the team and try to resolve them at the earliest</p> <p>SB7. interact and engage with the team members on a day to day basis</p> <p>SB8. counsel and coach the operators and help them resolve issues</p> <p>SB9. timely highlight to the management about any good work/ achievement by the operators and helpers</p> <p>SB10. display empathy for the problems faced by the team and act on the concerns</p>
	Analytical Thinking
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB11. break the problem into smaller issues and tasks to arrive at a solution</p> <p>SB12. understand inter process relationship and establish relationship between various parts of the problem</p> <p>SB13. leverage experience to find effective solutions to problems</p> <p>SB14. use basic analytical tools to arrive at solutions</p> <p>SB15. collaborate with cross functional teams to resolve problems</p>
	Judgment and Critical Thinking
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB16. use common sense and make judgments during day to day basis</p> <p>SB17. use reasoning skills to identify and resolve problems</p> <p>SB18. use intuition to detect any potential problems which could arise during operations</p> <p>SB19. critically analyse solutions/ recommendations shared by operatives and supervisors for implementation</p>
	Ownership
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB20. accept additional responsibility for self and the team</p> <p>SB21. encourage self and other to take greater responsibilities</p> <p>SB22. ensure that the work allocated to the team is completed as per timelines and quality norms</p> <p>SB23. identify obstacles and bottlenecks in the process and on own find basic level solutions for removing these obstacles</p>
	Team Work
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB24. motivate and provide support for the team on the shop floor</p>

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Finalize and manage the team on the line/ shift on a day to day basis

	<p>SB25. encourage collaboration between team members</p> <p>SB26. resolve team issues and grievances to manage conflicts within the team</p> <p>SB27. create an environment of approachability, trust and openness within the team</p> <p>SB28. ensure role clarity for all operators and helpers on the line/ shift</p> <p>SB29. escalate any team related issues to the concerned person at the right time</p>
	<p>Decision making</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB30. use previous experience in resolving problems and taking decisions</p> <p>SB31. make timely and independent decisions on the line/ shift within the boundaries of the delegation matrix of the organization</p>



ASC/N/N0018

Finalize and manage the team on the line/ shift on a day to day basis

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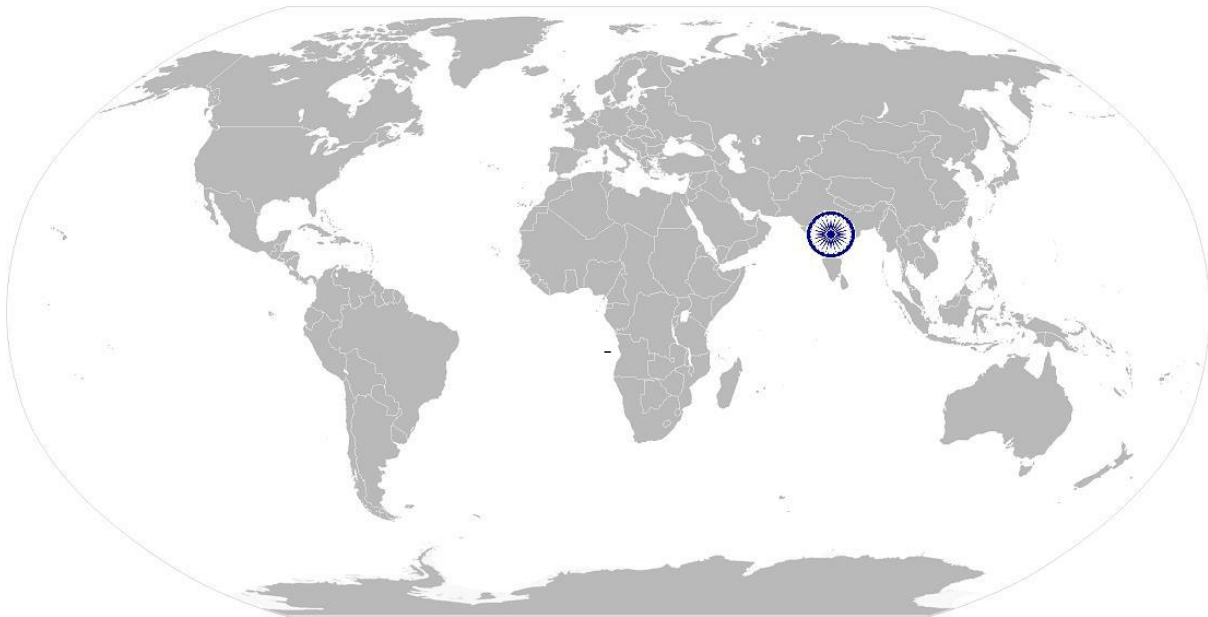
NOS Code	ASC/N0018		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	25/11/2013
Industry Sub-sector	Manufacturing	Last reviewed on	15/12/2013
Occupation	Casting	Next review date	Under revision expected date of revised version 31-Dec-15



ASC/N0006

Maintain a safe and healthy working environment

National Occupational Standard



Overview

This unit is about maintaining a Safe and Healthy working environment

ASC/N0006

Maintain a safe and healthy working environment

National Occupational Standard	Unit Code	ASC/N0006
	Unit Title (Task)	Maintain a safe and healthy working environment
	Description	This NOS is about creating 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 and training team members on health and safety related issues
	Scope	The role holder will be responsible for <ul style="list-style-type: none"> identifying and reporting of risks creating and sustaining a safe, clean and environment friendly work place This NOS will be applicable to all Automotive sector manufacturing job roles
	Performance Criteria (PC) w.r.t. the Scope	
	Element	Performance Criteria
	Identify and report the risks identified	<p>PC1. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals ,loud noise</p> <p>PC2. Identify areas in the plant which are potentially hazardous/ unhygienic in nature</p> <p>PC3. Conduct regular checks on machine health to identify potential hazards due to wear and tear of machine</p> <p>PC4. Ensure that all equipment are tested of safety conformance as per the cycle/ timelines identified in the organization</p> <p>PC5. Inform the shop head and the safety team about the potential risks identified in the processes, workplace area/ layout, material used, malfunctioning of safety related equipment etc.</p> <p>PC6. Inform the maintenance team about machine breakdowns, damages which can potentially harm man/ machine during operations and analyse their defects to prevent any future damage to men/ machine</p> <p>PC7. Ensure that all risk involving and hazardous areas near the work place are marked/ tagged in order to caution the users of the work area/ machinery</p> <p>PC8. Create awareness amongst other by sharing information on the identified risks. Ensure that periodic awareness sessions are conducted for the helpers and operatives to make them aware of the risks identified</p>
	Create and sustain a Safe, clean and environment friendly work place	<p>PC9. Support the Safety team in risk identification and creation of a risk mitigation plan</p> <p>PC10. Train team members on safety and health related issues</p> <p>PC11. Ensure that all team members operate the machine using the recommended Personal Protective Equipment (PPE) and also</p>

