APPRENTICESHIP CURRICULUM (OPTIONAL TRADE)

Rubber

Machine Operator_Plastic Sacks

Course Code: CO072200134

☒NAPS ☐Non-NAPS

NSQF Level: 4

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Course Details

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<tr><td rowspan="2">3.</td><td>Apprenticeship Training Duration:
(2 to 4 weeks of BT is embedded in this duration as per the requirement of the establishment)</td><td>Months: 12 month</td></tr>
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<tr><td>4.</td><td>Credit</td><td>TBD</td></tr>
<tr><td>5.</td><td>NSQF Level (Mandatory for NAPS)</td><td>4 NSQC Approval Date: 20/07/2016</td></tr>
<tr><td>6.</td><td>Related NSQF aligned qualification details</td><td>
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<tr><th>S. No.</th><th>QP/ Qualification/ NOS Name (As applicable)</th><th>QP/ NOS Code & Version</th><th>NQR Code</th></tr>
<tr><td>1.</td><td>Machine Operator Plastic Sacks</td><td>RSC/Q4804_V1</td><td>2021/CP/CIPET/04625</td></tr>
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<tr><td>7.</td><td>Brief Job Role Description</td><td>This plastics sacks operator is responsible for producing Tape/yarn from plastics resin by involves operating semi & fully automatic extrusion and post extrusion machines. They are responsible for troubleshooting process problems and performing minor maintenance to ensure continued operation of the production line. They are also responsible for completing the output earn Good Manufacturing Practices</td></tr>
<tr><td>8.</td><td>NCO-2015 Code & Occupation (Access the NCO 2015 volumes from: https://labour.gov.in/organizationsofmole/directorate-general-employment-training-dget)</td><td>NIL</td></tr>
<tr><td>9.</td><td>Minimum Eligibility Criteria
(Educational and/ or Technical Qualification)</td><td>10th Passed</td></tr>
<tr><td>10.</td><td>Entry Age for Apprenticeship</td><td>18 Years</td></tr>
<tr><td>11.</td><td>Any Licensing Requirements (wherever applicable)</td><td>NA</td></tr>
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12.	**Is the Job Role amenable to Persons with Disability**	☐ **Yes** ☒ **No** **If yes, check the applicable type of Disability** ☐ **Locomotor Disability** ☐ **Leprosy Cured Person** ☐ **Cerebral Palsy** ☐ **Dwarfism** ☐ **Muscular Dystrophy** ☐ **Acid Attack Victims** ☐ **Blindness** ☐ **Low Vision** ☐ **Deaf** ☐ **Hard of Hearing** ☐ **Speech and Language Disability** ☐ **Intellectual Disability** ☐ **Specific Learning Disabilities** ☐ **Autism Spectrum Disorder** ☐ **Mental Illness** ☐ **Multiple Sclerosis** ☐ **Parkinson's Disease** ☐ **Haemophilia** ☐ **Thalassemia** ☐ **Sickle Cell Disease** ☐ **Multiple Disabilities**
		Remarks:
13.	**Submitting Body Details**	**Name:** Rubber, Chemical & Petrochemical Skill Development Council **E-mail ID:** ceo@rcpsdc.in **Contact Number:** 011-41009347- 48
14.	**Certifying Body**	Rubber, Chemical & Petrochemical SkillDevelopment Council (RCPSDC)
15.	**Employment Avenues/Opportunities**	• Plastic manufacturing units in India: The apprentice may be employed with the biggest player of the trades and be a part of their manufacturing set and deliver quality work. • Education and Training: They may also take up the role of the instructor in this field where they can impart their manufacturing knowledge to the aspiring students.

16.	**Career Progression**	• The Machine Operator Assistant-Plastics Sacks (Level 3) has a clear pathway to Machine Operator- Plastics Sacks (Level 4).
17.	**Trainer's Qualification & Experience:**	Any graduate preferably in Rubber or Polymer with 5+ yrs. of experience in Plastic or related industry
18.	**Curriculum Creation Date**	10/08/2022
19.	**Curriculum Valid up to Date**	31/12/2024

