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GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
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TEXTILE SECTOR SKILL COUNCIL
TSC
PERFECTING SKILLS

Participant Handbook

Sector
Textile Sector Skill Council

Sub-Sector
Technical Textiles

Occupation
Post Spinning - Technical Textiles

Reference ID: **TSC/Q8301, Version 4.0**
NSQF Level 3

Tape Winder

This book is jointly developed by

Textile Sector Skill Council (TSC) &

Technical Training & Research Centre - Lohia Corp.

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> Skilling is building a better India. If we have to move India towards development then Skill Development should be our mission.

Shri Narendra Modi
Prime Minister of India

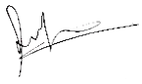
Acknowledgements

Textile Sector Skill Council (TSC) sincerely thanks Ministry of Skill Development & Entrepreneurship (MSDE), National Council for Vocational Education and Training (NCVET) & National Skill Development Corporation (NSDC) for creating a strong skill ecosystem in the country of which TSC is an integral part.

TSC is the Sector Skill Council approved by NSDC & recognized awarding body approved by NCVET under the ages of MSDE.

TSC acknowledges and appreciate "Technical Training & Research Centre - Lohia Group" for supporting us to prepare the handbook including preparational content and valuable technical inputs provided by them.

Special Acknowledgement to **Mr. Rajeev Kumar Dwivedi** & **Mr. Jitendra Kumar Arya**



Dr. Swapna Mishra
CEO
(Textile Sector Skill Council)

About TSC

Textile Sector Skill Council (in short TSC) is a non-profit making organisation having license under Section 8 (1) of the Companies Act, 2013 registered under Companies Act 2013. Textile Sector Skill Council has been approved by National Skill Development Corporation, set up by Ministry of Finance, Govt. of India. TSC will develop a skilled work force for the textile industry through setting curriculum for training and accreditation of trade competency. TSC is to facilitate scalable "skill training" to the complete work force engaged in the manufacture of textile and hand-loom products. National Skill Development Corporation (NSDC approved Textile Sector Skill Council (TSC) for development of skill in spinning, weaving, processing and hand-loom sectors of the textile industry.Setting of Textile Sector Skill council has also been endorsed by Ministry of Textiles, Government of India vide approval letter dated 6th September 2013.The TSC is an organization represented by Industry, government and academia to develop innovative skill solutions and to investment in skills and job creation. The key objective of TSC is to define the skill requirement of the industry and to create a deployable talent pool of workforce for the textile industry. The TSC is incubated by textile industry associations and training providers including textile research associations and office of the Development Commissioner of Hand-looms. A governing council of this group will oversee the running of the TSC with its CEO and a team of professionals, who will collect, compile and manage Labour Market Information System (LMIS), build competency framework, evaluation methods and curriculum development in consultation with industry and academia.

About TTRC

TECHNICAL TRAINING & RESEARCH CENTRE (TTRC) was established by LOHIA CORP LTD at Kanpur, India in 2012 as an independent division of the group with objectives blended with CSR commitment to impart skills to unemployed youth for employment generation as well as to support the growing raffia industries by providing skilled & trained manpower. The objectives of TTRC have been drawn up in line with the vision of Mr Raj Kumar Lohia, Chairman, Lohia Group to create a Training Institution for the Raffia industry in the country.

Since its operation in 2012, TTRC has emerged as the global destination for training requirement in all disciplines of Raffia industry from Operator level program to Executive development programs with a systematic approach to create pool of trained & knowledge based manpower for Raffia Sector. Perhaps, TTRC is the first of its kind Technical training & research centre of international repute dedicated for Woven sack industry. TTRC campus at Kanpur, India is spread across 10 acre land with residential facilities within the campus & state of art infrastructure including Testing Laboratory & Workshop equipped with Tape plant, Looms, BCS, Valvomatic, MFY Extruder, etc.

LOHIA's TTRC has also been engaged by Woven sack manufacturing units from different countries of SAARC, Africa, Middle East, South East Asia, GCC as the Training partner. TTRC's Onsite training modules at factory premises are becoming popular which enable industries to improve productivity & quality in their operation. USP of TTRC programs is customization as per the requirement of Industries. TTRC's skill training program has been shortlisted by NSDA (apex body of Govt of India for skill development) as an innovative initiative in area of skill development. TTRC is registered as a Training Partner with Textile Sector Council Under NSDC to promote skill development.

Certificate

COMPLIANCE TO
QUALIFICATION PACK – NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

TEXTILE SECTOR SKILL COUNCIL

&

TECHNICAL TRAINING & RESEARCH CENTRE - LOHIA CORP.

for

SKILLING CONTENT : PARTICIPANT HANDBOOK

Complying to National Occupational Standards of

Job Role/ Qualification Pack: '**Tape Winder**' QP No. '**TSC/Q8301 ; NSQF Level 3**'

Dr. Swapna Mishra
CEO
(Textile Sector Skill Council)

Date of Issuance: **May 08th, 2025**
Valid up to*: **May 08th, 2028**
**Valid up to the next review date of the Qualification Pack or the 'Valid up to' date mentioned above (whichever is earlier)*

Mr. Rajeev Kumar Dwivedi
Director
(Technical Training & Research Centre - Lohia Corp.)

About this Book

This Participant Handbook is designed to enable training for the specific Qualification Pack (QP). Each National Occupational (NOS) is covered across Unit/s.

Plastics raffia or Woven sack sector is one of the key segments of plastics processing industries in India, contributing to the growth of consumption of commodity plastics like polyethylene (PE) & polypropylene (PP). The Plastics Woven sack industry can be classified into the following major product packaging categories depending upon the end use applications:

- **Polyolefin Woven Sacks / bags for packaging of Fertilizer, Cement, Food grain, Sugar, Petrochemical products, poultry / animal feed / agricultural produces, resins & chemicals etc.**
- **Flexible Intermediate Bulk Containers (FIBC)**
- **Tarpaulins of different types & applications**
- **Leno bags for fruit & vegetable packaging**
- **Wrapping fabrics**
- **Other tailor - made applications of woven fabrics in Postal, parcel, courier, good transportation/ shipping / logistic areas etc.**
- **Geotextiles / agro textiles**

The **Tape Winder (TSC/Q8301)** is responsible for running the Tape Winder Line under supervision by maintaining health, safety, and security in the raffia industry.

This unit/task covers the following:

1. **Taking charge & handing over the shift to Tape Winder (TSC/N8301)**
2. **Running Tape Winding Machine (TSC/N8302)**
3. **Contribute quality winding in Tape Plant line (TSC/N8303)**
4. **Maintain work area, tools and machines in raffia sector (TSC/N9011)**
5. **Working in a team in raffia sector (TSC/N9012)**
6. **Maintain health, safety and security at work place in raffia sector (TSC/N9013)**
7. **Comply with industry and organizational requirements in raffia sector (TSC/N9014)**



Symbols Used

Learning Outcomes | Objectives | Notes | Tips

Table of Contents

It is recommended that all trainings include the appropriate Employability Skills Module Content for the same is available here:

https://www.skillindiadigital.gov.in/content/list

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1. Taking Charge & Handing over the shift to Tape Winder

TEXTILE SECTOR SKILL COUNCIL
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Unit 1.1: Introduction

Unit 1.2: Parts Name of Winder

Unit 1.3: Types & Specifications of Winder

TSC/N8301

Key Learning Outcomes

At the end of this module, you will be able to:

1. Understand the use of Winders.
2. Operate the Winders.
3. Know about winding mechanism.
4. Describe about different types of winders.
5. Perform timely maintenance of winder as required.

UNIT 1.1: Introduction

Unit Objectives

At the end of this unit, you will be able to understand and know the:

1. Describe about Winder.
2. Know about winder functionality and parameters.

1.1.1: Winders

Tape winders are the most appropriate solution for high-speed winding of flat / fibrillated tape on bobbin cores used as warp bobbins on flat/circular loom and/or weft bobbins on flat/circular looms.

Functionality

1. To revolve the bobbin such that it takes up the tape at a speed in which the extruder produces it, the motor does this job.
2. To lay the tape uniformly across the bobbin. This is achieved by the motion of the cam shaft-slider-thread guide assembly.
3. To control the winding tension throughout the bobbin diameter. This is achieved by the dancing arm mechanism.

Parameters

1. Threading speed (4-6 % more than annealing godet speed)
2. Idle 'off' time (Motor will stop in 3 seconds after tape breakage)
3. Switch 'off' time (Motor will stop in 15 seconds if bobbin is not loaded)
4. Crossing ratio (no. of spindle rotation in one complete cycle)
5. Std. Cross ratio = 11.24 (suitable for 2-5mm tape width)

Scan the QR code to see the related video

Technical Textiles: A Sunrise Segment in the Textile Ecosystem

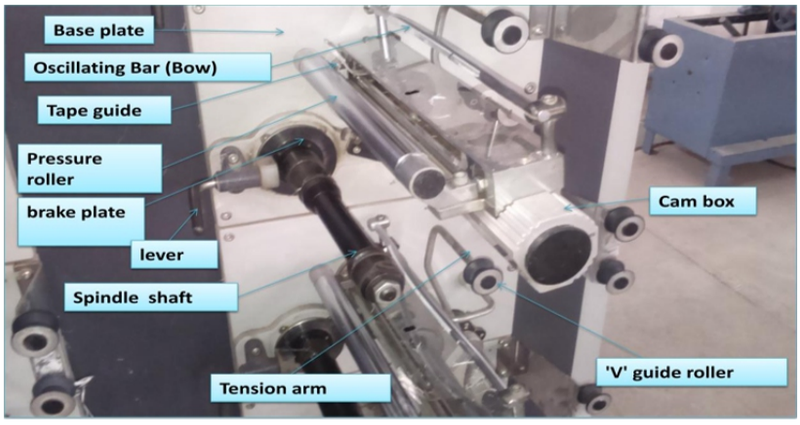
UNIT 1.2: Parts Name of Winder

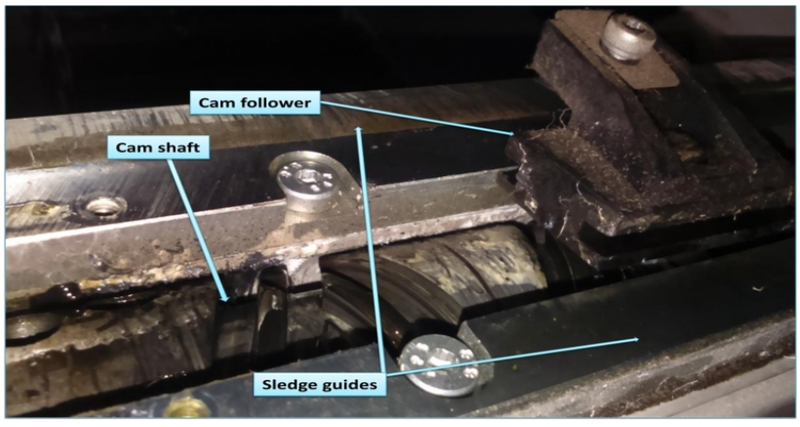
Unit Objectives

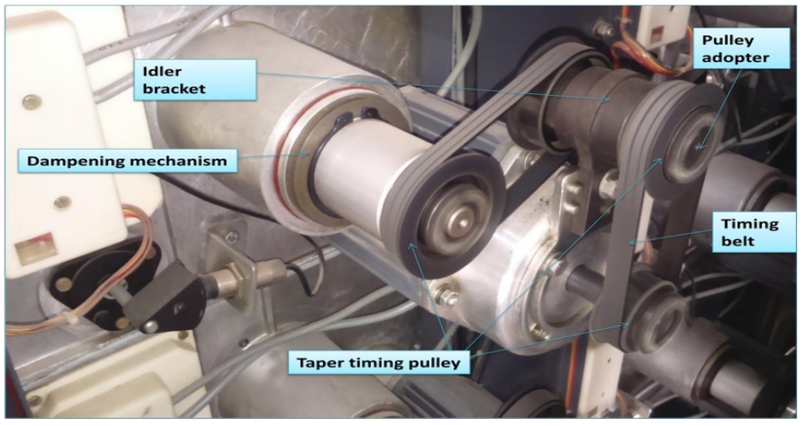
At the end of this unit, you will be able to understand and know the:

