

Sourcing → Sourcing can be defined as the process of identifying potential vendors, conducting negotiations with them and agreeing the supply contracts with these vendors.

Global Sourcing

Sourcing of products from perspective of national boundaries known as global sourcing.

~~Domestic~~

Domestic Sourcing

Because difficulties in sourcing usually arise when no structure is in place, specific procedures should be developed and followed by a company that chooses to ~~source~~ source domestically, i.e. within nation.

Out Sourcing:-

It is defined as a process in which a company delegates (handover) some of its in house operations/process to a third party. It is a contracting transaction through one company purchases service from other.

~~Outsourcing is a contracting the contracting task to~~
→ In business, outsourcing is the contracting ~~out~~ of a business process to a third party. ~~The~~

Benefits

- Outsourcing include potentially lower cost ~~cost~~ development.
- More predictable operations costs & products ~~is~~ is more.
- Access to expertise about new technology & increased Flexibilities.
- Outsourcing can free up resource within the firm for other project.
- Reducing expenses and cost savings.
- Improving quality & capacity management.

(2)

Risks → Time risk, Financial risk
Supply/operation risk, Regulatory risk
Demand/market risk, Brand / Environment risk
Intellectual property risk.

→ Requirements of measurements

- i) To serve as the ~~the~~ foundation for pattern drafting and draping to establish body dimensions to develop new designs per garment.
- ii) To provide a fit according to the style.
- iii) To calculate the amount of fabric required
- iv) To compare the body size
- v) To ~~transfer~~ transfer the body size on ~~the~~ to the garment.

→ Classification of garments for men, women & children.

<u>MEN</u>	<u>WOMEN</u>	<u>CHILDREN</u>
→ Basic shirt	→ Salwar kameez	→ Baby suit
→ Casual shirt	→ Blouse	→ Sun suit
→ 3/4 pant	→ Skirts	→ Jabra.
→ Cargo	→ Nighties	→ Sleeveless Jabra.
→ pants	→ Tops	→ Dargrees
		→

Types of Samples

(3)

1) photo / develop sample

Here measurement is nearly important but need not to match the fabric and accessories.

2) sales man sample

To supply the new product in different showroom, buyer wants this sample.

3) Pre-Production sample

First garment of bulk production is called sample known as pre-prod sample.

4) Original sample

This type of sample made of original fabric and accessories according to buyer sketches and measurements.

5) Pre-line sample:- This type of sample is collected from anyone line during production.

Two method of pattern making

① Drafting Method

- we have to take the required measurement of a person and draft the pattern. It can be done manually by using ~~paper~~ proper pattern making tools (or) with the help of a computer software.
- Only known person can create the patterns with the help of a drafting method. It is an accurate method.
- consuming less time.

② Draping method.

- In this method, with the help of a ~~dress~~ dress form and fabric, pattern can be created. In this method we simply drape the fabric on dummy and pin the ~~the~~ style lines.
- The extra fabric will be cut off with the help of shears. After completing the draping the fabric should be removed from the dress form and pattern can be drawn by duplicating the draped fabric.
- Draping is an approximate method and consumes more time.

→ Pleating

(4)

A fold in cloth made by doubling the material upon itself and then pressing or stitching it into place. There are four kinds of pleats

Flat pleats, Projected pleats, accordion pleats, wrinkled pleats.

→ Permanent press

It is a characteristic of fabric that has been chemically processed to resist wrinkles and hold its shape. This treatment has a lasting effect on the fabric.

Packaging (packing)

Packing is one of important role in garment industry. Once it is packed it should be reached safely to the customer without Damage.

Most garment are packed in polythene bags, either at the end of production or when they enter the finished goods stores. Products like shirts and underswear are usually bagged and boxed directly after final inspection and enter the stores in pre-packed form.

There are three packing equipments as follows

- 1) Manual machines → Packing is done purely by machinery.
- 2) Semiautomatic → Packing is done ~~partly~~ partially automatic loading & unloading by manually.
- 3) Fully automatic → The hanging garments are loaded on to a powered spiral drive which feeds the garments one at time into the bagging m/c. After bagging and sealing, the garments are automatically positioned on to another spiral drive which transports them to awaiting trolley or storage & built. The operation is entirely automatic and some of the modern models m/cs can bag and seal some 500 garments per hour.

Supply chain management.

⑤

SCM is the combination of art and science that goes into improving the way your company finds the raw ~~materials~~ components it needs to make a product or service and deliver it to customers.

The 5 activities basic components of SCM.

- 1) Plan 2) Source 3) Make 4) Deliver
5) Return

① Plan: Companies need a ~~strategy~~ strategy for managing all the ~~resources~~ resources that go toward meeting customer demand for their product or service.