Module Details

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
1.	**Introduction**	• Evaluate the developmental history of plastic • Describe current industrial scenario of plastics and prospects • Identify types of plastic • List major industrial associations related to plastics sacks • Identify equipment used for plastics sacks • Describe the roles and responsibilities of a machine operator assistant - plastics sacks	0	0	0	0
2.	**Advanced method for Fitting Tools Measuring Equipments and Practice RSC/N4109_V1**	• Comply with health and safety, environmental & other relevant regulations • Follow laid down procedures and instructions for carrying out measurement. • Clean the work area and make it safe from hazards before starting the work. • Perform check that all tools, equipment, power tool cables, extension leads are in a safe and usable condition. • Comprehend job requirements from the job specification document properly before starting the work. • Report and rectify incorrect information in job specification documents, if any. • Prepare for the fitting operations as per procedure • Perform calibration status check of all the measuring instruments used. • Perform collection of correct work pieces & consumables as per job requirements • Identify and select appropriate tools and measuring instruments. • Set up the work pieces as per job requirements using appropriate holding devices. • Demonstrate marking of specified features with the help of appropriate measuring and marking tools on the work pieces as per the job specification. • Perform marking on templates for tracing/ transferring the specified features on the work pieces as per the drawing.	25	65	70%	70%

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
		• Perform specified features tracing or transferring from the templates on to the work pieces as per the drawing. • Follow the procedures and guidelines for personal protective equipment (PPE) and other relevant safety regulations while performing dye fitting operations. • Perform fitting operations on various forms of metal components using a range of hand tools and manually operated machines. • Follow the specified machining sequence and procedure as per job specifications. • Perform fitting operations, independently and safely to produce components with various features as per the specifications. • Measure the finished components as per the specifications. • Identify areas requiring corrective action, improve performance and increase efficiency. • Perform the quality checks of the output as per the required standards, by visual checks and measurement of dimensional parameters using measuring instruments. • Perform documentation during & post fitting operations as per procedures • Demonstrate process of equipment handover during shift change to next shift operator.				
3.	**Introduction and Test method for Polymers & thermoplastics Materials RSC/N4110_V1**	• Describe the importance of polymers. • Explain fundamental terminology of the polymers. • Describe the types of polymers thermoplastics and elastomers. • Explain the types of polymerization, condensation, addition, and copolymerization. • Perform the measurement of molecular weight and sizes-structure of polymer. • Describe the properties of the commodity polymers like: polyolefin, LDPE, HDPE, LLDPE, PP etc. • Explain the properties of the engineering polymers like: PC, ABS, PMMA, POM, PA-NYLON etc. • Describe the properties of the special polymers: FEP, PVDF etc. • Use PP and HDPE for the tape and sack production.	15	45	70%	70%

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
		• Demonstrate the conventional methods of material identification such as drop test, water floatation test and scratch test. • Demonstrate the advanced methods of material identification such as MFI, Melting etc.				
4.	**Perform the woven sack/raffia plant operations with start up and shut down procedure RSC/N4810_V1**	• Select the material for the woven sack • Describe the end applications of tape/ sack. • Describe the principle of plastics sack/ tape process. • Compare the merits and demerits of sack/ tape process over all the others plastic process. • Define the terminology related to sack/ tape process. • Prepare the tape extrusion process such as quenching, heating and orientation by stretching annealing, winding etc. • Prepare machine for film extrusion, such as blown film, flat film and cast film. • Prepare machine for special film extrusion, such as tubular quench film (TQ), expanded film, and co-extruded film & sheet. • Prepare the machine for pipe/ tube extrusion process. • Prepare the pipe extruder dye, constructive feature, size and specification. • Prepare for special extrusion process, such as tapes, woven sack, and monofilament manufacturing process. • Set up the parameters, including product shape and size, plastic type, quantity to be produced • Prepare for conversion processes, such as: lamination sealing cutting, printing and other processes. • Perform preheating and pre operations of plastic if required. • Demonstrate the process of plastic material mixing with additives, fillers (if any) before being fed into the hopper. • Conduct a test process and produce a sample output as per requirement.	30	80	70%	70%