ASC/N0006

Maintain a safe and healthy working environment

	<p>ensure self-usage of the required PPEs</p> <p>PC12. Ensure that all operatives follow the instructions given on the equipment manual describing the operating process of the equipment to prevent any hazard</p> <p>PC13. Ensure that all team members follow the Safety, Health and Environment related practices developed by the organization</p> <p>PC14. Ensure that a clean and safe working environment near the work place is maintained and that there is no spillage of chemicals, production waste, oil, solvents etc. in the working area</p> <p>PC15. Ensure that the first aid safety kit at the work place/ shop floor contains the requisite items to respond to minor injuries. Also may sure that the operatives and helpers are made aware of these items and their usage</p> <p>PC16. Ensure that a documented record of all minor and major injuries is kept and updated on the shop floor</p> <p>PC17. Ensure that the waste disposal is done in the designated area and manner as per organization SOP</p> <p>PC18. Attend all safety and fire drills to be self-aware of safety hazards and preventive techniques and ensure that the team participate in all the required safety and fire drills</p> <p>PC19. Participate in all safety related initiatives like Safety Committee participations, Safety Day Celebrations etc.</p> <p>PC20. Maintain high standards of personal hygiene at the work place</p> <p>PC21. Ensure that any activity performed by the team members which may negatively impact their health and productivity is immediately brought to notice by the supervisor</p> <p>PC22. Periodically counsel and train employees on good health and safe working practices.</p> <p>PC23. Inform the medical officer/ HR in case of self or an employee's illness of contagious nature so that preventive actions can be planned for others</p>
Knowledge and Understanding (K)w.r.t. the scope	
Element	Knowledge and Understanding
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant standards, procedures and policies related to Health, Safety and Environment followed in the company</p> <p>KA2. emergency handling procedures & hierarchy for escalation</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. basic knowledge of Safety procedures(fire fighting, first aid) within the organization</p> <p>KB2. knowledge of various types of PPEs and their usage</p> <p>KB3. basic knowledge of risks/hazards associated with each occupation in the organization</p>

ASC/N0006

Maintain a safe and healthy working environment

	<p>KB4. how to safely operate various tools and machines and risks associated with the tools/ equipment</p> <p>KB5. knowledge of personal hygiene and how an individual can contribute towards creating a highly safe and clean working environment</p>
Skills (S)w.r.t. the scope	
Element	Skills
A. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SA1. write basic level notes and observations SA2. note down observations (if any) related to the process SA3. write information documents to internal departments/ internal teams
	Reading Skills
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SA4. read safety instructions put up across the plant premises SA5. read safety precautions mentioned in equipment manuals and panels to understand the potential risks associated
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SA6. effectively communicate information to team members SA7. Inform employees in the plant and concerned functions about events, incidents & potential risks observed related to Safety, Health and Environment. SA8. question the process head/ safety team in order to understand the safety related issues SA9. attentively listen with full attention and comprehend the information given by the speaker during safety drills and training programs
B. Professional Skills	Judgmental Thinking
	The user/individual on the job needs to know and understand how to: <ul style="list-style-type: none"> SB1. use common sense and make judgments during day to day basis SB2. use reasoning skills to identify and resolve basic problems
	Persuasion skills
	The user/ individual on the jobs needs to know and understand how to: <ul style="list-style-type: none"> SB3. persuade team members to wear Personal Protective Equipment as per requirement SB4. ensure that the team understands the importance of using various machines and equipment without creating any risk to human/ machine SB5. train team members on various risks identified
	Analytical Thinking

ASC/N0006

Maintain a safe and healthy working environment

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB6. break the problem into smaller issues and tasks to arrive at a solution</p> <p>SB7. understand inter process relationship and establish relationship between various parts of the problem</p> <p>SB8. leverage experience to find effective solutions to problems</p> <p>SB9. use basic analytical tools to arrive at solutions</p>
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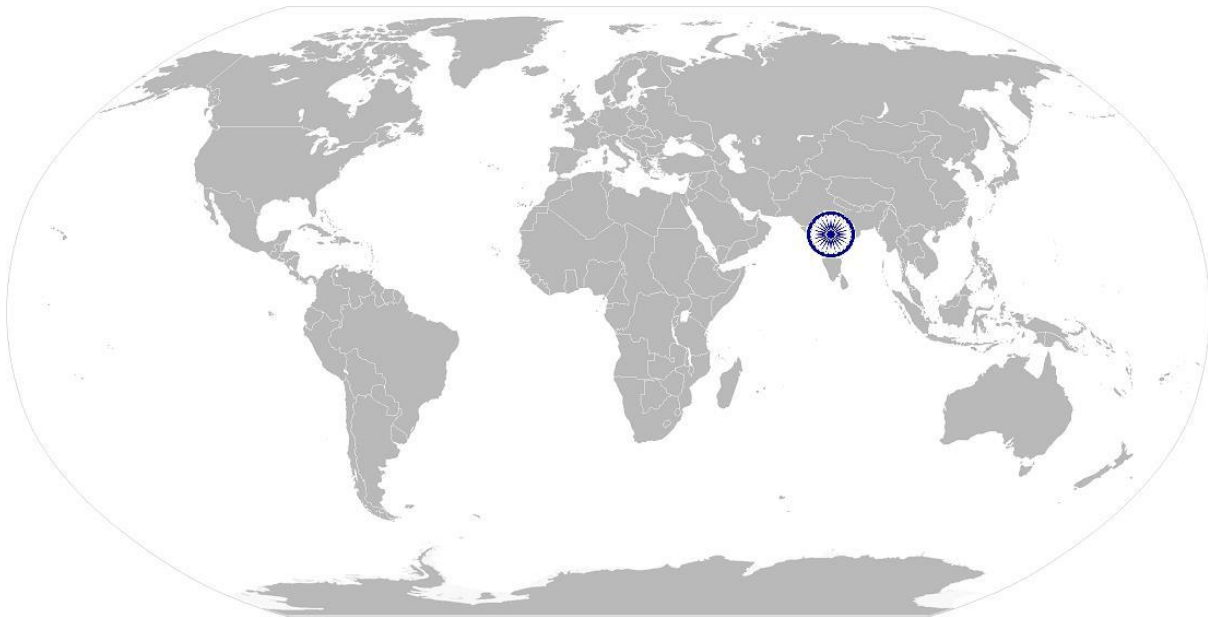
NOS Version Control