1. Determine the Parts of Winder.

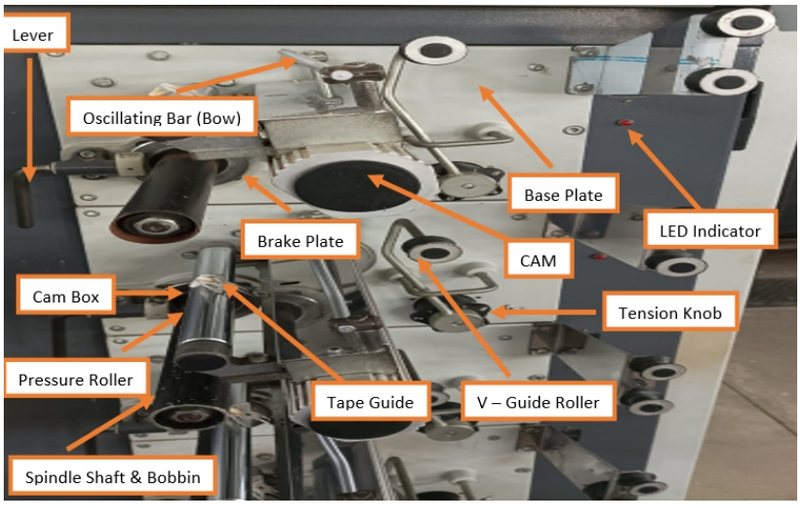
1.2.1: Mechanical Winder

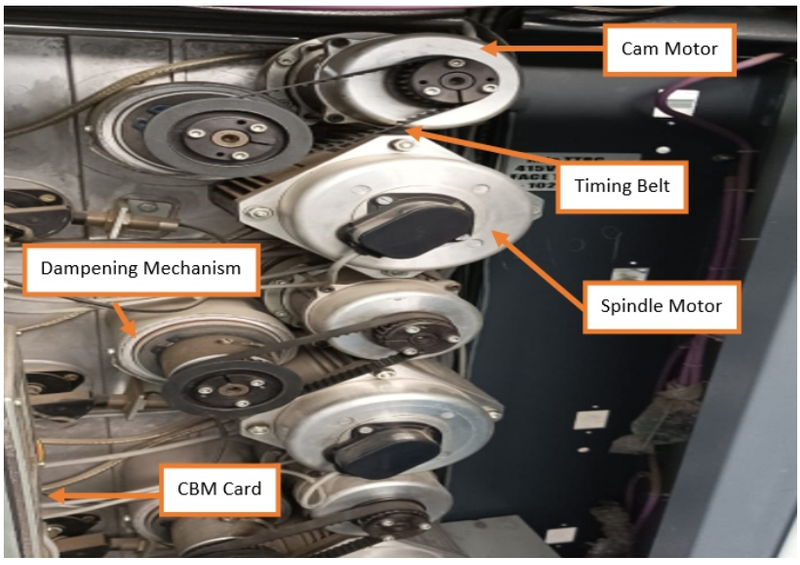


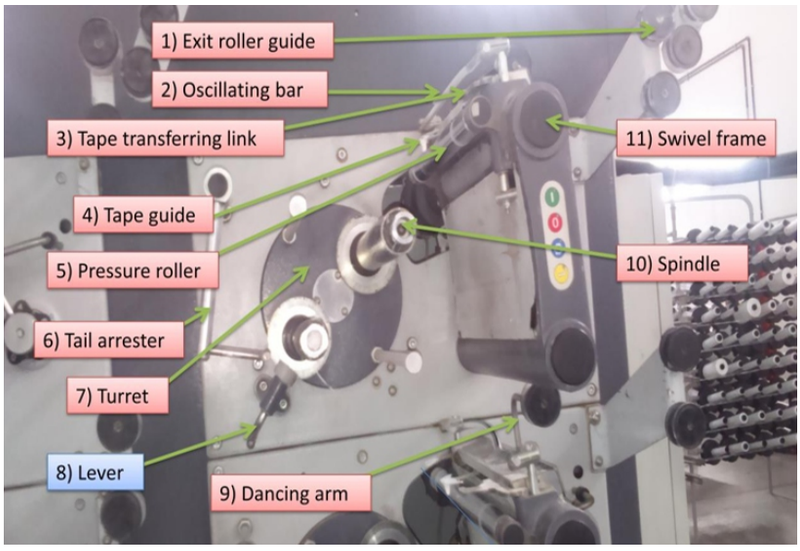


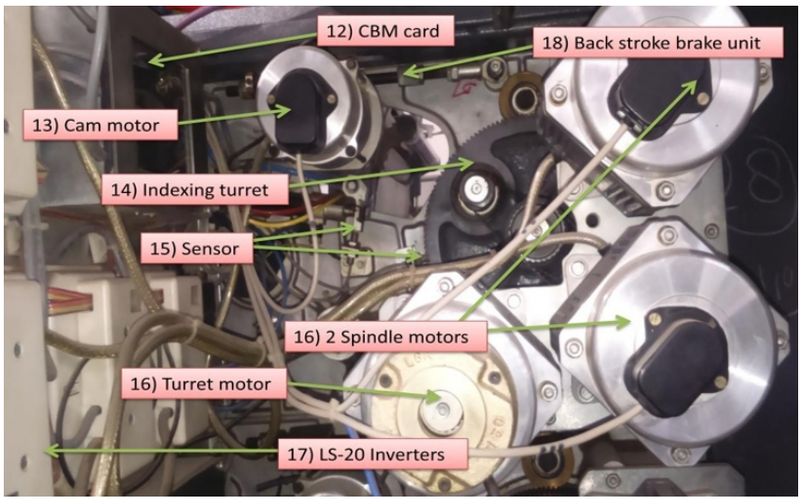


1.2.2: Electronic Winder








12) CBM card
18) Back stroke brake unit
13) Cam motor
14) Indexing turret
15) Sensor
16) 2 Spindle motors
16) Turret motor
17) LS-20 Inverters

UNIT 1.3: Types & Specifications of Winder

Unit Objectives

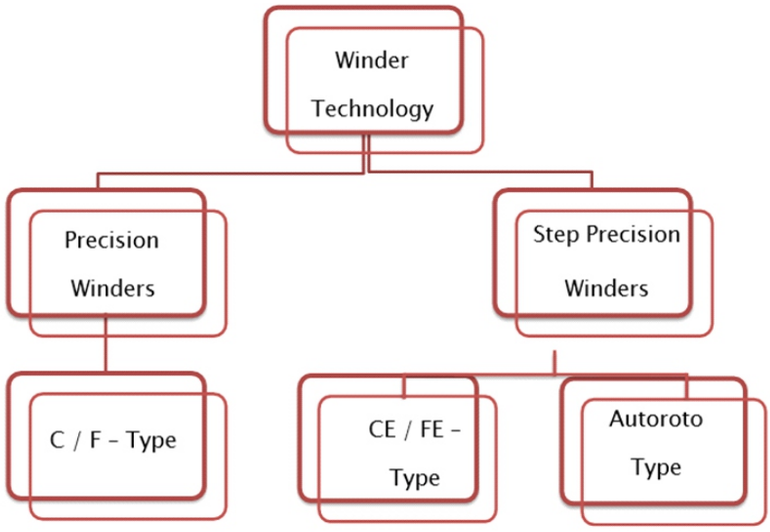
At the end of this unit, you will be able to understand and know the:

1. Explain about types and specification of winders.

1.3.1: Types & Specifications of Winder

There are two types of Winders:

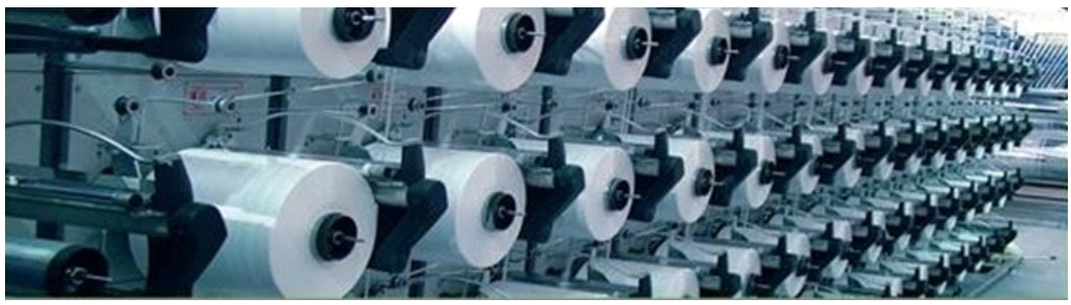
1. Precision Winders
   - Mechanical Winders (C/ F- Type)
2. Step Precision Winders
   - Electronics Winders (CE/FE – Type)
   - Autoroto Winders



PRECISION WINDERS

Mechanical Winders (C/F – Type)

These are a class of precision winders in which each spindle is driven by an AC motor with individual frequency inverter. The drive transmission for traverse mechanism is via timing belts and pulleys.



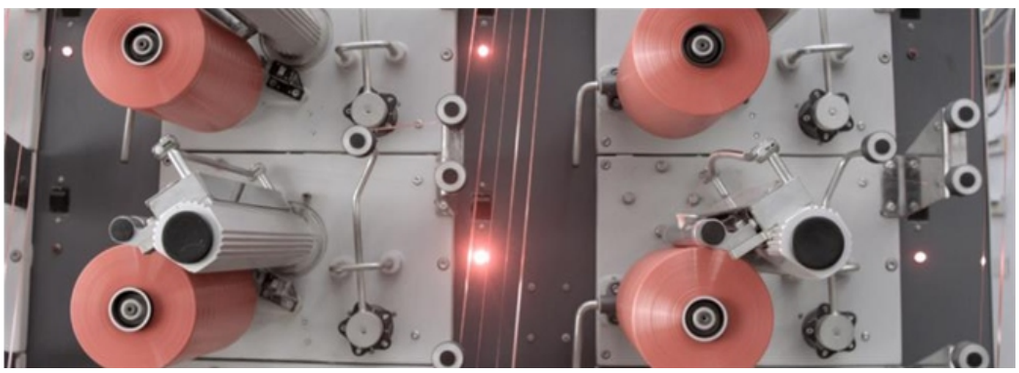
Technical Specifications

MODEL	LTW 200CM LFW 200CM	LTW 200FM LFW 200FM	LTW 250FM LFW 250FM	LTW 300FM LFW 300FM
Winding ratio setting	Mechanical	Mechanical	Mechanical	Mechanical
Tape width range	1.8 - 6.0 mm#*	1.8 - 6.0 mm#*	1.8 - 6.0 mm#*	1.8 - 6.0 mm#*
Denier range	400 - 3000#	400 - 3000#	400 - 3000#	400 - 3000#
Length of traverse	200 mm	200 mm	250 mm	300 mm
Bobbin core- Inner diameter	35 mm**	90 mm**	90 mm**	90 mm**
Bobbin core- Length	218 mm**	230 mm**	280 mm**	330 mm**
Winding speed mech. (max.)	160-450 m/min	160-425 m/min	160-425 m/min	160-425 m/min
Max. bobbin diameter	160 mm	240 mm	280 mm	290 mm
Frame configuration	6 High, 4 Across	4 High, 3 Across	4 High, 3 Across	4 High, 3 Across

STEP PRECISION WINDERS

Electronics Winders (CE/FE – Type)

These step precision winders are equipped with electronic gearing between the metallic traverse cam and the spindle. This allows for a dynamic change of gear ratio (winding ratio) depending on bobbin diameter.



1. High speed precision winding
2. Excellent bobbin quality
3. Low energy consumption
4. Increased weaving efficiencies

Technical Specifications

MODEL	LTW 200CE LFW 200CE	LTW 250 FEv3 LFW 250 FEv3	LTW 300FEv3 LFW 300FE v3
Winding ratio setting	Electronic	Electronic	Electronic
Tape width range	1.8 - 6.0 mm#*	1 end 1.2-6.0 mm*# 2 ends 0.9-2.0 mm*#	1 end 1.2-6.0 mm*# 2 ends 0.9-2.0 mm*#
Denier range	400 - 3000#	500 - 3500#	500 - 3500#
Length of traverse	200 mm	90/82.5 mm**	90/82.5 mm**
Bobbin core- Inner diameter	35 mm**	280 mm**	330 mm**
Bobbin core- Length	218 mm**		
Winding speed mech. (max.)	160-500 m/min	500 m/min	500 m/min
Max. bobbin diameter	160 mm	280 mm	300 mm
Frame configuration	6 High, 4 Across		

Autoroto Winders

Tape winders used for producing quality bobbins of polyolefin flat / fibrillated tapes.

This technology enables automatic changeover of bobbins. It is especially designed to meet the ever-increasing demand of efficient and cost-effective tape winding.

