

COURSE PROGRAM FOR WARPING CREEL
REGARDING MACHINE CARPETING

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GENERAL INFORMATIONS REGARDING THE PROGRAM

Since occupations have been facing with changing and getting more complicated recently, professional competence begins to require extensive knowledge, skills, and behaviors, and it requires continuous development.

As a result of sweeping sector and researches, occupations in the sector have been detected, and they have been separated into second, third, fourth, and fifth occupational groups. Starting from the opinions and suggestions of the people who work in this sector, each professional competence is determined.

In the program development process' each step, collaboration with leading sector representatives provided, so that individuals and institutions could contribute the studies directly. Sector expectations reflected in the program and in this way training programs and modules were the mainstay and the content of the determined competences of occupations.

The training programs of machine carpet field have been designed based on a structure which is appropriate for updating flexibly and continuously. Individuals will be able to be employed in accordance with the current professional qualifications gained.

An education is provided for individuals from any age and any level for all occupations related to machine carpet field.

With main and sub industries, Machine Carpet Sector has contributed to the country economy especially in the employment level.

The rest competences out of the education programs can be certified used in course programs when needed.

TARGETS OF THE PROGRAM

At the end of the course program the trainee will be able:

1. To distinguish vegetable fibres.
2. To distinguish animal fibres.
3. To distinguish chemical fibres.
4. To define the yarn that is used in carpet production.
5. To knot the yarn.
6. To adjust the reel change machine and choose the suitable bobbin and produce a reel.
7. To make the yarn tests.
8. To prepare the warping creel for the production.
9. To take the warping creel to the production.

PERIOD OF THE PROGRAM

1. The period for vocational education program has been planned as 480/312 hours.
2. The education period that has been separated into school period, enterprise period, and personal education period, will be applied as it is indicated in the instructions.

REFERENCE DOCUMENTS AND BASES

In machine carpeting sector, while designing or preparing a program, there is no available national or international validated reference documents (UMS, YB, ISCED, ISCO etc.).

In the designing or preparing a program for machine carpeting sector, there is no available national or international validated reference documents (UMS, YB, ISCED, ISCO etc.).

DOCUMENTATION

In the course program, the trainees will be taught and trained in order them to have adequate qualifications. The target of this program is to make them qualified enough for the profession.

- All of the finished modules, trainings, gained skills and professional qualifications of the trainees during the course will be certified.
- At the end of the course all the certificates that the trainees with professional qualifications have got, will be evaluated on the main certificate according to the legislations.
- In the future, if the individuals want to change their professions or change their professions with a similar one, their gained skills will be evaluated.
- The trainees who completed the difference modules may gain the skills of a second profession.
- The individuals get a document when they finish the teaching program, so that they can use this document for other course programs as well.
- The individuals who are skilled with professional qualifications get a certificate after the course, so that they may labour in related workshops.

MODULE LIST OF THE COURSE PROGRAM

CATEGORIES OF MODULES	MODULES	PERIOD	CREDIT
MODULES	Vegetable Fibres	40/32	
	Animal Fibres	40/32	
	Chemical Fibres	40/32	
	Characteristics of Carpet Yarn	40/32	
	Yarn Knotting	40/24	
	Production on Reel Change Machines	40/32	
	Yarn Tests	40/32	
	Preparation of the Warping Creel to Production 1	40/24	
	Preparation of the Warping Creel to Production 2	40/24	
	Run the Warping Creel 1	40/24	
	Run the Warping Creel 2	40/24	
TOTAL			

EXPLANATIONS FOR THE EXECUTION OF THE PROGRAM

In the modules exist in the course program, the anticipated education is provided.

In order individuals to participate into the course program, they have to be at least primary school graduates, and they need to have required personal and physical properties to perform the required tasks and qualifications.

The education can be provided in Vocational Education Centers with an adequate substructure and technical equipment, Public Education Centers, Universities, and enterprises in the sector.

In order the program to be implemented, all the equipment and supplies required by the profession have to be provided.

