



COMPETENCY STANDARD

RING FRAME OPERATIONS

Level: 2

(RMG & Textile Sector)

Competency Standard Code: CS-RMGT-RFO-L2-EN-V1



**National Skills Development Authority
Prime Minister's Office
Government of the People's Republic of Bangladesh**

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This Competency Standard for Ring Frame Operations is a document for the development of curricula, teaching and learning materials, and assessment tools. It also serves as the document for providing training consistent with the requirements of industry in order to meet the qualification of individuals who graduated through the established standard via competency-based assessment for a relevant job.

This document has been validated by NSDA in association with RMG & Textile Sector, industry representatives, academia, related specialist, trainer and related employee.

Public and private institutions may use the information contained in this standard for activities benefitting Bangladesh.

Introduction

The NSDA aims to enhance an individual's employability by certifying completeness with skills. NSDA works to expand the skilling capacity of identified public and private training providers qualitatively and quantitatively. It also aims to establish and operationalize a responsive skills ecosystem and delivery mechanism through a combination of well-defined set of mechanisms and necessary technical supports.

Key priority economic growth sectors identified by the government have been targeted by NSDA to improve current job skills along with existing workforce to ensure required skills to industry standards. Training providers are encouraged and supported to work with industry to address identified skills and knowledge to enable industry growth and increased employment through the provision of market responsive inclusive skills training program. "**Ring Frame Operations**" is selected as one of the priority occupations of RMG & Textile Sector. This standard is developed to adopt a demand driven approach to training with effective inputs from Industry Skills Councils (ISC's), employer associations and employers.

Generally, a competency standard informs curriculum, learning materials, assessment and certification of trainees enrolled in Skills Training. Trainees who successfully pass the assessment will receive a qualification in the National Skills Qualification Framework (NSQF) under Bangladesh National Qualification Framework and will be listed on the NSDA's online portal.

This competency standard is developed to improve skills and knowledge in accordance with the job roles, duties and tasks of the occupation and ensure that the required skills and knowledge are aligned to industry requirements. A series of stakeholder consultations, workshops were held to develop this document.

The document also details the format, sequencing, wording and layout of the Competency Standard for an occupation which is comprised of Units of Competence and its corresponding Elements.

Overview

A competency standard is a written specification of the knowledge, skills and attitudes required for the performance of an occupation, trade or job corresponding to the industry standard of performance required in the workplace.

The purpose of a competency standards is to:

- provide a consistent and reliable set of components for training, recognising and assessing people's skills, and may also have optional support materials
- enable industry recognised qualifications to be awarded through direct assessment of workplace competencies
- encourage the development and delivery of flexible training which suits individual and industry requirements
- encourage learning and assessment in a work-related environment which leads to verifiable workplace outcomes

Competency standards are developed by a working group comprised of representative from NSDA, Key Institutions, ISC, and industry experts to identify the competencies required of an occupation in Informal Sector.

Competency standards describe the skills, knowledge and attitude needed to perform effectively in the workplace. CS acknowledge that people can achieve technical and vocational competency in many ways by emphasizing what the learner can do, not how or where they learned to do it.

With competency standards, training and assessment may be conducted at the workplace or at training institute or any combination of these.

Competency standards consist of a number of units of competency. A unit of competency describes a distinct work activity that would normally be undertaken by one person in accordance with industry standards.

Units of competency are documented in a standard format that comprises of:

- unit title
- nominal duration
- unit code
- unit descriptor
- elements and performance criteria
- variables and range statement
- curricular content guide
- assessment evidence guides

Together, all the parts of a unit of competency:

- describe a work activity
- guide the assessor to determine whether the candidate is competent or not yet competent

The ensuing sections of this document comprise of a description of the relevant occupation, trade or job with all the key components of a unit of competency, including:

- a chart with an overview of all Units of Competency for the relevant occupation, trade or job including the Unit Codes and the Unit of Competency titles and corresponding Elements
- the Competency Standard that includes the Unit of Competency, Unit Descriptor, Elements and Performance Criteria, Range of Variables, Curricular Content Guide and Assessment Evidence Guide.

