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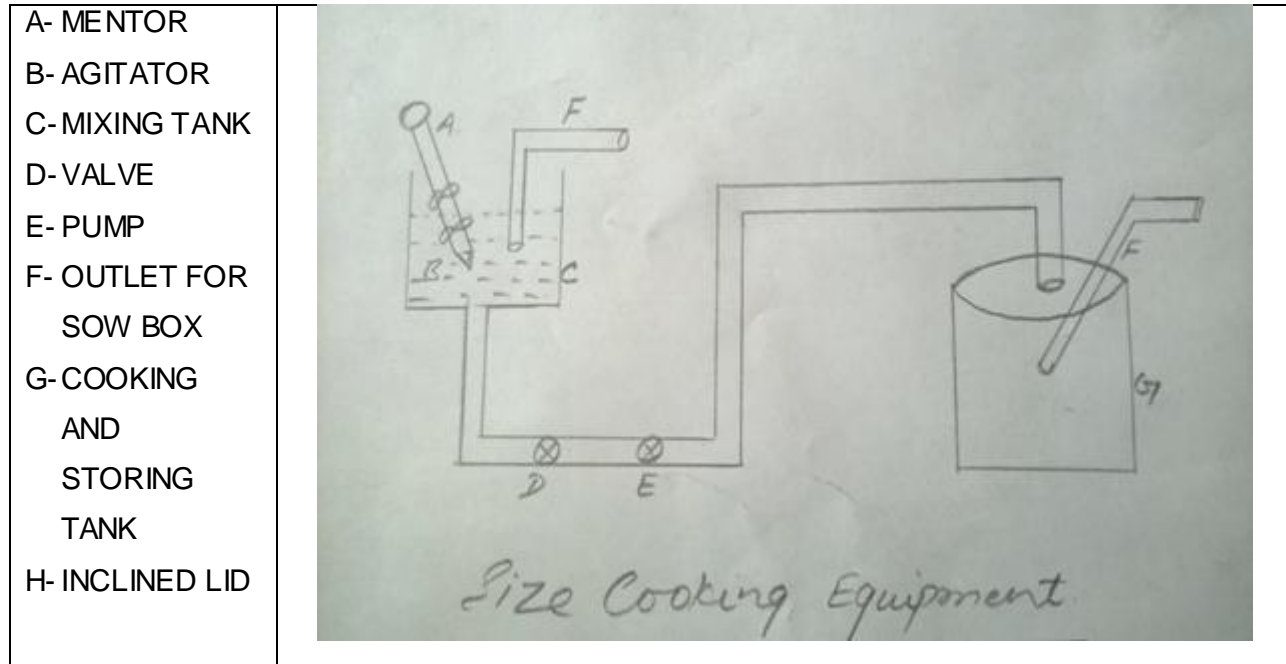
## 1. BASIC TEXTILES TERMS:

- **Yarn:** A continuous strand of fibers/filament, twisted /non twisted, it is basic raw material for weaving.
- **Type of Yarns:** single yarn, double or multi fold yarn, spun yarn & filament yarn etc.
- **Yarn count:** the yarn count is a numerical expression which defines it's fineness or coarseness.
- **Yarn count:**  
Indirect system: English count(Ne), Worsted Count etc.  
i.e. Higher the yarn number , finer the yarn.  
Direct System: Tex, Denier  
i.e. Higher the yarn number , Coarser the yarn.
- **Warp & Weft Yarn:**  
The lengthwise yarns are called the warp yarn and the widthwise yarns are called the weft yarn.

## 2. Size paste mixing

- A Size Mixer is a job in a weaving preparatory department. The responsibility of a Size Mixer is to prepare the Size Mixing efficiently so as to get quality output with minimum defects, giving due importance to safety and environment aspects

## Size Cooking Equipments:

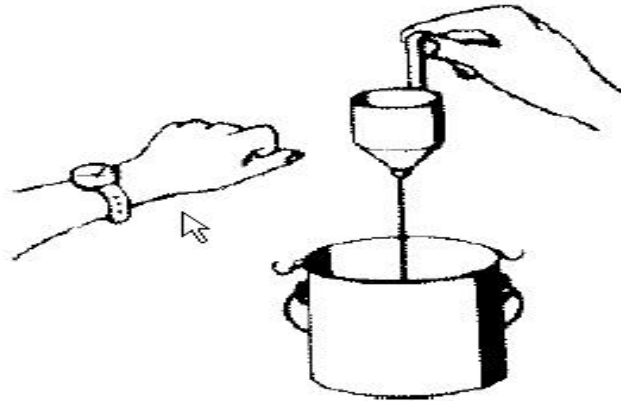


## Size Viscosity Cup:

Cup Volume	50 ml
Hole inside diameter	3.5+/- 0.05mm
Hole outside diameter	6.0 +/-0.05mm
Efflux time	20 -100 sec.
Cup material	Nickel coated copper
Viscosity range	70-370 cSt
Mass	0.35Kg



## Viscosity Cup:



## 4 Objectives of the Size Mixing

- Prepare perfect & homogeneous emulsion on the size mixture
- To Complete dispersion & agglomeration all size ingredients, including waxes, allows and additives.