When there is no possibility to implement the learning activities exist in the module, the implementations can be performed by cooperation with other schools and enterprises.

The trainee is not required to take the prequalification again as long as he took one before.

The module and the qualifications will be taken in their application order in the program.

TEACHING TARGETS OF THE PROGRAM

The targets of the program are to teach the trainee to prepare the carpet for the carpet quality control & inspection machine, to determine and remove the manufacturing defects on the back side of the carpet, to determine and remove the manufacturing defects on the carpet surface.

MODULES

The target of this module is to teach and train the trainees in order them to get skilled for general carpet industry, characteristics of carpt yarn, prepare reel on reel machines, yarn knotting, prepare the Warping Creel to Production, and Run the Warping Creel.

Name of the Module: Vegetable Fibres

Duration of the Module: 40/32 hours

Teaching Targets of the Module

- Distinguish the characteristics of the vegetable fibres.
- Distinguish the vegetable fibres with microscope.
- Distinguish the vegetable fibres by doing the burning test.
- Distinguish the vegetable fibres by doing the dry distillation test.

Name of the Module: Animal fibres

Duration of the Module: 40/32 hours

Teaching Targets of the Module

- Distinguish the characteristics of the vegetable animal fibres.
- Distinguish the vegetable animal fibres by doing tests.

Name of the Module: Chemical fibres

Duration of the Module: 40/32 hours

Teaching Targets of the Module

- Distinguish the man-made (recycled) fibres by doing tests.
- Dintinguish the synthetic fibres by doing tests.

Name of the Module: Yarn Features used in Carpets

Duration of the Module: 40/32 course hours

Teaching Targets of the Module

- Fix the characteristics of warp pile.
- Fix the characteristics of base fill warp.
- Fix the characteristics of base tie warp.
- Fix the characteristics of weft yarn.

Name of the Module: Yarn Knotting

Duration of the Module: 40/24 hours

Teaching Targets of the Module

- Tie the yarn by single layer weaving knot
- Tie the yarn by double layer weaving knot

Name of the Module: Production on reel change machines

Duration of the Module: 40/32 hours

Teaching Targets of the Module

- Do the production adjustments of the reel change machine
- Do the production on the reel change machine

Name of the Module: Yarn Tests

Duration of the Module: 40/32 hours

Teaching Targets of the Module

- Fix the number of yarn.
- Fix the twist of yarn.
- Doing the strength test of the yarn.

Name of the Module: Prepare the Warping Creel to Production 1

Duration of the Module: 40/24 hours

Teaching Targets of the Module

- Fix the collating of warping creel of reels.
- Fix the tension according the reel size and type of fibre.

Name of the Module: Prepare the Warping Creel to Production 2

Duration of the Module: 40/24 hours

Teaching Targets of the Module

- Fix the reel chage size and time.
- Fix the locations of pile yarns on warping creel guide, comb and filter.

Name of the Module: Run the Warping Creel 1

Duration of the Module: 40/24 hours

Teaching Targets of the Module

- To put the reel pallets and boxes (cages) surround the machine
- To put the reels on the warping creel.

Name of the Module: Run the Warping Creel 1

Duration of the Module: 40/24 ders saati

Teaching Targets of the Module

- To put the pile yarns through the guide, comb and filters.
- To tie the broken yarn on warping creel.

MODULE INFO PAGE

FIELD	: MACHINE CARPETING
OCCUPATION / BRANCH	: WARPING CREEL
MODULE	: VEGETABLE FIBRES
DURATION	: 40/32
PRECONDITION	: There is no precondition on this module.
EXPLANATION	: Vegetable fibers samples should be ready near the application area.
GENERAL TARGET	: In backcloth and good conditions, the trainee will be able to distinguish the vegetable fibres in accordance with the technical methods.

TARGETS

The trainee will be able to:

1. Distinguish the characteristics of the vegetable fibres.
2. Distinguish the vegetable fibres by doing the microscope test.
3. Distinguish the vegetable fibres by doing the burning test.
4. Distinguish the vegetable fibres by doing the dry distillation test.