Competency Standards for National Skill Certificate, Level-2 in Ring Frame Operations in RMG & textile Sector

Level Descriptors of NSQF (BNQF 1-6)

Level & Job classification	Knowledge Domain	Skills Domain	Responsibility Domain
6-Mid-Level Manager/ Sub Assistant Engineer	Comprehensive actual and theoretical knowledge within a specific work or study area with an awareness of the validity and limits of that knowledge, able to analyse, compare, relate and evaluate.	Specialised and wider range of cognitive and practical skills required to provide leadership in the development of creative solutions to defined problems. Communicate professional issues and solutions to the team and to external partners/users.	Work under broad guidance and self-motivation to execute strategic and operational plan/s. Lead lower-level management. Diagnose and resolve problems within and among work groups.
5-Supervisor	Broad knowledge of the underlying, concepts, principles, and processes in a specific work or study area, able to scrutinize and break information into parts by identifying motives or causes.	Broad range of cognitive and practical skills required to generate solutions to specific problems in one or more work or study areas. Communicate practice-related problems and possible solutions to external partners.	Work under guidance of management and self-direction to resolve specific issues. Lead and take responsibility for the work and actions of group/team members. Bridge between management.
4-Highly Skilled Worker	Broader knowledge of the underlying, concepts, principles, and processes in a specific work or study area, able to solve problems to new situations by comparing and applying acquired knowledge.	A range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying the full range of methods, tools, materials and information. Communicate using technical terminology and IT technology with partners and users as per workplace requirements.	Work under minimal supervision in specific contexts in response to workplace requirements. Resolve technical issues in response to workplace requirements and lead/guide a team/ group.
3-Skilled Worker	Moderately broad knowledge in a specific work or study area, able to perceive ideas and abstract from drawing and design according to workplace requirements.	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools. Communicate with his team and limited external partners upholding the values, nature and culture of the workplace	Work or study under supervision with considerable autonomy. Participate in teams and responsible for group coordination.
2-Semi Skilled Worker	Basic understanding of underpinning knowledge in a specific work or study area, able to interpret and apply common occupational terms and instructions.	Skills required to carry out simple tasks, communicate with his team in the workplace presenting and discussing results of his work with required clarity.	Work or study under supervision in a structured context with limited scope of manipulation
1 –Basic Skilled Worker	Elementary understanding of ability to interpret the underpinning knowledge in a specific study area, able to interpret common occupational terms and instructions.	Specific Basic skills required to carry out simple tasks. Interpret occupational terms and present the results of own work within guided work environment/ under supervision.	Work under direct supervision in a structured context with limited range of responsibilities.

List of Abbreviations

CS	Competency Standard
ISC	Industry Skills Council
NSDA	National Skills Development Authority
NSQF	National Skills Qualifications Framework
OSH	Occupational Safety and Health
PPE	Personal Protective Equipment
SCVC	Standards and Curriculum Validation Committee
STP	Skills Training Provider
SOP	Standard Operating Procedure
UoC	Unit of Competency
ISO	International Organization for Standardization
MSDS	Material Safety Data Sheet
OSH	Occupational Safety and Health
PPE	Personal Protective Equipment
SOP	Standard Operating Procedures

Approval of Competency Standard

Approved by

---th Executive Committee (EC) Meeting of NSDA

Held on -----

Deputy Director (Admin)

and

Officer of Secretarial Duties for EC meeting
National Skills Development Authority

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Competency Standards for National Skill Certificate, Level- 2 in Ring Frame Operations in RMG & Textile Sector

Course Structure

SL No	Unit code and Title		UOC Level	Nominal (hours)
Generic Units of Competencies				
1.	GU-02-L2-V1	Apply Occupational Safety and Health (OSH) Procedure in the Workplace	2	15
2.	GU-08-L2-V1	Work in a Team Environment	2	20
3.	GU-12-L2-V1	Communicate in the Workplace	2	20
Sub Total				55
Sector Specific Units of Competencies				
4.	SU-RMGT-01-L2-V1	Explore the History of Textile Industries	2	15
Sub Total				15
Occupation Specific Units of Competencies				
5.	OU-RMGT-RFO-01-L2-V1	Interpret Basics of Ring Frame	2	50
6.	OU-RMGT-RFO-02-L2-V1	Handle Materials	2	40
7.	OU-RMGT-RFO-03-L2-V1	Maintain Drafting System and Drafting Zone	2	30
8.	OU-RMGT-RFO-04-L2-V1	Carry out Ring Frame Operations	2	120
9.	OU-RMGT-RFO-05-L2-V1	Maintain Product Quality	2	50
Sub Total				290
Total Duration				360

Units & Elements at Glance

Generic Competencies

Code	Unit of competency	Elements of competency	Duration (hours)
GU002L2V1	Apply Occupational Safety and Health (OSH) procedure In the Workplace	1. Identify OSH policies and procedures 2. Follow OSH procedure 3. Report hazards and risks 4. Respond to emergencies 5. Maintain personal well-being	15
GU008L2V1	Work in a Team Environment	1. Define team role and scope 2. Identify individual role and responsibility 3. Participate in team discussions 4. Work as a team member	20
GU012L2V1	Communicate in the Workplace	1. Receive verbal instructions. 2. Interpret verbal and written information/ instruction 3. Convey instructions using verbal and written forms of communication 4. Complete written documentation 5. Participate in work place meetings and discussions	20
Total hours			55