1. Single and Double Tape Winding
2. Automatic Changeover
3. Reduced Wastage Levels
4. Lesser Effort in Doffing

Technical Specifications

Model	autoroto 200CF v4 autoroto 200CT v4
Bobbin Changeover	At preset length
Winding Ratio	Electronically programmable
Tape Width Range	1 end 1.8 - 6.0 mm*#** 2 ends 0.9 - 2.0 mm*#**
Denier Range	500 - 3000#**
Length of Traverse	200 mm
Bobbin Core - Inner Diameter	35 mm*#
Bobbin Core - Outer Diameter	40 mm**
Bobbin Core – Length	218 mm**
Winding Speed Mechanical (max.)	200 - 600 m/min
Max. Bobbin Diameter	200 mm
Frame Configuration	5 High, 3 Across
Frame Size (L x W x H)	2.1 x 1.0 x 2.0 m

Features

- Equal length bobbins - Setting by length, winding time, or bobbin diameter
- Higher winding speed (up to 600 m/min)
- Electronic gear box
- Step Precision Winding
- Automatic bobbin changeover
- Bobbin diameter up to 200mm
- More stable bobbin due to “ring” formation during bobbin changeover
- Pneumatically controlled bail roller pressure
- Back stroke brake unit
- Recipe storage
- Transfer tail possible

Notes

Scan the QR code to see the related video

Fully automatic Tape Winding Machine

Tape Winding Machine

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2. Running Tape Winding Machine

Unit 2.1: Winding Mechanism

Unit 2.2: Machine Operation

TSC/N8302

Key Learning Outcomes

At the end of this module, you will be able to :

1. Know about the Mechanism of Winder in detail.
2. Know about the Machine Operation.

UNIT 2.1: Winding Mechanism

Unit Objectives

At the end of this unit, you will be able to:

1. Know about the Mechanism of Winder in detail.

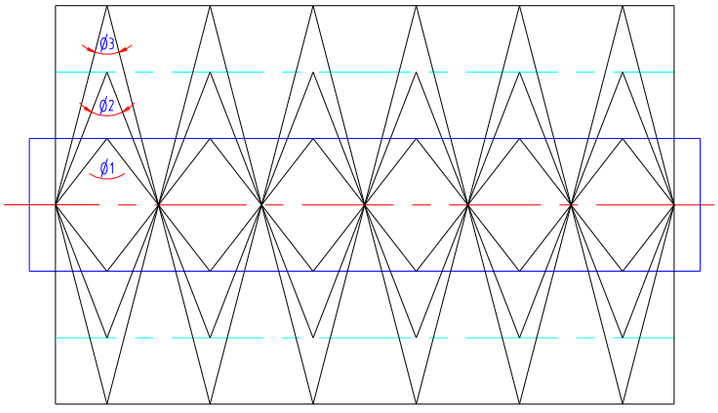
2.1.1: Winding Mechanism

PRECISION CROSS WINDING

- The number of crossings in each successive wound layer is identical, i.e., the crossing ratio is constant throughout the package diameter.
- Crossing angle continuously decreases with increase in bobbin diameter.
- Fix transmission ratio between cam double stroke and spindle rpm.

Example: Mechanical Gearing Winders, Models LTW 200C, LTW 200F, LTW 250F, LTW 300F

PRECISION CROSS WINDING – WINDING PATTERN

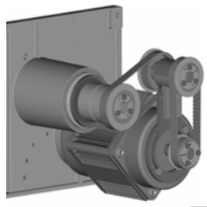


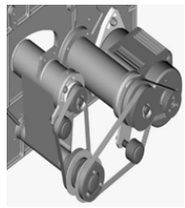
Crossing angle Ø1 > Ø2 > Ø3, Crossing Ratio- fixed

PRECISION CROSS WINDING – MECHANICAL GEARING WINDERS – MOTOR DRIVE UNIT

Features

- Integrated spindle motor with speed control by frequency inverter
- Cam drive with timing pulley & belt
- Speed control through frequency inverter and analog sensor
- Constant winding tension throughout the package formation
- User friendly tension selection device for individual heads
- Auto individual spindle stops in case of tape breakage
- Dampening through disc spring
- Low power consumption



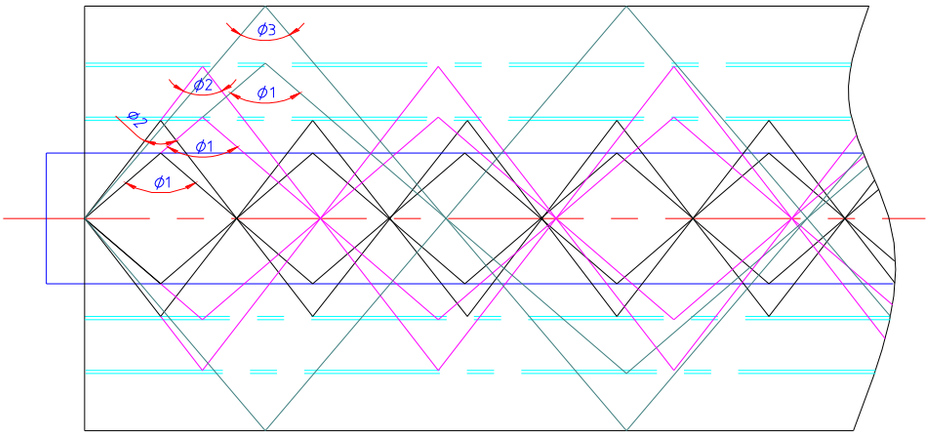


STEP PRECISION WINDING

- Several changes of winding ratio during package formation. A high winding ratio is applicable to the initial phase and decreases in steps during package formation.
- Crossing angle varies between a pre-decided range and crossing ratio changes in steps to maintain that.

Example: Electronics Winders & Autoroto Winders

STEP PRECISION WINDING – WINDING PATTERN



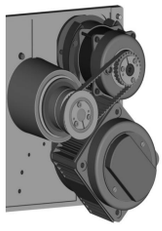
Where Ø1 = Start crossing angle, Ø2 = End crossing angle

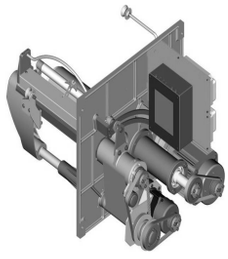
At any running diameter, crossing angle Ø3 <Ø1 & Ø3 >Ø2

STEP PRECISION WINDING – ELECTRONIC GEARING WINDERS

Features

- Separate motors for CAM and spindle
- Separate motors for spindle and traverse cam
- Separate frequency inverters for spindle and traverse cam motor
- Encoders feedback for electronic gearing
- HMI for data entry
- Gateway module for line speed synchronization
- Electronic gear box
- Step precision winding
- Higher winding speed (up to 500 m/min)
- Recipe storage – Easy selection of cross ratio





UNIT 2.2: Machine Operation

Unit Objectives

At the end of this unit, you will be able to:

1. Know about the Machine Operation.

2.2.1: Machine Operation

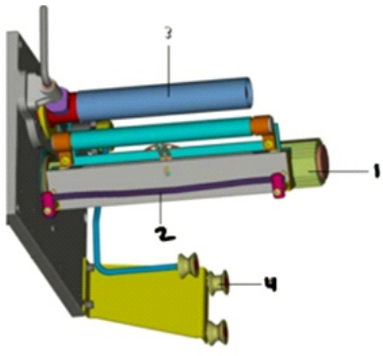
It is recommended that following checking procedures be observed before starting the machine. This is very important for proper functioning of each unit.

Traverse Motion Mechanism

The cam-box (1) must be free and can be easily rotated without any jerk. However, extreme easy running or sluggishness in corresponding parts may result in bad package formation.

Oscillating Bar (Bow)

The positioning of oscillating bar (2) is very important for getting uniform tension throughout the package building. It should be perfectly centered with respect to cheese tube (3) as well as exit roller guide (4). Moreover, it should be positioned in such a way so that the distance between the exit roller-guide to the pressure roller should be approximately same during the entire package formation.



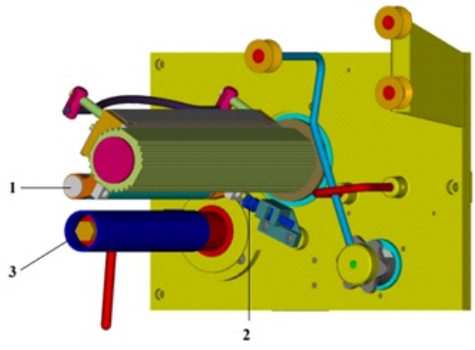
Pressure Roller

Along with the cam box, the pressure roller (1) must be parallel with the cheese tube (3). Otherwise, there can be net formation (overthrown tapes) on one side of the package. The roller must turn freely and should not have any axial clearance.

The roller must also be clean and smooth.

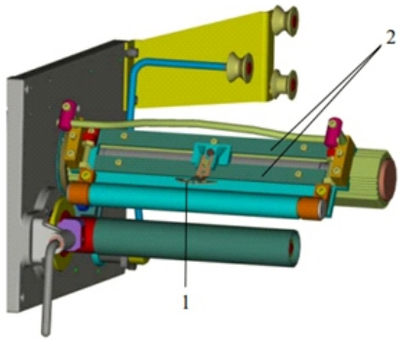
Any contamination may result in unevenness of the package. Check that the pressure roller must not touch the empty cheese tube.

A gap of approximately 1 mm or less should be kept so that the highly polished plated roller is not damaged. Set the stopper screw (2) accordingly.



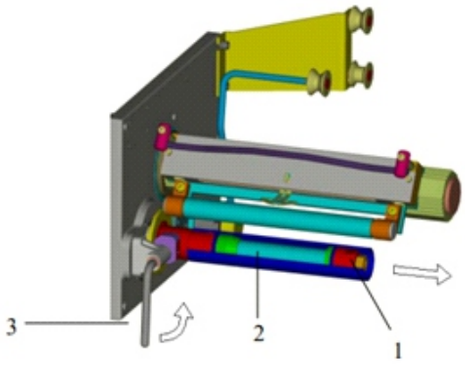
Tape Guide

Check the to and fro movement of the tape guide unit (1) by rotating the spindle by hand. It should be uniform and free during the complete cycle. Moreover, there should not be much play while checking it in stationary condition. If there is lot of play, set the gap between two sledge guides (2) to get the correct fittings of this unit. Fix the tape guide in the slot in such a way so that, the tape neither comes out nor it touches the bobbin while it is running. Tighten the tape guide thoroughly.



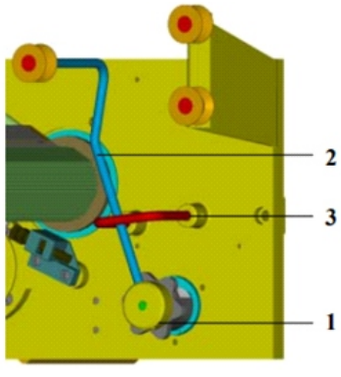
Expandable Spindle

To hold the cheese tube (1) tightly on the expandable spindle (2) position the lever (3) as shown in fig.15. The tube can be easily moved on the spindle by rotating the lever in the direction of the arrow shown, i.e., when the lever is parallel with spindle. The lever should be handled only when the spindle is totally stopped.



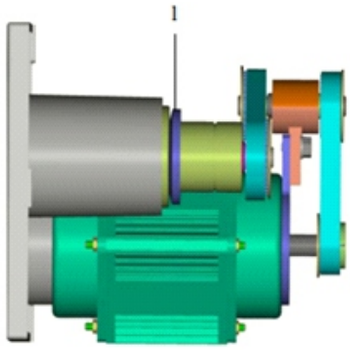
Dancing Arm (Tension Controller)

Check the freeness of the dancing arm (2) by hand. It must be able to swing freely within the range restricted by “U” clamp (3). The clamping screw (1) must hold the arm firmly in its position.



Contact Pressure System

The necessary contact pressure between pressure roller and the package is generated by the dampening mechanism (1). Only authorized person should do necessary adjustments.



Start Of Machine Without Load

Following adjustments / checking should be made carefully by running the machine for few seconds.

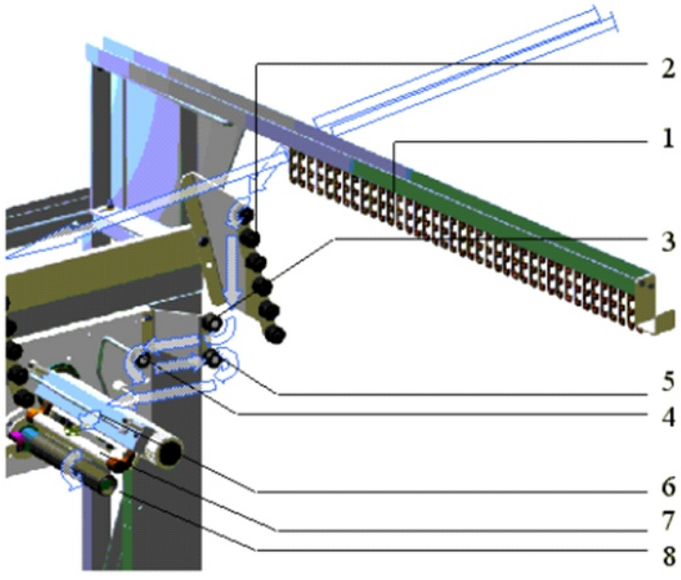
- Check the direction of rotation of the spindle of each spindle Unit. It should be clockwise.
- Check the vibration of each spindle. If more, replace the cheese tube.
- Check the parallelism as well as gap between pressure roller & cheese tube.
- Check free movement of cam box unit.
- Check the free running of each pressure roller.
- Check free movement of dancing arm.
- Check the free running of all guide rollers.
- Check the free movement and play of each tape guide.
- Check whether the belt is running out of center.
- Check the positioning of cheese tube.
- Check smooth working of entire machine. After doing these jobs thoroughly, make necessary arrangements for making one trial package to satisfy all quality parameters.

Path of the Tape for Threading

Take respective tape from the running line and place it over the individual spindle unit in the following sequence:

- Through the 'triple J hook' (1) provided in the first frame (except first column).
- Over guide roller (2) mounted on the frame.
- Bellow the entry guide roller (3) of spindle unit
- Around the dancing arm roller (4)
- Around the exit guide roller (5)
- Over the oscillating bow (6)
- Over the pressure roller (7)
- And lastly wrap on the empty tube (8) Now, swivel the cam box to rest on package or the stopper provided for avoiding damage of pressure roller.