CONTENTS

1. VEGETABLE FIBRES

1.1. The Definition and the structure of the textile fibres

- 1.1.1. Classification of the textile fibres
- 1.1.2. Characteristics of the textile fibres

1.2. Seed Fibres

- 1.2.1. Cotton
- 1.2.2. Supply of cotton
- 1.2.3. Physical structure and characteristics
- 1.2.4. Chemical structure and characteristics
- 1.2.5. Usage areas
- 1.2.6. Kapok fibres

1.3. Stock Fibres

1.3.1. Linen Fibres

- 1.3.1.1. Supply
- 1.3.1.2. Physical structure and characteristics
- 1.3.1.3. Chemical structure and characteristics
- 1.3.1.4. Usage areas

1.3.2. Hemp

1.3.3. Jute

1.3.4. Ramie

1.3.5. Bamboo Fibre

1.4. Leaf Fibres

1.4.1. Sisal

1.4.2. Manila hemp

1.4.3. Fruit Fibres

1.4.4. Coco

2. MICROSCOPE TEST

2.1. Identifying the microscope

2.2. Parts of the microscope

2.3. Usage of the microscope

2.4. To examine longitudinal view on microscope

2.5. To examine latitudinal view on microscope

2.6. Methods of Sectioning

2.6.1. Latitudinal sectioning with cork

- 2.6.2. Latitudinal sectioning with metal plate
- 2.6.3. Latitudinal sectioning with hand microtome
- 2.6.4. Latitudinal sectioning with hardy microtome
- 2.6.5. Other microtome devices

2.7. Longitudinal and latitudinal views of Vegetable Fibres

3. BURNING TEST

- 3.1. Target of the burning test
- 3.2. The Way of the burning test
- 3.3. The reactions of vegetable fibres and characteristics of their burning

4. DRY DISTILLATION TEST

- 4.1. Target of distillation
- 4.2. The Way of the test
- 4.3. Result schedules for tests of dry distillation on vegetable fibres

ASSESSMENT AND EVALUATION

The trainee will be able to perform the performance criterias below:

1. To distinguish the physical characteristics of the vegetable fibres.
2. To distinguish the chemical characteristics of the vegetable fibres.
3. To know about the types of vegetable fibres.
4. To be able to use the microscope.
5. To distinguish the vegetable fibres by using microscope.
6. To distinguish the vegetable fibres by doing the burning test.
7. To distinguish the vegetable fibres by doing the dry distillation test.
8. To be able to decide the type of fibres in accordance of the tests.

MODULE INFO PAGE

FIELD	: MACHINE CARPETING
OCCUPATION / BRANCH	: WARPING CREEL
MODULE	: ANIMAL FIBRES
DURATION	: 40/32
PRECONDITION	: The trainee has to finish the vegetable fibres module.
EXPLANATION	: Animal fibers samples, microscope, match, experiment container, tongs, gas furnace, experiment tube, pH paper, the brush for cleaning the test tube should be ready near the application area.

GENERAL TARGET: In backcloth and good conditions, the trainee will be able to distinguish the animal fibres correctly, in accordance with the technical methods.

TARGETS:

The trainee will be able to:

1. Distinguish the characteristics of the animal fibres.
2. Distinguish the animal fibres by doing tests.

CONTENTS

1. ANIMAL FIBRES

1.1. Wool

- 1.1.1. Supply of wool fibres
- 1.1.2. Physical structure and characteristics
- 1.1.3. Chemical structure and characteristics
- 1.1.4. Usage areas

1.2. Angora Wool

- 1.2.1. Supply of angora wool
- 1.2.2. Physical structure and characteristics
- 1.2.3. Chemical structure and characteristics
- 1.2.4. Usage areas

1.3. Cashmere

- 1.3.1. Supply of cashmere fibres
- 1.3.2. Characteristics of cashmere fibres
- 1.3.3. Usage areas