Sector specific competencies

Code	Unit of competency	Elements of competency	Duration (hours)
SU-RMGT-01-L2-V1	Explore The History of Textile Industries	1. Examine the background of textile industries 2. Identify main industries with in the sector 3. Identify prime local and export markets	15
Total hours			15

Occupation specific competencies

Code	Unit of competency	Elements of competency	Duration (hours)
OU-RMGT-RFO-01-L2-V1	Interpret Basics of Ring Frame	1. Interpret ring frame process 2. Identify machine and specifications 3. Interpret technical terms	50
OU-RMGT-RFO-02-L2-V1	Handle Materials	1. Perform doffing operation 2. Handle cops and trolley 3. Dispose of waste materials	40
OU-RMGT-RFO-03-L2-V1	Maintain Drafting System and Drafting Zone	1. Explain drafting system 2. Identify functions of drafting zone	30
OU-RMGT-RFO-04-L2-V1	Carry Out Ring Frame Operations	1. Collect roving for feeding 2. Perform creeling, feeding and piecing 3. Operate ring frame 4. Clean and maintain machine	120
OU-RMGT-RFO-05-L2-V1	Maintain Product Quality	1. Identify roving and yarn faults 2. Test quality of material 3. Carryout maintenance work	50
Total Hours			290

Generic Units of Competencies

Unit Code and Title	GU-02-L2-V1: Apply Occupational Safety and Health (OSH) Procedure in the Workplace
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to apply occupational safety and health (OSH) procedure in the workplace. It specifically includes the task of identifying OSH policies and procedures, following OSH procedure, reporting hazards and risks, responding to emergencies and maintaining personal well-being.
Nominal Hours	15 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Identify OSH policies and procedures	1.1. <u>OSH policies</u> and <u>safe operating procedures</u> are accessed and stated 1.2. <u>Safety signs and symbols</u> are identified and followed 1.3. Emergency response, evacuation procedures and other contingency measures are determined according to workplace requirements
2. Follow OSH procedure	2.1 <u>Personal protective equipment (PPE)</u> is selected and collected as required 2.2 Personal protective equipment (PPE) is correctly used in accordance with organization OSH procedures and practices 2.3 A clear and tidy workplace is maintained as per workplace standard 2.4 PPE is maintained to keep them operational and compliant with OSH regulations
3. Report hazards and risks	3.1 <u>Hazards</u> and risks are identified, assessed and controlled 3.2 Incidents arising from hazards and risks are reported to designated authority
4. Respond to emergencies	4.1 Alarms and warning devices are responded 4.2 Workplace <u>emergency procedures</u> are followed 4.3 <u>Contingency measures</u> during workplace accidents, fire and other emergencies are recognized and followed in accordance with organization procedures 4.4 First aid procedures are applied during emergency situations
5. Maintain personal well-being	5.1 OSH policies and procedures are adhered to OSH awareness programs are participated in as per workplace guidelines and procedures.

	5.2 Corrective actions are implemented to correct unsafe condition in the workplace 5.3 <u>“Fit to work” records</u> are updated and maintained according to workplace requirements
Range of Variables	
Variables	Range (may include but not limited to):
1. OSH policies	1.1. Bangladesh standards for OSH 1.2. Fire Safety Rules and Regulations 1.3. Code of Practice 1.4. Industry Guidelines
2. Safe operating procedures	2.1 Orientation on emergency exits, fire extinguishers, fire escape, etc. 2.2 Emergency procedures 2.3 First Aid procedures 2.4 Tagging procedures 2.5 Use of PPE 2.6 Safety procedures for hazardous substances
3. Safety signs and symbols	3.1 Direction signs (exit, emergency exit, etc.) 3.2 First aid signs 3.3 Danger Tags 3.4 Hazard signs 3.5 Safety tags 3.6 Warning signs
4. Personal Protective Equipment (PPE)	4.1 Gas Mask 4.2 Gloves 4.3 Safety boots 4.4 Face mask 4.5 Overalls 4.6 Goggles and safety glasses 4.7 Sun block 4.8 Chemical/Gas detectors
5. Hazards	5.1 Chemical hazards 5.2 Biological hazards 5.3 Physical Hazards 5.4 Mechanical and Electrical Hazard 5.5 Mental hazard 5.6 Ergonomic hazard
6. Emergency procedures	6.1 Fire fighting 6.2 Earthquake 6.3 Medical and first aid 6.4 Evacuation