(As such, there should be a gap of approximately 1mm or less between the empty tube and the pressure roller to avoid damage) Spindle unit is now ready for processing and for running the spindle, swivel the dancing arm to the right side from its left position. The head will start running according to the preset winding speed by self-picking up the tape inside the tape guide.



Scan the QR code to see the related video

Webbing winder for winding tape and ribbon

Tape Twining Coil Machine

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3. Contribute quality winding in Tape Plant Line

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Unit 3.1: Functions & Adjustments

Unit 3.2: Lubrication of Winder

Unit 3.3: Formulative Assessment

TSC/N8303

Key Learning Outcomes

At the end of this module, you will be able to:

1. To Know about the Functions and Adjustments related to winders.
2. To Perform the Lubrication of Winders.
3. Answer questions related to winders.

UNIT 3.1: Functions and Adjustments

Unit Objectives

At the end of this unit, you will be able to:

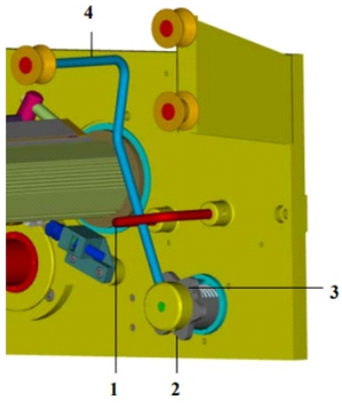
1. To Know about the Function and Adjustment related to winders.

3.1.1: Functions and Adjustments

Tape Tension

The tension in the tape is due to the pulling of tape through the dancing arm (4). The unrestricted movement of the dancing arm within the extremes set by the 'U'-clamp (1) during the entire doffing cycle is the pre-requisite for winding at a constant tape tension. For setting tension, following procedure must be followed:

- Disengage the spiral spring (3) out of the dancing arm by pushing the tension knob (2) forward until the tip of the spring comes out from the hole of the dancing arm.



- Now turn the tension knob (2) clockwise or anti-clockwise to increase or decrease the tension of the tape being wound. Engage spring tip in the desired position according to number embossed in the tension knob.

Note: -HIGHER THE NUMBER MORE WILL BE THE TENSION (Rotating clockwise).

As a rule, the change in the denier requires an adjustment in the tape tension. The desired tension values for a good quality winding are:

PP 0.1 - 0.15 cN/den

HDPE 0.08 - 0.12 cN/den

UNIT 3.2: Lubrication of Winders

Unit Objectives

At the end of this unit, you will be able to:

1. To Perform the Lubrication of Winders.

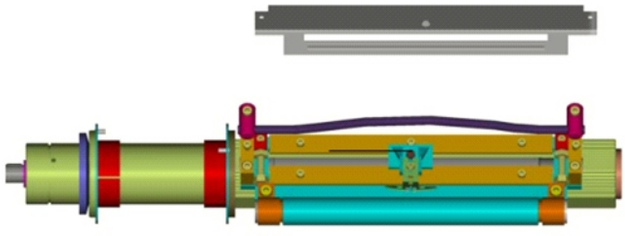
3.2.1: Lubrication of Winders

Note: Before doing any maintenance operation switch off the machine

Lubrication Instructions

The unique design of the machine helps you not to bother for tedious lubrication schedule. Most of the rotating parts are lubricated for life; thereby there are not many lubrication points, only one type of lubricant and lubrication interval.

No.	Lubrication Point	Type of Lubricant	Make	Lubrication Intervals and Instructions
1	Camshaft & camshaft follower	BM- 50	Ore Lube	* Every 1200 operating hours (Bimonthly) 3 to 4 cm3 depending on the camshaft stroke. * During lubrication, the camshaft should be rotated by hand.
2	Sledge and Sledge Guide Bars	BM- 50	Ore Lube	* Every 1200 operating hours (Bimonthly) * Small amount spread over entire length



Scan the QR code to see the related video

Narrow Tapes Spooling Machine

Tape Point Winding Machine

UNIT 3.3: Formulative Assessment

Unit Objectives

At the end of this unit, you will be able to:

1. Answer questions related to winders.

3.3.1: Formulative Assessment

Subjective Types

1. Name the three types of winders.
2. Write down the difference between precision and step precision winding .
3. Write down the speed of the various models of winders.
4. Write the winding operation in brief as per your understanding.
5. Write down the winder parameters.
6. Write down the winding functions and the adjustments related to it.

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4. Maintain work area, tools and machines in raffia sector

Unit 4.1 - Department House Keeping

Unit 4.2 - Machine Cleanliness & Maintenance

Unit 4.3 - Self Discipline in Cleanliness Culture

Unit 4.4 - Do's & Don'ts

TSC/N9011

Key Learning Outcomes

At the end of this module, you will be able to:

1. Understand how to maintain tools.
2. Understand how to maintain machine.
3. Understand what is cleanliness.
4. Understand how to maintain house keeping.

UNIT 4.1: Department House Keeping

Unit Objectives

At the end of this unit, you will be able to :

1. Perform and maintain a good housekeeping in the department.
2. Follow the cleaning checklist correctly.

4.1.1: Importance of Department Housekeeping

- **Safety**: Proper housekeeping reduces the risk of accidents and injuries by keeping walkways clear and ensuring that equipment is stored safely.

- **Efficiency**: A clean and organized workspace allows for smoother operations, reducing downtime caused by misplaced tools or materials.
- **Quality Control**: Cleanliness helps maintain the quality of the film by preventing contamination from dust, debris, or other foreign particles.
- **Equipment Longevity**: Regular cleaning and maintenance of equipment prevent wear and tear, extending the lifespan of machinery.
- **Compliance**: Adhering to housekeeping standards ensures compliance with industry regulations and safety standards.
- **Morale**: A tidy work environment boosts employee morale and productivity, creating a more pleasant and professional atmosphere.
- **Problem Identification**: A well-maintained area makes it easier to spot potential issues with equipment or processes early, allowing for timely interventions.

UNIT 4.2: Machine Cleanliness & Maintenance

Unit Objectives

At the end of this unit, you will be able to :

1. The importance of machine cleanliness and the maintenance of the Winder

4.2.1: Importance of Machine Cleanliness

Maintaining machine cleanliness is crucial for several reasons:

1. **Efficiency**: Clean machines operate more efficiently, reducing downtime and increasing productivity. Dirt and debris can cause mechanical issues, leading to decreased performance

2. **Safety**: Regular cleaning helps prevent accidents by ensuring that all parts are functioning correctly and that there are no obstructions or hazardous buildups
3. **Product Quality**: Clean machines produce higher quality products by minimizing the risk of contamination. This is especially important in industries like food processing and pharmaceuticals
4. **Equipment Longevity**: Keeping machines clean reduces wear and tear, extending their lifespan and reducing the need for costly repairs or replacements
5. **Compliance**: Adhering to cleanliness standards is often a regulatory requirement, ensuring that operations meet industry-specific guidelines and avoid legal issues
6. **Cost Savings**: Preventative cleaning can save money in the long run by avoiding breakdowns and maintaining optimal machine performance

4.2.2: Maintenance of Winder

Maintaining a tape winder involves several key steps to ensure it operates efficiently and safely. Here's a general procedure for tape winder maintenance:

Daily Maintenance

1. **Inspect for Leaks and Damage**: Check the winder for any hydraulic leaks, loose bolts, or worn and damaged parts
2. **Clean the Machine**: Remove any debris or material that could interfere with the operation.
3. **Lubrication**: Ensure all moving parts are properly lubricated to prevent wear and tear.

Weekly Maintenance

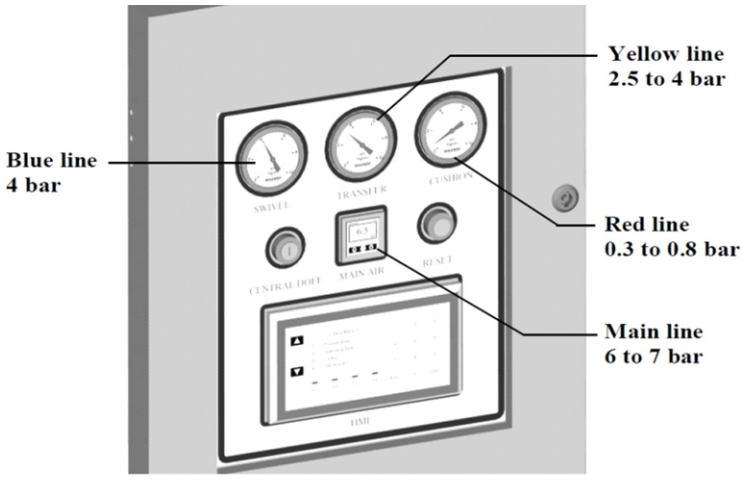
1. **Check Tension and Alignment**: Verify that the tape tension and alignment are correct to avoid winding defects.

2. **Inspect Safety Labels**: Replace any worn or illegible safety labels to maintain safety standards

Monthly Maintenance

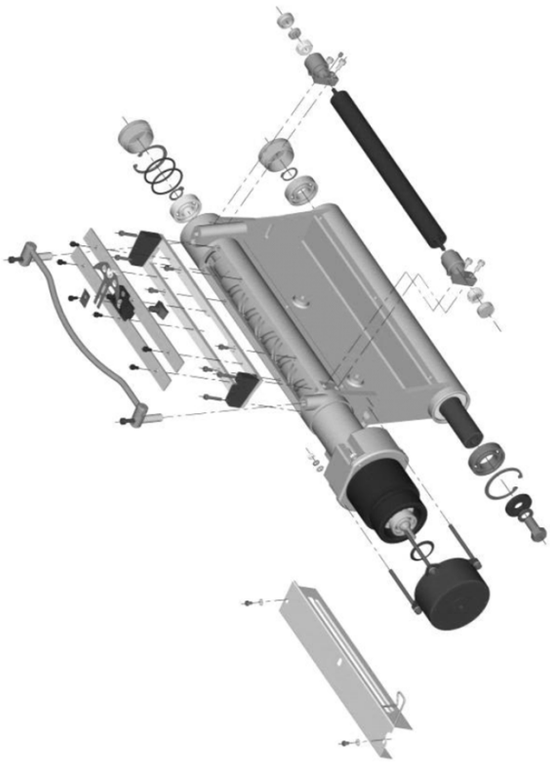
1. **Pneumatic System Check**: Inspect the pneumatic system for proper pressure and flow. Ensure there are no leaks and that the system is functioning correctly
2. **Calibration**: Calibrate the winder to ensure it is operating within the specified parameters.

Check that there is no leakage and maintain the air pressure in the lines as recommended bellow.



Yearly Maintenance

1. **Thorough Inspection**: Conduct a detailed inspection of all components. Replace any parts that show signs of wear or damage
2. **Safety Check**: Ensure all safety mechanisms are functioning correctly and that the machine complies with safety regulations



Off-Season Storage

1. **Clean and Store**: Wash and clean the winder thoroughly before storing it. Ensure it is stored in a dry, safe place to prevent rust and damage.

Troubleshooting

- **Winder Does Not Spin**: Check the hydraulic flow direction and ensure the connections are correct
- **Uneven Winding**: Adjust the tension and alignment of the tape to ensure even winding

Regular maintenance not only extends the life of your tape winder but also ensures it operates safely and efficiently. If you have specific issues or need detailed instructions, referring to the manufacturer's manual is always a good idea.

Scan the QR code to see the related video

Tape Roll Winding Machine

UNIT 4.3: Self Discipline in Cleanliness Culture

Unit Objectives

At the end of this unit, you will be able to :

1. know about Self Discipline in Cleanliness Culture.

4.3.1: Self Discipline

- Wear PPE provided by company
- Keep necessary display boards wherever necessary
- Avoid putting the waste on floor
- Highlight if any parts found damage to superior
- Notice any abnormal condition while cleaning and inform to superior Support to co-worker to finish the task in time
- Complete your task without disturbing co-workers

Scan the QR code to see the related video

Safety Attitudes

UNIT 4.4: Do's & Don'ts in Winder

Unit Objectives

At the end of this unit, you will be able to :

1. Know about Do's & Don'ts in Winder.

4.4.1: Do's & Don'ts

- Always use the personal safety equipment made available with you, such as protective glasses, ear protection, safety helmet, safety gloves, protective clothing.
- Please wear closely fitting proper work clothes.
- Do not wear jewellery, protect long hair with a helmet.
- Please wear shoes or boots with non-slips soles.
- Always make sure that you have a firm and secure foothold.
- Do not use machine parts as climbing aids. When working in elevated locations, always use safety tested climbing aids and operating platforms.
- Do not operate the line while under the influence of alcohol, drugs or medicine with comparable effects.
- Keep your work area neat. Lack of order will increase the risk of accidents.
- Please be fully alert to any danger while staying in the hazardous line / machine area.
- Only perform work for which you are authorized and for which you have been properly trained.
- Do not allow unauthorized individuals to enter the line/ machine area.
- Please use only suitable auxiliary equipment to operate the line/machine.
- Use only suitable lifting devices, prior to lifting the equipment, check weight, location of the center of gravity and fastening point.
- Perform maintenance work only while the machine/machine parts are shut off.
- Do not start the work until all rotating part has come to a complete standstill. In addition, project yourself against accidental restart by activating the main switch.
- Inspect the line / machine for deficiencies prior to start-up.
- Make sure the all safety devices on the machine are in place and operative.
- Do not remove any protective devices or other safety equipment. If it is necessary to dismantle any of these devices, however for example during maintenance or cleaning work the devices must be reinstalled and checked immediately after completion of work.
- Please make sure that there is no risk to anybody before leave the line / machine switched on.
- If any changes are observed in the line / machine or in its operating behavior, shut the line / machine off immediately and report the malfunction to the person in charge.
- Make sure the systems under pressure (e.g. melt heat -transfer, pneumatic, or hydraulic lines and vessels) are depressurized before operating, for instance during maintenance work.
- Work on the electrical equipment of the line/ machine must be performed exclusively by a qualified electrician or by properly trained individuals under the guidance and supervision of a qualified electrician in accordance with the regulations governing installations.
- When handling oil, grease, and other chemical substances please observe the safety rules prescribed for the specific product.
- Use caution when handling hot operating supplies or process material (danger or burns or scalding).