1.4. Alpaca

- 1.4.1. Characteristics of alpaca fibres
- 1.4.2. Usage areas

1.5. Angora (Rabbit Pile)

- 1.5.1. Supply of Angora (Rabbit Pile) fibres
- 1.5.2. Characteristics of Angora (Rabbit Pile)
- 1.5.3. Usage areas

1.6. Camel hair

- 1.6.1. Supply of camel hair
- 1.6.2. Characteristics of camel hair
- 1.6.3. Usage areas

1.7. Silk

- 1.7.1. Supply of silk fibres
- 1.7.2. Physical structure and characteristics of silk fibres
- 1.7.3. Chemical structure and characteristics of silk fibres
- 1.7.4. Usage areas

2. TEACHING ANIMAL FIBRES BY DOING TESTS

2.1. Microscope Test

- 2.1.1. Longitudinal and latitudinal views characteristics of animal fibres
- 2.1.2. Longitudinal and latitudinal views on microscope of animal fibres

2.2. Burning Tests

2.2.1. The reaction against flame and characteristics of burning of the animal fibres.

2.3. Dry Distillation Test

2.3.1. The results of dry distillation tests of animal fibres

ASSESSMENT AND EVALUATION

The trainee will be able to perform the performance criterias below:

1. To distinguish the physical characteristics of the animal fibres.
2. To distinguish the chemical characteristics of the animal fibres.
3. To distinguish the animal fibres by using microscope.
4. To distinguish the animal fibres by doing the burning test.
5. To distinguish the animal fibres by doing the dry distillation test.
6. To be able to decide the type of fibres in accordance of the tests.

MODULE INFO PAGE

FIELD	: MACHINE CARPETING
OCCUPATION / BRANCH	: WARPING CREEL
MODULE	: CHEMICAL FIBRES
DURATION	: 40/32
PRECONDITION	: The trainee has to finish the animal fibres module.
EXPLANATION	: Animal fibers samples, microscope, match, experiment container, tongs, gas furnace, experiment tube, pH paper, brush for cleaning the test tube should be ready near the application area.

GENERAL TARGET: In a backcloth and good conditions, the trainee will be able to distinguish the chemical fibres correctly, in accordance with the technical methods.

TARGETS:

The trainee will be able to:

1. Distinguish the recycle fibres by doing tests.
2. Distinguish the synthetic fibres by doing tests.

CONTENTS:

1. RECYCLE FIBRES

1.1. The Description the chemical fibres, classification and the methods of supplying chemical fibres

1.2. Synthetic fibres and their characteristics

1.2.1. Cellulose based synthetic fibres

- 1.2.1.1. Physical structure and characteristics
- 1.2.1.2. Chemical structure and characteristics
- 1.2.1.3. Usage areas

1.2.2. Protein based synthetic fibres

- 1.2.2.1. Physical structure and characteristics
- 1.2.2.2. Chemical structure and characteristics
- 1.2.2.3. Usage areas

1.3. Recycle fibres Tests

1.3.1. Microscope tests

- 1.3.1.1. Longitudinal and latitudinal views characteristics of animal fibres
- 1.3.1.2. Longitudinal and latitudinal views on microscope of animal fibres

1.3.2. Burning test

- 1.3.2.1. The reaction against flame and characteristics of burning of recycle fibres

1.3.3. Dry distillation test

- 1.3.3.1. The results of dry distillation tests of recycle fibres

2. SYNTHETIC FIBRES

2.1. Types, characteristics and usage areas of synthetic fibres

- 2.1.1. Poliamid fibres
- 2.1.2. Polyester fibres
- 2.1.3. Polyvinyl fibres
- 2.1.4. Polyolefin fibres
- 2.1.5. Elastomer fibres

2.2. Test to learn synthetic fibres

2.2.1. Microscope test

- 2.2.1.1. Longitudinal and latitudinal views characteristics of synthetic fibres
- 2.2.1.2. Longitudinal and latitudinal views on microscope of synthetic fibres