NOS Code	ASC/N0006B 		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	15/11/2013
Industry Sub-sector	Manufacturing	Last reviewed on	28/11/2013
Occupation	Casting	Next review date	Under revision expected date of revised version 31-Dec-15

ASC/N0022

Ensure implementation of 5S activities at the shop floor and the office area

National Occupational Standard



Overview

This unit is about the implementing the various principles of 5S and ensure that the given guidelines are followed to ensure a clean and efficient working environment in the organization

ASC/N0022

Ensure implementation of 5S activities at the shop floor and the office area

National Occupational Standard	Unit Code	ASC/N0022
	Unit Title (Task)	Ensure implementation of 5S activities at the shop floor & the office area
	Description	This NOS is about overseeing the implementation of all 5 S activities both at the shop floor and the office area by the team members and training the team in implementation of the 5S principles
	Scope	The individual needs to <ul style="list-style-type: none"> Ensure sorting, streamlining/ organizing, storage and documentation, systematic cleaning, standardization and sustenance across the plant and office premises of the organization as given in the organization guidelines
	Performance Criteria (PC) w.r.t. the Scope	
	Element	Performance Criteria
	Ensure proper sorting of items at the work place	PC1. Ensure all recyclable materials are put in designated containers PC2. Ensure no Tools, fixtures & jigs are lying on workstations unless in use and no un-necessary items is lying on workbenches or work surfaces unless in use PC3. Ensure that the operators and other team members are segregating the waste in hazardous/ Non Hazardous waste as per the sorting work instructions PC4. Ensure that all the operators are following the technique of waste disposal and waste storage in the designated bins PC5. Segregate the items which are labeled at red tag items for the process area and keep them in the correct places PC6. Ensure that all the tools/ equipment/ fasteners/ spare parts are arranged as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions PC7. Check for return of any type of extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area PC8. Oversee removal of unnecessary equipment, storage, furniture, unneeded inventory, supplies, parts and material PC9. Ensure that areas of material storage areas are not overflowing PC10. Ensure proper stacking and storage of the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required
	Ensure proper documentation and storage – streamlining & organizing	PC11. Ensure that the team follows the given instructions and checks for labelling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc.

ASC/N0022

Ensure implementation of 5S activities at the shop floor and the office area

the workplace	<p>PC12. Make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions</p> <p>PC13. Ensure that organizing the workplace takes place with due considerations to the principles of wasted motions, ergonomics, work & method study .</p>
Ensure cleaning of self and the work place	<p>PC14. Ensure that the area has floors swept, machinery clean and is generally neat and tidy. In case of cleaning, ensure that correct displays are maintained on the floor which indicate potential safety hazards</p> <p>PC15. Ensure workbenches and work surfaces are clean and in good condition</p> <p>PC16. Ensure adherence to the cleaning schedule for the lighting system to ensure proper illumination</p> <p>PC17. Ensure self-cleanliness - clean uniform, clean shoes, clean gloves, clean helmets, personal hygiene</p>
Ensure standardization	<p>PC18. Ensure that daily cleaning standards and schedules to create a clean working environment are followed across the plant</p> <p>PC19. Oversee that various cleaning and organizing tasks have been developed and assigned for the work area</p> <p>PC20. Ensure logical and user friendly documentation and file management for all activities across the plant and create guidelines around standardization of processes</p> <p>PC21. Ensure timely creation and sharing of the 5S checklists</p> <p>PC22. Ensure that the 5S manual are available as per the timelines</p>
Ensure sustenance	<p>PC23. Ensure team cooperation during the audit of 5 S activities</p> <p>PC24. Ensure that workmen are periodically trained to address challenges related to 5S</p> <p>PC25. Participate actively in employee work groups on 5S and encourage team members for active participation</p> <p>PC26. Oversee that the staff/operators are trained and fully understand 5s procedures</p> <p>PC27. Ensure that all the guidelines for What to do and What not to do to build sustainability in 5S are mentioned in the 5S check lists/ work instructions and are easily searchable</p> <p>PC28. Ensure continuous training of the team members on 5S in order to increase their awareness and support implementation</p> <p>PC29. Ensure that all visual controls, notice boards, symbols etc. at the manufacturing place are created, working and are put up as per the requirement</p>
Knowledge and Understanding (K) w.r.t. the scope	
Element	Knowledge and Understanding