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5. Working in a team in raffia sector

TSC/N9012

Key Learning Outcomes

At the end of this module, you will be able to:

1. understand how to work as team.
2. understand how to work with self responsibility.
3. understand what is communication.
4. understand different between Discussion Vs Argument

UNIT 5.1: Advantage of Team Work

Unit Objectives

At the end of this unit, you will be able to :

1. Lead a team and perform well to achieve the goal.
2. Communicate the message among team members without affecting the theme of content.

5.1.1: Team

- TEAM means **T**ogether **E**ach **A**chieve **M**ore
- Risk and time delay task can be easily completed by working as team.
- Working with team gives more benefits than working with individual
- Working with team will save time in achieving the target
- We can know more details /information about the task from our team members.
- Mutual understanding between members will improve
- We can overcome unwanted conflict
- Physical support will be get from members
- Level of deviation will be minimized
- Confidence level increases with team to achieve the target

Fig. 5.1.1.1: Team Work

UNIT 5.2: Being a Successful Team Player

Unit Objectives

At the end of this unit, you will be able to know:

1. How to become a successful team player.

5.2.1: A Successful Team Player

- Cooperating with other team members is main criteria for a successful team player
- Avoid implementing your thoughts and ideas without discussing with other members about pros and cons
- Have open discussion among the members to avoid misunderstanding
- Lead the team with involvement and interest
- Support and guide the members in difficult situation

Scan the QR code to see the related video

Industrial Safety

UNIT 5.3: Faith in Team Work

Unit Objectives

At the end of this unit, you will be able to know:

1. The Important things to follow in Team work.

5.3.1: Faith in Team Work

- Believe other team members
- Allow other members to talk in discussion

Fig. 5.3.1.1: Group discussion

- Respect their views

UNIT 5.4: Initiate for Development

Unit Objectives

At the end of this unit, you will be able to know:

1. The important things to initiate development.

5.4.1: Development

- Come forward to take task
- Prepare action plan before starting the task
- Consider the company policy / Standards in preparation of action plan
- Explain to team members about the task
- Give necessary support to others to understand the policy / standard's
- Get their suggestion
- Encourage the team members
- Give importance of their points even though it is not much worth

Fig. 5.4.1.1: Development

UNIT 5.5: Effective Communication

Unit Objectives

At the end of this unit, you will be able to know:

1. The important things for effective communication.

5.5.1: Effective Communication

- When working as a team, communication plays a vital role for the success of the task
- Miscommunication among the team members leads to breakdown the task
- You should clearly communicate the management policy to others if they are not clearly understood
- Communicate the message to other members politely and clearly
- If any problem faced during the task, inform to the superior immediately with proper details like machine no., area, etc.
- While communicating to other departments, provide clear information about machine number, process details, time etc.

UNIT 5.6: Active Involvement in Discussion

Unit Objectives

At the end of this unit, you will be able to know:

1. The important things for active involvement in discussion.

5.6.1: Involvement in Discussion

- Before starting the task, have a discussion among the team members about the task and plan
- Involve with interest in the discussion
- Make everyone to take part in the discussion
- Avoid unnecessary/ useless talks which is not relevant to the task

Fig. 5.6.1.1: Useless talk to avoid during discussion (Red marked)

- You initiate the discussion
- Get information instead of questioning in discussion
- Give chance to other members to talk
- Listen their talk keenly
- Any controversy appears in discussion, find a way and means to solve the problem by involving oneself
- If necessary seek your superior's guidance to solve the matters of discussion

UNIT 5.7: Discussion Vs Argument

Unit Objectives

At the end of this unit, you will be able to know:

1. The difference between discussion and argument

5.7.1: Discussion Vs Argument

- Discussion is a good thing for long time. It will create good relationship between members of a team and also improves our concentration and involvements.
- Argument in a team creates bad remark about a team and will leads to loss of time. Sometimes it creates conflict and bad remarks about some ones.
- Discussion makes team members to improve their knowledge
- Argument makes team members to disappoint
- Discussion leads to creativities of good thoughts
- Argument leads to unnecessary worries
- Discussion helps to achieve the task easily
- Argument spoils the task completion

Fig. 5.7.1.1: Group discussion and Argument (Positive and Negative)

UNIT 5.8: Ethics in Discussion

Unit Objectives

At the end of this unit, you will be able to know:

1. The importance of ethics in discussion.

5.8.1: Ethics

- Self-discipline is must to work as a team
- Give attention in discussion
- Avoid interrupting while other members talking
- One person to talk at a time in discussion
- Others should observe the points
- Any points need clarification ask politely
- If different opinion comes, express it gently
- Accept the opinion without resistance for the sake of team work
- Appreciate others view
- Initiate the changes /Acceptance from you

UNIT 5.9: Commitment on Collective Decision

Unit Objectives

At the end of this unit, you will be able to know:

1. The importance of commitment on collective decision.

5.9.1: Commitment

- Discussion is carried out to get a best output of activity to achieve the task
- Discussion is made to get a common point's of follow up to achieve the task
- Discussion is made to involve all members to take part in task
- Once the decision is taken together, each and every one of the team to work towards it
- No other discussion to be carried out once the decision is take
- Periodical Review meeting to be conducted to know the status of task
- In case of failure in task, take it in positive way and analyses it.
- Avoid critics other and take responsibility on own
- If any changes are required, do it after discussion
- To take part in the discussion with Wholly hearted mind

Fig. 5.9.1.1: Group discussion with involvement

UNIT 5.10: Dos and Don'ts

Unit Objectives

At the end of this unit, you will be able to :

1. know about the dos and don'ts of team work.

5.10.1: Dos and Don'ts

S. No.	Dos	Don'ts
1.	Work as a team	Working independently
2.	Show involvement in discussion	Not showing involvement in discussion
3.	Take decision with discussion	Taking decision on own
4.	Extend co-operation to team members	Not co-operating to team members
5.	Avoid argument during discussion	Making argument in discussion
6.	Don't critics others for failure	Making critics for failure
7.	Avoid interrupting while others talking	Interrupting while others talking
8.	Accept the different opinion to the sake of team	Not accepting the different of opinion
9.	Listen others talk in discussion	Neglecting others talk
10.	Support to team members to complete the task	Not supporting the members to complete the task

Table 5.10.1.1: Dos and don'ts

Tips

- Work with team for better result in a task
- Discuss and achieve the common points with team
- Avoid conflict and argument
- Co-operate with team members would helps to achieve good result
- Understand the company policy and prepare the plan to achieve the task
- Have Periodical review meeting and discuss the status of task
- Avoid critics and encourage team members in case of failure

Self-Assessment

- What are the advantages of team work?
- How to be a successful team player?
- Brief about effective communication
- Distinguish 'Discussion Vs Argument'
- Brief about ethics of discussion
- Mention some does & don't (Any Five)

Exercise

- Form a team and act as a team member as well as team leader
- Communicate a comment to colleague as per the superior instruction for effective communication

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6. Maintain health, safety and security at work place in raffia sector

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Unit 6.1 - Ensure the Health and Safety Instructions at Workplace

Unit 6.2 - Personal Protection Equipment

Unit 6.3 - Follow up of Work Specification Guideline and Procedures

Unit 6.4 - Tips to Healthy Life,

Unit 6.5 - Care on Environmental

Unit 6.6 - Unsafe Conditions at Workplace,

Unit 6.7 - Material Storage

Unit 6.8 - Methods of Waste Disposal

Unit 6.9 - Self Discipline in Safety

Unit 6.10 - Prevention of Unsafe Condition

Unit 6.11 - Fire Fighting

Unit 6.12 - First Aid

Unit 6.13 - Planning and Implement Safety Techniques

Unit 6.14 - Dos and Don'ts

TSC/N9013

Key Learning Outcomes

At the end of this module, you will be able to:

1. Understand the importance of health and safety.
2. Understand how to be part of a safe working atmosphere.
3. Understand how to lead a healthy life.
4. Understand how to identify hazards and act proactively to avoid accidents.
5. Understand the different type of fire and extinguishing methods.
6. Understand the importance of first aid and general procedure of first aid.

UNIT 6.1: Ensure the Health and Safety Instruction at Work Place

Unit Objectives

At the end of this unit, you will be able to :

1. Meticulously follow the safety instructions.
2. Maintain a healthy life without any bad habits.
3. Identify the hazards in advance and could initiate preventive measure.
4. Handle the emergency situation like fire, personal accident etc.
5. Be a self disciplined with respect to Health and safety.

6.1.1: Health and Safety Instruction at Work Place

- In workplace Instructions related to Health and safety is communicated through various methods like Sign boards, Text message displays, Lighting, Alarms, etc.
- Communication through Sign boards, Text message, Lighting, Alarms etc., attracts and reaches the person immediately
- The exhibits are kept in critical places

Fig. 6.1.1.1: Safety Sign Display boards "way to preparatory"

Fig. 6.1.1.2: Safety Sign Displays

Fig. 6.1.1.3: Safety Display as Text

Fig. 6.1.1.4: Emergency signal lamp

Fig. 6.1.1.5: Emergency signal Siren

- Understand the instruction given or displays in the work place
- If not clear with the instruction, get guidance from your superior
- Health and safety class is conducted for new comers before inducting into the job to educate about it
- Follow the health and safety instructions properly

UNIT 6.2: Personal Protection Equipment (PPE)

Unit Objectives

At the end of this unit, you will be able to :

1. Use PPE's perfectly.
2. Know the importance and uses of PPE's.

6.2.1: Personal Protection Equipment (PPE)

- Self-protection is must while working in or near moving parts and machines
- Wear the safety protection tools like Cap, ear plug, nose mask, shoe, apron, provided by the organization before entering into the work spot
- Carelessness in wearing causes injuries and health decease
- Some of the important PPE's used in industries are as under

Fig. No.	Image of PPE	Name and usage
Fig. 6.2.1.1:		**Head cap :** To protect our head and hair (plaiting or loose hair) not to get in moving parts
Fig. 6.2.1.2:		**Nose mask :** To protect from micro dust Use the face mask cleanly Don't use other's mask Use good quality mask
Fig. 6.2.1.3:		**Ear plug :** To protect our hearing ability by blocking the noise entering in to ears Wear the ear plug correctly. Wash the ear plug frequently
Fig. 6.2.1.4:		**Apron / Over coat :** To avoid loose wears caught in moving / rotating parts and cause personal accident. Wear the apron/Over coat tightly, Correctly and without loose ends
Fig. 6.2.1.5:		**Shoe :** To protect our feet from hit injuries due to Falling objects and tumble down etc. Protects also while stepping in Electrical line, slippery area. Avoid wearing damage Shoe. Wear correct size shoe.

