

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR TEXTILE SECTOR

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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Contents

1. Introduction and Contacts.....P.1
2. Qualifications Pack.....P.2
3. Glossary of Key Terms.....P.3
4. NOS Units.....P.5

Introduction

Qualifications Pack – Knitting Machine Fitter

SECTOR: TEXTILE

SUB-SECTOR: KNITTING

OCCUPATION: MAINTENANCE

REFERENCE ID: TSC/ Q 4201

ALIGNED TO: NCO-2004 / 7233.46

Brief Job Description: Knitting machine fitters are responsible for carrying out maintenance activities in knitting machinery such as weft knitting machine, flat knitting machines and warp knitting machines. He should carry out maintenance activities in all aspects such as install, maintain, repair, overhaul and set up in all kind of knitting machineries. This job requires the individual to have thorough knowledge of process flow and material flow in a knitting machine for fabric production and should have sound technical knowledge on erecting the different sequence of machines in knitting department.

Personal Attributes: A fitter should have good eyesight, hand-eye-leg coordination, motor skills and vision. He/she should also have good interpersonal skills.

Job Details	Qualifications Pack Code	TSC/Q4201		
	Job Role	Knitting Machine Fitter		
	Credits (NSQF)	TBD	Version number	1.0
	Sector	Textile	Drafted on	15/12/14
	Sub-sector	Knitting	Last reviewed on	21/01/15
	Occupation	Maintenance	Next review date	01/03/16
Job Role	Fitter			
Role Description	Knitting machinery mechanics and repairers install, maintain, repair, overhaul and set up knitting machinery such as weft knitting machine, flat knitting machines and warp knitting machines.			
NSQF level	5			
Minimum Educational Qualifications	5 th standard, preferably			
Maximum Educational Qualifications	N/A			
Training (Suggested but not mandatory)	Not Applicable			
Experience	Preferably 1-2 years of work experience in a textile mill.			
National Occupational Standards (NOS)	<p>Compulsory:</p> <ol style="list-style-type: none"> TSC/ N4201 Taking charge of shift and handing over shift to fitter TSC/ N4202 General Maintenance Responsibilities TSC/ N4203 Preventive maintenance responsibilities TSC/ N4204 Break down maintenance TSC/ N4205 Maintaining records and ensuring availability of spares TSC/ N9001 Maintain work area, tools and machines TSC/ N9002 Working in a team TSC/ N9003 Maintain health, safety and security at workplace TSC/ N9004 Comply with industry and organizational requirement <p>Optional: N/A</p>			
Performance Criteria	As described in the relevant OS units			

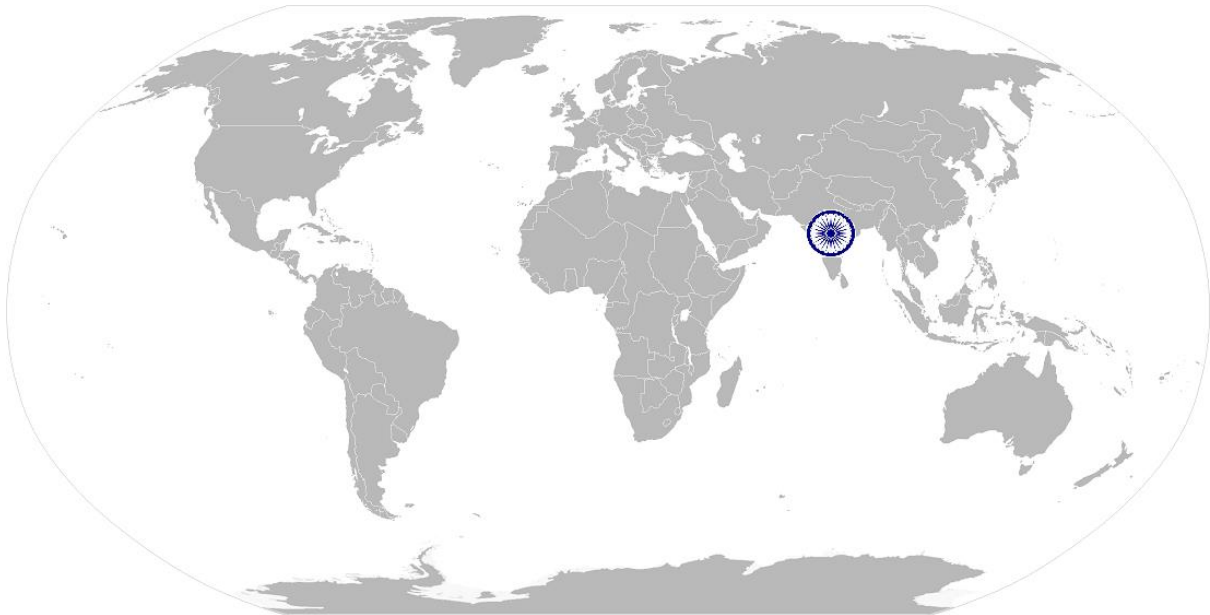
Table 1: Glossary of Key Terms

Keywords /Terms	Description
Definitions	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.
Vertical	Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry.
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
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 OS.
Sub-functions	Sub-functions are sub-activities essential to fulfill the achieving the objectives of the function.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Qualifications Pack(QP)	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Unit Code	Unit Code is a unique identifier for an OS unit, which can be denoted with either an 'O' or an 'N'.
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.

Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
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.
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.
Organizational Context	Organizational 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.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
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 OS , these include communication related skills that are applicable to most job roles.
Keywords /Terms	Description
SSC	Sector Skill Council
OS	Occupational Standard(s)
NOS	National Occupational Standard(s)
QP	Qualifications Pack
NSQF	National Skill Qualifications Framework
NCO	National Classifications of Occupation
TBD	To Be Determined
TSC	Textile Sector Skill Council
NSDC	National Skill Development Corporation

Acronyms

National Occupational Standard



Overview

This unit is about taking charge of shift from previous shift fitter and relieving the responsibilities to the next shift fitter

TSC/ N 4201

Taking charge of shift and handing over shift to fitter

National Occupational Standard	Unit Code	TSC/ N4201
	Unit Title (Task)	Taking charge of shift and handing over shift to fitter
	Description	This unit is about taking charge of shift from previous shift fitter and relieving the responsibilities to the next shift fitter
	Scope	This unit/task covers the following: <ul style="list-style-type: none"> ▪ Taking charge of shift ▪ Handing over shift
	Elements	Performance Criteria
	Taking charge of shift	<p>To be competent, you must be able to:</p> <p>PC1. come at least 10 - 15 minutes earlier to the work spot</p> <p>PC2. bring the necessary operational tools to the department</p> <p>PC3. meet the previous shift fitter and discuss with him/ her regarding the issues faced by them with respect to the quality or production or spare or safety or any other specific instruction etc.</p> <p>PC4. understand the count produced, colour coding, followed in the different knitting machines</p> <p>PC5. patrol around the knitting machineries and ensure the smooth functioning of all the machines in the department</p> <p>PC6. ensure with previous shift fitter regarding the issues faced in the machines if any</p> <p>PC7. ensure all the machines are running properly, machines which are not running and problems if any should be clarified with the fitter, supervisor and operator</p> <p>PC8. check the cleanliness of the machines & other work areas</p> <p>PC9. check whether any spare/raw material/ tool / yarn / any other material are thrown under the machines or in the other work areas.</p> <p>PC10. should question the previous shift maintenance people for any deviation in the above and should bring the same to the knowledge of his/ her shift superior as well that of the previous shift as well.</p> <p>PC11. ensure the work spot is clean</p>
	Handing over shift	<p>PC12. hand over the shift to the incoming shift fitter in a proper manner</p> <p>PC13. ensure in providing the details regarding count produced, colour coding followed for his allocated number of machines in knitting department</p> <p>PC14. provide all relevant information regarding the count produced, idle machines, damaged machine parts if any get clearance from the incoming counterpart before leaving the work spot</p> <p>PC15. report to his shift superiors as well as that of the incoming shift fitter in case his/ her counterpart doesn't report for the incoming shift fitter</p> <p>PC16. ensure the shift has to be properly handed over to the incoming shift fitter</p> <p>PC17. report to his shift superior about the quality / production / maintenance issues / safety issues/ any other issue faced in his/her shift and should leave the department only after getting concurrence for the same from his/ her</p>

TSC/ N 4201

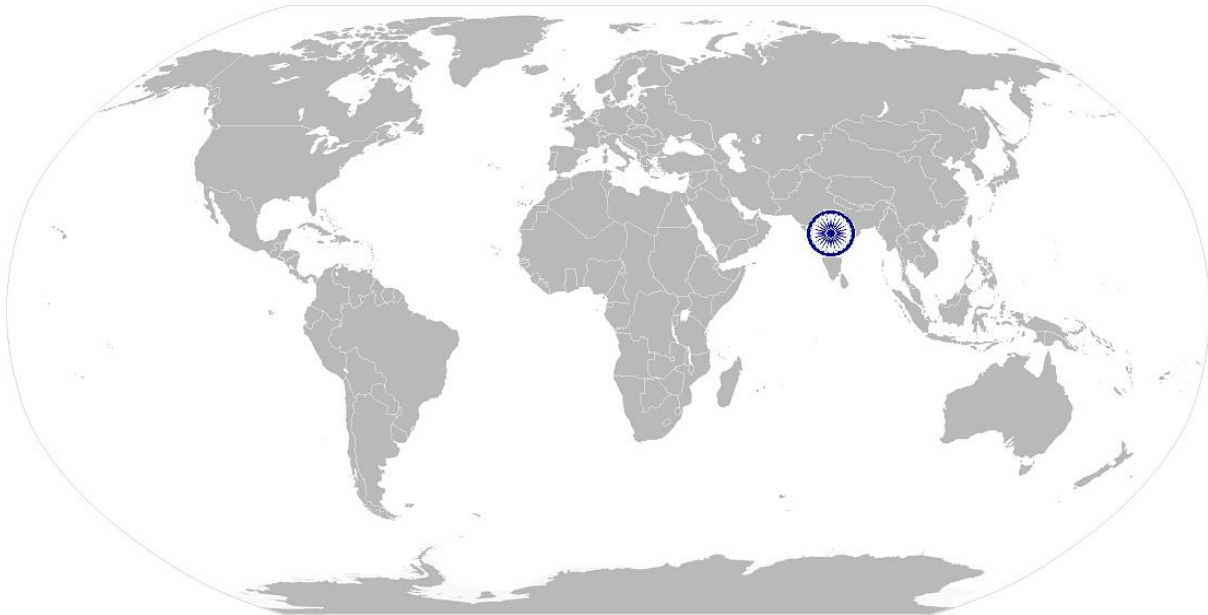
Taking charge of shift and handing over shift to fitter

	<p>superiors</p> <p>PC18. ensure the work spot is clean</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its processes)	<p>You need to know and understand:</p> <p>KA1. standard operating procedures (SOP) and regulations in a knitting industry</p> <p>KA2. safe working practices to be adopted in knitting industry</p> <p>KA3. quality systems and other processes practiced in the knitting industry</p> <p>KA4. reporting to the supervisor or higher authority in case of emergency</p> <p>KA5. color coding adopted for different counts in the knitting industry</p>
B. Technical Knowledge	<p>You need to know and understand:</p> <p>KB1. Understanding the importance of</p> <ul style="list-style-type: none"> • Types of yarn • Types of yarn • Yarn count • Types of yarn defects • Types of knitted fabric defects <p>KB2. Process flow and material flow in knitting industry</p> <p>KB3. Importance of knitting</p> <p>KB4. Functions of different parts of different types of knitting machines</p> <p>KB5. Importance of colour coding followed for different counts</p> <p>KB6. Guidelines for operating the knitting machine</p> <p>KB7. Understanding the functions of different signal lamps</p> <p>KB8. Guidelines for taking charge of shift from previous shift fitter</p> <p>KB9. Guidelines for handing over the shift to the next shift fitter</p> <p>KB10. Importance of material handling and types of material handling equipments used equipments</p> <p>KB11. Functions and methodology for operating different material handling tools</p> <p>KB12. Knowledge of waste collection system & equipments used</p> <p>KB13. Importance of cleanliness at workplace</p> <p>KB14. Safety procedures to be followed in knitting industry</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	<p>You need to know and understand how to:</p> <p>SA1. write clear and short sentences</p>
	Reading Skills
	<p>You need to know and understand how to:</p> <p>SA2. comprehend written instructions</p>
A. Core Skills/ Generic Skills	Oral Communication (Listening and Speaking skills)
	<p>You need to know and understand how to:</p> <p>SA3. communicate with supervisor appropriately</p> <p>SA4. talk to others to convey information effectively</p>
B. Professional Skills	Problem Solving
	<p>You need to know and understand how to:</p> <p>SB1. apply problem-solving approaches in different situations</p> <p>SB2. refer anomalies to the supervisor</p>

TSC/ N 4201

Taking charge of shift and handing over shift to fitter

	SB3. seek clarification on problems from others
	Attention to Detail
	You need to know and understand how to: SB1. apply good attention to detail SB2. check your work is complete and free from errors
C. Technical Skills	You need to know and understand how to: SC1. Procedure to patrol around the knitting department SC2. Procedure to operate the different mechanisms in knitting machine SC3. Procedure for patrolling around the knitting machine and identifying worn out or damaged machine parts SC4. Procedure to check the quality of cone package, fabric rolls , proper functioning of machine parts in knitting SC5. Procedure for operating different material handling tools and equipments SC6. Maintain neatness at work