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
		• Perform the tape extrusion process such as quenching, heating and orientation by stretching annealing, winding etc. • Perform film extrusion, such as blown film, flat film and cast film. • Perform special film extrusion, such as tubular quench film (TQ), expanded film, and co-extruded film & sheet. • Perform pipe/ tube extrusion process, independently and safely. • Perform sizing method, take off method & post operation method. • Perform special extrusion process, such as: tapes, woven sack, monofilament manufacturing process. • Perform in-process quality and process parameter inspection for producing quality product. • Assess actual production against production plan and take appropriate action if any gap is observed. • Demonstrate post production and storing operations. • Perform the shut-down procedure of extruder, tape line/ circular looms and weaving machines etc. • Perform conversion processes, such as: lamination sealing cutting, printing and other processes.				
5.	**Weaving technology and Loom operation (Circular) RSC/N4811_V1**	• Describe the principle of weaving technology and loom operation. • Identify basic tools and accessories and machineries. • Select the raw material for loom, weaving machines operation. • Perform various types of loom, weaving machines operation process. • Perform various types of loom, such as shuttle, projectile loom, rapier loom water jet loom, air jet loom and circular looms etc. • Perform single phase and multiphase weaving. • Perform set-up of loom and weaving machine. • Describe merits and demerits of loom and weaving process over other process.	30	100	70%	70%

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
		• Assess the feed strip for dimension uniformity/ identified tape. • Determine broken warp ends and the location of the broken end. • Determine the location using the indication lamp and by bringing the hands over the droppers, with electrical warp stop motion. • Identify the tape defects like wrong drawing, wrong denting, end out, double end etc., • Take corrective action for identified defects. • Perform cleaning of the machines & work area to ensure good working atmosphere. • Perform trimming of the loose threads after attending to the warp breaks. • Assess the operation of weaving and loom apparatus as per the checklist provided. • Perform the fixing of the desired loom and weaving in loom machine apparatus as per the work instruction. • Perform modifications in the process parameters. • Distinguish between the common and moderns weaving machine • Illustrate the new development inshuttle, projectile loom, rapier loom water jet loom, air jet loom and circular looms etc. • Demonstrate making adjustment in the weaving and loom machine with the help of tools and software. • Perform the functionality check of weaving and loom machine as per SOP. • Demonstrate the adjustment in the weaving and loom machine program with the help of tools and software as per requirement. • Demonstrate the molding procedure for completing the work order from the supervisor by using the work instruction. • Describe the type of looms and weaving required for executing the required finishing operation. • Perform pouring operation in line with defined standards and specifications • Perform functionality check of weaving and loom machine as per SOP. • Record the observations during operations, such as: interrupted pouring or any abnormality.				

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
		• Conduct a test process and produce a sample output as per the sketches/ engineering drawing. • Measure the dimensions of the output product as per the process given in the work instructions. • Measure the parts dimensions and take corrective actions in case the parts are not as per the given measurements. • Perform the disposal of rejected production batch. • Record output of each category of work as per the batch etc. • Determine the linkage between rejection of output and the pertinent causes and recommend the actions for rejection control. • Perform minor defects rectification, such as: dimension variation, thickness variation etc. by controlling the process parameters. • Perform escalation of all the issues related to change in surface properties, tensile strength etc. • Demonstrate sample submission of first and last output from each batch to the lab for quality check on its composition, properties etc.				
6.	**Auxiliary equipments used in Plastics Sack and Tape Production RSC/N4806_V1**	• Explain how to inspect operating fuel systems, fuel oil transfer, supply lines and associated equipment and fossil fuel chillers • Discuss how to operate condensate and feed water systems, circulating and cooling water systems, condensate and makeup systems, circulating service water treatment equipment, auxiliary lube oil systems, emission control equipment and miscellaneous equipment • Explain how to perform according to the onsite training programs • Ensure cleaning and lubrication of equipment and tooling • Discuss how to perform various preventative maintenance tasks, as needed • Identify different types of pre-drier hot air oven, hopper driers, dehumidifiers etc. • Analyze the basics of chiller, cooling tower for controlling temperature of mold, machine and fluids	10	32	70%	70%