② Source: Next, companies must choose suppliers to deliver the goods and services they need to create their product. ∴ Supply chain managers must develop a set of pricing, delivery and payment processes with suppliers and create metrics for monitoring and improving the relationships.

③ Make: This is the manufacturing step. Supply chain managers schedule the activities, necessary for product testing, packaging and preparation for delivery.

④ Delivery: - This is the part that many
consider life to as logistics, where
company co-ordinates the receipt of order
for customers, develop a network of
warehouse, place carriers to get products
to customers and ~~set~~ set up an invoicing
system to ~~the~~ receive payments.

⑤ Returns This is the problematic part
of the supply chain for many companies.
Supply chain planners to create a
responsive and flexible network for
receiving defective and excess products
back from their customers and
supporting customers who have problems
with delivery products.

Sequence of garment making

From cloth Beam

↓
Spreading or Laying

↓
Cutting

↓
Relaying

↓
Re Numbering

↓
Bundling

↓
Sewing

↓
Pressing

↓
Wrapping

↓
Labeling

↓
Packaging

Sewing machine Needles

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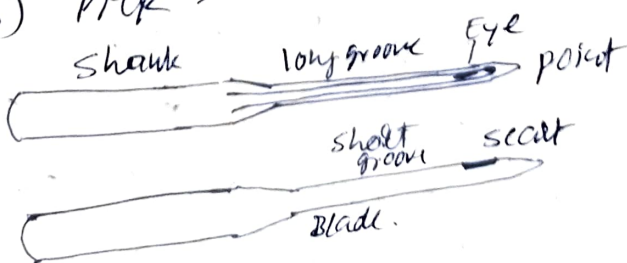
The way in which fabric is penetrated by the needle during sewing has a direct on seam strength and on garment appearance and wearable life.

The functions of the sewing machine needle in general are to:

- Produce a hole in the material for the thread to pass through and to do so without causing any damage to the material.
- Carry the needle thread through the material and then form a loop, which can be picked up by the hook on the bobbin case in a lockstitch etc or by the looper or other mechanism in other etc.
- Pass the needle thread through the loop formed by the looper mechanism in other than lockstitch.

Types of Needles

- 1) Common Needle (straight - used in lockstitch)
 - 2) Blind stitch needle
 - 3) Pick stitch needle
- } special needles



1) straight Needle.

special needle



3)



Straight needles are used in regular sewing like lock stitch and chain stitch. Blind stitching machines, used particularly for Felling of hems, also use needles that are curved.

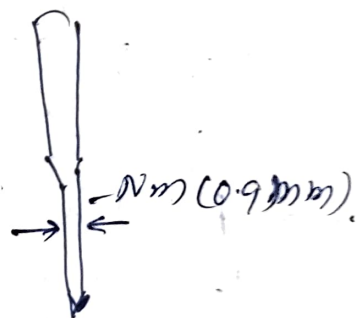
Needle Number



Needle number is related to the diameter at a point at the middle of the blade above the scarf the shaft groove.

This measurement, in millimeters, multiplied by 100, gives the metric number. This diameter of 0.9 mm is an Nm 90, and a diameter of 1.1 mm is a ~~Nm 110~~ Nm 110.

Examples of diameters

<u>in mm</u>	<u>Nm.</u>
$0.65 \times 100 = 65$	
$0.90 \times 100 = 90$	
$1.10 \times 100 = 110$	
$1.30 \times 100 = 130$	



The basic division of needle points is into cutting points and cloth points. Cutting point needles all have sharp tips but they are available with a wide variety of cross-sectional shapes in their points. To sew the plastic and leather are used  the cutting edge points needles are used. Ball points are used for cloth stitching 

Sewing Threads

If seams are to have satisfactory appearance and performance, a prime contributory factor is the sewing thread used. The sewing threads are composed of a fibre type, a construction and a finish, each of which may influence both the appearance and the performance of the thread.

The threads are classified according to the material.

1) Fibre type 2) Construction 3) Finish.

Fibre type :-

The variety of natural and man-made fibres is used in the production of sewing threads although some have only limited uses. Cinen - strong and stiff and used for heavy sewing also used for button sewing.

Silk:- silk is available both as the continuous filament or ~~sea~~ spun yarn. It is good appearance but high cost only used for expensive garments.

Cotton:- cotton spun yarns fibre with average length about 35-40 mm and dia 0.02 mm. Cotton is having good strength abrasion, good sewing performance.