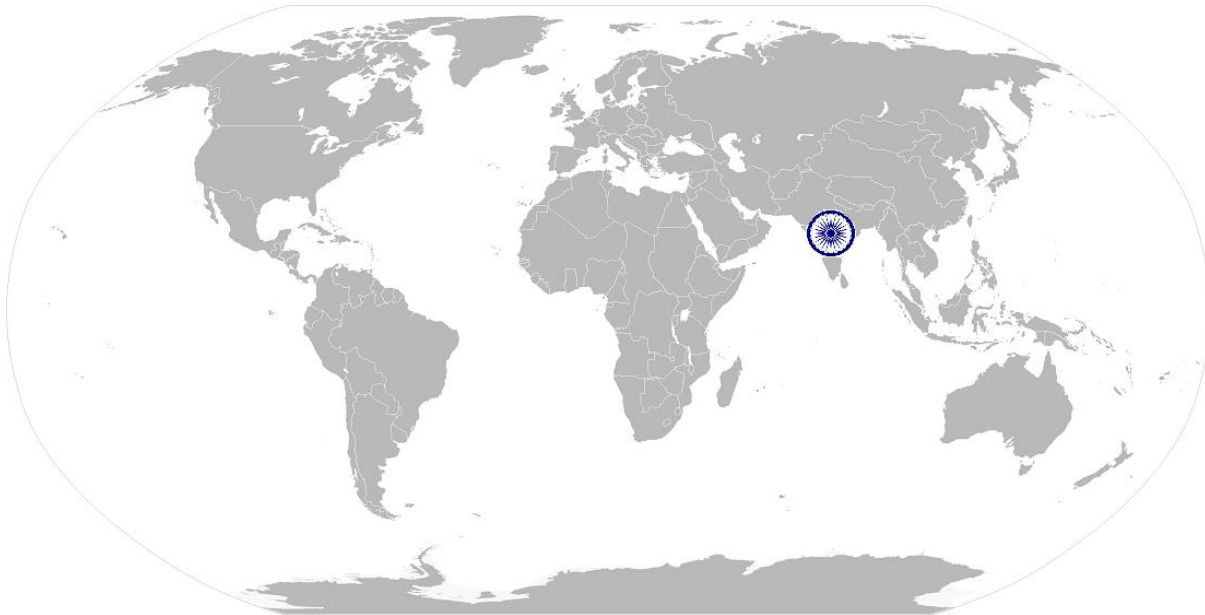


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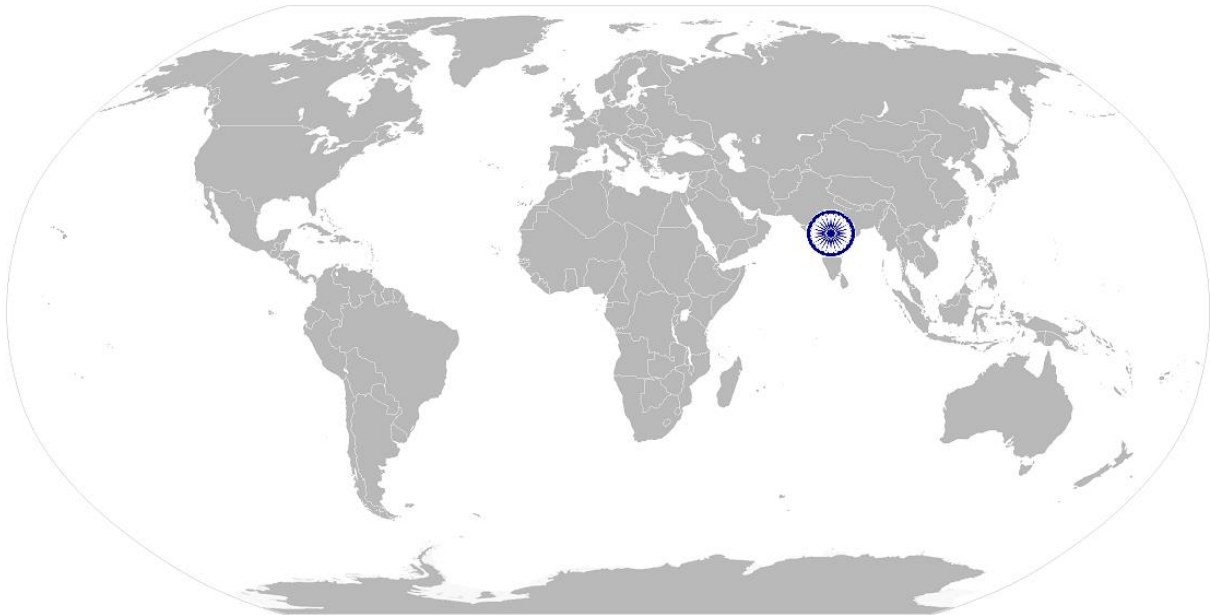
Taking charge of shift and handing over shift to fitter

NOS Version Control

NOS Code	TSC/ N4201		
Credits (NSQF)	TBD	Version number	1.0
Industry	Textile	Drafted on	15/12/14
Industry Sub-sector	Spinning	Last reviewed on	21/01/15
Occupation	Maintenance	Next review date	01/03/16



National Occupational Standard



Overview

This unit is about carrying out general maintenance activities in the knitting department.

TSC/ N4202

General Maintenance Responsibilities

National Occupational Standard	Unit Code	TSC/ N4202
	Unit Title (Task)	General Maintenance Responsibilities
	Description	This unit is about carrying out general maintenance activities in the knitting department.
	Scope	This unit/task covers the following: <ul style="list-style-type: none"> ▪ general maintenance activities
	Elements	Performance Criteria
	General maintenance activities	<p>You need to know and understand:</p> <p>PC1. taking round of the work area before the start of the shift and observing the working.</p> <p>PC2. Taking note of the machines stopped for repairs and the type of problem.</p> <p>PC3. dismantle and assemble different mechanisms in the machines on need basis.</p> <p>PC4. repair and overhaul electrical and mechanical systems of knitting machinery.</p> <p>PC5. adjust and set up complex machinery for new patterns or products</p> <p>PC6. perform maintenance, such as, cleaning and lubrication of knitting machinery, and replace and align moving parts as required</p> <p>PC7. recommend equipment changes or modifications and evaluate new equipment</p> <p>PC8. troubleshoot, test run and verify machine for proper operation.</p> <p>PC9. clean machines (before & after work).</p> <p>PC10. understand different fabric knitting structures</p> <p>PC11. differentiate the needs of single knit and double knit machines, etc.</p> <p>PC12. operate machines, handle fabric and control of each machine properly</p> <p>PC13. install yarn cones on machine, adjust colours to different feeders, choose and change knitting structures graph on the machine</p> <p>PC14. identify the yarn quality problems and easily knit with cotton / polyester and spandex.</p> <p>PC15. make various fabric structures jersey, pique, rib, interlock, fleece, etc.</p> <p>PC16. identify fabric order details</p> <p>PC17. ensure that the nature and extent of machine or knitting faults with operator</p> <p>PC18. knitting product is assessed to identify knit faults</p> <p>PC19. yarn is examined to assess possible impact on operational problems</p> <p>PC20. problems and faults are identified and analyzed to determine root cause</p> <p>PC21. fault diagnosis is established and strategy for repair including replacement of yarn or parts is determined</p> <p>PC22. knitting machine is returned to optimal performance through repair of faulty operation or replacement of yarn or machine parts</p> <p>PC23. test knitting machine and sample produced to ensure problems have been fixed</p> <p>PC24. identify quality standards and have knowledge of quality parameters</p>

TSC/ N4202

General Maintenance Responsibilities

	<p>PC25. quality concepts and implementation of process quality program</p> <p>PC26. identify the quality complaints in the machines.</p> <p>PC27. identify the works done till date and the works pending in the machines stopped for repairs or for maintenance works or modifications.</p> <p>PC28. identify the production plan, prepare maintenance plan and allocate people for different activities.</p> <p>PC29. ensure the machines allotted for various fabric and decide on the parameters to be checked while doing maintenance, like, condition of needles, loop settings, take-down mechanism.</p> <p>PC30. allocate the workers for different tasks considering their knowledge, skills, maturity and workloads agreed.</p> <p>PC31. refer to process parameters and work out the changes to be made for change in hank or product mix and getting the changes made by the concerned maintenance workers.</p> <p>PC32. ensure the use of safety gadgets like caps, masks, gloves and shoes by all maintenance workers.</p> <p>PC33. counsel and influencing a poor performing worker to produce as per norms</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its processes)	<p>You need to know and understand:</p> <p>KA1. standard operating procedures (SOP) and regulations in a textile mill</p> <p>KA2. safe working practices to be adopted in textile mill</p> <p>KA3. quality systems and other processes practiced in the textile mill</p> <p>KA4. reporting to the supervisor or higher authority in case of emergency</p> <p>KA5. color coding adopted for different counts in the textile mill</p>
B. Technical Knowledge	<p>You need to know and understand:</p> <p>KB1. plan maintenance activities and prepare date-wise plans for maintenance and replacement of parts considering their life.</p> <p>KB2. role of humidity and temperature in maintaining quality and productivity. basic knowledge of operating a humidification plant.</p> <p>KB3. workloads, work allocation and standard working conditions for maintenance operatives.</p> <p>KB4. knitting methods and the various types of knit effects</p> <p>KB5. yarn twist and application</p> <p>KB6. fiber types and their method of production</p> <p>KB7. fiber parameters</p> <p>KB8. yarn counts</p> <p>KB9. pattern specifications</p> <p>KB10. factors affecting machine performance: yarn strength, sizing, ambient conditions</p> <p>KB11. machine manufacturer specifications</p> <p>KB12. common knitting machine faults and methods</p> <p>KB13. the knitting cycle</p> <p>KB14. the principal cams controlling the knitting cycle</p>

TSC/ N4202

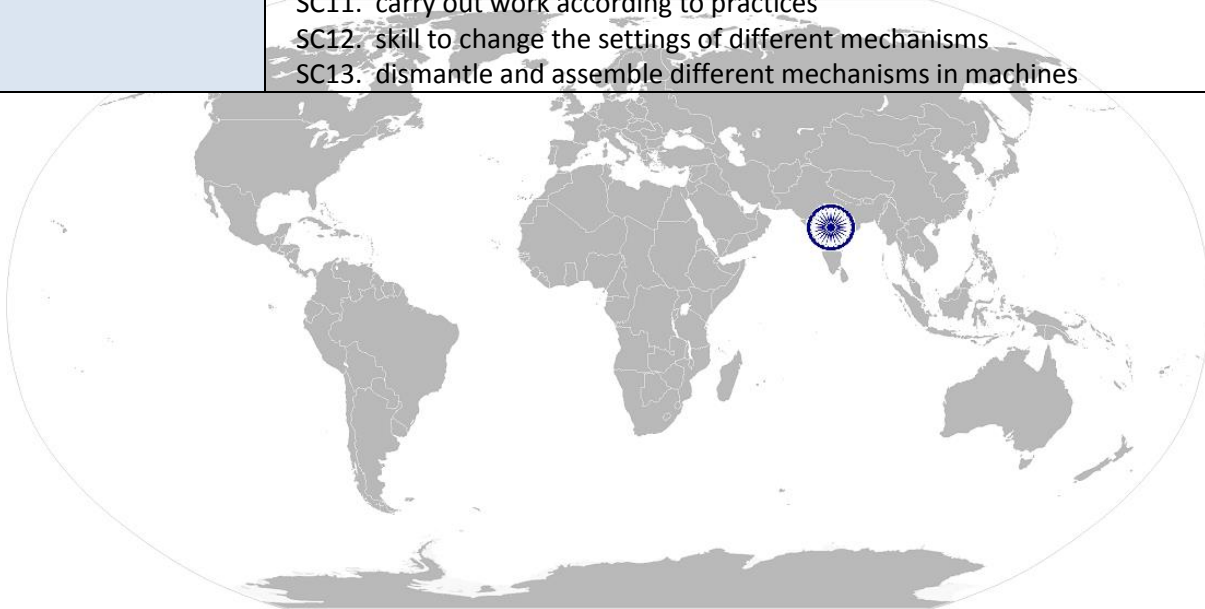
General Maintenance Responsibilities

	<p>KB15. alterations to the cams to produce miss-knitting, and tucking</p> <p>KB16. knock over timing</p> <p>KB17. delayed knock over</p> <p>KB18. the means of adjusting knitting quality</p> <p>KB19. the correct positioning of yarns in the feeders</p> <p>KB20. safety and environmental aspects of relevant enterprise activities</p> <p>KB21. practices, including hazard identification and control measures</p> <p>KB22. quality practices</p> <p>KB23. workplace practices</p> <p>KB24. recording and reporting practices</p> <p>KB25. calculation of maintenance efficiency; time spent for maintenance, men employed, cost of maintenance, costs of spares consumption, mean time between breakdowns, and the industry norms</p> <p>KB26. factors affecting maintenance.</p> <p>KB27. roles and responsibilities of a maintenance supervisor</p> <p>KB28. basic supervisory skills – listening and observing, communication, counseling, taking charge, reporting and motivating.</p> <p>KB29. general management knowledge of managing subordinates, co-coordinating with workshop, electrical department, stores and production</p> <p>KB30. standing orders and discipline in working</p> <p>KB31. precautions to be taken while working</p> <p>KB32. importance of cleanliness and personal safety</p> <p>KB33. fire fighting and first aid</p> <p>KB34. safety precautions and gadgets to be used in factory</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	You need to know and understand how to: SA1. write clear and short sentences
	Reading Skills
	You need to know and understand how to: SA2. comprehend written instructions
	Oral Communication (Listening and Speaking skills)
B. Professional Skills	Problem Solving
	You need to know and understand how to: SB1. apply problem-solving approaches in different situations SB2. refer anomalies to the supervisor SB3. seek clarification on problems from others
	Attention to Detail
	You need to know and understand how to: SB4. apply good attention to detail SB5. check your work is complete and free from errors