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
		• Check the basic operation and monitor gauges, dials, or other indicators to make sure the machine is working properly • Explain how to examine the functions of the compressor and scrap grinder • Determine when and what kind of maintenance is needed • Ensure that appropriate kind of equipment are selected to do a job • Comply with the instructions given on the equipment manual describing the operating process • Ensure relevant safety board's/ signs are placed on the shop floor • Explain how to operate the machine using the recommended personal protective equipment (PPE) • Ensure team members also use the related PPEs at the workplace • Inspect operating fuel systems, fuel oil transfer, supply lines and associated equipment and fossil fuel chillers • Operate condensate and feed water systems, circulating and cooling water systems, condensate and makeup systems, circulating service water treatment equipment, auxiliary lube oil systems, emission control equipment and miscellaneous equipment • Perform according to the onsite training programs • Demonstrate the skills required to meet the production with basic plant services • Ensure cleaning and lubrication of equipment and tooling • Perform various preventative maintenance tasks, as needed • Identify different types of pre-drier hot air oven, hopper driers, dehumidifiers etc. • Analyze the basics of chiller, cooling tower for controlling temperature of mold, machine and fluids • Check the basic operation and monitor gauges, dials, or other indicators to make sure the machine is working properly				

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
		• Examine the functions of the compressor and scrap grinder • Demonstrate equipment maintenance by performing routine maintenance on equipment • Determine when and what kind of maintenance is needed • Ensure that appropriate kind of equipment are selected to do a job • Comply with the instructions given on the equipment manual describing the operating process • Ensure relevant safety board's/ signs are placed on the shop floor • Operate the machine using the recommended personal protective equipment (PPE) • Ensure team members also use the related PPEs at the workplace.				
7.	**Basic Knowledge of Communication/soft skills RSC/N4108_V1**	• Analyze the basic functions of a computer • Discuss how to practice receiving information and instructions accurately from the supervisor/operator and fellow workers • Discuss about circulating information to the authorized person, within agreed timelines • Throw light on the supportive behavior by assisting others in performing tasks as and when required • Assist coworkers to maximize the effectiveness and efficiency in carrying out tasks • Illustrate active listening skills while interacting with others at work • Discuss about the appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism • Explain how to escalate grievances and problems to the appropriate authority • Practice basic computer operations • Analyze the basic functions of a computer • Practice receiving information and instructions accurately from the supervisor/operator and fellow workers • Demonstrate circulating information to the authorized person, within agreed timelines	10	30	70%	70%

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
		• Demonstrate supportive behavior by assisting others in performing tasks as and when required • Assist coworkers to maximize the effectiveness and efficiency in carrying out tasks • Demonstrate active listening skills while interacting with others at work • Demonstrate appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism • Demonstrate how to escalate grievances and problems to the appropriate authority.				
8.	**Maintain basic health and safety practices at the workplace, 5S RSC/N4101_V1**	• Explain how to check that the tools, fixtures and jigs that are lying on workstations are the ones in use and unnecessary items are not cluttering the workbenches • Explain how to segregate waste in hazardous/non-hazardous types • Discuss about the technique of waste disposal and waste storage in proper bins • Explain how to segregate the items which are labeled as red tag items for the process area and keep them in the correct places • Illustrate sorting tools/equipment/fasteners/spare parts as per the specifications/utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions • Explain how to stack the various types of boxes and containers properly as per the size/utility to avoid any spillage of items/breakage • Explain how to store extra material and tools at the designated places and make sure that no additional material/tool is lying near the work area • Identify the floor markings/area markings used for demarcating the various sections in the plant • Comply with the given instructions and check for labeling of fluids, oils, lubricants, solvents, chemicals etc. • Identify the importance of wearing protective clothing/equipment for specific tasks and work conditions	10	30	70%	70%

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
		• Illustrate safe working practices while dealing with hazards to ensure the safety of self and others. • Employ good housekeeping practices at all times • Discuss how to apply appropriate fire extinguishers on different types of fires • Throw light on the rescue techniques applied during fire hazard • Explain the correct use of a fire extinguisher • Identify potential injuries through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise • Explain how to conduct regular checks of the machine, with support of the maintenance team • Inform the concerned authorities about machine breakdown/ damages which can potentially cause harm • Discuss how to maintain awareness amongst others by sharing information on the risks identified • Explain how to practice safety and fire drills to be self-aware of safety hazards and preventive techniques • Discuss about high standards of personal hygiene at the work place • Identify the importance of wearing protective clothing/equipment for specific tasks and work conditions • Explain good housekeeping practices • Explain how to apply appropriate fire extinguishers on different types of fires • Illustrate the rescue techniques applied during fire hazard • State the correct use of a fire extinguisher • Identify potential injuries through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise				