UNIT 6.3: Follow up of Work Specification Guideline and Procedures

Unit Objectives

At the end of this unit, you will be able to :

1. Know the organization guidelines and procedures to be followed.

6.3.1: Work Specification Guideline and Procedures

- For every activity, there is specific guidelines or procedures to do the work without any deviation or defect
- Guidelines and procedures are prepared based on the working condition and availability of sources
- Following the guidelines lead to trouble free, defect free, accident free working atmosphere
- Also it keeps us in safe guard from personal accidents and also our people working in and around
- By Following the guidelines or procedures, a uniform method of working is spelt out in work places
- Operator should refer the guideline in case of any doubt
- Operator should fully understand the guidelines or procedures. Any clarification sought in this regard must be sorted out by superior
- So strictly follow the activities in line with the approved guidelines and procedures without fail
- Besides oneself, one has to ensure the follow-up of our team and coworkers around us since deviation from guidelines/procedures by our team member or coworkers cause untoward incident
- Whenever you found procedure deviation, immediately ask the respective person to correct himself by explaining the importance and its cause and effect
- Based on internal nonconformity and accidents, the safety procedure is normally reviewed, revised and notified to all concern . So, one has to check for that changes regularly and ensure the revised follow-up without fail
- Also the changes should be conveyed to every team member, incoming operator and other coworkers around us

UNIT 6.4: Tips to Healthy Life

Unit Objectives

At the end of this unit, you will be able to :

1. Follow the tips for healthy life.

6.4.1: Tips to Healthy Life

- Healthy life makes us to live longer with wealthy life and Health is wealth
- Healthy life is important for human being to work actively and effectively
- Self discipline and good habits are most important for our healthy life
- Drink sufficient water which is a simple preventive medicine to avoid lot of our health related problems
- Always eat with happiness, maintain limit and avoid improper timings
- When one enters the work spot, try to leave everything in the mind concerning outside problems
- Ensure a balanced diet and avoid excess fat, sugar, salt, spice etc., Also in the other end don't starve of required nutrients
- Be happy always. Happiness is our decision and in any situation we can be happy if we strongly believe that our happiness doesn't depend on others and materials

Fig. 6.4.1.1 Good Habits

Fig. 6.4.1.2 Discipline

- Avoid intoxicants like consuming alcohol, Tobacco, drugs etc .,
- Keep yourself clean by following good habits like Brushing teeth, Bathing, Wearing washed cloth, etc. daily for healthy life
- Always maintain your surroundings spic and span, airy, and free from congestion, unwanted materials, waste etc .,
- Make others feeling happy with your posture

Fig. 6.4.1.3 Mill surroundings with spic and span

UNIT 6.5: Care on Environmental

Unit Objectives

At the end of this unit, you will be able to :

1. The information of care on the environment.

6.5.1: Environmental Care

- Safe and good Environment is most important for not only human being, entire life of our mother earth
- In our universe out of crores and crores of planets only our earth supports life. It is god's gift and everyone is responsible to keep our environment clean, safe and good
- If environment gets polluted, it means that entire life will be under threat of extinction, especially as a human being we have more responsibilities in protecting our environment
- Changes needed in our life style for being environmental friendly are
- Avoid any kind of wastages (Energy, Materials, Water, Human and machine resource etc.) leading to dumping in backyard/squeezing the cost of production
- Avoid over usage of everything (Energy, Materials, Water, Nature, Renewable sources etc.) and use it economically since the availability becomes scarce
- Dispose of all kinds waste as per standard and with safe procedures

Fig. 6.5.1.1: Disposal of waste in waste trolley

- In our work spot, we can do lot of things related to the above points like
- Unnecessary usage of lights, fans and idle machines may be switched off wherever possible
- Water wastages may be avoided everywhere
- Utilize effectively and achieve maximum efficiency in Draw frame machines
- Avoid the micro dust in the air by cleaning frequently etc.,
- Support the organization's environment management system through dedicated follow up of its procedures and with proactive suggestions
- Last but not least, we have always to spread the news about safe environment awareness to the extent that we are able to do. Like educate our family members, our team, our neighbors, our colleagues, even unknown person caught in our sight

UNIT 6.6: Unsafe Conditions at Work Place

Unit Objectives

At the end of this unit, you will be able to :

1. know about the unsafe conditions of work place.

6.6.1: Unsafe Conditions

- Unsafe condition leads to accident causing damage of machine parts or human parts
- Permanent Damage in human parts affects our healthy life
- You should be able to know the safe / Unsafe condition of spot or activities in work area
- Any unsafe condition found in the work sport, it should be immediately corrected or addressed properly to the superior or concerned person
- If you feel any abnormal sound or smell in work spot correct it or inform to concerned person
- Any abnormal conditions in parts, activities, feel etc. correct it immediately. If the corrective action is beyond your limit, inform to superior or concerned persons immediately and get the guidance
- Also get clarification from superior and be thorough of the situation for avoiding the repetition
- When you inform to your superior or concerned person, mention clearly the place, machine no, condition etc., correctly
- In necessary give the information through written form also

Scan the QR code to see the related video

Implementing Health & Safety in Workplace

UNIT 6.7: Material Storage

Unit Objectives

At the end of this unit, you will be able to :

1. Store the materials as per the organizational guidelines with safety.

6.7.1: Material Storage

- Material, equipment and tools are to be kept in proper way / method that not affecting the condition of the material (any damage), the surroundings and disturbance to movements
- Some basic material storage concept as per 5S are (Japanese techniques for material storage / good housekeeping and work culture)
- Remove all unwanted materials from working area. Even occasionally / rarely used materials also to remove from working area
- Identify and allocate a suitable place for individual material. If required special storage racks, stands, to design for individual materials for user friendly handling. While allocation of place and or design of storage items consider the below points
- For frequently used material to store in a place easy to retrieve
- Heavy material to store in bottom racks to avoid accidents
- Light material may store in higher place
- For consumables items in store in a visible manner and mark reorder level & Quantity
- On any occasion stored material need not be disturbed for taking / storing another material nearby
- Try to design that the storage place should easy enough to identify and put back after its use. Like a tools storage box shown below
- Ensure any kind of loss during storage
- Inflammable, dangerous and hazardous material should be stored as per government norms & regulations and take extra care to avoid any kind of accidents
- Display the storage material details in a suitable manner, it may be written display or signs, material identity, outer line drawing, etc.
- Train each and every individual to follow the procedures defined for storage of materials and ensure its strict follow-up
- Take safety measures like keeping fire extinguisher, providing alarms, keeping caution displays, properly in dangerous places like electrical panel
- Also suitable first aid arrangement should be kept for ready use in need of place in the storage area.

Fig. 6.7.1.1: Extinguisher kept in the wall with necessary identification

UNIT 6.8: Methods of Waste Disposal

Unit Objectives

At the end of this unit, you will be able to :

1. dispose the wastes in proper method.

6.8.1: Waste Disposal Methods

- As per the standard operating procedure ensure the waste disposal, considering no damages for person, place, machine and environment.
- Understand the procedure clearly. In case of any clarification required get guidance form superior.
- Dispose the waste then and there with proper method and keep the work spot clean.
- Before disposal ensure proper weighment and recording the data.
- Use proper tools, trolleys, to dispose the waste
- Use sweeping brush stick to clean the floor with easy handling

Fig. 6.8.1.1: Clean work area

Fig. 6.8.1.2: Waste box used for waste collection

- Use bins to collect the waste materials produced in production process
- Transport it to the godown or the mentioned place using suitable transport equipment

UNIT 6.9: Self-Discipline in Safety

Unit Objectives

At the end of this unit, you will be able to :

1. know the self-discipline in safety.

6.9.1: Self-Discipline in Safety

- Most of the risk and accident or damage happens due to human error
- Human error like mishandling of tools, not following the procedures, Negligence, Carelessness etc. cause more risk to the life
- Operator should maintain self discipline like following the code of work, following the rules and regulations of the organization correctly or as prescribed in stand alone manuals
- Wear personal protection equipment provided to eliminate the safety risk

UNIT 6.10: Prevention of Unsafe Condition

Unit Objectives

At the end of this unit, you will be able to :

1. know about the prevention of unsafe conditions.

6.10.1: Prevention of Unsafe Condition

- Machine is used for a continuous process around the clock and there are some sorts of wear and tear in running parts in due course and have the chances of getting damages
- Under machine maintenance activities, the machines are diagnosed to find out any wear and tear of parts in advance for its replacement
- Machines, tools, equipment trolleys are handled by various operator which may lead to parts damages for which suitable guards must be provided
- Such kinds of conditions are leading to unsafe condition, if not corrected, replace it in time
- Operator should able to find out the unsafe conditions and kind of possible hazards in the machine and surrounding of the machine
- Give more importance for even a small deviation in safety aspects like improper lighting, lighting with low lux, Safety cover damage / missing / open condition, leakage in air / chemical solution, etc., and immediate action should be initiated for correction
- List out the parts/ area/ spot to be checked in patrolling like gauge, indicators, stuff level, safety door conditions etc., as per the superior instruction
- Go around the machine and work spot in periodical intervals and check the parts and condition to know the actual situation
- Give importance for abnormal sound, smell heat etc., which may cause potential hazard
- Don't keep or stack any material on the alley ways, near electrical panels, fire extinguishers, emergency exits etc., to avoid accidents and put in difficult situation during emergency evacuation
- Don't keep inflammable things near electrical panel
- Ensure that the emergency exit door is designed in such a way that it should be opened on pushing it when come from inside to ease the emergency evacuation
- Any unsafe condition noticed should be corrected immediately . If necessary, place a warning display about the condition till its correction ticed should be corrected immediately. If necessary, place a warning display about the condition till its correction
- Inform superiors or concerned person with proper details immediately to take action against
- Keep the tools and equipments in its specified place after use.
- Avoid keeping unwanted materials in work place which disturb the work and some time leads to accident
- Always ensure the effectiveness of corrective action in practical way by cross checking

UNIT 6.11: Fire Fighting

Unit Objectives

At the end of this unit, you will be able to :

1. know the types of fires and its fire fighting equipments
2. know the action to be taken during the fire accident

6.11.1: Fire Fighting

- Fire is dangerous hazard causing major loss to materials, material part or human body
- Operator should take more care on this type of hazards
- To protect from the fire hazard and to control the hazard, operator should have awareness about safety
- Fire is a combination of fuel, heat and oxygen. In this heat and oxygen are not visible and it can be felt only. On the other hand, Fuel is only visible
- Always avoid a situation or action combining these three at a time to avoid fire hazards
- Fire is classified based on the fuels

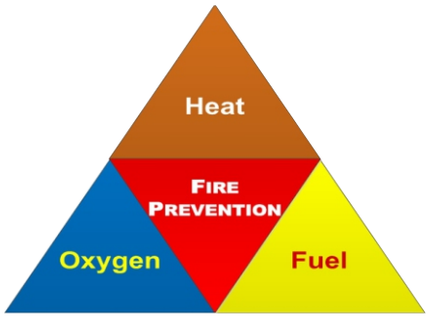

Fig. 6.11.1.1: Fire Triangle - Prevent Heat, Fuel & Oxygen connection

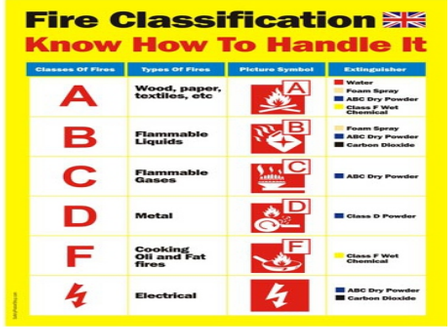

Fig. 6.11.1.2: Classification of fire

- Each type of fire should be extinguished with proper extinguisher like water type, foam type, powder type, and gas type
- Improper usage of extinguisher makes the condition serious instead of solving it
- At any cost water should not be used as extinguisher for electrical fire
- Operator should aware of fire type and extinguishing methodology
- Operator should take part in the mock drill conducted by the safety persons and knows how to handle the emergency situation
- Operator should know to safe guard the material form fire accident and to give first aid treatment to the victim of fire accident
- Also operator should know the emergency exit, evacuation procedure, safe assembly point location and its importance to safe guard yourself and others
- After noticing the fire immediately cut off all electric supply near the area by switching of main supply and announce through fire alarm and run for the help with shouting as "Fire, Fire "to communicate all nearby
- Low intensity of fire can be extinguished with fire extinguisher & water hose reel. For fire of high intensity, fire hydrant is to be used

- If the fire is beyond our control, inform to Fire service persons for attending it. Contact detail of our India's fire service is 101. Ambulance service 102. Normally it is displayed in the entrance of any industry
- Give proper information like type of fire, its intensity, Location, easy / shortest way, Landmark to reach. Proper information of its location makes them to act quickly
- Timing is so important in extinguishing the fire. Earlier action eases the extinguishing. Delay even a minute give a place for spreading the fire and may cause huge loss to life and property

Fig. 6.11.1.3: Different type of fire extinguisher

Fig. 6.11.1.4: Fire Hose reel - for small fire

Fig. 6.11.1.5: Water hydrent -For big fire

Fig. 6.11.1.6: Display boards for emergency exit

- In case of emergency, everyone should exit from the spot and assemble in the "Emergency Assembling Point", which helps to ensure that everyone comes out from danger

Fig. 6.11.1.7: Emergency evacuation plan

Fig. 6.11.1.8: Safe assembling point

- Also help others to evacuate from the spot when a fire is broken out
- At time of danger situation, gives 1st importance to life and then material if possible
- Also during fire, try to remove the nearby material to avoid spreading of fire. If couldn't remove immediately, use fire extinguisher over them

UNIT 6.12: First Aid

Unit Objectives

At the end of this unit, you will be able to :

1. know what is First aid and its importance.
2. know the first aid materials and its uses.

6.12.1: First Aid

- First aid is an action taken to save the life of victim from fatal injury time with available sources
- Injuries causes fatal if treatment is not taken / given in time
- Operators should be able to do first aid in time of accident to save a life. Necessary to have first aid training from authorized first aid trainer
- Conduct first aid to others after ensuring your safety first
- Carefully do the first aid as per the procedure
- Keep in mind that victim should be taken to nearest hospital after doing first aid without fail
- Ensure the availability of the first aid kit box in important places and also at the possible hazard causing places
- Ensure the First aid kit is properly identified with specified symbol.