TSC/ N4202

General Maintenance Responsibilities

C. Technical Skills	<p>You need to know and understand how to:</p> <ul style="list-style-type: none"> SC1. set and operate knitting machines SC2. test, analyze and prepare samples SC3. interpret and document a simple range of knit patterns SC4. read, interpret and follow information on work specifications, standard operating procedures and work instructions and other reference material SC5. undertake preventative maintenance to circular knitting machines including servicing, according to manufacturer instructions and regular checking for worn or damaged parts. SC6. maintain accurate records SC7. communicate within the workplace SC8. sequence operations SC9. meet specifications SC10. clarify and check task-related information SC11. carry out work according to practices SC12. skill to change the settings of different mechanisms SC13. dismantle and assemble different mechanisms in machines
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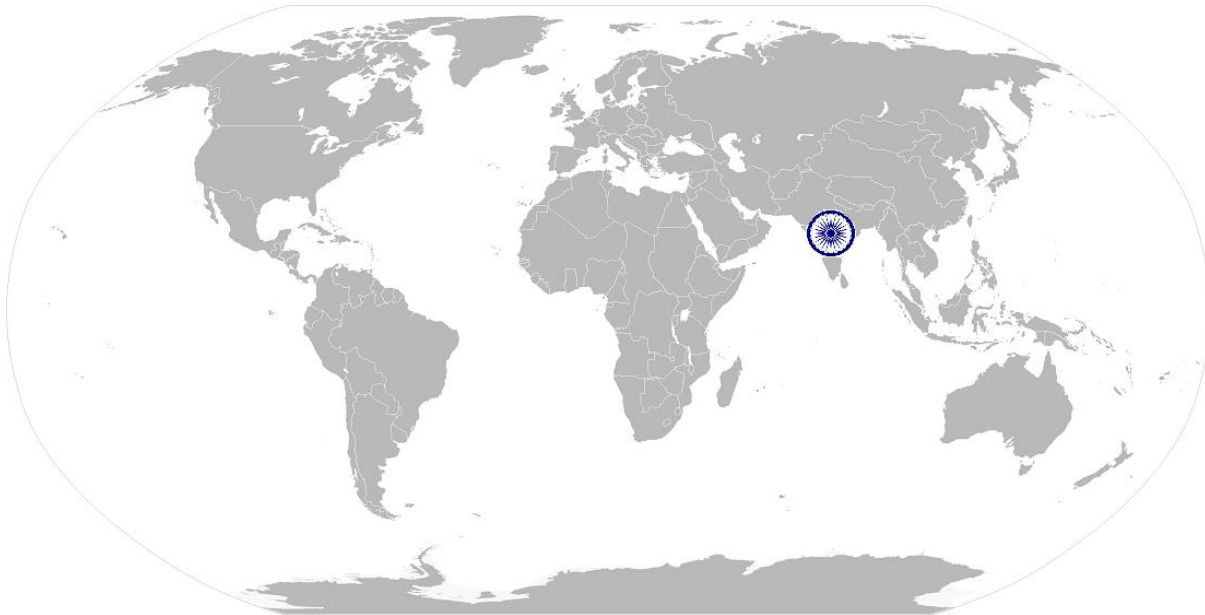


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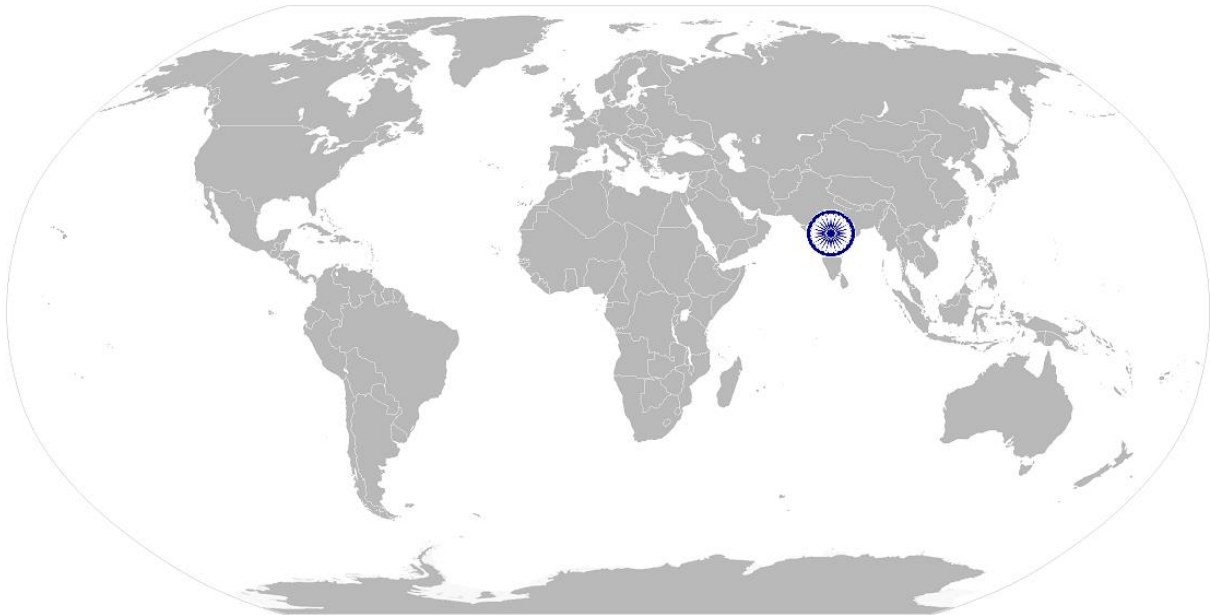
General Maintenance Responsibilities

NOS Version Control

NOS Code	TSC/ N4202		
Credits (NSQF)	TBD	Version number	1.0
Industry	Textile	Drafted on	15/12/2014
Industry Sub-sector	Knitting	Last reviewed on	21/01/2015
Occupation	Maintenance	Next review date	01/03/16



National Occupational Standard



Overview

This unit is about carrying out preventive maintenance activities in the knitting department

TSC/ N4203

Preventive maintenance responsibilities

National Occupational Standard	Unit Code	TSC/ N4203
	Unit Title (Task)	Preventive maintenance responsibilities
	Description	This unit is about carrying out preventive maintenance activities in knitting department
	Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> ▪ Inspecting the condition of machine parts ▪ Carrying out maintenance ▪ Oiling and greasing the machine parts
	Performance Criteria (PC) w.r.t. the Scope	
	Elements	Performance Criteria
	Inspecting the working condition of machine parts	<p>To be competent, you must be able to:</p> <p>PC1. check the proper functioning of machines like cylinder, dial, positive feeder, takedown mechanism, stop motion and the ancillaries like trolleys, filters, and needles and soon.</p> <p>PC2. check the conditions of machine parts while they are being cleaned/scoured or overhauled</p> <p>PC3. ensure the use of safety gadgets like caps, masks, gloves and shoes by all maintenance workers.</p>
	Carrying out maintenance	<p>PC4. change the settings of the machines on need basis.</p> <p>PC5. give instructions to the machine operator about machine handling</p> <p>PC6. identify the worn out parts and get them replaced.</p> <p>PC7. verify the safety stop motions and get them attended</p> <p>PC8. monitor the stoppages due to breakdowns and analyse the reasons for breakdowns and take precautionary measures.</p> <p>PC9. monitor the cylinder change activities in knitting machines and fabric change</p> <p>PC10. monitor the cam and needles, draw, first landing, pressing, second landing, knock over, holding down, sinker action, threading-up</p> <p>PC11. carry out all changes to machine settings in accordance with workplace procedures and as directed by a supervisor</p> <p>PC12. conduct tool audits, i.e. the tools used for maintenance like spanners, gauge, lubricating and flushing pumps etc.</p>
	Oiling and greasing the machine parts	<p>PC13. oil and grease the different machine parts at scheduled intervals for smooth functioning of machines</p> <p>PC14. schedule the oiling and greasing activities</p> <p>PC15. ensure correct oil and grease are taken</p> <p>PC16. ensure proper functioning of machines in preparatory department</p>
	Knowledge and Understanding (K)	

TSC/N4203

Preventive maintenance responsibilities

<p>A. Organizational Context (Knowledge of the company/ organization and its processes)</p>	<p>You need to know and understand:</p> <p>KA1. standard operating procedures (SOP) and regulations in a textile mill KA2. safe working practices to be adopted in textile mill KA3. quality systems and other processes practiced in the textile mill KA4. reporting to the supervisor or higher authority in case of emergency KA5. color coding adopted for different counts in the textile mill</p>
<p>B. Technical Knowledge</p>	<p>You need to know and understand:</p> <p>KB1. Importance and functions of various machines and mechanisms used in knitting machine KB2. Plan maintenance activities and prepare date-wise plans for maintenance and replacement of parts considering their life KB3. Role of humidity and temperature in maintaining quality and productivity. Basic knowledge of operating a humidification plant KB4. Workloads, work allocation and standard working conditions for maintenance operatives KB5. Calculation of maintenance efficiency; time spent for maintenance, men employed, cost of maintenance, costs of spares consumption, mean time between breakdowns, and the industry norms KB6. Factors affecting maintenance KB7. Roles and responsibilities of a maintenance supervisor KB8. Basic supervisory skills KB9. Importance of conducting the tool audits KB10. Importance of oiling and greasing KB11. General management knowledge of managing subordinates, coordinating with workshop, electrical department, stores and production. KB12. Standing orders and discipline in working and precautions to be taken while working. KB13. Safety precautions and gadgets to be used in factory</p>
<p>Skills (S)</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Writing Skills</p> <p>You need to know and understand how to:</p> <p>SA1. write clear and short sentences</p> <p>Reading Skills</p> <p>You need to know and understand how to:</p> <p>SA2. comprehend written instructions</p> <p>Oral Communication (Listening and Speaking skills)</p> <p>You need to know and understand how to:</p> <p>SA3. communicate with supervisor appropriately SA4. talk to others to convey information effectively</p>
<p>B. Professional Skills</p>	<p>Problem Solving</p> <p>You need to know and understand how to:</p> <p>SB1. apply problem-solving approaches in different situations</p>

TSC/N4203

Preventive maintenance responsibilities

	SB2. refer anomalies to the supervisor
	SB3. seek clarification on problems from others
	Attention to Detail
	You need to know and understand how to:
	SB4. apply good attention to detail
	SB5. check your work is complete and free from errors
C. Technical Skills	<p>You need to know and understand :</p> <p>SC1. skill to check the condition of different machine parts</p> <p>SC2. procedure to replace worn-out parts</p> <p>SC3. procedure for cylinder change, fabric change.</p> <p>SC4. procedure to oil and grease the different machine parts</p> <p>SC5. ensure correct oil and grease are taken</p> <p>SC6. skill to change the settings of the different machine parts of all the machines in knitting department.</p>

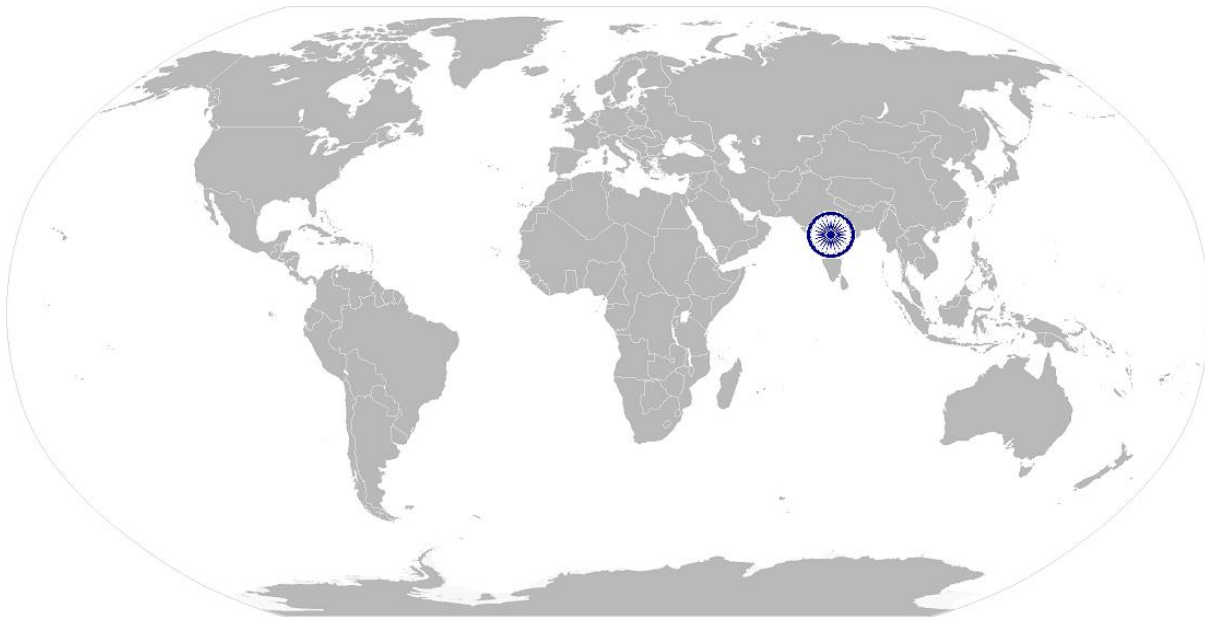


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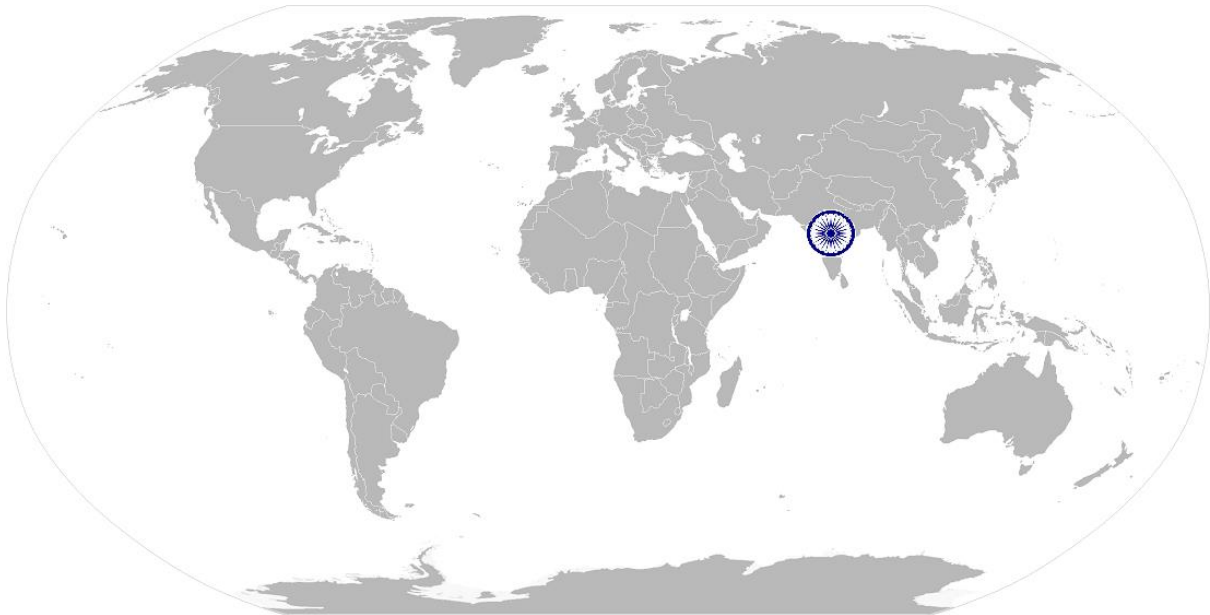
Preventive maintenance responsibilities

NOS Version Control

NOS Code	TSC/ N4203		
Credits (NSQF)	TBD	Version number	1.0
Industry	Textile	Drafted on	15/12/14
Industry Sub-sector	Knitting	Last reviewed on	21/01/15
Occupation	Maintenance	Next review date	01/03/16



National Occupational Standard



Overview

This unit is about carrying out breakdown maintenance activities in the knitting department in case of emergency.