ASC/N0022

Ensure implementation of 5S activities at the shop floor and the office area

C. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA3. relevant standards, procedures and policies related to 5S followed in the company
D. Technical Knowledge	The user/individual on the job needs to : KB6. have basic knowledge of 5S procedures KB7. know various types 5s practices followed in various areas KB8. understand the 5S checklists provided in the department/ team KB9. have skills to identify useful & non useful items KB10. have knowledge of labels , signs & colours used as indicators KB11. Have knowledge on how to sort and store various types of tools, equipment, material etc. KB12. know , how to identify various types of waste products KB13. understand the impact of waste/ dirt/ dust/unwanted substances on the process/ environment/ machinery/ human body KB14. have knowledge of best and environment protective ways of cleaning & waste disposal KB15. understand the importance of standardization in processes KB16. understand the importance of sustainability in 5S KB17. have knowledge of TQM process KB18. have knowledge of various materials and storage norms KB19. understand visual controls, symbols, graphs etc.
Skills (S)w.r.t. the scope	
Element	Skills
C. Core Skills/ Generic Skills	Writing Skills
	The user/ individual on the job needs to know and understand how to: SA10. write basic level notes and observations SA11. note down observations (if any) related to the process SA12. write information documents to internal departments/ internal teams
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA13. read 5S instructions put up across the plant premises
	Oral Communication (Listening and Speaking skills)

ASC/N0022

Ensure implementation of 5S activities at the shop floor and the office area

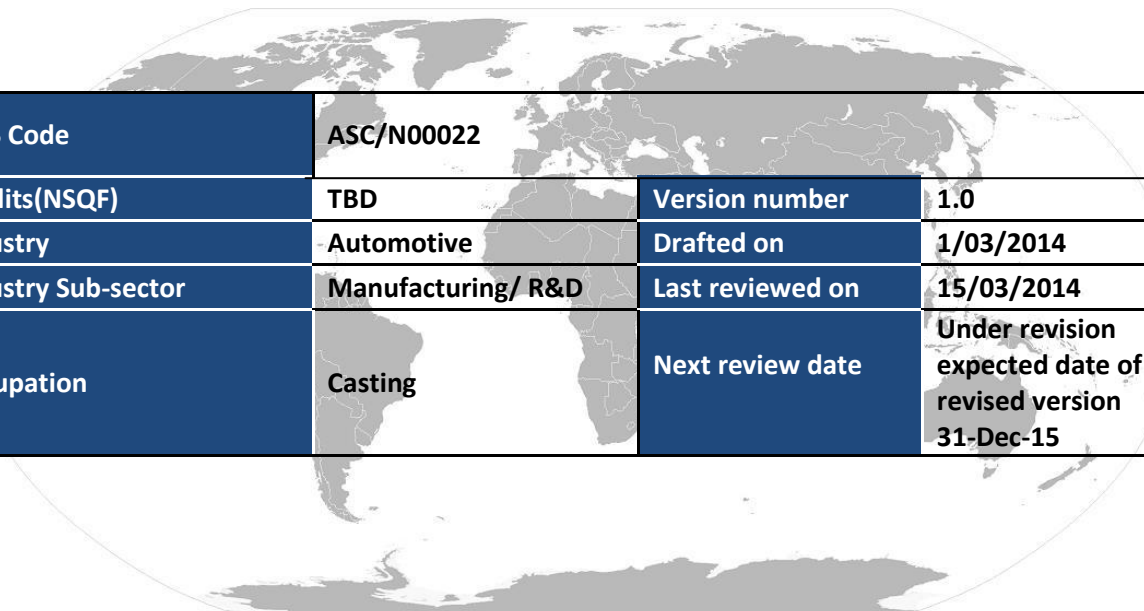
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA14. effectively communicate information to team members inform employees in the plant and concerned functions about 5S</p> <p>SA15. question the process head in order to understand the 5S related issues</p> <p>SA16. attentively listen with full attention and comprehend the information given by the speaker during 5S training programs</p>
D. Professional Skills	Judgmental Thinking
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB10. use common sense and make judgments during day to day basis</p> <p>SB11. use reasoning skills to identify and resolve basic problems using 5S</p>
	Persuasion
	<p>The user/ individual on the jobs needs to know and understand how to:</p> <p>SB12. persuade team members to follow 5 S</p> <p>SB13. ensure that the team members understand the importance of using 5 S tool</p>
	Creativity
	<p>The user/individual on the job needs to know and understand how to :</p> <p>SB14. use innovative skills to perform and manage 5 S activities at the work desk and the shop floor</p> <p>SB15. exhibit inquisitive behaviour to seek feedback and question on the existing set patterns of work emerge, techniques in CA/CI around 5 S work practices</p>
	Self –Discipline
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB16. do what is right, not what is a popular practice</p> <p>SB17. follow shop floor rules& regulations and avoid deviations</p> <p>SB18. lead by example in the plant premises while performing activities related to 5S</p> <p>SB19. ensure self-cleanliness on a daily basis</p> <p>SB20. demonstrate the will to keep the work area in a clean and orderly manner</p>
	Ownership
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB21. accept additional responsibility for self and the team</p> <p>SB22. encourage self and other to take greater responsibilities for managing 5S</p> <p>SB23. identify obstacles and bottlenecks in the process and find basic level solutions for removing these obstacles</p>
	Decision making

ASC/N0022

Ensure implementation of 5S activities at the shop floor and the office area

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB24. use previous experience in resolving problems and taking decisions</p> <p>SB25. make timely and independent decisions on the line/ shift within the boundaries of the delegation matrix of the organization</p>
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NOS Version Control

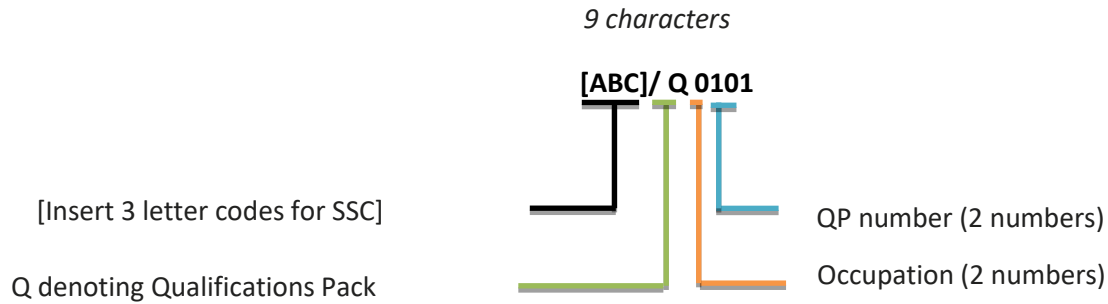


NOS Code	ASC/N00022		
Credits(NSQF)	TBD	Version number	1.0
Industry	Automotive	Drafted on	1/03/2014
Industry Sub-sector	Manufacturing/ R&D	Last reviewed on	15/03/2014
Occupation	Casting	Next review date	Under revision expected date of revised version 31-Dec-15