2.2.2. The burning test

- 2.2.2.1. The reaction against flame and burning characteristics of synthetic fibres

2.2.3. Dry distillation test

- 2.2.3.1. - The results of dry distillation tests of recycle fibres

ASSESSMENT AND EVALUATION

The trainee will be able to perform the performance criterias below:

1. To distinguish the physical characteristics of the recycle fibres.
2. To distinguish the chemical characteristics of the recycle fibres.
3. To distinguish the recycle fibres by using microscope.
4. To distinguish the recycle fibres by doing burning test.
5. To distinguish the recycle fibres by doing dry distillation test.
6. To distinguish the synthetic fibres by using microscope.
7. To distinguish the synthetic fibres by doing burning test.
8. To distinguish the synthetic fibres by doing dry distillation test.
9. To be able to decide the type of fibres in accordance of the tests.

MODULE INFO PAGE

FIELD	: MACHINE CARPETING
OCCUPATION / BRANCH	: WARPING CREEL
MODULE	: THE CHARACTERISTICS OF CARPET YARN
DURATION	: 40/32
PRECONDITION	: The trainee has to finish the chemical fibres module.
EXPLANATION	: Bright area, scissors, twisting test device

METHODS AND TECHNIQUES OF TEACHING: In this chapter the following methods and techniques can be used: illustrating, lecturing, question-answer, group action (teamwork), discussion, working by practise, etc.

GENERAL TARGETS: The trainee will be able to fix the carpet type and characteristics, pile warping, fix the characteristics of warp pile, fix the characteristics of base tie warp, fix the characteristics of weft yarn.

TARGETS:

The trainee will be able to:

1. Fix the characteristics of warp pile.
2. Fix the characteristics of base fill warp.
3. Fix the characteristics of base tie warp.
4. Fix the characteristics of weft yarn

CONTENTS:

1. **Physical characteristics of warp pile.**
2. **Types of warp pile fibres**
3. **Physical characteristics of base fill warp.**
4. **Types of fibres of base fill warp.**
5. **Physical characteristics of base tie warp.**
6. **Types of fibres of base tie warp.**
7. **Physical characteristics of weft yarn.**
8. **Types of fibres of carpet weft yarn.**

ASSESSMENT AND EVALUATION

1. Search about types of warp pile yarn fibres.
2. Search about yarn numbers, yarn twist, and yarn strength used on pile yarn.
3. Fix the suitable pile yarn for carpet production.
4. Search about types of fibres of base tie warp for carpet production.
5. Search about yarn numbers, yarn twist and yarn strength used on yarn base fill warp.
6. Fix the suitable yarn of base fill warp for carpet production.
7. Search about yarn types of base tie warp for carpet production.
8. Search about yarn numbers, yarn twist and yarn strength used on yarn base tie warp
9. Fix the suitable pile yarn of base fill warp carpet production.
10. Search about types of fibres of carpet weft yarn.

11. Search about yarn numbers, yarn twist and yarn strength used on weft yarn.
12. Fix the suitable weft yarn for carpet production.

MODULE INFO PAGE

FIELD	: MACHINE CARPETING
OCCUPATION / BRANCH	: WARPING CREEL
MODULE	: YARN KNOTTING
DURATION	: 40/24
PRECONDITION	: The trainee has to finish the module of characteristics of carpet yarn
EXPLANATION	: Has to be done in an atelier or plant area and the needed materials are a yarn and scissors.

METHODS AND TECHNIQUES OF TEACHING: In this chapter the following methods and techniques can be used: illustrating, lecturing, question-answer, group action (teamwork), discussion, working by practise, etc.

GENERAL TARGET: After learning this module, the trainee will be able to fix the yarn by single layer and double layer yarn knotting.