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
		• Inform the concerned authorities about machine breakdown/ damages which can potentially cause harm • Maintain awareness amongst others by sharing information on the risks identified • Explain the standards of personal hygiene at the work place. • Check that the tools, fixtures and jigs that are lying on workstations are the ones in use and unnecessary items are not cluttering the workbenches • Segregate waste in hazardous/non-hazardous types • Demonstrate the technique of waste disposal and waste storage in proper bins • Segregate the items which are labeled as red tag items for the process area and keep them in the correct places • Demonstrate sorting tools/equipment/fasteners/spare parts as per the specifications/utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions • Practice stacking the various types of boxes and containers properly as per the size/utility to avoid any spillage of items/breakage • Show how to store extra material and tools at the designated places and make sure that no additional material/tool is lying near the work area • Identify the floor markings/area markings used for demarcating the various sections in the plant • Comply with the given instructions and check for labeling of fluids, oils, lubricants, solvents, chemicals etc. • Check that the tools, fixtures and jigs that are lying on workstations are the ones in use and unnecessary items are not cluttering the workbenches • Segregate waste in hazardous/non-hazardous types • Demonstrate the technique of waste disposal and waste storage in proper bins				

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
		• Segregate the items which are labeled as red tag items for the process area and keep them in the correct places • Demonstrate sorting tools/equipment/fasteners/spare parts as per the specifications/utility into proper trays, cabinets, lockers as mentioned in the 5S guidelines/ work instructions • Practice stacking the various types of boxes and containers properly as per the size/utility to avoid any spillage of items/breakage • Store extra material and tools at the designated places and make sure that no additional material/tool is lying near the work area • Identify the floor markings/area markings used for demarcating the various sections in the plant • Comply with the given instructions and check for labeling of fluids, oils, lubricants, solvents, chemicals etc. • Identify the importance of wearing protective clothing/equipment for specific tasks and work conditions • Demonstrate safe working practices while dealing with hazards to ensure the safety of self and others. • Employ good housekeeping practices at all times • Apply appropriate fire extinguishers on different types of fires • Demonstrate rescue techniques applied during fire hazard • Demonstrate the correct use of a fire extinguisher • Identify potential injuries through sharp objects, burns, fall, electricity, gas leakages, radiation, poisonous fumes, chemicals, loud noise • Conduct regular checks of the machine, with support of the maintenance team • Inform the concerned authorities about machine breakdown/ damages which can potentially cause harm				

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
		• Maintain awareness amongst others by sharing information on the risks identified • Practice safety and fire drills to be self-aware of safety hazards and preventive techniques • Demonstrate high standards of personal hygiene at the work place				
9.	**Testing and quality control, Conduct quality checks and inspection of the finished products RSC/N4812_V1**	• Describe the significance of the raw material and product testing. • Describe the significance of quality control of product. • Explain the concept of quality control, conduct quality checks. • Perform raw material and product inspection, analysis and reporting as per organization Standard Operating Procedure. • Describe the Total Quality Management philosophy. • Describe total quality control tools- ISO, 5S, Six Sigma, OHSAS 18001 and ASTMD. • Apply the prescribed national and international standards on regular intervals. • Use appropriate measuring instruments, equipment, tools, accessories etc., as prescribed / required. • Identify non-conformities to quality assurance standards. • Identify potential causes of nonconformities to quality assurance standards • Identify impact on final product due to non-conformance to prescribed standards. • Describe the significance for action to ensure that problems do not reoccur. • Suggest corrective action to address problem. • Review effectiveness of corrective action. • Interpret the results of the quality check correctly. • Present results of the findings with QC in charge/appropriate authority within stipulated time. • Record of results of action taken and adjustments not covered by established procedures for future reference. • Perform escalation in case the cause of defect cannot be identified.	10	40	70%	70%