Annexure

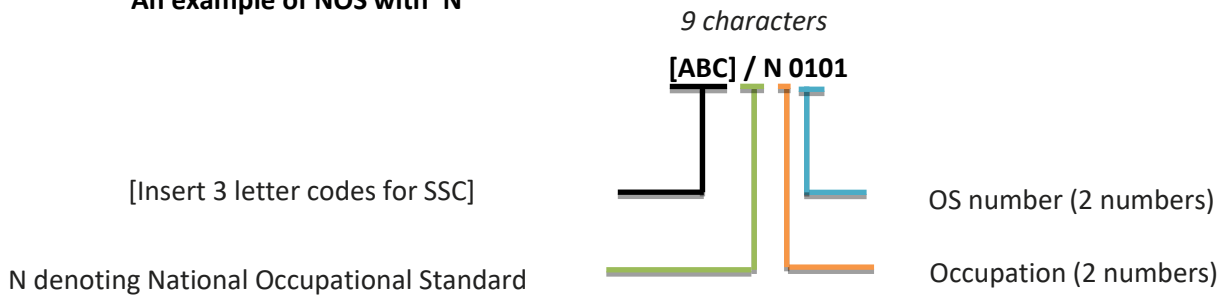
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



The following acronyms/ codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Manufacturing	31 - 45 & 61 - 68
Research & Development	81 - 84
Sales & Service	01 - 21
Road Transportation	96 - 97

Sequence	Description	Example
Three letters	Automotive	ASC
Slash	/	/
Next letter	Whether QP or NOS	N
Next two numbers	Occupation code	01
Next two numbers	OS number	01

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role: Casting Line Incharge

Qualification Pack: ASC/Q3207

Sector Skill Council: Automotive Skills Development Council

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. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
5. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
6. In case of *unsuccessful completion*, the trainee may seek reassessment on the Qualification Pack.

Assessable Outcomes	Assessment criteria	Marks Allocation		
		Theory	Viva	Practical
ASC/N3223	Manage end to end process related to metal casting process			
Pressure Die Casting	PC1. Ensure that the engineering drawing provided to the team is the latest version available to ensure accurate casting as per demand PC2. Ensure that the team members understand and follow all the does and don'ts of the manufacturing process as defined in SOPs/ Work Instructions or defined by supervisors/ master technicians PC3. Ensure that various casting parameters like temperature etc. as well as equipment		100	50

	<p>availability for executing the activity before starting the process</p> <p>PC4. Ensure that the specifications of the finished product are as per work instructions using devices like micrometers etc. and other inspection equipment and</p> <p>PC5. Ensure that the right casting and trimming methodology, process and parameters are in place for completing the work order before starting the casting and trimming process</p> <p>PC6. Ensure that the material required and the equipment is available for executing the scheduled activity</p> <p>PC7. Ensure that any modifications in the casting parameters are made within defined timelines (by selecting the right program from the machine control system) if required and ensure alignment with the prescribed standards</p> <p>PC8. Ensure that required processes are in place for slag/impurities removal from molten metal</p> <p>PC9. Ensure that the operator has input the correct temperature and other parameters are as per the casting requirement and the required operation code is set in the casting machine for it to cast the metal into desired shape</p> <p>PC10. Analyse any irregularities in the process and recommend preventive steps as required</p> <p>PC11. Ensure that help or advice from specialists if the problem is outside the operator's area of competence or experience</p> <p>PC12. Establish linkages between rejection of output and the</p>			
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	<p>pertinent causes for the same (process/material etc.)</p> <p>PC13. Ensure that first and last castings from each batch are sent to the lab for quality check on its composition, soundness, no dularity etc. and a batch clearance is obtained from the lab</p> <p>PC14. Escalate all issues related to change in colour, surface properties etc. so that the manufacturing target can be achieved</p> <p>PC15. Ensure that the defective pieces are separated into two categories – pieces which can be repaired/modified and pieces which are beyond repair. Ensure that pieces beyond repair are discarded as per work instructions</p> <p>PC16. Recommend the means for rejection control to operators whenever required</p>			
<p>Gravity Die Casting</p>	<p>PC17. Ensure that the latest version of the available engineering drawing is available with the team and is adhered to ensure accurate casting</p> <p>PC18. Ensure that the required set of activities needed to complete the work order and final output are adhered to and that the process adopted in gravity casting is as per the Work Instructions/SOPs</p> <p>PC19. Ensure that the assistant operator has the correct set of instructions to operate the casting machines</p> <p>PC20. Ensure that the right components are loaded in the chamber of the shot blasting machine and the required operation code is fed in the</p>		100	50