TSC/ N4204

Breakdown maintenance

Unit Code	TSC/N4204
Unit Title (Task)	Breakdown Maintenance
Description	This unit is about carrying out breakdown maintenance activities in the knitting department in case of emergency
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> ▪ Attending the machine on breakdown ▪ Identifying the reason for breakdown and carryout maintenance activity ▪ Post maintenance activities
Performance Criteria (PC) w.r.t. the Scope	
Elements	Performance Criteria
Attending the machine on breakdown	<p>To be competent, you must be able to:</p> <p>PC1. attend the machine on a break down</p> <p>PC2. report to the maintenance in charge on a breakdown</p> <p>PC3. prepare the machine for carrying out breakdown maintenance</p> <p>PC4. ensure in bringing the proper tool and equipments required for carrying out maintenance</p>
Identifying the reason for breakdown and carryout maintenance activity	<p>PC5. analyze the machine which is under breakdown</p> <p>PC6. identify the reason for breakdown</p> <p>PC7. carryout maintenance activities</p> <p>PC8. replace worn out parts with new parts</p> <p>PC9. ensure safety while carrying out maintenance activity</p> <p>PC10. ensure proper material handling of maintenance tools</p>
Post maintenance activities	<p>PC11. check for proper functioning of machine after maintenance</p> <p>PC12. run the machine and check for smooth functioning of machine parts</p> <p>PC13. repair further if further fine tuning is needed</p> <p>PC14. ensure the output material quality is as per quality requirement.</p> <p>PC15. ensure the use of safety gadgets like caps, masks, gloves and shoes by all maintenance workers</p> <p>PC16. ensure minimum time is taken to attend the breakdown, identify the reason for breakdown and carryout the breakdown maintenance activities</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its processes)	<p>You need to know and understand:</p> <p>KA1. standard operating procedures (SOP) and regulations in a textile mill</p> <p>KA2. safe working practices to be adopted in textile mill</p> <p>KA3. quality systems and other processes practiced in the textile mill</p> <p>KA4. reporting to the supervisor or higher authority in case of emergency</p> <p>KA5. color coding adopted for different counts in the textile mill</p>
B. Technical	You need to know and understand:

TSC/ N4204

Breakdown maintenance

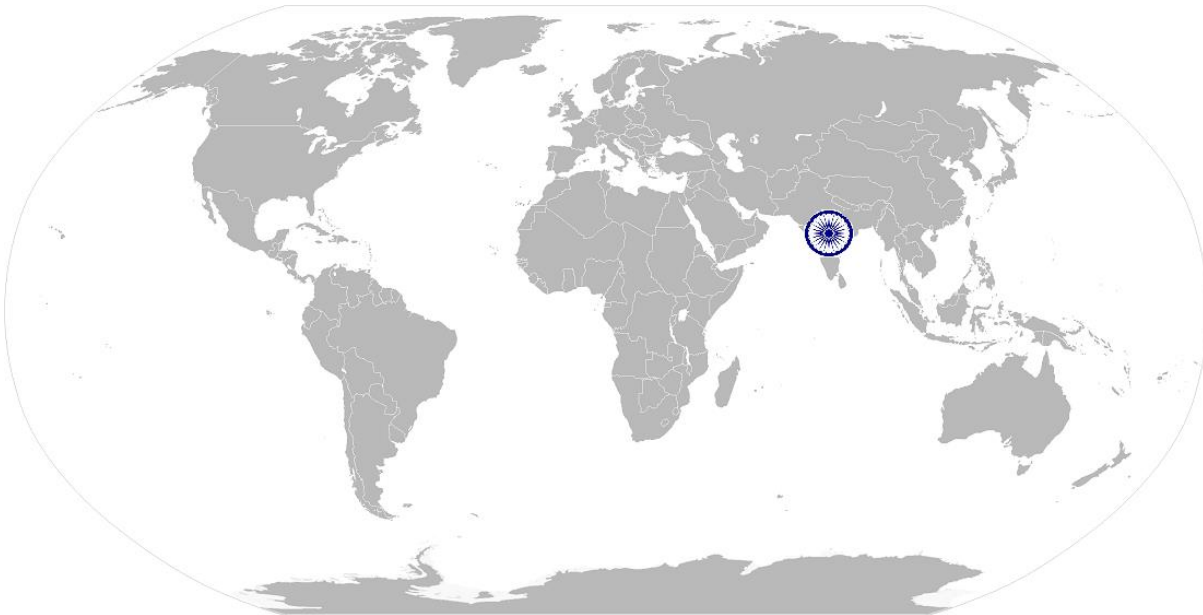
<p>Knowledge</p>	<p>KB1. Importance and functions of various machines and mechanisms used in knitting department machines</p> <p>KB2. Workloads, work allocation and standard working conditions for maintenance operatives.</p> <p>KB3. Roles and responsibilities of a maintenance supervisor</p> <p>KB4. Basic supervisory skills</p> <p>KB5. General management knowledge</p> <p>KB6. Standing orders and discipline in working and precautions to be taken while working</p> <p>KB7. Factors affecting maintenance</p> <p>KB8. Standing orders and discipline in working and precautions to be taken while working.</p> <p>KB9. Importance of time management</p> <p>KB10. Safety precautions and gadgets to be used in factory</p>
<p>Skills (S)</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Writing Skills</p> <p>You need to know and understand how to:</p> <p>SA1. write clear and short sentences</p> <p>Reading Skills</p> <p>You need to know and understand how to:</p> <p>SA2. comprehend written instructions.</p> <p>Oral Communication (Listening and Speaking skills)</p> <p>You need to know and understand how to:</p> <p>SA3. communicate with supervisor appropriately</p> <p>SA4. talk to others to convey information effectively</p>
<p>B. Technical Skills</p>	<p>You need to know and understand :</p> <p>SB1. skill to identify the reason for breakdown</p> <p>SB2. skill to carryout different maintenance activities</p> <p>SB3. skill to material handling the different maintenance tools properly</p> <p>SB4. skill to identify the quality of output material is as per requirement</p> <p>SB5. maintain cleanliness at work place</p>

TSC/ N4204

Breakdown maintenance

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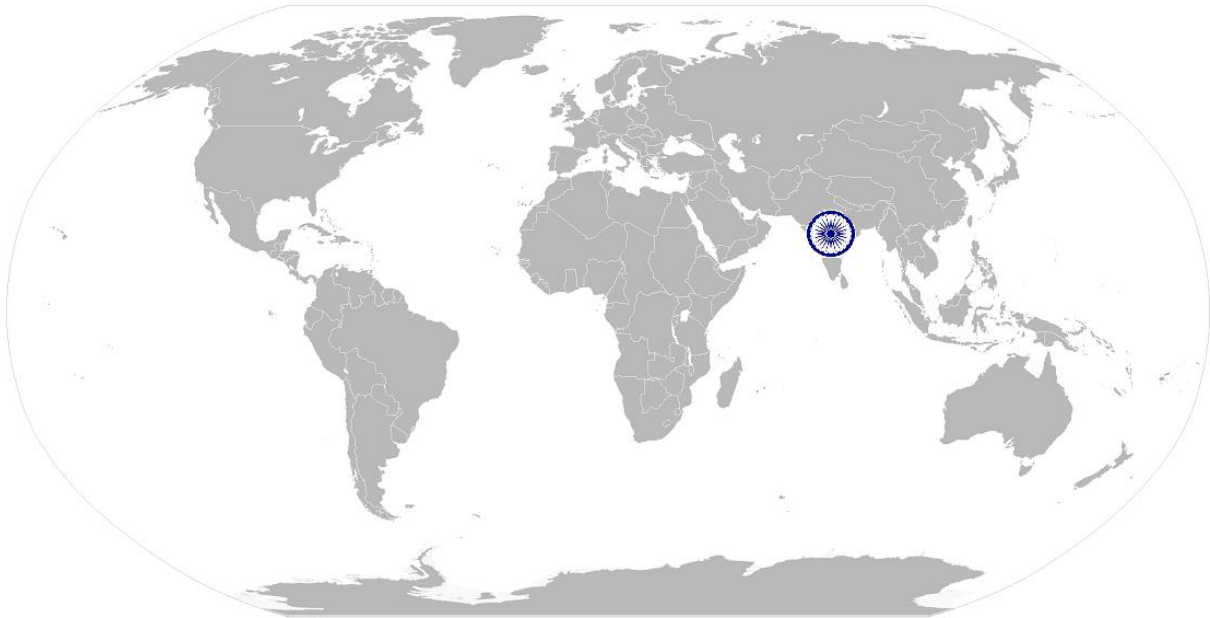
NOS Code	TSC/N4204		
Credits (NSQF)	TBD	Version number	1.0
Industry	Textile	Drafted on	15/12/14
Industry Sub-sector	Knitting	Last reviewed on	21/01/15
Occupation	Maintenance	Next review date	01/03/16



TSC/ N4205

Maintaining records and ensuring availability of spares

National Occupational Standard



Overview

This unit is about the procedure of maintaining records of maintenance activities in the knitting department

TSC/ N4205

Maintaining records and ensuring availability of spares

National Occupational Standard

Unit Code	TSC/ N4205
Unit Title (Task)	Maintaining records and ensuring availability of spares
Description	This unit is about the procedure of maintaining records of maintenance activities in the knitting department
Scope	This unit/task covers the following: <ul style="list-style-type: none"> ▪ Maintaining records
Performance Criteria (PC) w.r.t. the Scope	
Elements	Performance Criteria
Maintaining records	To be competent, you must be able to: <ul style="list-style-type: none"> PC1. carryout maintenance auditing PC2. record the activities in the log book (report book) and update the machine history book PC3. verify the stock of various spares, accessories and lubricants and work out the indenting plan and place indents PC4. refer the machinery catalogues and identify the correct spares needed PC5. check the quality of materials received at stores, for e.g. bearings, wheels, machine spares, needles, belts, brushes, spanners and other tools, etc. PC6. carry out maintenance machine audit PC7. maintain records of maintenance PC8. ensure availability of spares and give requisitions on need basis
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its processes)	You need to know and understand: <ul style="list-style-type: none"> KA1. standard operating procedures (SOP) and regulations in a textile mill KA2. safe working practices to be adopted KA3. quality systems and other processes practiced in the textile mill KA4. reporting to the supervisor or higher authority in case of emergency
B. Technical Knowledge	You need to know and understand: <ul style="list-style-type: none"> KB1. plan maintenance activities and prepare date-wise plans for maintenance and replacement of parts considering their life. KB2. understand types and functions of different spares of different machines in knitting department KB3. calculate maintenance efficiency; time spent for maintenance, men employed, cost of maintenance, costs of spares consumption, mean time between breakdowns, and the industry norms KB4. understand roles and responsibilities of a maintenance foreman KB5. general management knowledge of managing subordinates, coordinating with

TSC/ N4205

Maintaining records and ensuring availability of spares

	workshop, electrical department, stores and production. KB6. follow standing orders and maintain discipline at work
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	You need to know and understand how to: SA1. Write clear and short sentences
	Reading Skills
	You need to know and understand how to: SA2. comprehend written instructions
B. Technical Skills	Oral Communication (Listening and Speaking skills)
	You need to know and understand how to: SA3. communicate with supervisor appropriately SA4. talk to others to convey information effectively
	You need to know and understand how to : SC1. procedure to carryout maintenance auditing SC2. skill to verify the quality of different spares used