## 5 The functions of size ingredients.

### 1. Adhesive:

- a) To improve strength
- b) To increase smoothness.
- c) To increase elasticity & stiffness.
- d) Reduce extension percentage.
- e) Impart adhesion.

### 2. Lubricant or softener:

- a) To make the yarn soft & slippery.
- b) To smoothen the yarn.
- c) To reduce stiffness.
- d) Reduce flexibility & friction.

### 3. Antiseptic or anti-mildew agent:

- a) To prevent mildew formation.
- b) To preserve size material for a long time.
- c) To help to store the sized yarn.
- d) To protect yarn from bacteria or fungus.

## 6 Operation involved in Size Mixing

### 6.1 Size preparation

- Size cooker should kept clean for every new mixing
- Use calibrated weighing balance of Weigh the size ingredients, size chemicals.
- Remove condensed water from the size cooker.
- Fill water in the cooker as per the 'size mixing' given
- Maintain the steam pressure as required.
- Pour hardened materials like 'pva' first & see that it gets dissolved in the water completely
- Pour maize and then the chemicals as per the size mixing given
- See that all these materials poured in the cooker are dissolved completely.
- Close the cooker and steam has to be applied to the cooker
- Allow the materials poured in the cooker , boiled for 20 minutes after the temperature in the Cooker is raised to 130 degree F,

### 6.2 Transferring Size to Storage Tank

- Check the viscosity & refract meter reading for the size
- Check whether the storage tank is completely cleaned.
- Drain out the left out sizer of the previous shift to collect in other storage vessels as per the instructions of the higher authority.
- Transfer the size prepared to the Storage Tank

### 6.3 Other Work practices

- Wear the protecting tools like 'shoes', 'gloves' etc., whenever required.
- Keep all the vessels and the working area neat & clean
- Give preference to safety. Should not enter the area, where he/ she are not allowed. should not do a job in which training has not being given
- Check that no size / sizing material / any other material in the other work areas.
- Report immediately to the Superior for any problem

## 7 Shift interchanging charges

### 7.1 Taking charge

- Come at least 10 - 15 minutes earlier to the work spot
- Meet the previous shift size mixer , discuss with him/ her regarding the
- Issues faced by them with respect to the quality or reuse of size, wastage etc., or safety or any other specific instruction etc.
- Check the size level in the 'storage tank' and should check whether any size mixing has to be prepared immediately, for the running program.
- Prepare the size mixing as per instructions given by superviour.

- Check the availability of the sizing ingredients & chemicals required for the running program
- Take 'instructions' in writing for the "size mixing" for the next programs, from the higher authority.
- Check availability of the size ingredients & the size chemicals required for the next programs
- Note down the total stock of the sizing ingredients, sizing chemicals etc. in the register maintained and to show the same to the higher authority.
- Check the availability of water
- Check the Steam condition

## 7.2 Handing over change

- Hand over the shift to the incoming size mixer in a proper manner & get clearance from the incoming counterpart before leaving the work spot
- Report to his/ her shift superiors as well as that of the incoming shift, in case his/ her counterpart doesn't doesn't come for work for the incoming shift.
- Properly hand over to the incoming shift superior (in case his/her counterpart does not arrive)& get clearance from him/ her, before leaving the work spot
- Report to his/ her shift superior about the quality / production / safety issues/ any other issue faced in his/ her shift and should leave the department only after getting concurrence for the same from His/ Her superiors

## 8 Safety aspects

- Maintain a healthy lifestyle and guard against dependency on intoxicants.
- Follow environment management system related procedures.
- Identify and correct (if possible) malfunctions in machinery and equipment.
- Comply with health and safety related instructions applicable to the workplace.
- Use and maintain personal protective equipment such as 'ear plug', 'nose mask', 'head cap' etc., as per protocol.
- Carry out own activities in line with approved guidelines and procedures.
- Store materials and equipment in line with organisational requirements.
- Minimize health and safety risks to self and others due to own actions.
- Participate in mock drills/ evacuation procedures organized at the workplace.
- Undertake first aid, fire-fighting and emergency response training, Take action based on instructions in the event of fire, emergencies or accidents.
- Monitor the workplace and work processes for potential risks and threat
- Carry out periodic walk-through to keep work area free from hazards and obstructions, if assigned.
- Report hazards and potential risks/ threats to supervisors or other authorized personnel.
- Follow organisation procedures for shutdown and evacuation when required.