	<p>pressing machine for it to prepare the core</p> <p>PC21. Ensure that the type of sand and apparatus to be used for making the mold is correctly identified and the casting apparatus for molten metal carrying etc. are function properly</p> <p>PC22. Ensure that the apparatus for the selected sand making/ core making/mould making/casting process is as per the standards used in the industry</p> <p>PC23. Oversee the sand feeding and mixing process and analyze the readings on various panels/meters to prevent machine breakdown/stoppages and deviations</p> <p>PC24. Oversee the quality checks on output sand in terms of grain compressive strength etc.</p> <p>PC25. Ensure that any minor defects like excess slag, holes etc. are rectified via processes like fettling, chipping etc.</p> <p>PC26. Ensure that the first and last casting from each batch is sent to the lab for quality check on its composition, soundness, nodularity etc.</p> <p>PC27. Ensure that the final metal casting is as prescribed in the work order and the latest engineering drawings</p> <p>PC28. In case the parts are not as per the given measurements, ensure that the same are sent for further processing in terms of chipping, fettling etc.</p> <p>PC29. Ensure that the final mould pattern is measured and compared with the dimensions as prescribed in the work order engineering drawing</p>			
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	<p>PC30. Ensure timely escalation of any machine related issues regarding die setting to the machine setter in the plant</p> <p>PC31. Ensure that specialists look into the problem if it is outside the operator's area of competence or experience</p> <p>PC32. Analyse any irregularities in the processes and take preventive steps whenever required</p>			
	Sub Total	100	200	100
ASC/N0016	Understand process requirements, ensure implementation and suggest process improvements	Theory	Viva	Practical
Understanding all the requisite processes in detail and ensuring implementation	<p>PC1. Display detailed understanding of all the requisite processes to be adopted for completing the work order through reading the process manuals/ Work Instructions/Standard Operating Procedures for the production job</p> <p>PC2. Ensure first level drafting of process manuals, Work Instructions, Control Plans, process flow charts to enable the team to easily understand and implement the process</p> <p>PC3. Ensure proper display of Work Instructions, Control Plans and flow charts at the correct places on the shop floor to enable timely and proper view of the documents</p> <p>PC4. Share knowledge of processes , inputs and outputs with the operators and in order to enhance their skill levels</p> <p>PC5. Maintain work flow by monitoring steps of the processes, setting variables, observing control points and equipment</p> <p>PC6. Monitor various process parameters on a regular basis</p>		40	20

	<p>and ensure compliance to agreed standards (e.g. ambient air quality, stack monitoring, water quality monitoring etc.)</p> <p>PC7. Ensuring recording and reporting procedures and systems are in place</p> <p>PC8. Facilitating corrections to malfunctions within process control points</p> <p>PC9. Ensure that all the tools and measuring instruments used on the shop floor are inspected, tested and calibrated internally/ externally as per the schedule</p> <p>PC10. Support the Shop Head/ Process Head in arranging for the requisite usage certificates for the tools and equipment as per the internal guidelines of the organization</p> <p>PC11. Ensure 5S implementation in the production line by analysing possible areas of systems and process improvements and ensure implementation of the recommended measures to address the gaps</p> <p>PC12. Ensure successful implementation of the completed Poka Yoke and kaizen on the running line</p> <p>PC13. Support the Shop Head/ Process manager in conducting first level audit of the manufacturing process on the shop floor</p>			
<p>Process Improvement</p>	<p>PC14. Ensure optimum resource utilization and wastage reduction through process improvements, Kaizens, TQM, Poka Yoke etc. in the shift</p> <p>PC15. Provide inputs for analysis of breakdown trends and current</p>		30	15

	<p style="text-align: center;">maintenance process to identify areas for improvement to achieve cost savings and reduce breakdown timing</p> <p>PC16. Identify areas of improvement in the existing processes/systems and take measures to adhere to the identified Kaizen/ process improvement initiatives</p> <p>PC17. Ensure inputs from the line operators are considered while designing for various Poka Yoke , kaizen initiatives</p> <p>PC18. Encourage team members/ Supervisor/ operators to suggest quality improvement measures through suggestion schemes, evaluate feasibility of the ideas and discuss their implementation with seniors</p> <p>PC19. Support in analysing internal & external rejection data, planning and ensuring implementation of the corrective measures</p> <p>PC20. Ensure team has understanding of basic analytical tools like Why analysis, 7 QC tools, TQM principles to analyse various problems and design process improvement activities</p> <p>PC21. Support the Process Engineering/ Industrial Engineering team in modifications of the process flow, process/ plant layout to improve the process TAT, operational ergonomics, work quality etc.</p>			
<p>Implementation of various initiatives</p>	<p>PC1. Take overall responsibility to ensure adherence to Safety standards by all employees and establish zero accident practice in the section</p>		30	15

	PC2. Implement various business excellence techniques like Kaizen, 5S initiatives, etc. to enhance productivity for the plant/ shift			
	Sub Total	50	100	50
ASC/N0017	Manage and analyze production related operations of the shift/ line on a day to day basis	Theory	Viva	Practical
Manpower Management	<p>PC1. Undertake effective shift planning based on manpower allocation and shift handling of place right manpower on the right workstation in coordination with Production In-charge to achieve production targets</p> <p>PC2. Support the Shop Head/ Process head in finalizing the shift rosters for the week and month based on the production plan available</p>		20	10
Material Management	<p>PC3. Send inventory requirements to Stores and Purchase department and follow up with stores and purchase to ensure timely receipt of material (Spares, Consumables)</p> <p>PC4. Ensure that the incoming raw material quality is inspected and meets the production requirement</p> <p>PC5. Ensure that the material and work piece movement on the shop floor conforms to the TAT time prescribed in the SOP/ Work Plans so that production targets are met for the line/ shift</p>		20	10
Supervise Production Operations	<p>PC6. Ensure that the production plan shared by the PPC team is fulfilled during the shift/ across lines</p> <p>PC7. Coordinate with various functions like material</p>		20	10

	<p>management, stores, paint shop, assembly line, quality, safety, production planning etc. to ensure communication of required information and resolution of queries</p> <p>PC8. Responsible for End of Line Inspection under supervision</p> <p>PC9. Ensure that the operators and helpers have the required tools and equipment at the start of the process</p> <p>PC10. Identify & implement action steps to reduce losses and wastages during shift operation and ensure minimum rejection of components</p> <p>PC11. Observe and note the consumption of energy, fuel, steam on the production line and utilize these inputs for optimization of various factors of production</p> <p>PC12. Support the maintenance team in finalizing the preventive maintenance schedule for the shop</p> <p>PC27. Ensure that the operator and helper are using the required Personal Protective Equipment like Goggles, masks, gloves and other PPE's at the time of conducting the painting operation</p>			
<p>Conformance to Product and Process Quality</p>	<p>PC28. Conduct random incoming quality inspection of material and provide the relevant feedback on the same to the store</p> <p>PC29. Conduct quality inspection of the process parameters, lab parameters and WIP products and provide necessary feedback to the line leaders</p> <p>PC30. Conduct quality inspection of</p>		20	10