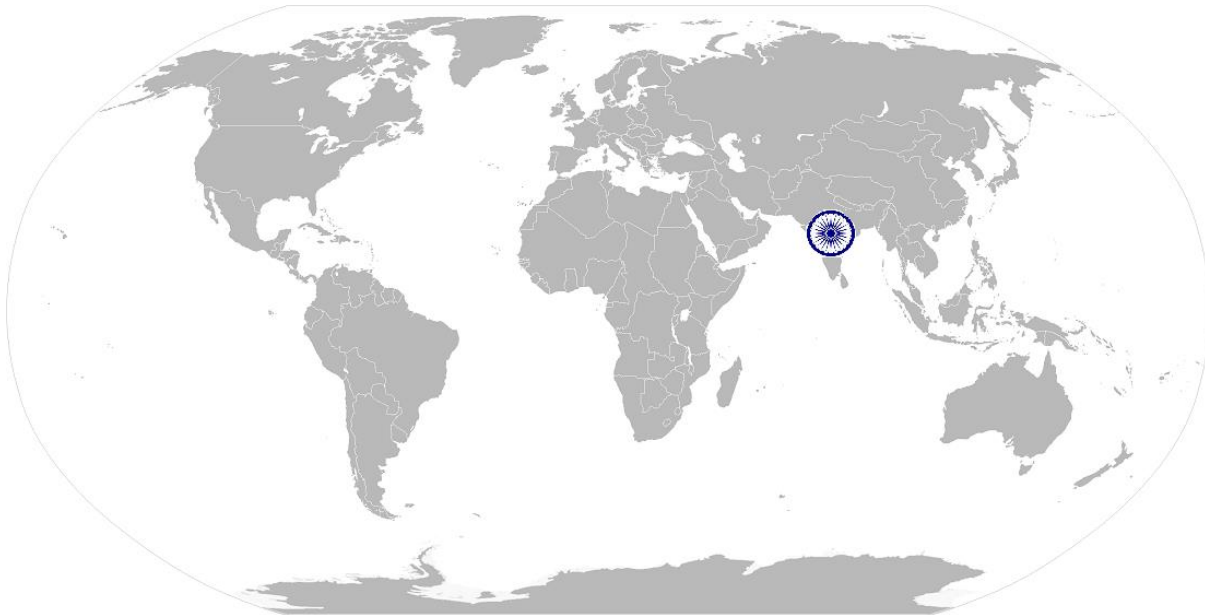


TSC/ N4205

Maintaining records and ensuring availability of spares

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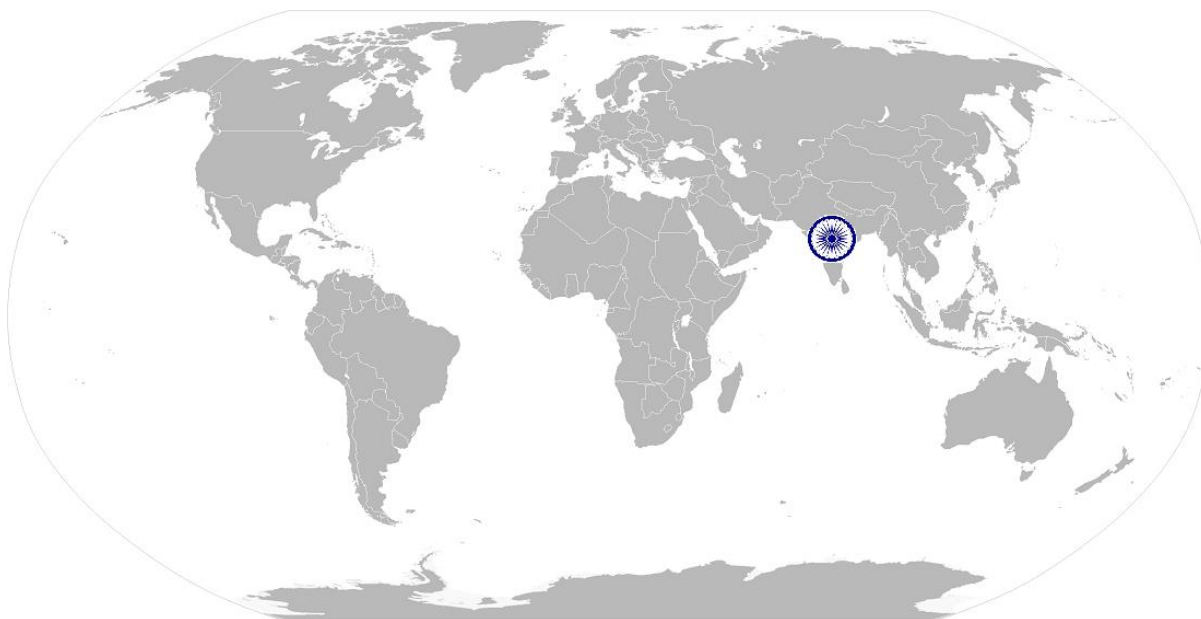
NOS Code	TSC/ N4205		
Credits (NSQF)	TBD	Version number	1.0
Industry	Textile	Drafted on	15/12/14
Industry Sub-sector	Knitting	Last reviewed on	21/01/15
Occupation	Maintenance	Next review date	01/03/16



TSC/ N9001

Maintaining work area, tools and machine

National Occupational Standard



Overview

This unit is about maintaining work areas and activities to ensure tools and machines are maintained as per norms.

TSC/ N9001

Maintaining work area, tools and machine

Unit Code	TSC/ N9001
Unit Title (Task)	Maintaining work area, tools and machines
Description	This unit provides performance criteria, knowledge & understanding and skills & abilities required to organize/ maintain work areas and activities to ensure tools and machines are maintained as per norms
Scope	This unit/task covers the following: <ul style="list-style-type: none"> ▪ Maintain the work area, tools and machines
Performance Criteria (PC) w.r.t. the Scope	
Elements	Performance Criteria
Maintain the work area, tools and machines	<p>To be competent, you must be able to:</p> <p>PC1. handle materials, machinery, equipment and tools with care and use them in the correct way</p> <p>PC2. use correct lifting and handling procedures</p> <p>PC3. use materials to minimize waste</p> <p>PC4. maintain a clean and hazard free working area</p> <p>PC5. maintain tools and equipment</p> <p>PC6. carry out running maintenance within agreed schedules</p> <p>PC7. carry out maintenance and/or cleaning within one's responsibility</p> <p>PC8. report unsafe equipment and other dangerous occurrences</p> <p>PC9. ensure that the correct machine guards are in place</p> <p>PC10. work in a comfortable position with the correct posture</p> <p>PC11. use cleaning equipment and methods appropriate for the work to be carried out</p> <p>PC12. dispose of waste safely in the designated location</p> <p>PC13. store cleaning equipment safely after use</p> <p>PC14. carry out cleaning according to schedules and limits of responsibility</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its processes)	<p>You need to know and understand:</p> <p>KA1. personal hygiene and duty of care</p> <p>KA2. safe working practices and organizational standard operating procedures (SOP)</p> <p>KA3. limits of your own responsibility</p> <p>KA4. ways of resolving with problems within the work area</p> <p>KA5. the production process and the specific work activities that relate to the whole process</p> <p>KA6. the importance of effective communication with supervisors</p> <p>KA7. the lines of communication, authority and reporting procedures</p> <p>KA8. the organization's rules, codes and guidelines (including timekeeping)</p> <p>KA9. the company's quality standards</p> <p>KA10. the importance of complying with written instructions</p> <p>KA11. equipment operating procedures / supervisor's instructions</p>
B. Technical	<p>You need to know and understand:</p> <p>KB1. work instructions and specifications and interpret them accurately</p>

TSC/ N9001

Maintaining work area, tools and machine

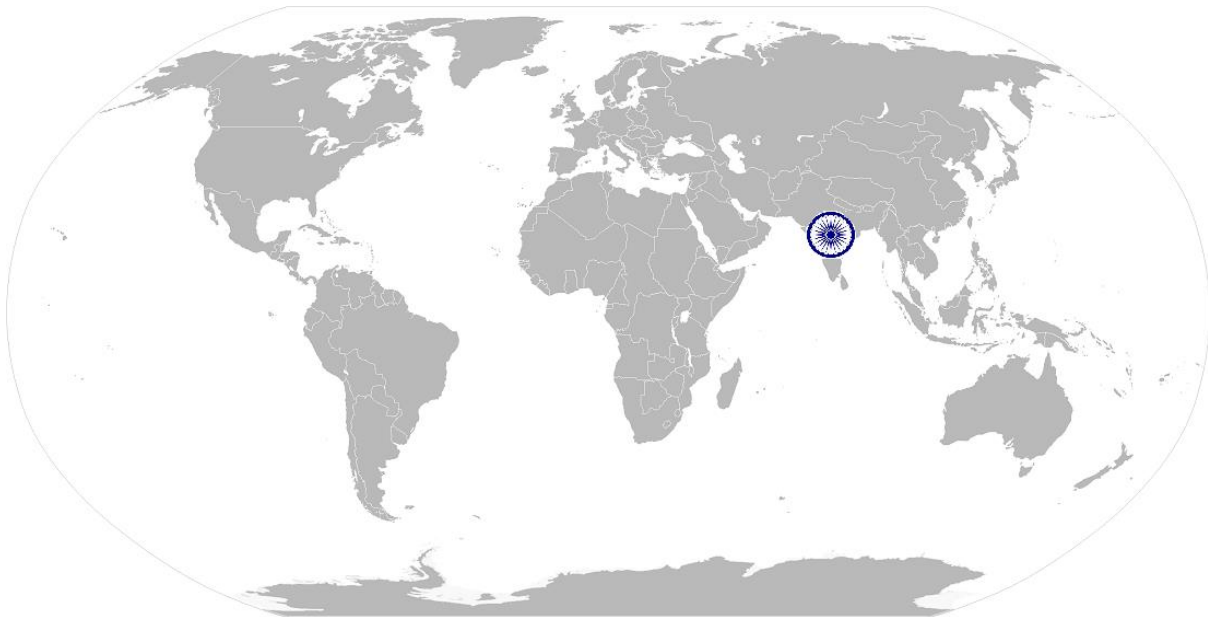
<p>Knowledge</p>	<p>KB2. relation between work role and the overall manufacturing process KB3. hazards likely to be encountered when conducting routine maintenance KB4. the importance of taking action when problems are identified KB5. different ways of minimizing waste KB6. the importance of running maintenance and regular cleaning KB7. effects of contamination on products i.e. machine oil, dirt, foreign materials KB8. common faults with equipment and the method to rectify KB9. maintenance procedures KB10. different types of cleaning equipment and substances and their use KB11. safe working practices for cleaning and the method of carrying them out</p>
<p>Skills (S)</p>	
<p>A. Core Skills/ Generic Skills</p>	<p>Writing Skills You need to know and understand how to: SA1. Write clear and short sentences</p> <p>Reading Skills You need to know and understand how to: SA2. comprehend written instructions SA3. read any application sent by other colleagues</p> <p>Oral Communication (Listening and Speaking skills) You need to know and understand how to: SA4. Communicate effectively in local language SA5. communicate with supervisor appropriately SA6. talk to others to convey information effectively</p>
<p>B. Professional Skills</p>	<p>Problem Solving You need to know and understand how to: SB1. identify the real reason of problem faced SB2. apply problem-solving approaches in different situations SB3. refer anomalies to the supervisor SB4. seek clarification on problems from others</p> <p>Attention to Detail You need to know and understand how to: SB5. apply good attention to detail SB6. check your work is complete and free from errors SB7. make sure every kind of communication is error free</p>
<p>C. Technical Skills</p>	<p>You need to know and understand :</p> <p>SC1. communicate effectively SC2. apply leadership skills wherever required SC3. take initiative at the right place SC4. understand the requirement to be creative</p>

TSC/ N9001

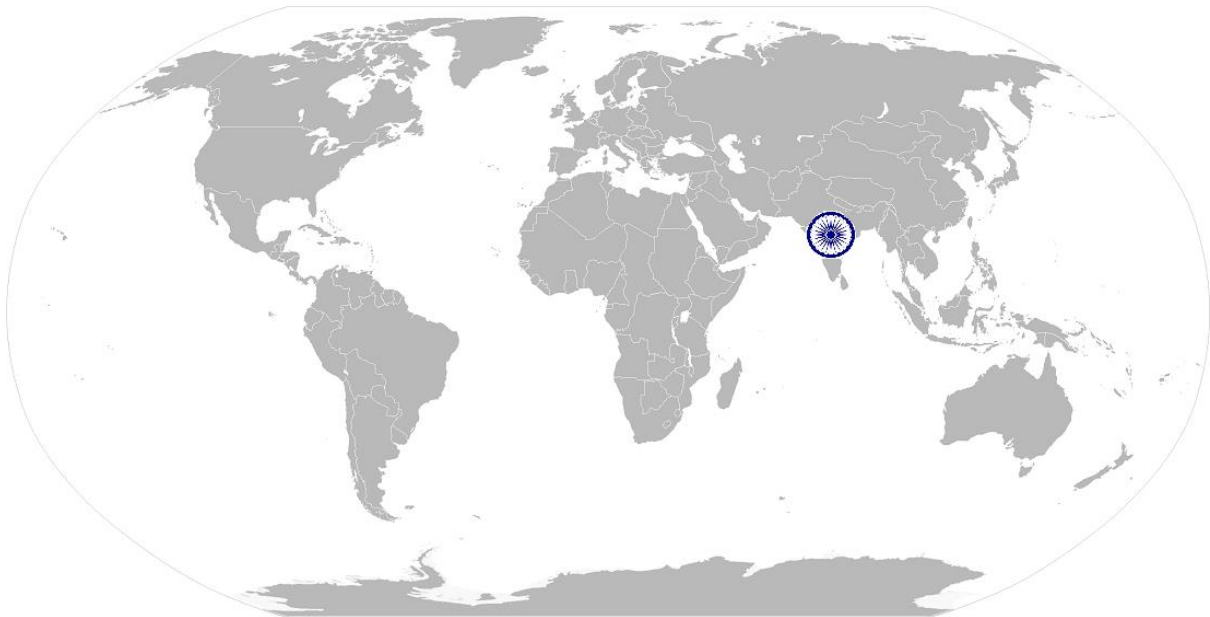
Maintaining work area, tools and machine

NOS Version Control

NOS Code	TSC/ N9001		
Credits (NSQF)	TBD	Version number	1.0
Industry	Textile	Drafted on	15/12/14
Industry Sub-sector	Spinning	Last reviewed on	21/01/15
Occupation	Maintenance	Next review date	01/03/16



National Occupational Standard



Overview

This unit is about working as part of a team in the textile industry.