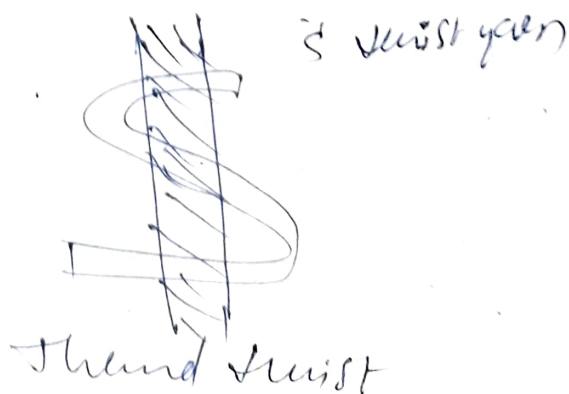
Viscose:- Viscose is very limited in use. Its strength, low clarity but high lustre. It is mainly used for embroidery. It is mainly used in embroidery. It is not required high strength and low abrasion and should not undergo repeated washing.

Synthetic sewing threads (polyester)

Synthetic sewing threads made mainly from polyester and polyamide (nylon) ~~are~~ small with continuous filaments. Various filament sizes are possible according to the size of the spinnings. They ~~are~~ have resistance to mildew or bacteria, high tenacity, resistance to abrasion, lustre and good appearance & evenness.

2) Thread construction

Most of the sewing threads are twisted in S or Z direction and twist must be upstream of left twist yarn may break and high twist yarns causing the snarling. Usually Z twist yarns are used in lock stitch like the needle and hook tend to impart some Z twist to the sewing thread, if we use S twist becomes untwisted by the action of the eye. In most sewing threads, two, three or occasionally four component yarns are twisted together to form 2, 3 or 4 ply threads.



3) Thread finish

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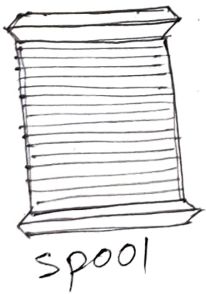
The final aspect of thread construction to be studied is that of surface finish, the most important type of finish being 'lubrication'. The lubrication will reduce the friction and it in provide protection from needle heat & damage to the sewing parts. Thread finish also reduce temperature ~~also~~ increase the strength. Another special demand is for threads with a water-resistant finish. Sewing waterproof or water-repellent clothing creates difficulty along the seam, which tend to allow water to enter the garment.

Large packages: Large packages for use 10 on overedge and covering ~~stitch~~ machines can hold in excess of 200000 yds of Spun or cored thread wound on large ~~cable~~ cones or tubes.

Containers: Containers are constructed to handle lively monofilament threads which would be difficult to control on standard packages.

Cocoons: cocoons are self spooling, ie, Centules, thread packages, specially designed for insertion in the shuttle of ~~the~~ multi-needle quilting m/c and some types of Embroidery machines.

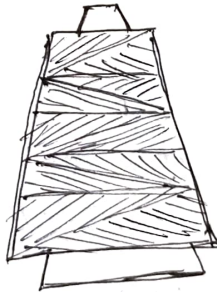
Pre-wound bobbins: ~~They~~ These are precision-wound thread packages which can replace metal bobbin on variety of Lockstitch machines.



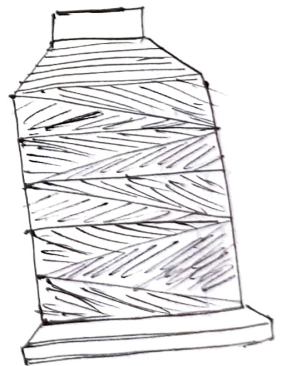
spool



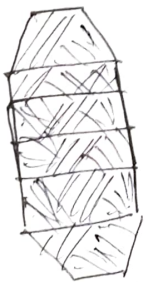
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cone



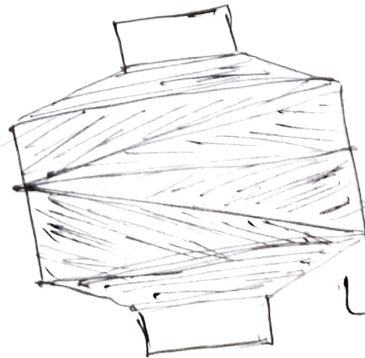
Vicone



cocoon



pre-wound bobbin



Large package

Characteristics of sewing Thread.

- i) Tensile strength / breaking strength.
- ii) Abrasion resistance.
- iii) Frictional properties
- iv) Resistance to higher temperature
- v) Thread uniformity
- vi) Extensibility and shrinkage.
- vii) Balanced structure, Twist
- viii) Colour uniformity and fastness

Properties or characteristics of Button

Selecting Button for specific garments is an important task. ∴ Button has to match with garment. Before attaching with garment button has to follow some characteristics.

- Button should not fade its colour during using.
- It should have resistance to calendaring and ironing heat.
- Button should have good fastness properties, specially wash fastness.
- It should be able to stick with garment.
- It should not break with some pressure.
- Button should ~~not~~ rust free if it make from iron or steel.
- It should become comfortable and easy to use in any circumstances.

Types of buttons

- 1) Plastic button 2) Metal Button
- 3) Printed Button 4) Horn button
- 5) Chalk Buttons