	<p>the first sample/batch to ensure that the quality of the product produced meet customer requirements</p> <p>PC31. Conduct inspection and analysis of the defects observed in the process and products</p>			
<p>Data Collation and Analysis</p>	<p>PC32. Prepare daily and monthly production MIS reports to match actual performance vis-à-vis the targets and report the same to Production In-chart</p> <p>PC33. Verify the production and material movement related data entries in the system (manual/ ERP) for the shift and ensure correctness of the data</p> <p>PC34. Ensure compilation of data of breakdown maintenance and reporting the same to the maintenance team</p> <p>PC35. Collaborate with the maintenance team in conducting detailed breakdown analysis to understand problems, look out for process/ machine modifications and resolve the issues</p> <p>PC36. Conduct random sampling of the process parameters, finished goods and WIP products and provide necessary feedback to the line leaders</p> <p>PC37. Collaborate with the Quality Management and Inspection team in conducting detailed analysis to resolve issues</p> <p>PC38. Collaborate with various supervisors to capture process data points as mentioned in</p>		<p style="text-align: center;">20</p>	<p style="text-align: center;">10</p>

	<p>the internal operating guidelines for data analytics</p> <p>PC39.Support the Shop Head/ Process Head in analysing the various data points related to production, maintenance, manpower deployment, material management, costs etc.</p> <p>PC40.Support the Shop Head/ Process Head in creating various analytical presentations required for process/ shop/ plant review</p>			
	Sub Total	50	100	50
ASC/N0018	Finalize and manage the team on the line/ shift on a day to day basis	Theory	Viva	Practical
Engaging the shop floor work force through employee communication and employee engagement	<p>PC1. Ensure operators and helpers on the production line/ shift are aware of the job expectations on a daily basis</p> <p>PC2. Ensure that the operators are aware of the production targets and the timelines required to process a work order as finalized in the production plan</p> <p>PC3. Involve operators and helpers for the daily floor meeting/ morning meetings/ staff meetings to communicate information intended for them</p> <p>PC4. Ensure communication to line operators/ helpers on any changes in policies/ processes by the organization through required verbal/ written mechanisms</p> <p>PC5. Ensure participation of employees in various engagement initiatives organized at the plant and other place by the organization</p>		30	15

	<p>PC6. Involve operators and helpers in Quality Circles, TQM & Kaizen meets, Brainstorming sessions, safety drills etc. to increase their involvement in manufacturing operations</p> <p>PC7. Ensure availability of tea, snacks, drinking water and basic hygiene facilities at the shop floor for the operative workforce</p> <p>PC8. Escalate issues to concerned staff in case of any issue related to operative deployment and engagement</p>			
Finalizing manpower deployment	<p>PC9. Finalize along with the process manager, the shift planning and manpower deployment for the shift/ line as per the proposed production plan</p> <p>PC10. Support the process manager in creating week wise shift rosters for the shift/ line manpower and ensure rotation of manpower as per the organizational norms and guidelines</p> <p>PC11. Maintain the information on leaves/ IN Out time keeping and shift/ line overtime for the operatives and helpers and share the information with the concerned as and when required</p> <p>PC12. Identify skilled manpower for the process and ensure periodic up - dation of Skill Matrix/ Skill Chart for the shift/ line/ process area</p> <p>PC13. Ensure identification and deployment of right skilled people at the right places on the line/ process area</p>		30	15
Employee Performance Measurement and	<p>PC14. Ensure that all the operative manpower is aware of the</p>		20	10

<p>Employee Development</p>	<p>production targets, production plan and daily productivity targets</p> <p>PC15. Track the daily performance of the operators and helpers during the shift and note the achievement levels in a manual register/ online IT enabled system</p> <p>PC16. Provide feedback to the operators and helper in case of any process deviation observed</p> <p>PC17. Provide feedback to managers pertaining to performance appraisals of operators and helpers</p> <p>PC18. Ensure that the operatives are trained and are aware of the processes which need to be followed on the shop floor during the production process</p> <p>PC19. Support the manager and the training team in training of entry level operators and helpers in the plant</p> <p>PC20. Share knowledge of processes , inputs and outputs with the operators to enhance their skill levels</p> <p>PC21. Other than technical trainings, support the team by delivering trainings related to quality and safety for the operators and helpers</p> <p>PC22. Drive a culture of creativity and innovation in the team by given the team members opportunity to think out of box and express their thoughts</p>			
<p>Grievance Management for Operators and Helpers</p>	<p>PC23. In case the operating staff has any queries, ensure that the queries are resolved either by self or escalated to</p>		20	10

	<p>the concerned person</p> <p>PC24. Listen to issues related to workmen problems/ work men grievances/ Complaints/ Personal Problems etc. for the operators and helpers</p> <p>PC25. Resolve issues which are under the purview of the supervisor and escalate the ones which need higher intervention to the concerned team</p> <p>PC26. Counsel employees for any work related issues or any personal problems highlighted by the employee</p>			
	Sub Total	50	100	50
ASC/N0006		Theory	Viva	Practical
	Maintain a safe and healthy working environment			
Identify and report the risks identified	<p>PC1. Identify activities which can cause potential injury through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals ,loud noise</p> <p>PC2. Identify areas in the plant which are potentially hazardous/ unhygienic in nature</p> <p>PC3. Conduct regular checks on machine health to identify potential hazards due to wear and tear of machine</p> <p>PC4. Ensure that all equipment are tested of safety conformance as per the cycle/ timelines identified in the organization</p> <p>PC5. Inform the shop head and the safety team about the potential risks identified in the processes, workplace area/ layout, material used, malfunctioning of safety related equipment</p>		50	25