TSC/ N9002

Working in a team

Unit Code	TSC/ N9002
Unit Title (Task)	Working in a team
Description	This unit is about working as a team member in the textile industry
Scope	This unit/task covers the following: <ul style="list-style-type: none"> ▪ commitment and trust ▪ communication ▪ adaptability ▪ creative freedom
Performance Criteria (PC) w.r.t. the Scope	
Elements	Performance Criteria
Commitment and trust	To be competent, you must be able to: PC1. be accountable to the own role in whole process PC2. perform all roles with full responsibility PC3. be effective and efficient at workplace
Communication	PC4. properly communicate about company policies PC5. report all problems faced during the process PC6. talk politely with other team members and colleagues PC7. submit daily report of own performance
Adaptability	PC8. adjust in different work situations PC9. give due importance to others' point of view PC10. avoid conflicting situations
Creative freedom	PC11. develop new ideas for work procedures PC12. improve upon the existing techniques to increase process efficiency
Knowledge and Understanding (K)	
A. Organizational Context	You need to know and understand: <ul style="list-style-type: none"> KA1. standard operating procedures (SOP) and regulations in a textile mill KA2. procedure followed to get the final output in the mill KA3. safe working practices to be adopted in textile mill KA4. reporting to the supervisor or higher authority about any grievances faced
B. Technical Knowledge	KB1. the importance of the previous and next step of the process KB2. process flow in a textile mill and the concerned workers KB3. material flow in a textile mill and the required person KB4. functions of different parts of the machine KB5. tools and equipments used KB6. guidelines for operating the machine KB7. safety procedures to be followed in the machine
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	You need to know and understand how to: <ul style="list-style-type: none"> SA1. write clear and short sentences SA2. write daily work report SA3. write grievance complaint application
	Reading Skills

TSC/ N9002

Working in a team

	SA4. comprehend written instructions SA5. read any application sent by other colleagues
	Oral Communication (Listening and Speaking skills)
	SA6. communicate with supervisor appropriately SA7. talk to co-workers to convey information effectively
B. Professional Skills	Problem Solving
	You need to know and understand how to: SB1. identify the real reason of problem faced SB2. be able to find the most effective solution to the problems faced
	Attention to Detail
	SB3. apply good attention to detail SB4. ensure every kind of communication is error free
C. Technical Skills	You need to know and understand how to: SC1. communicate effectively SC2. apply leadership skills wherever required SC3. take initiative at the right place SC4. understand the requirement to be creative

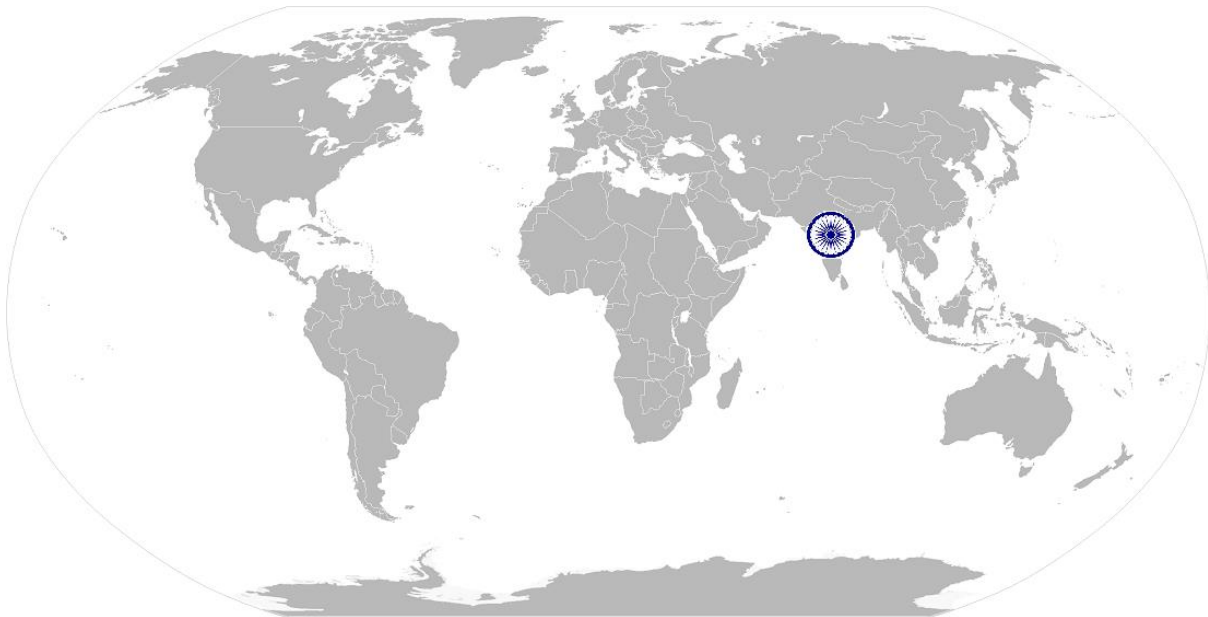


TSC/ N9002

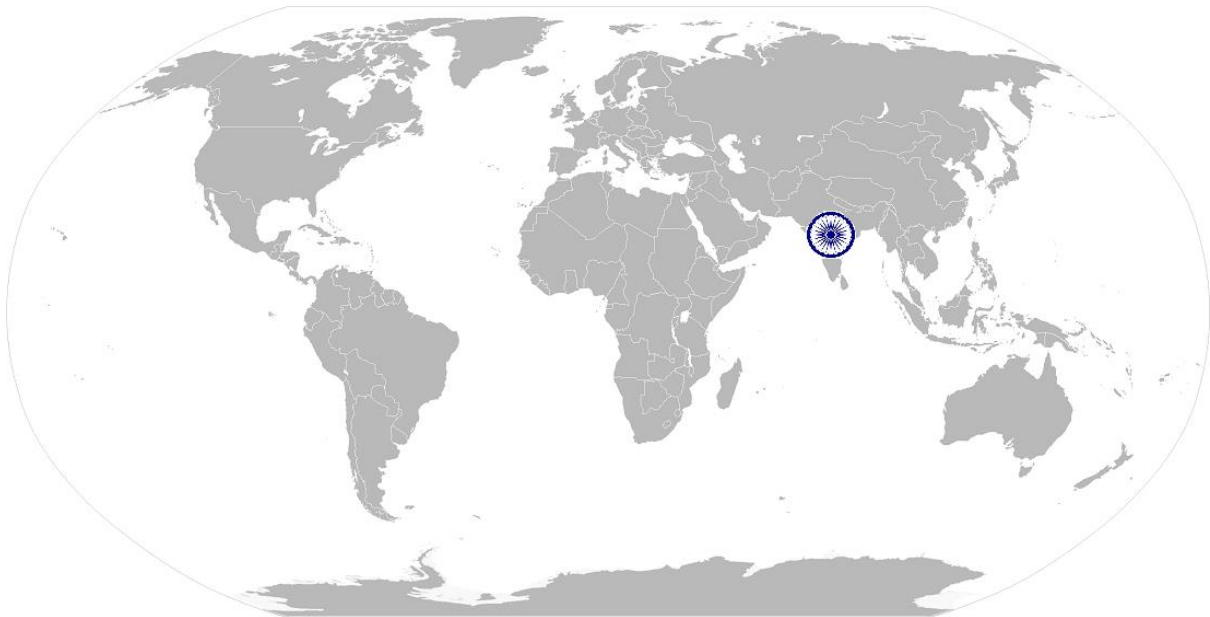
Working in a team

NOS Version Control

NOS Code	TSC/ N9002		
Credits (NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Textile	Drafted on	15/12/14
Industry Sub-sector	Spinning	Last reviewed on	21/01/15
Occupation	Maintenance	Next review date	01/03/16



National Occupational Standard



Overview

This unit is about maintaining health, safety, and security standards at workplace.

TSC/ N9003

Maintain health, safety and security at work place

Unit Code	TSC/ N9003
Unit Title (Task)	Maintain health, safety and security at work place
Description	This unit provides performance criteria, knowledge & understanding and skills & abilities required to comply with health, safety and security requirements at the workplace and covers procedures to prevent, control and minimize risk to self and others.
Scope	This unit/task covers the following: <ul style="list-style-type: none"> ▪ Comply with health, safety and security requirements at work ▪ Recognizing the hazards ▪ Planning the safety techniques ▪ Implementing the programs
Performance Criteria (PC) w.r.t. the Scope	
Elements	Performance Criteria
Comply with health, Safety and security requirements at work	<p>To be competent, operator must be able to:</p> <p>PC1. comply with health and safety related instructions applicable to the workplace</p> <p>PC2. use and maintain personal protective equipment such as “ear plug”, “ nose mask “, “ head cap” etc., as per protocol</p> <p>PC3. carry out own activities in line with approved guidelines and procedures</p> <p>PC4. maintain a healthy lifestyle and guard against dependency on intoxicants</p> <p>PC5. follow environment management system related procedures</p> <p>PC6. identify and correct (if possible) malfunctions in machinery and equipment</p> <p>PC7. report any service malfunctions that cannot be rectified</p> <p>PC8. store materials and equipment in line with organisational requirements</p> <p>PC9. safely handle and remove waste</p> <p>PC10. minimize health and safety risks to self and others due to own actions</p> <p>PC11. seek clarifications, from supervisors or other authorized personnel in case of perceived risks</p> <p>PC12. monitor the workplace and work processes for potential risks and threat</p> <p>PC13. carry out periodic walk-through to keep work area free from hazards and obstructions, if assigned</p> <p>PC14. report hazards and potential risks/ threats to supervisors or other authorized personnel</p> <p>PC15. participate in mock drills/ evacuation procedures organized at the workplace</p> <p>PC16. undertake first aid, fire-fighting and emergency response training, if asked to do so</p> <p>PC17. take action based on instructions in the event of fire, emergencies or accidents</p> <p>PC18. follow organisation procedures for shutdown and evacuation when required</p>
Recognizing the hazards	<p>To be competent, you must be able to:</p> <p>PC19. identify different kinds of possible hazards (environmental, personal, ergonomic, chemical) of the industry</p> <p>PC20. recognise other possible security issues existing in the workplace</p>
Planning the safety	PC21. recognise different measures to curb the hazards

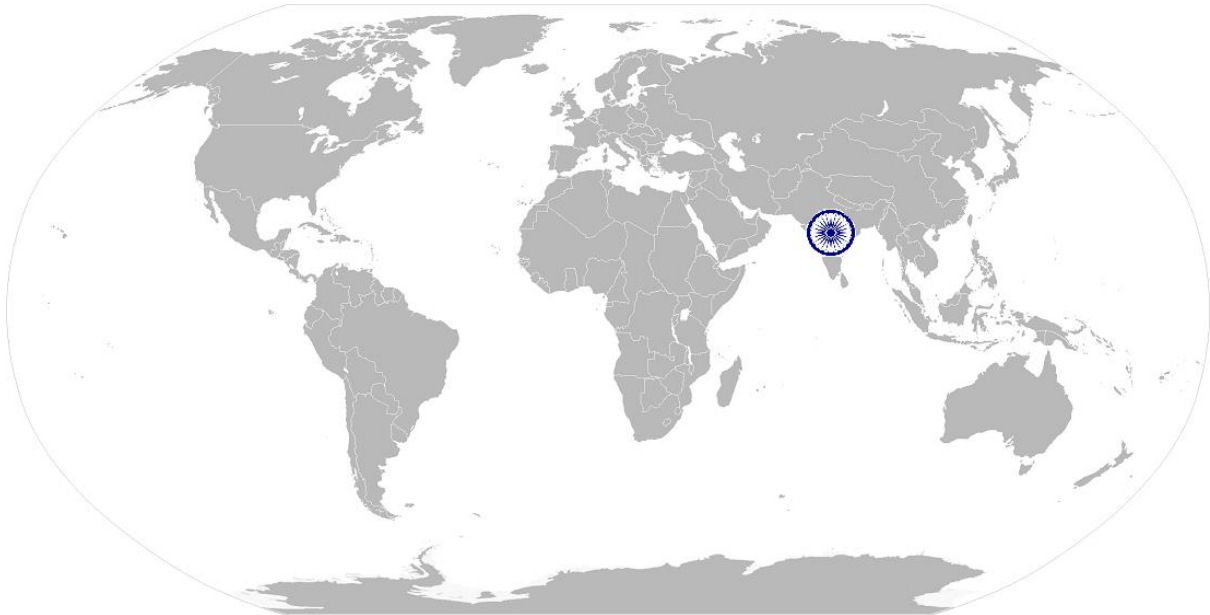
TSC/ N9003 Maintain health, safety and security at work place

techniques	
Implementing the programs	PC22. communicate the safety plan to everyone PC23. attach disciplinary rules with the implementation
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its processes)	You need to know and understand: KA1. standard operating procedures (SOP) and regulations in a textile mill KA2. safe working practices to be adopted in textile mill KA3. quality systems and other processes practiced in the textile mill KA4. health and safety related practices applicable at the workplace KA5. potential hazards, risks and threats based on nature of operations KA6. organizational procedures for safe handling of equipment and machine operations KA7. potential risks due to own actions and methods to minimize these KA8. environmental management system related procedures at the workplace KA9. layout of the plant and details of emergency exits, escape routes, emergency equipment and assembly points KA10. potential accidents and emergencies and response to these scenarios KA11. reporting protocol and documentation required KA12. details of personnel trained in first aid, fire-fighting and emergency response KA13. actions to take in the event of a mock drills/ evacuation procedures or actual accident, emergency or fire
B. Technical Knowledge	You need to know and understand: KB1. occupational health and safety risks and methods KB2. personal protective equipment and method of use KB3. identification, handling and storage of hazardous substances KB4. proper disposal system for waste and by-products KB5. signage related to health and safety and their meaning KB6. importance of sound health, hygiene and good habits KB7. ill-effects of alcohol, tobacco and drugs
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	You need to know and understand how to: SA1. write clear and short sentences
	Reading Skills
	SA2. read and understand the company instructions SA3. read and understand work instructions SA4. read and understand the safety guidelines
	Oral Communication (Listening and Speaking skills)
	SA1. listen to others attentively SA2. respond to emergencies, accidents or fire at the workplace SA3. evacuate the premises and help others in need while doing so SA4. the value of physical fitness, personal hygiene and good habits SA5. talk with others politely
B. Professional Skills	Decision Making
	SB1. identify correct safety measure for particular hazard