S. No	Module/NOS Name, Code, Version	Outcomes	Assessment Marks		Passing Percentage	
			Th.	Pr.	Th.	Pr.
10.	**Behavior science and entrepreneurship RSC/N4813_V1**	• Describe the significance of behavior science and entrepreneurship. • Compare the difference between behavioral science and social science. • Describe the categories of behavioral science. • Explain the steps of entrepreneurship development, selecting a plastic product for the project and preparing project report. • Create cordial relations with various clients for the benefit of business. • Assess the needs and requirement of the clients in comparison with one's own unique selling proposition. • Develop the plan and budget with reference to various plastic sack and tape for the next process. • Create the books of accounts and financial transactions. • Determine the prices of various inputs and products from the market • Assess the influence of various quality parameters of products/pellets on the product pricing. • Determine critical market information that is otherwise not in the public domain. • Choose appropriate buyer in a given situation of market parameters • Identify best ways of attracting market price for one's produce • Describe the significance of quality before and during the sales to ensure good returns.	10	30	70%	70%
Total Marks			**150**	**452**		

Glossary

Term	Description
Sector	Sector is a conglomeration of different business operations
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.

Acronyms

Acronym	Description
NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training

Annexure 1: Tools and Equipment

List of Tools and Equipment

The tools and equipment required are:

Sno	Tool / Equipment Name	Specification (per batch of 30 trainees)
1	Extrusion Blow film Machine	1
2	Hand Tools: Hammer,screw driver set with Multiple heads, Allen key hexagonal , File triangular, Hacksaw, adjustable, Spanner set double side, Adjustable spanner	4
3	Chease winders with shuttles/ Circular weaving machine /Heavy duty sewing machine	1
4	Personal Protective equipments: Safety Goggles,Rubber Gloves, Asbestos gloves,Fire Extinguisher,Apron,Helmet,First Aid Box with Medicines	4
5	Measuring equipments: Steel Ruler, Micrometer,Vernier Caliper,Radius gauge,Feeler gage,Steel measuring tape, Weighing Balance (1 No.)	4
6	Plastics raw material: PP,LDPE & HDPE Extrusion Grade.	5
7	Mould & Die: Die size 16mm to 70 mm	2
8	Class Room equipments: LCD Projector/Screen, Computer, charts, Black / White board & Duster.	1
9	Auxiliaries equipments: Hot air oven and Dryer ,Mould Temperature Controller, Scrap Grinder, Crane, Air Compressor, Hot air blow Gun, Water cooling Tower	1

Classroom Aids

The aids required to conduct sessions in the classroom are:

1 Projector
2 Computer/laptops
3 Internet connectivity
4 Whiteboard

Annexure 2: Assessment Strategy

This section includes the processes involved in identifying, gathering and interpreting information to evaluate the learner on the required competencies of the program.

Assessment System Overview:

- Batches assigned to the assessment agencies for conducting the assessment on SDSM/SIP or email
- Assessment agencies send the assessment confirmation to VTP/TC looping SSC
- Assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records
- If the batch size is more than 30, then there should be 2 Assessors.

Testing Environment: Assessor must:

- Confirm that the centre is available at the same address as mentioned on SDMS or SIP
- Check the duration of the training.
- Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
- Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
- Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
- Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
- Check the availability of the Lab Equipment for the particular Job Role.

Assessment Quality Assurance levels / Framework:

- Question papers created by the Subject Matter Experts (SME)
- Question papers created by the SME should be verified by the other subject Matter Experts along with the approval required from SSC
- Questions are mapped with NOS and PC

- Question papers are prepared considering that level 1 to 3 is for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management Apprenticeship Curriculum: NAPS Jr. Machine Operator – CNC Milling of Plastic Page 20 of 14
- Assessor must be ToA certified
- Assessment agency must follow the assessment guidelines to conduct the assessment

Types of evidence or evidence-gathering protocol:

- Time-stamped & geotagged reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding
- Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
- Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos.

Method of verification or validation:

- Surprise visit to the assessment location
- Random audit of the batch
- Random audit of any candidate

Method for assessment documentation, archiving, and access

- Hard copies of the documents are stored
- Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage and are stored in the Hard Drive

On the Job:

1. Assessment for on the job training to be conducted by the industry partner on the practical competency output defined in the NOS/QP and the assessment criteria.
2. The candidate must score 70% in each module to complete the OJT.
3. Tools of Assessment that can be used are:
   a. Videos of Trainees during OJT should be shared by employer to RCPSDC.
4. Assessment will ensure that the apprentice will be able to:
   a. Work effectively and efficiently as per schedules and timelines while complying with the health and hygiene norms.
   b. Implement safety practices.
   c. Optimize the use of resources to ensure less wastage and maximum conservation.
   d. Communicate effectively and develop interpersonal skills.