	<p>etc.</p> <p>PC6. Inform the maintenance team about machine breakdowns, damages which can potentially harm man/ machine during operations and analyse their defects to prevent any future damage to men/ machine</p> <p>PC7. Ensure that all risk involving and hazardous areas near the work place are marked/ tagged in order to caution the users of the work area/ machinery</p> <p>PC8. Create awareness amongst other by sharing information on the identified risks. Ensure that periodic awareness sessions are conducted for the helpers and operatives to make them aware of the risks identified</p>			
<p>Create and sustain a Safe, clean and environment friendly work place</p>	<p>PC9. Support the Safety team in risk identification and creation of a risk mitigation plan</p> <p>PC10. Train team members on safety and health related issues</p> <p>PC11. Ensure that all team members operate the machine using the recommended Personal Protective Equipment (PPE) and also ensure self-usage of the required PPEs</p> <p>PC12. Ensure that all operatives follow the instructions given on the equipment manual describing the operating process of the equipment to prevent any hazard</p> <p>PC13. Ensure that all team members follow the Safety, Health and Environment related practices developed by the organization</p> <p>PC14. Ensure that a clean and safe working environment near the</p>		50	25

	<p>work place is maintained and that there is no spillage of chemicals, production waste, oil, solvents etc. in the working area</p> <p>PC15. Ensure that the first aid safety kit at the work place/ shop floor contains the requisite items to respond to minor injuries. Also may sure that the operatives and helpers are made aware of these items and their usage</p> <p>PC16. Ensure that a documented record of all minor and major injuries is kept and updated on the shop floor</p> <p>PC17. Ensure that the waste disposal is done in the designated area and manner as per organization SOP</p> <p>PC18. Attend all safety and fire drills to be self-aware of safety hazards and preventive techniques and ensure that the team participate in all the required safety and fire drills</p> <p>PC19. Participate in all safety related initiatives like Safety Committee participations, Safety Day Celebrations etc.</p> <p>PC20. Maintain high standards of personal hygiene at the work place</p> <p>PC21. Ensure that any activity performed by the team members which may negatively impact their health and productivity is immediately brought to notice by the supervisor</p> <p>PC22. Periodically counsel and train employees on good health and safe working practices.</p> <p>PC23. Inform the medical officer/</p>			
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	HR in case of self or an employee's illness of contagious nature so that preventive actions can be planned for others			
	Sub Total	50	100	50
<u>ASC/N0022</u>		Theory	Viva	Practical
	Ensure implementation of 5S activities at the shop floor and the office area			
Ensure proper sorting of items at the work place	<p>PC1. Ensure all recyclable materials are put in designated containers</p> <p>PC2. Ensure no Tools, fixtures & jigs are lying on workstations unless in use and no un-necessary items is lying on workbenches or work surfaces unless in use</p> <p>PC3. Ensure that the operators and other team members are segregating the waste in hazardous/ Non Hazardous waste as per the sorting work instructions</p> <p>PC4. Ensure that all the operators are following the technique of waste disposal and waste storage in the designated bins</p> <p>PC5. Segregate the items which are labelled at red tag items for the process area and keep them in the correct places</p> <p>PC6. Ensure that all the tools/ equipment/ fasteners/ spare parts are arranged as per specifications/ utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions</p> <p>PC7. Check for return of any type of extra material and tools to the designated sections and make sure that no additional material/ tool is lying near the work area</p> <p>PC8. Oversee removal of unnecessary</p>			

	<p>equipment, storage, furniture, unneeded inventory, supplies, parts and material</p> <p>PC9. Ensure that areas of material storage areas are not overflowing</p> <p>PC10. Ensure proper stacking and storage of the various types of boxes and containers as per the size/ utility to avoid any fall of items/ breakage and also enable easy sorting when required</p>			
<p>Ensure proper documentation and storage – streamlining & organizing the workplace</p>	<p>PC11. Ensure that the team follows the given instructions and checks for labeling of fluids, oils, lubricants, solvents, chemicals etc. and proper storage of the same to avoid spillage, leakage, fire etc.</p> <p>PC12. Make sure that all material and tools are stored in the designated places and in the manner indicated in the 5S instructions</p> <p>PC13. Ensure that organizing the workplace takes place with due considerations to the principles of wasted motions, ergonomics, work & method study .</p>			
<p>Ensure cleaning of self and the work place</p>	<p>PC14. Ensure that the area has floors swept, machinery clean and is generally neat and tidy. In case of cleaning, ensure that correct displays are maintained on the floor which indicate potential safety hazards</p> <p>PC15. Ensure workbenches and work surfaces are clean and in good condition</p> <p>PC16. Ensure adherence to the cleaning schedule for the lighting system to ensure proper illumination</p> <p>PC17. Ensure self-cleanliness - clean uniform, clean shoes, clean gloves, clean helmets, personal hygiene</p>			

<p>Ensure standardization</p>	<p>PC18. Ensure that daily cleaning standards and schedules to create a clean working environment are followed across the plant</p> <p>PC19. Oversee that various cleaning and organizing tasks have been developed and assigned for the work area</p> <p>PC20. Ensure logical and user friendly documentation and file management for all activities across the plant and create guidelines around standardization of processes</p> <p>PC21. Ensure timely creation and sharing of the 5S checklists</p> <p>PC22. Ensure that the 5S manual are available as per the timelines</p>			
<p>Ensure sustenance</p>	<p>PC23. Ensure team cooperation during the audit of 5 S activities</p> <p>PC24. Ensure that workmen are periodically trained to address challenges related to 5S</p> <p>PC25. Participate actively in employee work groups on 5S and encourage team members for active participation</p> <p>PC26. Oversee that the staff/operators are trained and fully understand 5s procedures</p> <p>PC27. Ensure that all the guidelines for What to do and What not to do to build sustainability in 5S are mentioned in the 5S check lists/ work instructions and are easily searchable</p> <p>PC28. Ensure continuous training of the team members on 5S in order to increase their awareness and support implementation</p> <p>PC29. Ensure that all visual controls, notice boards, symbols etc. at the manufacturing place are created, working and are put up</p>		50	25

	as per the requirement			
	Sub Total	25	50	25
	Total marks	325	650	325