Fig. 6.12.1.1: Symbol to remember for First Aid (+symbol)

- Ensure the availability of basic common medicine and tools like cotton, bandage, plaster, scissor, torch, ointments, etc. in first aid box

Fig. 6.12.1.2: Important first aid things to keep in first aid box

UNIT 6.13: Planning & Implement Safety Techniques

Unit Objectives

At the end of this unit, you will be able to :

1. Know the importance of planning and safety technique procedures

6.13.1: Planning & Implement Safety Techniques

- Planning is a procedure of steps to follow without causing or lead to cause accident
- Planning is framed with different measures based on the nature of work, working environment, equipment and tools and product processed
- Operator should know the different measures to curb the hazard
- Proper planning avoids accident and ensure a safe working environment
- Even though the safety is an individual's care, it should be followed by whole team
- So know the safety plans thoroughly and communicate to others also to follow
- Quality systems like SS, ISO-9000, ISO-1400 help to create a safe working environment
- Sufficient fire extinguisher is to be provided wherever necessary
- LOTO system is to be used in all running machine and electrical related work places

Fig. 6.13.1.1: LOTO (Lock Out Tag Out)

- LOTO is a full proof safety system. Any machine stopes for any maintenance/ repair/ service work to lock the main electrical switch to avoid unexpected machine running
- Refilling offire extinguisher as per schedule to follow exactly
- Assembly point to mark with proper display to reach in case of emergency. Assembly point location and its way to be shown in the mill entrance and all over department
- Selection of assembling points should be such that it can be reaches from all direction and all places with some ease
- Periodic training/ awareness classes and mock drill on safety to be conducted Necessary fire fighting training to be conducted and making others to take part Give prime importance to implement the safety techniques
- Don't compromise the deviation in implementation and follow up
- Plan to give first aid training for sufficient person and ensure that at least one first aid trained person should be in each department and each shift
- Display caution boards where ever necessary

Fig. 6.13.1.2: Some of the model safety caution boards

- Conduct frequent meeting and give awareness to all
- Ensure whatever implemented is followed correctly by periodical check/ check list

UNIT 6.14: Dos and Don'ts

Unit Objectives

At the end of this unit, you will be able to :

1. know about the Dos and Don'ts related to Health & Safety.

6.14.1: Dos and Don'ts related to health & safety

Some Dos and Don'ts related to Health & Safety.

S. No.	Dos	Don'ts
1.	Check the safety points during shift take over time	Not checking the safety points during take over shift
2.	Wear PPE while in work spot	Working without PPE
3.	Follow the safety rules	Neglecting the safety rules
4.	Get proper instruction from superior before starting the work	Start working without superior's instruction
5.	Ensure the correct RH% in department	Not bothering about RH%
6.	Follow the indication lamp signals for interruption	Working in assumption
7.	Keep the exhaust creel clean	Dumping waste in exhaust creel
8.	Use trolley for doffing	Not using trolley for doffing
9.	Replace the tools In specified place after use	Keeping the tools some wear lese.
10.	Dispose the waste in periodically as per the instruction	Not following the instruction.
11.	Clean the machine as per the schedule using tools	Not following the schedules
12.	Keep the alley way neat	Keeping materials in alley way/foot path
13.	Doing fire fighting with knowledge	Doing without knowledge

Table 6.14.1.1: Dos and don'ts

Tips

- Maintain good health. Then only you can achieve best result
- Work with wearing PPEs properly would be safety for you
- Classification of fires like A, B, C, D, F and extinguishing procedures
- Known about water type, foam type, powder type and gas type fire extinguishers
- Usage of emergency exit at emergency period would be safe to all
- About assembling point and its importance
- First Aid methods and its importance

Self-Assessment

- What is PPE?
- Give some points for healthy life
- What are the types of fire?
- What are the types of fire extinguishers?
- What is the purpose of emergency exit?
- What is LOTO?
- Brief about First aid
- What are the basic common materials to keep in first aid box?

Notes

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RE IMAGINE FUTURE

7. Comply with industry and organizational requirements in raffia sector

TEXTILE SECTOR SKILL COUNCIL
TSC
PERFECTING SKILLS

TSC/N9014

Key Learning Outcomes

At the end of this module, you will be able to:

1. understand about self–development how to develop yourself.
2. understand how to raise in the career ladder.
3. understand about team work and how to be a best team player.
4. understand about organizational standards.
5. understand about 5s and Kaizen and its importance in your career.
6. understand about nonconformity and its disposal procedure.
7. understand about importance of industry standard

UNIT 7.1: Self-Development

Unit Objectives

At the end of this unit, you will be able to :

1. develop yourself in your career through proper planning and execution
2. be a good team player and patient listener to others views.
3. maintain your work place neat and tidy through 5S.
4. develop small Kaizens.
5. handle the non-conformities.
6. work according to the Organization standards.
7. comply to the industrial standards

7.1.1: Self-Development

- **Value of your Job**
  - Textile is a combined process of cloth manufacturing
  - Cloth is the second commodity full filling the whole humanity in the world after food
  - Especially in Indian culture Cloth is more important than food
  - Textile process is known as a process of holiness to mankind
  - So, be proud to be a part of the textiles.
- **Responsibility**
  - Work with self-interest, involvement, dedication, sincerity. Take ownership of your machine, process, delivered product for the stipulated time period of your shift
  - Take responsibility for your every action.
  - Maintaining the machine always in best maximum productive condition
  - Checking the performance in terms of productivity and quality of material
  - Maintaining the cleanliness of the machine
- **Positive Attitude and Continual Improvement**
  - Think positively in all aspects. For any kind of deviation in your assigned work, accept it as generously with whole hearted mind and correct it to avoid it in future
  - Try to make efforts to simplify the work methods and systems to reduce strain, improve quality and productivity
  - Try to solve the deviations / non-conformity in your process / machine.
  - Interact with others and get positive matters from them
  - Don't bother about the negative matters and Just ignore it
  - Always work for the sake of organizations development
  - Development of organization and yourself are interdependent. If the organization grows, you will also grow
  - Take initiative to implement the procedures and think innovative for betterment

- **Learning**
  - Think that every day is a learning day and every situation is for learning
  - We can learn lot of things from our surroundings, Happenings, persons, Mistakes, etc.,
  - Don't think that the point is from whom, think that the point is what and whether it would create goodness for anyone
  - Learning will complete only when it is tried / applied. Before application ensure through learning
  - During initial try, ensure some close observation / follow-up and fine tune the things needed to make it success
  - If fails after dedicated efforts mean, no need to disappoint, as most of the success are learnt from failures
  - Learn and make others to learn for the improvement of yourself and the organization. Also the purpose of learning will fulfill only when it is shared
- **Career Growth**
  - Know about your career growth and fix a target line to reach it
  - Based on target draft an action plan with time line to reach that target
    - What is the additional education required
    - What are all the skill set required
    - Financial requirement
    - Time to learn and develop the education and skill
  - Execute the plan meticulously as per the time line and quality of learning
  - Once you got the required education and skill, inform the management about your new learning. It will lead to your self-development in your career
- **Follow-up of Statutory and Mandatory Procedures**
  - Understand the rules and regulations specified in the standing order applicable to the mills and follow them properly right from reporting for duty to Handover the duty
  - Don't violate safety regulations at any situation, do not fail to wear personal protective equipments while working in the shop floor
  - Don't violate the disciplinary procedures and follow the code of conduct

UNIT 7.2: Team Work

Unit Objectives

At the end of this unit, you will be able to :

1. know what is Team Work.
2. know the qualities required for a good team member and benefits of team work.

7.2.1: Team Work

- "TEAM" the word itself tells us that if you work **T**ogether**, E**ach will **A**chieve **M**ore benefits
- Working with team gives lot of benefits and the impact of result is more than working independently
- It is always better to work with team

7.2.2: Qualities Required for a Team Member

- Should have immense faith in Team and Team work
- Ability to communicate effectively and politely
- Ability of Adoptability to changes & cooperating with members and others
- Mind of respecting voice of another member's
- Sharing of views and ideas to others & ability of open discussion among members
- Able to convince others point if it is not suitable, avoid arguments and have a productive discussion

7.2.3: Benefits of Team Work

- Target and Task can be completed in time with ease
- Risk factor will reduce. Quality, quality consistency productivity will improve
- Accidents and waste level will reduce
- Moral support in working improve confidence level
- Anyone may not know everything but everyone may know something is the base for any Team work. This will lead to new innovative things for a identical problem / situation
- Learn new things through common discussion in a team
- Different kind of Interpretation for a same subject lead to wide open our mind
- Good attitudes like, patient hearing and understand others point of view, helping others Positive approach, cession etc.
- New idea emerges from team work
- Individual ability increases with team work

UNIT 7.3: Organizational Standards

Unit Objectives

At the end of this unit, you will be able to :

1. know the importance of organizational standards.

7.3.1: Organizational Standards

- Organizational standards are the outline of the way in which business is to be conducted and govern what is deemed as acceptable behavior in the workplace
- Organizational standards are established related to
  - Customer service
  - Code of conduct
  - Human resources issues
  - Quality assurance
  - Legislative issues
  - Marketing material and communication
  - Documenting standards like, Mission, Vision, workplace policy and procedures.
  - Standard operating procedures
- Organizational standards includes lean management, 5S, ISO-9000, ISO-14000, Kaizen, Quality circle etc.,
- We should know about the organization standards related to our work before starting
- Any clarification needed in understanding the standards, feel free to get guidance from your superior or concerned person
- Implement and follow the standards applicable for your work and work environment without deviation
- Observe the performance and behavior of the colleagues, helpers and others inside the factory and motivate them to follow the rules and regulations, work instructions, safety practices, etc.,
- Whenever there is any violation / deviation immediately motivate to follow the organizational standards meticulously
- Always update yourself about the changes effected in the organizational standards and be the first one to implement and follow the new changes
- Any changes required in the organizational standard, based on internal nonconformity, Customer compliant, Accidents, etc., should conveyed to concern for necessary amendment

UNIT 7.4: Industrial Standards

Unit Objectives

At the end of this unit, you will be able to :

1. know the importance of Industrial standards.

7.4.1: Industrial Standards

- Industrial standards are established in line with labour legislations of State and Central Government, safety standards of inspector of factories, fire precautions, fire fighting, first aid, ISO standards, environment standards, National Occupations Standards, etc.,
- Industrial standards are also known as a set of criteria within an industry relating to the standard functioning and carrying out of operation in their respective fields of production
- Generally, it is nothing but a statutory / mandatory requirement that should be followed by every member
- It providers an orderly and systematic formulation, adoption or standards used in industry
- You should know the industry standard very well related to your job, safety, and welfare
- Understand the points given clearly and act accordingly
- If you need any clarification to understand, get guidance from the concerned person or from your superior
- Align the industrial standard with organizational standard and work accordingly
- Working as a team, make others also to follow the standards and motivate them to complete the task successfully

Scan the QR code to see the related video

Health and Safety hazards

UNIT 7.5: 5S

Unit Objectives

At the end of this unit, you will be able to :

1. know what is “5S” and 5S techniques.
2. know the detailed explanation of 5S and benefits of 5S.

7.5.1: 5S

- 5 'S' is a Japanese technique of house keeping
- It is a general concept
- It is a systematic and methodical approach allowing teams to organize their workplace in the safest and most efficient manner
- It can be implemented in all Educational Institutions, Factories, Hotels, Hospitals, Offices, Banks and ever where including home

7.5.2: 5'S' TECHNIQUE

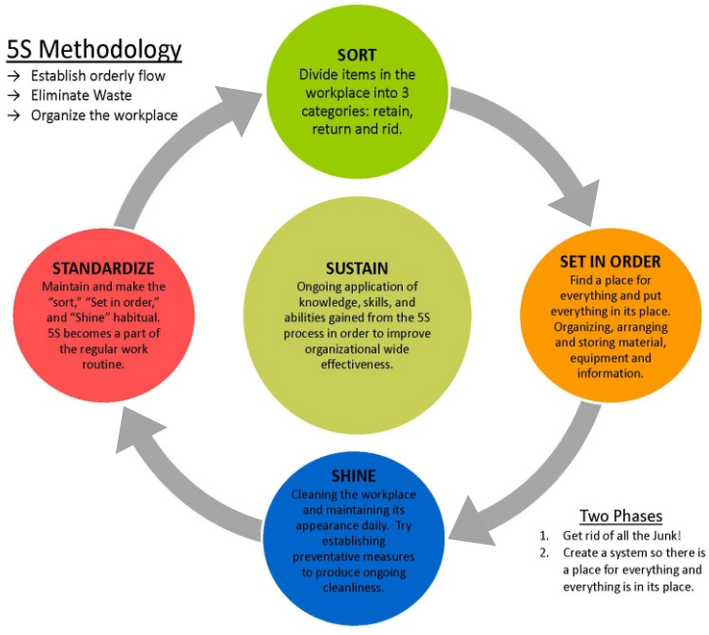

Fig. 7.5.2.1: 5S implementation step by step

- First S-SEIRI – Sort (1S)
- Second S-SEITON –Straighten (2S)
- Third S-SEISO – Shine (3S)
- Fourth S-SEIKETSU – Standardize (4S)
- Fifth S-SHITSUKE – Sustain (5S)