TARGET:

The trainee will be able to:

1. Fix the yarn by a single layer yarn knotting
2. Fix the yarn by a double layer yarn knotting

CONTENTS:

1. **Types of knotting**
2. **Types of knotting appropriate to the yarn types.**
3. **Single layer yarn knotting for weaving.**
4. **Double layer yarn knotting for weaving.**

ASSESSMENT AND EVALUATION

1. Fix the characteristics of knotting yarn usage area.
2. Fix the yarn by a single layer or a double layer knotting yarn.
3. Be able to cut the margins of the yarn, end with a suitable tool.

MODULE INFO PAGE

FIELD	: MACHINE CARPETING
OCCUPATION / BRANCH	: WARPING CREEL
MODULE	: PRODUCTION ON REEL CHANGE MACHINES
DURATION	: 40/32
PRECONDITION	: The trainee has to finish the module of yarn knotting.
EXPLANATION	: Reel machine, catalogues of reel machine, calculator, the key of main switching center, reel and bobbin

METHODS AND TECHNIQUES OF TEACHING: In this chapter the following methods and techniques can be used: illustrating, lecturing, question-answer, group action (teamwork), discussion, working by practise, etc.

GENERAL TARGETS: After learning this module, the trainee will be able to do the adjustments for production of the reel change machine, and he will be able to choose the suitable bobbin to produce reels in suitable sizes.

TARGETS:

The trainee will be able to:

1. Do the adjustments of reel change machine.
2. Do the production on reel change machine.

CONTENTS:

1. **Reel Machine**
 - 1.1. Competence
 - 1.2. Running principles
 - 1.3. Running elements
2. **Production calculation on reel change machine.**
3. **Types of reel winding.**
4. **Types of knotting.**
5. **Production adjustments on reel machine.**
6. **Run the reel machine.**
7. **To feed the half-done reel to reel machine.**
8. **The target of size changing on reels.**

ASSESSMENT AND EVALUATION

1. To calculate the production according to the job order.
2. To adjust the cycle of cylinder and adjust the length in meters on the main switching center.
3. To adjust the hardness of reel and knotting.
4. To choose the suitable tools according to the yarn in the production.

MODULE INFO PAGE

FIELD	: MACHINE CARPETING
OCCUPATION / BRANCH	: WARPING CREEL
MODULE	: YARN TESTS
DURATION	: 40/32
PRECONDITION	: The trainee has to finish the module of production on reel change machines
EXPLANATION	: Bright area, number wheel (pulley), assay balance, calculator, register form, test sample, leaflet of standarts, scissors, device for twisting, device for breaking strength.

METHODS AND TECHNIQUES OF TEACHING: In this chapter the following methods and techniques can be used: illustrating, lecturing, question-answer, group action (teamwork), discussion, working by practise, etc.

GENERAL TARGETS: After learning this module, the trainee will be able to fix the numbers of the yarn and test the yarn.

TARGETS:

The trainee will be able to:

1. Fix the yarn number.
2. Fix the yarn twisting.
3. Do the strength test with yarn.

CONTESNTS:

- 1. Systems of Numbering**
 - 1.1. Weight numbering systems
 - 1.2. Lenght numbering systems
- 2. Preparing test sample to fix the linear density of yarn whit wheel (pulley) methode**
 - 2.1. Band (Tape)
 - 2.2. Cord
 - 2.3. Yarn
- 3. Fixing the linear density of yarn whit wheel (pulley) methode**
 - 3.1. Description and target
 - 3.2. Devices and materials
 - 3.2.1. Band (tape) wheel (pulley), cord wheel (pulley),
 - 3.2.1.1. Structure
 - 3.2.1.2. Adjustments
 - 3.2.1.3. Using
 - 3.3. Application of test
 - 3.4. Assessment and calculations
- 4. Preparing stiff yarn test sample according to the standarts for twisting test**
- 5. Application of the twisting test of stif yarns**
 - 5.1. Checking on the parallelism of the opened yarns
 - 5.2. Assessment of the test results
- 6. Breaking strength and breaking elongation**
 - 6.1. Descriptions
 - 6.2. Affecting parameters
- 7. Preparing test sample according standarts for breaking strength test**