TSC/ N9003

Maintain health, safety and security at work place

	SB2. make required safety plans as and when required
	SB3. raise alarm in case of emergency
	Analytical Thinking
	SB4. know the use of correct safety measure whenever required
	Attention to Detail
	SB5. be attentive to details SB6. be careful to avoid occurrence of hazards
C. Technical Skills	You need to know and understand : SC1. maintenance of neatness at work SC2. procedure for reporting unwanted behavior

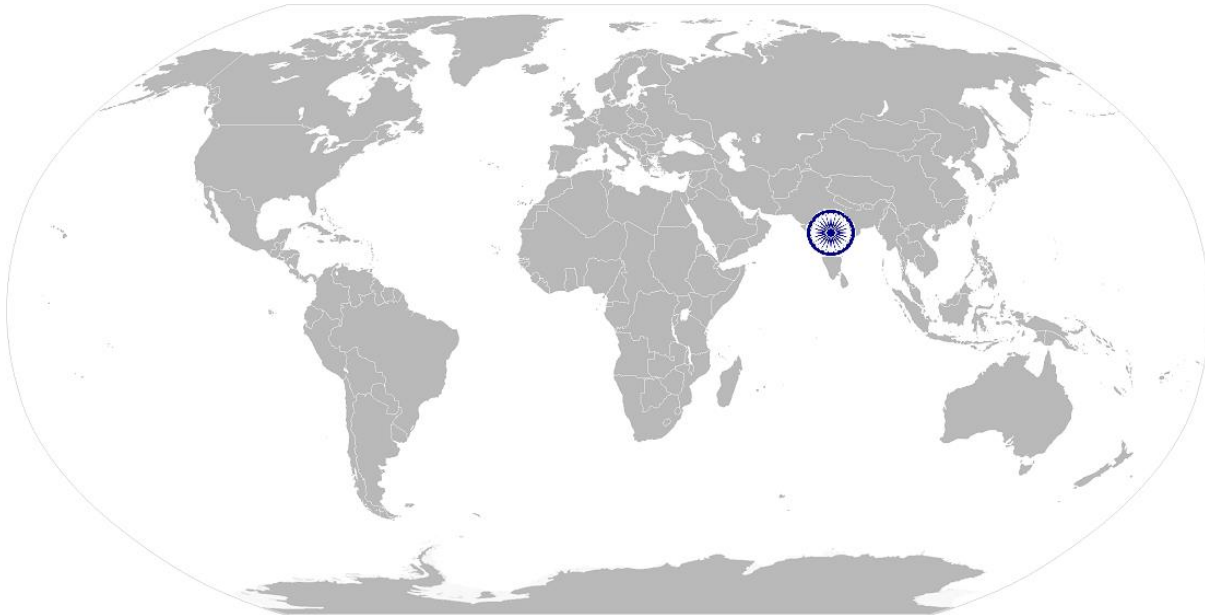


TSC/ N9003

Maintain health, safety and security at work place

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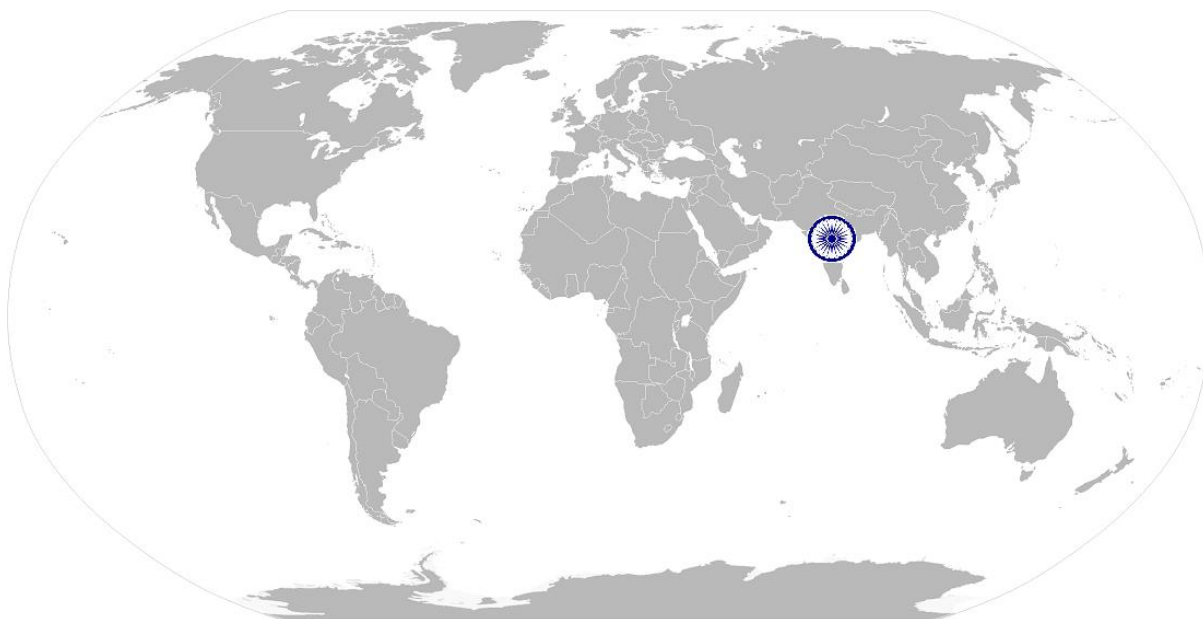
NOS Code	TSC/ N9003		
Credits (NSQF) [OPTIONAL]	TBD	Version number	1.0
Industry	Textile	Drafted on	15/12/14
Industry Sub-sector	Spinning	Last reviewed on	21/01/15
Occupation	Maintenance	Next review date	01/03/16



TSC/ N9004

Comply with industry and organizational requirements

National Occupational Standard



Overview

This unit is about knowing, understanding, and complying with the requirements of the organization and the textile industry.

TSC/ N9004 Comply with industry and organizational requirements

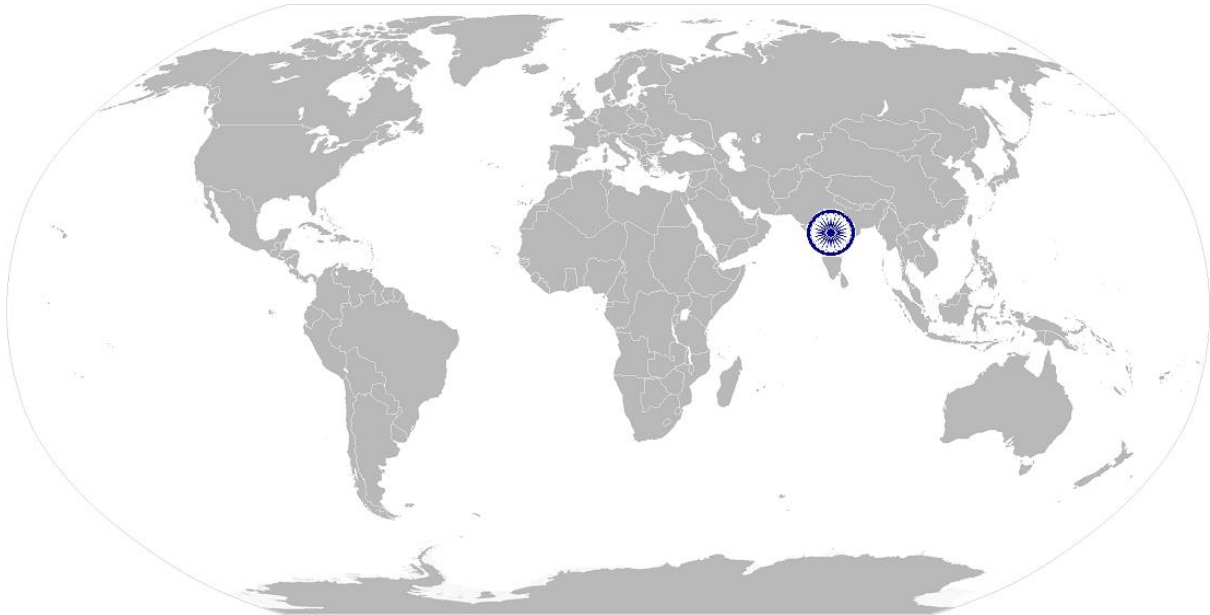
National Occupational Standard

Unit Code	TSC/ N9004
Unit Title (Task)	Comply with industry and organizational requirements
Description	This unit is about knowing, understanding, and complying with the requirements of the organization and the textile industry
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> ▪ self development ▪ team work ▪ organizational standards ▪ industry standards
Performance Criteria (PC) w.r.t. the Scope	
Elements	Performance Criteria
Self- development	<p>To be competent, you must be able to:</p> <p>PC1. perform own duties effectively</p> <p>PC2. take responsibility for own actions</p> <p>PC3. be accountable towards the job role and assigned duties</p> <p>PC4. take initiative and innovate the existing methods</p> <p>PC5. focus on self-learning and improvement</p>
Team work	<p>PC6. co-ordinate with all the team members and colleagues</p> <p>PC7. communicate politely</p> <p>PC8. avoid conflicts and miscommunication</p>
Organizational standards	<p>PC9. know the organisational standards</p> <p>PC10. implement them in your performance</p> <p>PC11. motivate others to follow them</p>
Industry standards	<p>PC12. know the industry standards</p> <p>PC13. align them with organisation standards</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its processes)	<p>You need to know and understand:</p> <p>KA1. standard operating procedures (SOP) and regulations in a textile mill</p> <p>KA2. reporting to the supervisor or higher authority</p> <p>KA3. knowledge of organizational standards</p> <p>KA4. knowledge of industry standards</p>
B. Technical Knowledge	<p>You need to know and understand:</p> <p>KB1. process and material flow in a textile mill</p> <p>KB2. importance of complying with the standards</p> <p>KB3. guidelines for cleaning the various parts of machine</p>
Skills (S)	
A. Core Skills/ Generic Skills	Writing Skills
	You need to know and understand how to:
	SA1. write clear and short sentences
	Reading Skills

TSC/ N9004

Comply with industry and organizational requirements

	You need to know and understand how to: SA2. read the given instructions SA3. comprehend written instructions
	Oral Communication (Listening and Speaking skills)
	SA4. talk effectively with others SA5. put forward your point SA6. listen to others
B. Technical skills	you need to know and understand : SC1. Organizational requirements SC2. your responsibilities at the workplace SC3. procedure to comply with the industry standards

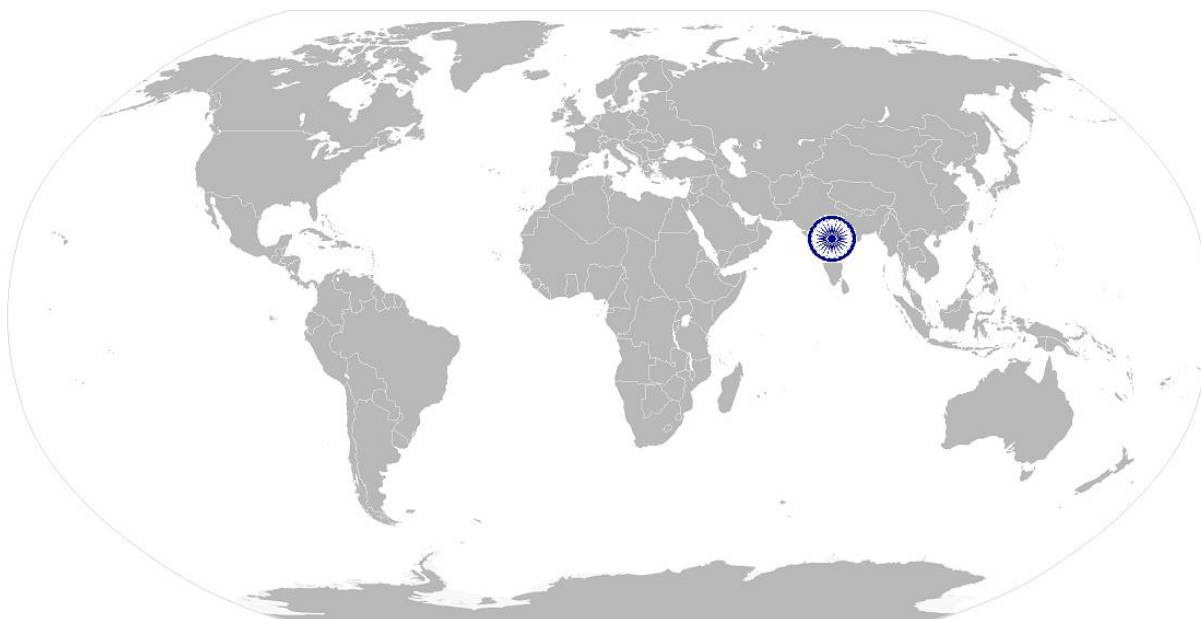


TSC/ N9004

Comply with industry and organizational requirements

NOS Version Control

NOS Code	TSC/N 9004		
Credits (NSQF)	TBD	Version number	1.0
Industry	Textile	Drafted on	15/12/14
Industry Sub-sector	Spinning	Last reviewed on	21/01/15
Occupation	Maintenance	Next review date	01/03/16



Assessment Criteria

Job Role: Knitting Machine Fitter
Qualification Pack: Knitting Machine Fitter
Sector Skill Council: Textile Sector Skill 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 & skill practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of question created by the SSC.
3. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre (as per assessment criteria below).
4. To pass the qualification pack, every trainee should score a minimum of 80%.