7. Contingency measures	7.1 Evacuation 7.2 Isolation 7.3 Decontamination
8. "Fit to Work" records	8.1 Medical Certificate every year 8.2 Accident reports, if any 8.3 Eye vision certificate
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 stated OSH policies and safe operating procedures 1.2 followed safety signs and symbols 1.3 used personal protective equipment (PPE) 1.4 maintained workplace clear and tidy 1.5 assessed and Controlled hazards 1.6 followed emergency procedures 1.7 followed contingency measures 1.8 implemented corrective actions
2. Underpinning knowledge	2.1 Define OSH 2.2 OSH Workplace Policies and Procedures 2.3 Work safety procedures 2.4 Emergency procedures 2.5 Hazard control procedure 2.6 Different types of hazards 2.7 PPE and there uses 2.8 Personal hygiene practices 2.9 OSH awareness
3. Underpinning skills	3.1 Accessing OSH policies 3.2 Using of PPE 3.3 Handling cleaning tools and equipment 3.4 Writing report 3.5 Responding to emergency procedures
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	5.1 Workplace (simulated or actual) 5.2 Equipment and outfits appropriate in applying safety measures

	5.3 Tools, equipment, materials and documentation required 5.4 OSH Policies and Procedures
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
Accreditation Requirements Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.	

Unit Code and Title	GU-08-L2-V1: Work in a Team Environment
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to work in a team environment. It specifically includes the task of defining team role and scope, identifying individual role and responsibility, participating in team discussions and working as a team member.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Define team role and scope	1.1. Role and objectives of the team are defined 1.2. Team structure, responsibilities and reporting relations are identified from team discussions and other external sources
2. Identify individual role and responsibility	2.1 Individual roles and responsibilities of <u>team members</u> are identified 2.2 Reporting relationships among team members are defined and clarified 2.3 Reporting relationships external to the team are defined and clarified
3. Participate in team discussions	3.1 Ideas related to team plans are contributed 3.2 Recommendations for improving team work are put forward
4. Work as a team member	4.1 Effective forms of communication are used to interact with team members 4.2 Communication channels are followed 4.3 OHS practices are followed
Range of Variables	
Variables	Range (may include but not limited to):
1. Team Members	1.1 Coach/mentor 1.2 Supervisor/Manager 1.3 Peers/Colleagues 1.4 Employee representative
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 demonstrated knowledge in working in a team environment. 1.2 satisfied the requirements mentioned in the

	1.3 Performance Criteria and Range of Variables
2. Underpinning knowledge	2.1 Team structure, role and responsibility 2.2 Individual members' roles and responsibilities 2.3 Communication flow and reporting structures 2.4 Team planning 2.5 Interpersonal communication skills 2.6 Team meeting procedures 2.7 OHS practices
3. Underpinning skills	3.1 Identifying the role and responsibility of the team 3.2 Identifying roles and responsibilities of individual members 3.3 Participating in team discussions 3.4 Working as a team member
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	5.1 Workplace (simulated or actual) 5.2 Pens 5.3 Telephone 5.4 Computer 5.5 Writing materials 5.6 Online communication
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
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Unit Code and Title	GU-12-L2-V1: Communicate in the Workplace
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to communicate in the workplace. It specifically includes the task of receiving verbal instructions, interpreting verbal and written information/ instruction, conveying instructions using verbal and written forms of communication, completing written documentation and participating in workplace meetings and discussions.
Nominal Hours	20 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Receive verbal instructions.	1.1 Instructions are accessed and interpreted 1.2 Questions are asked to clarify understanding or gain more information. 1.3 Information/instruction is recorded.
2. Interpret verbal and written information/ instruction	2.1 <u>Written instructions</u> are interpreted. 2.2 Work <u>signage's</u> are properly responded. 2.3 Routine written instructions are followed in sequence. 2.4 Feedback is given to workplace supervisor.
3. Convey instructions using verbal and written forms of communication	3.1 Relevant <u>communication</u> methods are used to transmit instructions. 3.2 Appropriate non-verbal communication is used. 3.3 Channels of communication are identified and followed 3.4 Communication <u>tools and equipment</u> are operated and faults are identified and reported. 3.5 Information is conveyed using appropriate <u>forms</u> .
4. Complete written documentation	4.1 All required <u>documentation</u> is completed 4.2 Workplace data are recorded 4.3 Written information/instruction is passed to personnel.
5. Participate in work place meetings and discussions	5.1 Meetings are attended regularly and on time. 5.2 Meeting inputs are consistent with the meeting purpose and established protocols. 5.3 Opinions are expressed without interruption. 5.4 Meeting outputs are processed and implemented.
Range of Variables	
Variables	Range (may include but not limited to):
1. Written instructions	1.1 Supervisor's/manager's instructions 1.2 Memoranda 1.3 Rules and regulations