- 8. Breaking strength test**
 - 8.1. Description and target
 - 8.2. Test device for breaking strength
 - 8.2.1. Structure
 - 8.2.2. Adjustments
 - 8.3. Application of the test
 - 8.4. Assessment of the test results

ASSESSMENT AND EVALUATION

1. Preparing test sample to fix the linear density of yarn with wheel (pulley) method.
2. Fixing the sample to the wheel (pulley) after getting through the guide.
3. Winding the sample to the wheel (pulley) according to the number of cycles mentioned on the standards after setting zero for the number of the Wheel (pulley).
4. Noting the weight of the sample after weighing it and calculating the number of it.
5. Preparing the test report
6. Preparing the stiff yarn test sample which is appropriate to the standards for twisting test
7. Adjusting the pre-tension according to the fixed yarn number.
8. Setting the counter to zero and set it to starting position.
9. Adjusting the machine for running in order to run in reverse direction of yarn twisting direction.
10. Registering the twisting values after providing parallelism of the yarns
11. Preparing test sample according to standards for breaking strength test
12. Set the device to start position and load the values of the test sample.
13. Run the device and observe the test process.
14. Assess the test results.

MODULE INFO PAGE

FIELD	: MACHINE CARPETING
OCCUPATION / BRANCH	: WARPING CREEL
MODULE	: PREPARATION OF THE WARPING CREEL TO PRODUCTION 1
DURATION	: 40/24
PRECONDITION	: The trainee has to finish the module of yarn tests
EXPLANATION	: Paper, pen, calculator, work table

METHODS AND TECHNIQUES OF TEACHING: In this chapter the following methods and techniques can be used: illustrating, lecturing, question-answer, group action (teamwork), discussion, working by practise, etc.

GENERAL TARGETS: After learning this module, the trainee will be able to read the job order, make careful calculation, and fix the reel arrangement.

TARGETS:

The trainee will be able to:

5. Fix the arrangement of the reel to warping creel.
6. Fix the weight of tension according to the reel size and fibres type.

CONTENTS:

1. ARRANGEMENT OF WARPING CREEL

- 1.1. Forms of job orders.
- 1.2. Calculation of the yarn usage.
- 1.3. Arrangement of warping creel appropriate for the yarn usage.

2. YARN REELS ON WARPING CREEL

- 2.1. Types of winding
- 2.2. Size of winding.
- 2.3. Hardness of winding.
- 2.4. The effect of reel size to yarn tension.
- 2.5. The effect of fibres types to yarn tension.
- 2.6. The effect of winding hardness to yarn tension.

ASSESSMENT AND EVALUATION

1. Be able to read the form of job order.
2. Be able to calculate the usage of yarn and make the arrangement of warping creel according to the results.
3. Be able to fix the reel winding types and sizes.
4. Be able to fix the affects of the winding hardness.
5. Be able to fix the affects of the fibres types and winding hardness to the tension of yarn.

MODULE INFO PAGE

FIELD	: MACHINE CARPETING
OCCUPATION / BRANCH	: WARPING CREEL
MODULE	: PREPARATION OF THE WARPING CREEL TO PRODUCTION 2
CODE OF THE MODULE	:
DURATION	: 40/24
PRECONDITION	: The trainee has to finish the preparation module of the Warping creel to production 1
EXPLANATION	: Carpet pile of warping creel, reel, carpet plant.

METHODS AND TECHNIQUES OF TEACHING: In this chapter the following methods and techniques can be used: illustrating, lecturing, question-answer, group action (teamwork), discussion, working by practise, etc.

GENERAL TARGETS: After learning this module, the trainee will be able to change the time of reel changing on warping creel and filter locations.

TARGETS:

The trainee will be able to:

3. Fix the reel change time and size.
4. Fix the locations of the pile yarns on guide, comb and filter on the warping creel.