7.5.3: 1S-SEIRI - Sort

- Sort out & separate the material which is needed & not needed in the area
- Distinguishing between necessary and unnecessary things, and getting rid of what you do not need
- Ask superior to tag all items which they don't think are needed - this improves understanding about need and use
- Classify all equipment and materials by frequency of use to help decide if it should be removed- place 'Red Tag' on items to be removed
- Establish a 'holding area' for items that are difficult to classify- hold item for allotted period to enable others not on 5S team to review
- Needed or wanted material alone to keep and all other unwanted materials to be disposed or destroyed. Some materials will be in good condition but not need for us. Such materials to be stored in separate place
- Some model visual photos of Seiri activities

Fig. No. & Location	Before	After
Fig. 7.5.3.1: Service room		
Fig. 7.5.3.2: Tools rack in service room		

7.5.4: 2S-SEITON - Straighten

- It is the practice of orderly storage of materials so the right item can be picked efficiently (without waste), at the right time
- Identify and allocate a place for all the materials needed for your work based on usage Assign fixed places and fixed quantity
- Arrange materials in such a way easy to access by everyone
- Make it compact

- Fix a place for everything and keep in its place after use
- Place heavy objects to be stored in a easy assessable height
- Identify the ally way and storage area with proper colour line
- Decide how things should be put away, and obey those rules
- Arrange items that are frequently needed rarely needed so that they are ready & easy to use
- Keep the frequently needed materials nearer to work place at reachable distance
- Keep the Rarely needed materials in distance clearly identify locations for all items so that anyone can find them & return them once the task is completed
- Some visual photos of before and after of Seiton

Fig. No. & Location	Before	After
Fig. 7.5.4.1: Tools box in service room		
Fig. 7.5.4.2: Rack in service room		

7.5.5: 3S - SEISO - Shine

- Create a clean worksite without garbage, dirt and dust, so problems can be more easily identified (leaks, spills, excess, damage, etc)
- Identify the root causes for dirtiness, and correct it
- Keep tools and equipment clean and in top condition, ready for use at anytime
- Cleaning should be a practice of daily activity. At least 5 minutes per day
- Follow the cleaning schedules correctly
- Use chart with signatures/initials if any shows that the action or review has taken place
- Ensure proper lighting to see dirt and dust easily
- Clean the workplace & equipment on a regular basis in order to maintain standards & identify defects.
- Check the condition of the equipments

- If any damage or defected tools or equipments found, replace it with new one
- Avoid dumping unnecessary materials in work spot
- Dispose the waste in time
- Model photo showing the before and after Seiso

Fig. No. & Location	Before	After
Fig 7.5.5.1: Model photo of M/c cleanliness		

7.5.6: 4S-SEIKETSU - Standardize

- Setting up standards for a neat, clean, workplace
- Standardization of best practices through 'visual management'
- Make abnormalities visible to management
- Keep each area consistent with one another
- Standards make it easy to move workers into different areas
- Create process of how to maintain the standard with defined roles and responsibilities
- Make it easy for everyone to identify the state of normal or abnormal conditions - place photos on the walls, to provide visual reminder
- Revisit the first three of the 5S on a frequent basis and confirm the condition of follow up using standard procedures


Fig. 7.5.6.1: some model picture shows the order of arrangements with standard

7.5.7: 5S - SHITSUKE - Sustain

- Implementing behaviors and habits to maintain the established standards over the long term, and making the workplace organization the key to managing the process for success
- Toughest phase is to Sustain-many falls short of this goal
- Establish and maintain responsibilities- requires leader commitment to follow through
- Every one sticks to the rules and makes it a habit
- Participation of everyone in developing good habits and buy-in
- Regular audits and reviews
- Get to root cause of issues
- Aim for higher 5S levels - continuous improvement Keep to the rules to maintain the standard & continue to improve every day

7.5.8: Benefits of 5S

- 5S are particularly effective because they want to improve the housekeeping of your workshops and the rest of your premises in order to obtain the following advantages
- Improve safety
- Improve the working atmosphere and environment
- Improve the quality of work and products
- Enable efficient maintenance
- Enhance your image and customer trust
- Prepare the launch of other methodologies
- Improves material retrieval time
- Savings in space consumption
- Maintain the morality of individual

UNIT 7.6: Kaizen

Unit Objectives

At the end of this unit, you will be able to :

1. know what is “Kaizen”.
2. know the steps of Kaizen and its benefits.

7.6.1: Kaizen

- Kaizen is the practice of continuous improvement
- Kaizen focuses on applying small, daily changes that result in major improvements overtime
- Kaizen methods can be used to improve the results of any firm and can also be used
- Kaizen (continual improvement) creates a culture where employees throughout the organization are actively engaged with improving productivity
- Word "kaizen", where "kai" = change "zen" = good, simply means "change for better”
- Growth is nothing but improvement in activity
- Think that any activities need improvement
- There are two ways of improvement
- Improvement can be achieved by investigating big things for change of situation.
- Improvement can be achieved by doing some small-small changes in current situation with continuous manner also
- The second concept of continual improvement of current process called kaizen. Kaizen tells us don't wasteever your day without improving wherever possible. This leads the organization people in disciplinary manner and it is bound to work with importance of time, skill and quality

7.6.2: Steps for Kaizen

- **There are four main steps in Kaizen. They are**
  - Step 1 – Identifying the current situation
  - Step 2 – Planning and Preparation
  - Step 3 – Implementation
  - Step 4 – Follow up
- **Step 1: Identifying Current Situation**
  - Understand the existing processes and dependencies.
  - Identify all the activities currently involved in developing a new product. Observe the process first
  - Identify Value Added (VA) and Non-Value Added (NVA).
  - Generally creates more questions than answers
- **Step 2: Planning and Preparation**
  - Identify the correct area in the organization that requires the immediate implementation of rapid improvement event

- After identifying the most appropriate production, administrative or a specific segment in the workplace, the focus should be given in particular to "waste elimination" issue prevailing in that department for implementing the kaizen event.
- After identifying the problematic area, the managers have to build a team of employees
- Prior to the training, the entire team should be completely aware of the organization's rapid improvement process and given appropriate training on the process
- The duration of kaizen events varies depending on the length of the process involved and depth of the problem

- **Step 3: Implementation**
  - The first and foremost work of the team is to identify and clearly understand the "current state" of the targeted process
  - This would give the team members a common and a clear picture of problem that they are aiming to solve
  - Why-Why analyze to understand the root cause of a problem step by step
  - The team members would raise queries on the aim of the process, and clearly observe the wastes, reasons for waste and analyze it
  - The most appealing and fruitful ideas are selected and suggested for implementation

- **Step 4: Follow up**
  - This is the very important phase in the kaizen event as this ensures that the improvements are consistent and not just for time being
  - On completion of kaizen event, the team members should keep track of performance as a routine in terms of metrics measures to record the gains
  - In general, the follow up kaizen events are conducted in 30 to 90 days after the first kaizen event in aim of assessing the performance and locate the follow-up changes that should undertaken to maintain the consistency in performance and development

Fig. 7.6.2.1: Kaizen Before – Used for single department – Front of the wall

Fig. 7.6.2.2: Kaizen After- Used for both departments. Front and Back of the wall

UNIT 7.7: Non-Conformities

Unit Objectives

At the end of this unit, you will be able to :

1. know what is Non-conformity.
2. know the types of non-conformity and its disposal methods.

7.7.1: Non-Conformities

- Failure to conform to accepted standards, conventions, rules, or laws is non-conformities
- Non-conformity comes in Product, Procedure and Document
- In quality management a non-conformity (also known as a defect) is a deviation from a specification, a standard, or an expectation. Nonconformities are classified as critical or major or minor
- Anything which does not meet customer requirement is also called non-conformity

7.7.2: Non- Conformity in Product

- Any product which does not meet the requirement in Quality, Quantity, Shape and Size is known as product non-conformity
- Failure in timely delivery to the subsequent process is also nonconformity
- Sliver material with the irregularity not meeting the requirement of subsequent process is a non-conforming product
- Sliver material with dirt and stain is a non-conforming product

7.7.3: Non-Conformity in Procedure

- Deviation of activities to the procedure is known as procedure of non-conformity
- Not following the cleaning schedule is procedure of non-conformity
- If a work is done without complying with the standard work instruction, it is a procedure of non-conformity
- If roller settings, draft and critical items differing from standard, it is a procedure of non conformity
- If a document is changed without proper approval from concern authority mean it is a procedure non-conformity

7.7.4: Non-Conformity in Document

- If documents are not updated means it is document non-conformity
- Job card not filled or partly filed job card are document non-conformity
- If the working procedure is not updated according to the process is called procedure non conformity
- If the roller settings, draft, critical items are not updated in the standard operating procedure mean, it is a documentation non-conformity

7.7.5: Disposal of Non-Conformity

- Disposal of non-conformity is two procedures
  - Disposal of non-conformity
  - Disposal of non-conforming product
- Disposal of non-conformity is a temporary correction of the problem example replacing the worn-out wheel, belt etc.,
- Disposal of non-conforming product is identified faulty material correction / disposal as per standard procedure
- Extra care to take while disposing the non-conforming product to avoid wrong faulty product get delivered to the customer
- Procedure for disposal method to be clearly defined
- For any disposal get concerns form the superior
- Disposal record should be signed by the superior then and there
- Ensure the corrective action followed by disposition and conform the effectiveness of disposition / corrective action immediately

UNIT 7.8: Do’s and Don'ts

Unit Objectives

At the end of this unit, you will be able to :

1. know about the Do’s and Don'ts in the department.

7.8.1: Do’s and Don'ts

S. No.	Dos	Don'ts
1.	Work with self interest	Work without interest
2.	Set Career goal, plan and execute	Be comfort in the existing and no efforts for self development
3.	Work as a team	Working independently
4.	Discuss about the problem	Argue about the persons
5.	Listen others voice in team	Neglecting members voice
6.	Follow 5S procedure meticulously	Think it is a burden
7.	Doing small small Kaizens	Doing routine and no efforts for improvement / development
8.	Dispose the non-conformity as per the procedure	Disposing the non-conformity as like wish
9.	Understand the rules and regulation of the organization	Working without understanding the rules and regulation
10.	Contamination polluted water to be treated in effluent	Discharging the contaminated polluted water to open land/ plantation
11.	Proper PPE to wear when handling chemicals to avoid occupational decease	Neglecting the PPE

Table 7.8.1.1: Do’s and Don'ts

Tips

- Learn from everything and try then and there for self-development
- Fix a career target, plan for it with time line and work towards it for career development
- Always work as a team and be a good team player
- Listen to alternate ideas and be a first one to good changes
- Learn about organizational standards and follow meticulously. Discuss the standards what you have known with superiors and understand clearly
- Be a best follower of any system and take leadership when it is offered through, 5s zone head, Quality circle head etc.,
- Pursue the standards daily which makes some positive inspiration to others to follow you
- Know about the industry standard and follow strictly

Self-Assessment

- Brief about Career development
- What are the qualities required for team members?
- What are the benefits in Team work?
- Mention some of the organizational standards
- Brief about 5S
- Brief about Kaizen
- How to handle nonconformity?
- What precaution to take to prevent occupational decease in the unit.

Notes

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8. Annexure

QR Codes - Video Links

Module No.	Unit No. and Title	Page No.	QR Code Link	QR Code
1. Taking charge & handing over the shift to Tape Winder	Unit 1.1 Introduction	3	www.youtube.com/watch?v=3PDIybCdcqY	Technical Textiles: A Sunrise Segment in the Textile Ecosystem
	Unit 1.3 Types & Specifications of Winder	11	www.youtube.com/watch?v=rQZzEm5QZIw	Fully automatic Tape Winding Machine
		11	www.youtube.com/watch?v=qR6n_x4PiKc	Tape Winding Machine
2. Running Tape Winding Machine	Unit 2.2 Machine Operation	20	www.youtube.com/watch?v=acZ604P7DaY	Webbing winder for winding tape and ribbon
		20	www.youtube.com/shorts/hqUZ-rh6zcY	Tape Twining Coil Machine
3. Contribute quality winding in Tape Plant line	Unit 3.2 Lubrication of Winder	26	www.youtube.com/watch?v=ezVWF6X-3ok	Narrow Tapes Spooling Machine
		26	www.youtube.com/shorts/pJ7ssN8Giwc	Tape Point Winding Machine

Module No.	Unit No. and Title	Page No.	QR Code Link	QR Code
4. Maintain work area, tools and machines in raffia sector	Unit 4.2 - Machine Cleanliness & Maintenance	35	www.youtube.com/watch?v=ZrnSWNViDTA	Tape Roll Winding Machine
	Unit 4.3 Self Discipline in Cleanliness Culture	36	www.youtube.com/watch?v=5_IFz7FEZ9E	Safety Attitudes
5. Working in a team in raffia sector	Unit 5.2 Being a successful team player	43	www.youtube.com/watch?v=OPs4MQOlZAQ	Industrial Safety
6. Maintain health, safety and security at work place in raffia sector	Unit 6.6 Unsafe Conditions at Workplace	61	www.youtube.com/watch?v=9S_i3uTfaTw	Implementing Health & Safety in Workplace
7. Comply with industry and organizational requirements in raffia sector	Unit 7.4 Industrial Standards	80	www.youtube.com/watch?v=5ubPG7_Tq8Q	Health and Safety hazards

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