National Occupational Standards (NOS)	Performance Criteria (PC)	Total Marks	Out Of	Marks Allocation		
				Theory	Skills Practical	Viva
1. TSC/N4201(Taking charge of shift and handing over shift to fitter)	PC1. come at least 10 - 15 minutes earlier to the work spot	100	4	1	2	1
	PC2. bring the necessary operational tools to the department		6	2	2	2
	PC3. meet the previous shift fitter and discuss with him/ her regarding the issues faced by them with respect to the quality or production or spare or safety or any other specific instruction etc.		7	2	2	3
	PC4. understand the count produced, colour coding, followed in the different knitting machines		7	3	2	2
	PC5. patrol around the knitting machineries and ensure the smooth functioning of all the machines in the department		6	2	3	1
	PC6. ensure with previous shift fitter regarding the issues faced in the machines if any		6	1	3	2

Assessment Criteria

	PC7. ensure all the machines are running properly, machines which are not running and problems if any should be clarified with the fitter, supervisor and operator		5	1	2	2
	PC8. check the cleanliness of the machines & other work areas		6	2	1	3
	PC9. check whether any spare/raw material/ tool / yarn / any other material are thrown under the machines or in the other work areas.		4	1	2	1
	PC10. should question the previous shift maintenance people for any deviation in the above and should bring the same to the knowledge of his/ her shift superior as well that of the previous shift as well.		5	2	2	1
	PC11. ensure the work spot is clean		4	1	2	1
	PC12. hand over the shift to the incoming shift fitter in a proper manner		7	2	2	3
	PC13. ensure in providing the details regarding count produced, colour coding followed for his allocated number of machines in knitting department		6	2	2	2
	PC14. provide all relevant information regarding the count produced, idle machines, damaged machine parts if any get clearance from the incoming counterpart before leaving the work spot		6	1	2	3
	PC15. report to his shift superiors as well as that of the incoming shift fitter in case his/ her counterpart doesn't report for the incoming shift fitter		6	2	2	2
	PC16. ensure the shift has to be properly handed over to the		6	2	1	3

Assessment Criteria

	incoming shift fitter					
	PC17. report to his shift superior about the quality / production / maintenance issues / safety issues/ any other issue faced in his/her shift and should leave the department only after getting concurrence for the same from his/ her superiors		5	1	2	2
	PC18. ensure the work spot is clean		4	1	2	1
			100	29	36	35
	Total	Weigh tage %		29%	36%	35%
2. TSC/N4202 (General Maintenance Responsibilities)						
	PC1. taking round of the work area before the start of the shift and observing the working.	191	5	2	2	1
	PC2. Taking note of the machines stopped for repairs and the type of problem.		6	2	3	1
	PC3. dismantle and assemble different mechanisms in the machines on need basis.		7	2	4	1
	PC4. repair and overhaul electrical and mechanical systems of knitting machinery.		6	2	3	1
	PC5. adjust and set up complex machinery for new patterns or products		5	2	2	1
	PC6. perform maintenance, such as, cleaning and lubrication of knitting machinery, and replace and align moving parts as required		5	2	3	0
	PC7. recommend equipment changes or modifications and evaluate new equipment		7	3	3	1
	PC8. troubleshoot, test run and verify machine for proper operation.		5	2	1	2
	PC9. clean machines (before & after work).		7	2	3	2

Assessment Criteria

PC10. understand different fabric knitting structures	5	2	2	1
PC11. differentiate the needs of single knit and double knit machines, etc.	5	1	1	3
PC12. operate machines, handle fabric and control of each machine properly	6	2	3	1
PC13. install yarn cones on machine, adjust colours to different feeders, choose and change knitting structures graph on the machine	6	2	3	1
PC14. identify the yarn quality problems and easily knit with cotton / polyester and spandex.	7	2	4	1
PC15. make various fabric structures jersey, pique, rib, interlock, fleece, etc.	6	2	3	1
PC16. identify fabric order details	5	2	2	1
PC17. ensure that the nature and extent of machine or knitting faults with operator	5	2	3	0
PC18. knitting product is assessed to identify knit faults	7	3	3	1
PC19. yarn is examined to assess possible impact on operational problems	5	2	1	2
PC20. problems and faults are identified and analyzed to determine root cause	7	2	3	2
PC21. fault diagnosis is established and strategy for repair including replacement of yarn or parts is determined	5	2	2	1
PC22. knitting machine is returned to optimal performance through repair of faulty operation or replacement of yarn or machine parts	5	1	1	3
PC23. test knitting machine and sample produced to ensure problems have been fixed	6	2	3	1

Assessment Criteria

	PC24. identify quality standards and have knowledge of quality parameters		6	2	3	1
	PC25. quality concepts and implementation of process quality program		7	2	4	1
	PC26. identify the quality complaints in the machines.		6	2	3	1
	PC27. identify the works done till date and the works pending in the machines stopped for repairs or for maintenance works or modifications.		5	2	2	1
	PC28. identify the production plan, prepare maintenance plan and allocate people for different activities.		5	2	3	0
	PC29. ensure the machines allotted for various fabric and decide on the parameters to be checked while doing maintenance, like, condition of needles, loop settings, take-down mechanism.		7	3	3	1
	PC30. allocate the workers for different tasks considering their knowledge, skills, maturity and workloads agreed.		5	2	1	2
	PC31. refer to process parameters and work out the changes to be made for change in hank or product mix and getting the changes made by the concerned maintenance workers.		7	2	3	2
	PC32. ensure the use of safety gadgets like caps, masks, gloves and shoes by all maintenance workers.		5	2	2	1
	PC33. counsel and influencing a poor performing worker to produce as per norms		5	1	1	3
			191	66	83	42
	Total	Weigh tage %		35%	43%	22%

Assessment Criteria

3 . TSC/N4203 (Preventive maintenance responsibilities)	PC1. check the proper functioning of machines like cylinder, dial, positive feeder, takedown mechanism, stop motion and the ancillaries like trolleys, filters, and needles and soon.	89	5	2	2	1
	PC2. check the conditions of machine parts while they are being cleaned/scoured or overhauled		5	2	2	1
	PC3. ensure the use of safety gadgets like caps, masks, gloves and shoes by all maintenance workers.		5	2	2	1
	PC4. change the settings of the machines on need basis.		6	2	3	1
	PC5. give instructions to the machine operator about machine handling		7	3	3	1
	PC6. identify the worn out parts and get them replaced.		5	2	2	1
	PC7. verify the safety stop motions and get them attended		5	2	2	1
	PC8. monitor the stoppages due to breakdowns and analyse the reasons for breakdowns and take precautionary measures.		5	1	3	1
	PC9. monitor the cylinder change activities in knitting machines and fabric change		7	3	3	1
	PC10. monitor the cam and needles, draw, first landing, pressing, second landing, knock over, holding down, sinker action, threading-up		7	2	3	2
	PC11. carry out all changes to machine settings in accordance with workplace procedures and as directed by a supervisor		5	1	3	1
	PC12. conduct tool audits, i.e. the tools used for maintenance like spanners, gauge, lubricating and flushing pumps etc.		7	3	3	1

Assessment Criteria

	PC13. oil and grease the different machine parts at scheduled intervals for smooth functioning of machines		5	2	2	1
	PC14. schedule the oiling and greasing activities		5	2	2	1
	PC15. ensure correct oil and grease are taken		5	1	3	1
	PC16. ensure proper functioning of machines in preparatory department		5	1	3	1
			89	31	41	17
	Total	Weightage %		35%	46%	19%
4 . TSC/N4204(Carry out Breakdown Maintenance activities)	PC1. attend the machine on a break down	70	4	1	2	1
	PC2. report to the maintenance in charge on a breakdown		4	1	1	2
	PC3. prepare the machine for carrying out breakdown maintenance		4	1	2	1
	PC4. ensure in bringing the proper tool and equipments required for carrying out maintenance		4	1	2	1
	PC5. analyze the machine which is under breakdown		5	1	3	1
	PC6. identify the reason for breakdown		5	1	3	1
	PC7. carryout maintenance activities		5	1	3	1
	PC8. replace worn out parts with new parts		5	1	3	1
	PC9. ensure safety while carrying out maintenance activity		4	1	2	1
	PC10. ensure proper material handling of maintenance tools		4	2	2	0
	PC11. check for proper functioning of machine after maintenance		5	1	3	1
	PC12. run the machine and check for smooth functioning of machine parts		4	1	3	0

Assessment Criteria

	PC13. repair further if further fine tuning is needed		4	1	3	0
	PC14. ensure the output material quality is as per quality requirement.		5	1	3	1
	PC15. ensure the use of safety gadgets like caps, masks, gloves and shoes by all maintenance workers		4	1	2	1
	PC16. ensure minimum time is taken to attend the breakdown, identify the reason for breakdown and carryout the breakdown maintenance activities		4	1	2	1
			70	17	39	14
	Total	Weigh tage %		24%	56%	20%
5 . TSC/N4205 (Maintaining records and ensuring availability of spares)	PC1. carryout maintenance auditing	30	4	1	2	1
	PC2. record the activities in the log book (report book) and update the machine history book		4	2	2	0
	PC3. verify the stock of various spares, accessories and lubricants and work out the indenting plan and place indents		4	2	2	0
	PC4. refer the machinery catalogues and identify the correct spares needed		3	2	1	0
	PC5. check the quality of materials received at stores, for e.g. bearings, wheels, machine spares, needles, belts, brushes, spanners and other tools, etc.		4	1	2	1
	PC6. carry out maintenance machine audit		4	1	2	1
	PC7. maintain records of maintenance		3	1	1	1
	PC8. ensure availability of spares and give requisitions on need basis		4	1	2	1
			30	11	14	5

Assessment Criteria

	Total	Weightage %	37%	47%	17%	
6.TSC/N9001(Maintaining work area, tools and machines)	PC1. handle materials, machinery, equipment and tools with care and use them in the correct way	50	4	1	2	1
	PC2. use correct lifting and handling procedures		4	1	2	1
	PC3. use materials to minimize waste		3	1	1	1
	PC4. maintain a clean and hazard free working area		3	1	1	1
	PC5. maintain tools and equipment		4	2	1	1
	PC6. carry out running maintenance within agreed schedules		4	1	2	1
	PC7. carry out maintenance and/or cleaning within one's responsibility		4	1	2	1
	PC8. report unsafe equipment and other dangerous occurrences		4	1	2	1
	PC9. ensure that the correct machine guards are in place		3	1	1	1
	PC10. work in a comfortable position with the correct posture		3	1	1	1
	PC11. use cleaning equipment and methods appropriate for the work to be carried out		3	1	1	1
	PC12. dispose of waste safely in the designated location		4	1	2	1
	PC13. store cleaning equipment safely after use		3	1	1	1
	PC14. carry out cleaning according to schedules and limits of responsibility		4	1	2	1
			50	15	21	14
Total	Weightage %	30%	42%	28%		
7.TSC/N9002 (Working in a team)	PC1. be accountable to the own role in whole process	50	4	2	1	1

Assessment Criteria

	PC2. perform all roles with full responsibility		4	2	1	1
	PC3. be effective and efficient at workplace		5	2	2	1
	PC4. properly communicate about company policies		4	1	1	2
	PC5. report all problems faced during the process		4	1	1	2
	PC6. talk politely with other team members and colleagues		4	1	1	2
	PC7. submit daily report of own performance		5	2	2	1
	PC8. adjust in different work situations		4	2	1	1
	PC9. give due importance to others' point of view		4	2	1	1
	PC10. avoid conflicting situations		4	2	1	1
	PC11. develop new ideas for work procedures		4	1	2	1
	PC12. improve upon the existing techniques to increase process efficiency		4	1	2	1
			50	19	16	15
	Total	Weigh tage %		38%	32%	30%
8.TSC/N9003 (Maintain health, safety and security at work place)	PC1. comply with health and safety related instructions applicable to the workplace	100	5	2	2	1
	PC2. use and maintain personal protective equipment such as “ ear plug” “ nose mask “ “ head cap” etc., as per protocol		5	2	2	1
	PC3. carry out own activities in line with approved guidelines and procedures		4	2	1	1
	PC4. maintain a healthy lifestyle and guard against dependency on intoxicants		4	2	1	1
	PC5. follow environment management system related procedures		4	2	1	1
	PC6. identify and correct (if possible) malfunctions in		5	2	2	1

Assessment Criteria

	machinery and equipment				
	PC7. report any service malfunctions that cannot be rectified	4	2	1	1
	PC8. store materials and equipment in line with organisational requirements	4	1	2	1
	PC9. safely handle and remove waste	4	1	2	1
	PC10. minimize health and safety risks to self and others due to own actions	5	2	2	1
	PC11. seek clarifications, from supervisors or other authorized personnel in case of perceived risks	4	2	0	2
	PC12. monitor the workplace and work processes for potential risks and threat	5	2	2	1
	PC13. carry out periodic walk-through to keep work area free from hazards and obstructions, if assigned	5	2	2	1
	PC14. report hazards and potential risks/ threats to supervisors or other authorized personnel	4	1	2	1
	PC15. participate in mock drills/ evacuation procedures organized at the workplace	4	2	2	0
	PC16. undertake first aid, fire-fighting and emergency response training, if asked to do so	5	2	2	1
	PC17. take action based on instructions in the event of fire, emergencies or accidents	5	2	2	1
	PC18. follow organisation procedures for shutdown and evacuation when required	4	2	1	1
	PC19. identify different kinds of possible hazards (environmental, personal, ergonomic, chemical) of the industry	4	2	1	1

Assessment Criteria

	PC20. recognise other possible security issues existing in the workplace		4	2	1	1
	PC21. recognise different measures to curb the hazards		4	2	1	1
	PC22. communicate the safety plan to everyone		4	2	1	1
	PC23. attach disciplinary rules with the implementation		4	2	1	1
			100	43	34	23
	Total	Weigh t age %		43%	34%	23%
9.TSC/N9004 (Comply with industry and organizational requirements)	PC1. perform own duties effectively	50	4	1	2	1
	PC2. take responsibility for own actions		4	1	2	1
	PC3. be accountable towards the job role and assigned duties		4	2	1	1
	PC4. take initiative and innovate the existing methods		3	1	1	1
	PC5. focus on self-learning and improvement		4	1	2	1
	PC6. co-ordinate with all the team members and colleagues		4	1	2	1
	PC7. communicate politely		4	1	1	2
	PC8. avoid conflicts and miscommunication		4	1	2	1
	PC9. know the organisational standards		4	2	1	1
	PC10. implement them in your performance		4	1	2	1
	PC11. motivate others to follow them		3	1	1	1
	PC12. know the industry standards		4	3	1	0
	PC13. align them with organisation standards		4	2	1	1
				50	18	19
	Total	Weih t age %		40%	40%	20%
	Grand Total		730	249	303	178