CONTENTS:

- 1. Reel changing times**
 - 1.1. According to the fibres types
 - 1.2. According to the hardness of winding
 - 1.3. According to the usage of colour
- 2. Calculation of Pile Yarn**
- 3. Carpet Pile of Warping Creels**
 - 3.1. Use
 - 3.2. Capacity
 - 3.3. Types
- 4. Arrangement of Warping Creel According Yarn Usage**
- 5. Yarn Crossing Filters on Warping Creel**
 - 5.1. Structure
 - 5.2. Types

ASSESSMENT AND EVALUATION

4. Be able to fix the reel change time according the fibres types, winding hardness and colour usage.
5. Be able to calculate the ratio of the pile yarn.
6. Be able to explain the characteristics of the carpet piles on warping creels.
7. Be able to fix the arrangement of warping creel according the yarn usage ratio.
8. Be able to explain the characteristics and structure of the yarn cross filters.

MODULE INFO PAGE

FIELD	: MACHINE CARPETING
OCCUPATION / BRANCH	: WARPING CREEL
MODULE	: RUN THE WARPING CREEL 1
DURATION	: 40/24
PRECONDITION	: The trainee has to finish the preparation module of the Warping creel to production 2
EXPLANATION	: Pile of warping creel, reel pallets, reel cages, reel, tension weights

METHODS AND TECHNIQUES OF TEACHING: In this chapter the following methods and techniques can be used: illustrating, lecturing, question-answer, group action (teamwork), discussion, working by practise, etc.

GENERAL TARGETS: After learning this module, the trainee will be able to change the reels and make the arrangement of the reels on warping creel correctly.

TARGETS:

The trainee will be able to:

3. Arrange the reel pallets and boxes (cages) that surround the machine.
4. Arrange the reels on warping creel.

CONTENTS:

1. **Reel Pallets**
2. **Cages where the semi-handed reels are located**
 - 2.1. Shapes
 - 2.2. Sizes
3. **Ares where the reel pallets can be located**
4. **Types of Reel Hanger on Warping Creel**
5. **Types of Tension Weight**
6. **Arrangement Shapes of Reels on Warping Creel**

ASSESSMENT AND EVALUATION

5. Be able to locate the reel pallets to the suitable places on the warping creel.
6. Be able to do the reel change on the warping creel.
7. Be able to arrange the new reels on the warping creel.

MODULE INFO PAGE

FIELD	: MACHINE CARPETING
OCCUPATION / BRANCH	: WARPING CREEL
MODULE	: RUN THE WARPING CREEL 2
DURATION	: 40/24
PRECONDITION	: The trainee has to finish the module of run the warping creel 2
EXPLANATION	: Pile of warping creel, reel, and tension weights, unwind guides

METHODS AND TECHNIQUES OF TEACHING: In this chapter the following methods and techniques can be used: illustrating, lecturing, question-answer, group action (teamwork), discussion, working by practise, etc.

GENERAL TARGETS: After learning this module, the trainee will be able to tie yarn breaks on the warping creel according correct knotting shape after cross the pile yarns through the guide, comb and filter.

TARGETS:

The trainee will be able to:

1. Cross the pile yarns through the guide, comb and filters.
2. Tie the yarn breaks on warping creel.

CONTENTS:

1. The shapes of the arrangement of pile yarns on the warping creel.
2. To cross the pile yarns through the guide and filters.
3. The shapes of the crossing of yarn through the support spindles.
4. Reel areas of warping creel
5. Remember the yarn knotting shapes.
6. Remember the shape of the crossing of the yarn from the warping creel.

ASSESSMENT AND EVALUATION

1. Be able to locate the pile yarns on the support spindles in suitable rank.
2. Be able to cross the pile yarns through the filter, intermediate filter and guide filter on warping creel.
3. Be able to find the yarn break on the warping creel.
4. Be able to cross the broken reel end through the guide spindles and filters.
5. Be able to tie two broken yarns from their ends.
6. Be able to adjust the tension of the tied broken yarn.