

BASIC TEXTILE OPERATION

NTQF Level -1

Learning Guide -49

Unit of Competence: Prepare Yarn for Weaving and Knitting

Module Title: Preparing Yarn for Weaving and Knitting

LG Code: IND BTO1 M13 LO3-LG-49

TTLM Code: IND BTO1 TTLM 0919v1

LO3: Remove product from machine



Instruction Sheet

Learning Guide #49

This learning guide is developed to provide you the necessary information regarding the following **content coverage** and topics:

- Checking Product quality standards
- Unloading product
- Dispatching Product
- Completing area cleaning

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, **you will be able to:**

- ❖ Check Product against quality standards.
- ❖ Unload or remove Product according to manufacturer specifications.
- ❖ Dispatch Product to next process where necessary.
- ❖ Complete Cleaning of area to ensure work environment is maintained in a safe and productive manner.

Learning Instructions:

1. Read the specific objectives of this Learning Guide.
2. Follow the instructions described in number 3 to 17.
3. Read the information written in the “Information Sheets 1”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
4. Accomplish the “Self-check 1.
5. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 1).
6. If you earned a satisfactory evaluation proceed to “Information Sheet 2”. However, if your rating is unsatisfactory, see your teacher for further instructions.
7. Read the information written in the “Information Sheet 2”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
8. Accomplish the “Self-check 2”.



9. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 2).
10. If you earned a satisfactory evaluation proceed to “Information Sheet 3”. However, if your rating is unsatisfactory, see your teacher for further instructions.
11. Read the information written in the “Information Sheet 3”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
12. Accomplish the “Self-check 3”.
13. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 3).
14. If you earned a satisfactory evaluation proceed to “Information Sheet 4”. However, if your rating is unsatisfactory, see your teacher for further instructions.
15. Read the information written in the “Information Sheet 4”. Try to understand what are being discussed. Ask you teacher for assistance if you have hard time understanding them.
16. Accomplish the “Self-check 4”.
17. Ask from your teacher the key to correction (key answers) or you can request your teacher to correct your work. (You are to get the key answer only after you finished answering the Self-check 4).



Information Sheet-1	Checking Product quality standards
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1.1. What is Yarn?

In textile sector, yarn is a long continuous length of interlocked fibers. Yarn is suitable for using in the production of textiles, knitting, weaving, rope making, crocheting and weaving etc. There are two sets of yarn (such as warp yarn and weft yarn) used in woven fabric manufacturing technology and one set of yarn is used knit fabric manufacturing technology.



1.2. Quality Requirement for Warp and Weft Yarn in Weaving:

Yarn must have some important qualities which will ensure the required quality of fabric. All those properties have presented in the below:

1. Yarn cross section must be uniform.
2. Yarn must be sufficiently and uniformly strong.
3. Yarn must be uniform in cross section.
4. Yarn must have less hairiness as much as possible.
5. Proper and standard type and size of knots.
6. Yarn must be clean and free from all kinds of dust.
7. Yarn should be free from count variation.
8. Knots in yarn must be in less number.
9. Sizing should be done accurately in warp yarn otherwise it creates problem during passing through heald eye.
10. In the weavers beam, arrangement of warp yarn must be parallel.
11. Yarn should be free from loose fibre, neps and slubs as much as possible.



12. Tension of warp yarn in warp beam must be uniform.

13. Knots must be standard size and type so that they can pass through the heald eye, dropper and read easily.

14. All warp ran should of same size in length.

1.3. Preparation Requirement for Knitting Yarn

Weft Knitting

1. Yarn friction must be decreased
2. Fiber shedding must be decreased
3. Yarn smoothness must be increased

Warp Knitting

1. Yarn friction must be decreased
2. Fiber shedding must be decreased
3. Yarn smoothness must be increased
4. Yarns must be properly aligned for introduction to knitting needles

1.4. Yarn preparation:

Yarn preparation involves those processes that improve the yarn's weave ability or knit ability. Yarn may be grey or dyed which are used for weaving and knitting. Yarn is the basic element for weaving and knitting. Yarn preparation is very essential for both weaving and knitting. Because the yarn which are collected from spinning cannot directly used in weaving and knitting. Before using it in loom or knitting machine it is processed by many ways. These all ways are called yarn preparation.



Self-Check -1	Written Test
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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Discuss the quality Requirement for weaving yarn. (3 point)
2. Discuss the quality Requirement for knitting yarn. (3 point)

Note: Satisfactory rating - 6 points

Unsatisfactory - below 6 points

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____

2. _____



Information Sheet-2	Un loading product
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2.1. Unloading

Unloading means removing the goods from truck or cargo. Unloading of goods is often required when the goods are delivered to the customer. When the goods are bulky and complex, poor handling of the goods can often cause damage to the goods and hence this task is often outsourced to the transporting facilities by the companies.

It is of great significance since there is a lot of risk involved and hence it is advised not to do the loading and unloading themselves as there may be a possibility of a valuable loss of goods. There are many independent loading and unloading service providers who make sure that the goods reach the destination in the perfect condition and then they also unpack the goods at the destination with utmost care and attention. Mostly the customers should choose a moving company which has some prior experience.

The moving companies provide suitable transportation vehicles like trucks to ensure the safety and timely delivery of the goods. They are the experts as they know how to place the goods in the transportation vehicle so that goods don't get damaged while the vehicle is moving. The service should be highly systematic, organized and reliable without causing any anxiety to the customers.