	1.4 Signage 1.5 Approved work plan 1.6 External communications
2. Signage	2.1. On-site direction signs 2.2. Common site warnings 2.3. Location signs 2.4. Traffic signs
3. Communication	3.1 Verbal instructions 3.2 Written instructions 3.3 Online communication
4. Tools and machinery	4.1 Telephone 4.2 Mobile phone 4.3 Fax machines 4.4 Two-way radio 4.5 Computers 4.6 Forms 4.7 Memo
5. Forms	5.1 Memorandum 5.2 Requisitioning form 5.3 Personnel form 5.4 Safety report form
6. Documentation	6.1 Reports (Monthly, Quarterly, Half-Yearly, Annual) 6.2 Plans (Strategic Plan, Operational Plan, Monthly Schedule) 6.3 Monitoring and Evaluation Report 6.4 Minutes of Meetings
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 demonstrated knowledge of workplace procedures in receiving, interpreting and conveying verbal & written communication. 1.2 satisfied the requirements mentioned in the Performance Criteria and Range of Variables.
2. Underpinning knowledge	2.1 Workplace Communication Policies, Standards and Procedures 2.2 Verbal and non-verbal communication 2.3 Modes of communication 2.4 Communication equipment: types, uses and faults 2.5 Channels of communication

3. Underpinning skills	3.1 Receiving verbal instructions. 3.2 Interpreting verbal and written information/ instruction 3.3 Conveying instructions using verbal and written forms 3.4 of communication 3.5 Completing written documentation 3.6 Participating in workplace meetings and discussions
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	5.1 Workplace (simulated or actual). 5.2 Pens 5.3 Telephone 5.4 Computer 5.5 Writing materials 5.6 Online communication
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral Questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
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Sector Specific Units of Competencies

Unit Code and Title	SU-RMGT-01-L2-V1: Explore the History of Textile Industries
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to explore the history of textile industries. It specifically includes the task of examining the background of textile industries, identifying main industries with in textile sector and prime local and export markets.
Nominal Hours	15 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Interpret the background of textile industries	1.1 The historical background of textile industries is interpreted; 1.2 <u>Steps of textile processing</u> are interpreted; 1.3 Backward and forward linkages are identified
2. Identify main industries with in the sector	2.1 Main industries with in the sector are identified 2.2 Importance of the sector and main industries is explored and analyzed
3. Identify prime local and export markets	3.1 Prime <u>local markets</u> and <u>export markets</u> are identified 3.2 Local and export markets are listed
Range of Variables	
Variables	Range (may include but not limited to):
1 Steps of textile processing	1.1 Spinning 1.2 Weaving 1.3 Dying 1.4 Printing 1.5 Finishing 1.6 Apparel manufacture
2 Local markets	2.1 Processing mills 2.2 Processing factories 2.3 Wholesale markets 2.4 Wholesale retailers
3 Export markets	3.1. Europe 3.2. United states 3.3. Australia
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	

1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 interpreted history of textile industries 1.2 interpreted basic steps of textile processing 1.3 identified prime local and export markets
2. Underpinning knowledge	2.1 History of textile industries 2.2 Steps of textile processing 2.3 Prime local and export markets
3. Underpinning skills	3.1. Interpreting the history of textile industries 3.2. Interpreting steps of textile processing 3.3. Identifying prime local and export markets
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	5.1. Workplace (simulated or actual). 5.2. Manuals 5.3. Drawings 5.4. Specifications
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral Questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
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Occupation Specific Units of Competencies

Unit Code and Title	OU-RMGT-RFO-01-L2-V1: Interpret Basics of Ring Frame
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to interpret basics of ring frame. It specifically includes the task of interpreting ring frame process, identifying machine and specifications and interpreting technical terms.
Nominal Hours	50 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Interpret ring frame process	1.1. <u>Production process of ring frame</u> is interpreted. 1.2. Functions of ring frame are identified and described. 1.3. Role of a ring frame operator is explained.
2. Identify machine and specifications	2.1 Origin, brand and model of the machine is identified. 2.2 <u>Parts of machine</u> are identified and located. 2.3 Function and location of parts are stated. 2.4 Number of spindles and Spindle speed are identified.
3. Interpret technical terms	3.1 <u>Technical terms</u> used in spinning process are identified. 3.2 Technical terms are described
Range of Variables	
Variables	Range (may include but not limited to):
1. Production process of ring frame	1.1. Creeling 1.2. Drafting 1.3. Twisting 1.4. Winding 1.5. Doffing
2. Parts of machine	2.1. Spacer 2.2. Apron 2.2.1. Top apron 2.2.2. Bottom apron 2.2.3. Lattice apron 2.3. Cradle 2.4. Spindle 2.5. Ring cup 2.6. Ring traveller 2.7. Hand brake / knee brake 2.8. Cot roller 2.9. Steel roller 2.10. Roving guide 2.11. Lappet