After the first pre-determined length and weight of sliver is coiled on the given can and get full, then it is doffed or removed from the machine and replaced with empty can for similar activity.



Self-Check -2	Written Test
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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What does it mean un loading of product? (3 point)

Note: Satisfactory rating – 3 points

Unsatisfactory - below 3 points

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____



Information Sheet-3	dispatching product
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3.1. Dispatching product

Product dispatching is activity that is performed after the product is doffed and checked to confirm the required standard. So product dispatching is simply distributing the prepared product to the next line process or customers for use.

The companies provide suitable transportation vehicles like trucks to ensure the safety and timely delivery of the goods. They are the experts as they know how to place the goods in the transportation vehicle so that goods don't get damaged while the vehicle is moving. The service should be highly systematic, organized and reliable without causing any anxiety to the customers.

- The functional separation concept should continue during transportation of clean textiles to the customer.
- Transport clean and soiled output in containers that functionally separate them from other output in the vehicle.
- Consider cleaning and packaging. Reusable bags, containers, or carts used to transport the product must be properly cleaned before they are used to transport clean or soiled linen in order to maintain functional separation.
- Hand sanitizer dispenser should be available for use in all delivery trucks.
- Spill Kits should also be available for use when necessary.
- Dispatching is the routine of setting productive activities in motion through the release of orders and necessary instructions according to pre-planned times and sequence of operations embodied in route sheets and loading schedules.
- In other words, once a job is in an area where an operation is to be performed, it has to be determined when and by whom the job will be processed and also the sequence of waiting orders to be processed. The decision of assigning the various jobs to different machines and equipment is called Dispatching.

3.2. Functions of Dispatching

- ✓ To check the availability of input materials and ensure the movement of material from store to first process and then from process to process.
- ✓ To ensure the availability of all production and inspection aids.
- ✓ To obtain the requisite drawings, specifications and material lists.
- ✓ To assign the work appropriate machine, workplace and men.



- ✓ The issue of job orders authorizing operations in accordance with dates and times previously planned and entered on load charts and route sheets.
- ✓ The issue of time tickets, instruction cards and other required items to the workers who are to perform the various activities.
- ✓ The issue of inspection orders after each operation in order to determine result regarding the quality of products if excessive spoilage occurs, to find out its causes.
- ✓ Clean up on jobs, collection of time tickets, blueprints and instruction cards and their return to appropriate section of production control deptt.
- ✓ To ensure that the work is forwarded to next deptt, storeroom etc.
- ✓ To record the beginning and completion times of jobs on time tickets for calculation of time interval. To forward time ticket to accounts deptt for preparing wages.
- ✓ To record and report idle time of men and machines and request for corrective action required.



Self-Check -3	Written Test
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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What does it mean dispatching of product? (3 point)

Note: Satisfactory rating – 3 points

Unsatisfactory - below 3 points

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____



Information Sheet-4	Completing area clean
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It is part of kaizen activities that sustain the quality of workplace and enhance the morale of workers.

Cleaning is shining the machine, during and after work is completed.

- Cleaning of the clearer under the creel rollers.
- Cleaning of the top drafting rollers with wet cloth.
- Take out fan waste at regular intervals.
- Clean top clearers and bottom clearers time to time.
- Clean coiler calendar roller sides time to time.
- Clean drafting rollers sides time to time.
- Cleaning scanning rollers surroundings as per requirement.
- Clean the suction pipes time to time.
- Clean delivery rolls and trumpet regularly.
- Develop checklists as a reminder to clean critical areas on each machine.
- Think safe before inspecting or cleaning any machine.
- contained for safe disposal of waste;
- away from water courses or public drains;
- flat for safety while working and to reduce run-off;
- stable surface to prevent re-contaminating machinery; like a concrete, gravel or well grassed area;
- access to suitable cleaning equipment, electricity and water as required;
- Avoid damaging machinery during cleaning. Use water on equipment that works under the ground and on external surfaces unless there are specific chemical treatments, such as for interstate movement of machinery. Check with us at Plant Standards if machinery is going interstate or into quarantine areas. For cabins or electronics, prone to water damage, use air, vacuum or manual cleaning equipment.
- Machines may need to be regressed or lubricated after cleaning, especially if detergents or other chemicals have been used.



Self-Check -4	Written Test
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Directions: Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Why clean the around the work area? (3 point)

Note: Satisfactory rating – 3 points

Unsatisfactory - below 3 points

Answer Sheet

Score = _____
Rating: _____

Name: _____

Date: _____

Short Answer Questions

1. _____



List of Reference Materials

- 1- Wynne, A. The Motivate Series, Textiles, 1997.
- 2- Handbook of technical textiles edited by a r horrocks and s c anand
- 3- Textile Sizing (Goswami-2004), by BHUVENESH C. GOSWAMI Clemson University
Clemson, South Carolina, U.S.A.
- 4- Textile dictionary by Celanese Acetate Three Park Avenue New York, NY 10016
- 5- Reference books of textile technologies By Giovanni Castelli, Salvatore Maietta,
Giuseppe Sigrisi, Ivo Matteo Slaviero
- 6- Cotton: Science and technology Edited by S. Gordon and Y-L. Hsieh