	2.12. Spindle tape 2.13. Drafting pressure arm 2.14. Pneumafil suction tube 2.15. Overhead Traveller Clearer (OHTC) 2.16. Wooden roller 2.17. Auto doffer
3. Technical terms	3.1 Roving 3.2 Creeling 3.3 Drafting 3.4 Twisting 3.5 Piecing 3.6 Building 3.7 Winding 3.8 Doffing
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1. interpreted the production process of ring frame. 1.2. identified parts of machine. 1.3. identified locations of parts in the machine.
2. Underpinning knowledge	2.1 Definition of ring frame. 2.2 Production process of ring frame. 2.3 Standard Operating procedure of ring frame. 2.4 Functions of ring frame. 2.5 Functions of parts of machine. 2.6 Technical terms used in textile sector.
3. Underpinning skills	3.1 Identifying parts of ring frame. 3.2 Identifying location of parts in the ring frame. 3.3 Interpreting function of parts of machine.
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Tidiness and timeliness 4.5 Respect of peers and seniors in workplace 4.6 Communicate with peers and seniors in workplace
5. Resource implications	The following resources must be provided: 5.1. Workplace (simulated or actual). 5.2. Tools, equipment and physical facilities appropriate to perform activities. 5.3. Materials consumable to perform activities.

6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
Accreditation Requirements Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.	

Unit Code and Title	OU-RMGT-RFO-02-L2-V1: Handle Materials
Unit Descriptor	The unit covers the knowledge, skills and attitudes required to handle materials. It specifically includes the task of performing doffing operation, handling cops and trolley and disposing of waste materials.
Nominal Hours	40 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Perform doffing operation	1.1. <u>Personal Protective Equipment (PPE)</u> is used. 1.2. Occupational Health and Safety (OSH) is followed. 1.3. Ring cops are doffed. 1.4. Empty ring bobbins are placed in the machine as per standard operating procedure.
2. Handle cops and trolley	2.1 Ring cops are collected. 2.2 Ring bobbins are collected and stored as per standard operating procedure. 2.3 Trolley and basket are cleaned.
3. Dispose of waste materials	3.1 <u>Waste material</u> from machine is identified. 3.2 Waste materials are separated and disposed of as per standard operating procedure.
Range of Variables	
Variables	Range (may include but not limited to):
1. Personal Protective Equipment (PPE)	1.1. Apron 1.2. Ear plug 1.3. Face mask 1.4. Scarf/ Cap
2. Waste material	2.1. Roving 2.2. Pneumafil 2.3. Bonda 2.4. Sweep
Evidence Guide	
The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 performed doffing operations. 1.2 handled cops and trolley as per standard. 1.3 collected and disposed of waste material as per workplace standard.

2. Underpinning knowledge	2.1 Procedure for doffing. 2.2 Procedure for handling cops and trolley. 2.3 Process for disposing of waste as per workplace Standard.
3. Underpinning skills	3.1 Doffing ring cops and ring bobbins. 3.2 Collecting and storing the cops. 3.3 Collecting and disposing of waste material as per workplace standard.
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Respect of peers and seniors in workplace 4.6 Communicate with peers and seniors in workplace
5. Resource implications	5.1. The following resources must be provided: 5.2. Workplace (actual or simulated). 5.3. Tools, equipment and materials appropriate to perform activities. 5.4. Materials consumables to perform activities.
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
Accreditation Requirements Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.	

Unit Code and Title	OU-RMGT-RFO-03-L2-V1: Maintain Drafting System and Drafting Zone
Unit Descriptor	The unit covers the knowledge, skills and attitudes required to maintain drafting system and drafting zone. It specifically includes the task of interpreting drafting system and maintaining drafting zone
Nominal Hours	30 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Interpret drafting system	1.1 <u>Drafting systems</u> are interpreted 1.2 Drafting systems are identified 1.3 Working procedure of drafting system is interpreted
2. Maintain drafting zone	2.1 <u>Parts of drafting zone</u> are identified. 2.2 Functions of different parts of drafting zone are interpreted. 2.3 Functions of drafting zone is interpreted. 2.4 <u>Faulty parts</u> are identified and reported 2.5 Drafting zone is maintained; 2.6 Drafting zone is cleaned as per workplace standard.
Range of Variables	
Variables	Range (may include but not limited to):
1. Drafting systems	1.1 Pneumatic 1.2 Mechanical/ Spring loaded 1.3 Apron drafting 1.4 3 over 3 drafting
2. Parts of drafting zone	2.1 Bottom roller 2.2 Top roller 2.3 Top Arm 2.4 Apron 2.5 Cradle 2.6 Spacer
3. Faulty parts	3.1 Defective top roller 3.2 Damaged apron 3.3 Spacer missing 3.4 Guide missing
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 identified drafting system. 1.2 adjusted drafting system as per requirement.

2. Underpinning knowledge	2.1 Systems of drafting. 2.2 Working procedure of drafting system. 2.3 Parts and their function of drafting zone. 2.4 Functions of drafting zone. 2.5 Procedure of maintaining drafting zone;
3. Underpinning skills	3.1 Identifying drafting system. 3.2 Adjusting drafting system as per requirement. 3.3 Cleaning drafting zone as per workplace standard
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	The following resources must be provided: 5.1. Workplace (actual or simulated). 5.2. Tools, equipment and physical facilities appropriate to perform activities. 5.3. Materials consumable to perform activities.
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor

Accreditation Requirements

Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.

Unit Code and Title	OU-RMGT-RFO-04-L2-V1: Carry Out Ring Frame Operations
Unit Descriptor	This unit covers the knowledge, skills and attitudes required to carry out ring frame operations. It specifically includes the task of collecting roving for feeding, performing creeling, feeding and piecing, operating ring frame, and cleaning and maintaining the machine.
Nominal Hours	120 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Collect roving for feeding	1.1. <u>Personal Protective Equipment (PPE)</u> is used. 1.2. Occupational health and safety (OSH) is followed. 1.3. Handover and takeover of machine is performed during shift change 1.4. Simplex bobbins of roving are identified and collected. 1.5. Rovings are stored as per standard operating procedure.
2. Perform creeling, feeding and piecing	2.1 Simplex bobbins of rovings are creeled as per standard operating procedure. 2.2 Simplex bobbins of rovings are fed into machine. 2.3 Rovings are pieced as per workplace standard
3. Operate ring frame	3.1 <u>Control points</u> are identified. 3.2 Machine is started as per standard operating procedure. 3.3 Yarns are pieced when required as per standard operating procedure. 3.4 <u>Material lots</u> are identified and separated. 3.5 Machine is stopped as per SOP if required
4. Clean and maintain the machine	4.1 Machine and machine parts are cleaned as per manufacturer instructions 4.2 <u>Drafting zone</u> is cleaned as per standard operating procedure 4.3 Waste material is disposed as per workplace standard
Range of Variables	
Variables	Range (may include but not limited to):
1. Personal Protective Equipment (PPE)	1.1. Apron 1.2. Ear plug 1.3. Face mask 1.4. Scarf/ Cap
2. Control points	2.1 Brake system 2.2 Feed zone

	2.3 Delivery zone 2.4 Start and stop system 2.5 Drafting zone
3. Material lots	3.1. Materials in a 'lot' of different count 3.2. Materials in a 'lot' of same count 3.3. Different fibres in a 'lot' 3.4. Same fibres in a 'lot'
4. Drafting zone	4.1 Steel roller (back, front and middle roller) 4.2 Cradle 4.3 Roving guide 4.4 Spacer 4.5 Apron
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	
1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1. carried out creeling, feeding and piecing. 1.2. performed starting and stopping the machine. 1.3. managed lots of the materials.
2. Underpinning knowledge	2.1 Standard operating procedures of ring frame. 2.2 Control points of machine. 2.3 Cleaning and maintaining procedure of machine
3. Underpinning skills	3.1 Following OSH in the workplace. 3.2 Identifying and collecting roving from machine. 3.3 Performing creeling, feeding and piecing. 3.4 Operating the machine as per standard operating procedure. 3.5 Cleaning and maintaining the machine as per standard operating procedure.
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	The following resources must be provided: 5.1. Workplace (actual or simulated).

	5.2. Tools, equipment and physical facilities appropriate to perform activities. 5.3. Materials consumable to perform activities.
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
Accreditation Requirements Training Providers must be accredited by National Skills Development Authority (NSDA), the National Quality Assurance Body, or a body with delegated authority for quality assurance to conduct training and assessment against this unit of competency for credit towards the award of qualification under NSQF. Accredited providers assessing against this unit of competency must meet the quality assurance requirements set by NSDA.	

Unit Code and Title	OU-RMGT-RFO-05-L2-V1: Maintain Product Quality
Unit Descriptor	The unit covers the knowledge, skills and attitudes required to maintain product quality. It specifically includes the task of identifying roving and yarn faults and carry out basic maintenance work.
Nominal Hours	50 Hours
Elements of Competency	Performance Criteria <u>Bold & Underlined</u> terms are elaborated in the Range of Variables
1. Identify roving and yarn faults	1.1 Roving and yarn quality is interpreted 1.2 <u>Roving and yarn faults</u> are identified. 1.3 Offending materials are collected and separated. 1.4 Identified faults are reported to appropriate authority
2. Carry out basic maintenance work	2.1. <u>Maintenance issues</u> are identified 2.2. Maintenance issues are reported to the competent authority.
Range of Variables	
Variables	Range (may include but not limited to):
1. Roving and yarn faults	1.1 Roving faults: 1.1.1 Irregular roving 1.1.2 Slack package 1.1.3 Stretched roving 1.1.4 Dirt and oil strained roving 1.1.5 Slubs 1.2 Yarn faults: 1.2.1 Thick and thin place 1.2.2 Neps 1.2.3 Slubs 1.2.4 Hairiness 1.2.5 Count mixing 1.2.6 Bad piecing 1.2.7 Long piecing 1.3 Double ended piecing
2. Maintenance issues	2.1 Bearing damage 2.2 Gear teeth damage 2.3 Electrical faults 2.4 Mechanical faults
Evidence Guide The evidence must be authentic, valid, sufficient, reliable, consistent, recent and meet all requirements of current version of the Unit of Competency	

1. Critical aspects of competency	Assessment required evidence that the candidate: 1.1 identified roving and yarn faults. 1.2 identified testing procedure. 1.3 carried out simple maintenance.
2. Underpinning knowledge	2.1 Roving and yarn faults. 2.2 Yarn properties. 2.3 Testing procedures. 2.4 Maintenance schedules and issues.
3. Underpinning skills	3.1 Identifying roving and yarn faults. 3.2 Performing maintenance according to schedule. 3.3 Carrying out simple maintenance.
4. Required attitude	4.1 Commitment to occupational health and safety 4.2 Sincere and honest to duties 4.3 Promptness in carrying out activities 4.4 Environmental concerns 4.5 Eagerness to learn 4.6 Tidiness and timeliness 4.7 Respect of peers and seniors in workplace 4.8 Communicate with peers and seniors in workplace
5. Resource implications	The following resources must be provided: 5.1. Workplace (actual or simulated). 5.2. Tools, equipment and physical facilities appropriate to perform activities. 5.3. Materials consumable to perform activities.
6. Methods of assessment	Competency should be assessed by: 6.1 Written test 6.2 Demonstration 6.3 Oral questioning
7. Context of assessment	7.1 Competency assessment must be done in NSDA accredited assessment centre 7.2 Assessment should be done by a NSDA certified/nominated assessor
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Development of Competency Standard

The Competency Standards for National Skills Certificate in Ring Frame Operations, Level-2 is developed by SEIP on 03 May 2018.

List of Members

Sl No	Name and Address	Position in the committee
1.	Kamrun Nahar Shetu, Assistant Coordinator, BTMA-SEIP	Member
2.	Dr. Md. Shah Alam Majumder, Specialist (Course Accreditation), BTEB	Member
3.	Engr. Kazi Zahirul Islam, General Manager (Quality & Planning), Asia Composite Mills Limited	Member
4.	Mr. S. M. Ashique, Lecturer (External Assessor) NITER (BTMA-SEIP)	Member
5.	Mr. Prahalad Acharjee, Senior Manager and Trainer, Maksons Spinning Mills Ltd.	Member
6.	Mr. Syed Nasir Ershad, AEPD (Public1), SEIP	Member
7.	Md. Ahsan Habib, TVET Specialist, SEIP	Member
8.	Mr Mohiuzzaman, Course Specialist, SEIP	Member
9.	Dr. Md. Wazed Ali, Deputy Team Leader, British Council - SD03	Member
10.	Shilpi Akter, National Subject Matter Consultant -Textile Sector, British Council - SD03	Member

Validation of Competency Standard

The Competency Standards for National Skills Certificate in Ring Frame Operations, Level- 2 is validated by NSDA 22th August 2022.

List of Members of SCVC

Sl No	Name and Address	Position in the committee	Signature
1.	Mohammed Nasir, Chairman, RMG & Textile ISC, Email: nasirever@gmail.com, Mobile: 01711527018.	Chairperson	
2.	Engr. Md Monir Hossen, GM, Nice Spun Mills Ltd., Email: gmnsplml@znzfab.com, Mobile: 01711541701	Member	
3.	Mohammad Anwar Hossain, A.G.M. production, Maksons Spinning Ltd., Email: anwarohi372@gmail.com, Mobile: 01815825135	Member	
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