



**Department of Fashion Design and
Technology**

Course Title : Garmnets Manufacturing Management



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Assignment On :Sewing room Management in Apparel Industry

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Introduction

The sewing section is the most significant section of the ready-made garments industry which has a major impact on the profitability of the business. It is therefore important to an efficient management of the sewing room in garment manufacturing process.

Sewing room Management

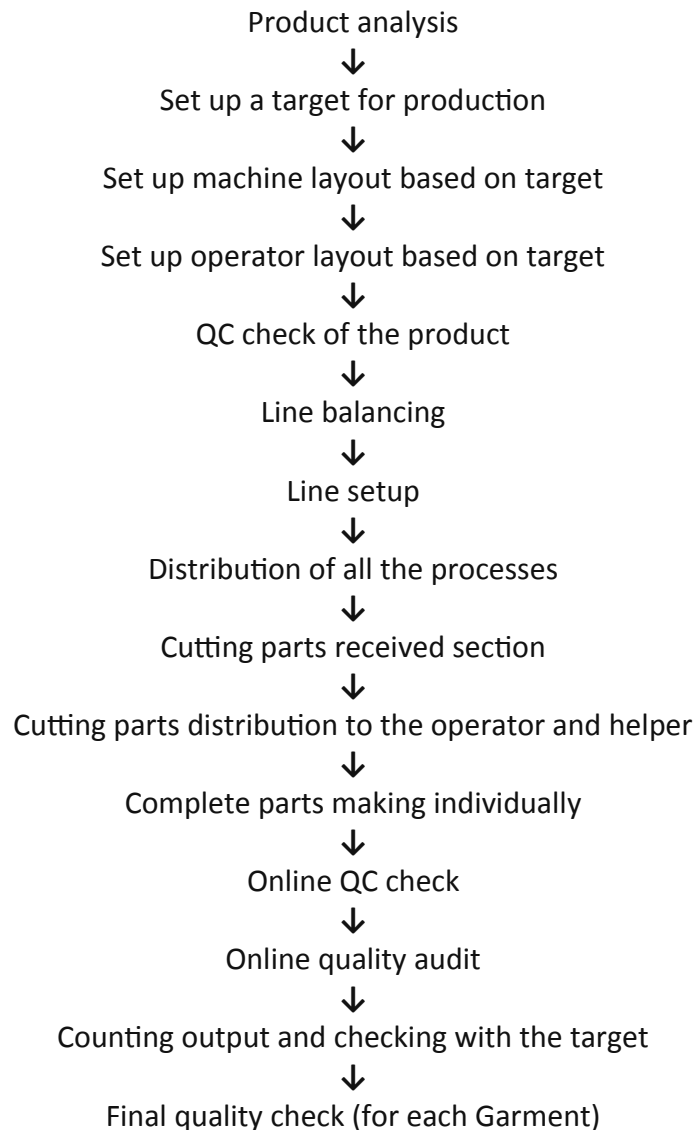
Sewing room is an extremely important section of the garment manufacturing process. Sewing is one of the basic steps of the garments manufacturing process. After receive the garments components from cutting section, all the garments parts are joined and sewn as sequentially. Obviously all the components are sewn respects on buyer requirement. Sewing machines of different types are arranged as a vertical line to assemble the garments. Sequence of types of sewing machine arrangement depends on sequence of assembling operations.

Sewing Section

In sewing section the complete garments are made which are suitable to wear. Although it seems to be a simple process, industrial sewing is quite a complex process involving many preparations and mathematical calculations for the perfect seam quality. Good quality sewing also depends on the sound technical knowledge that goes into pattern designing and making.



Flow Chart for Garments Sewing Department



Functions of Sewing Department

The basic functions of the sewing department are stitching of garment. In the sewing floor, various types of production systems and line layout are used. Factories either work in an assembly line or group system. The main tasks of this department are as follows

- ✓ Style Analysis
- ✓ Estimating labour costs
- ✓ Planning and scheduling floor level production

- ✓ Setting the line
- ✓ Stitching garments
- ✓ Balancing the assembly line
- ✓ Marking parts
- ✓ Ironing garment components
- ✓ Checking stitched garments:
- ✓ Stitching alteration
- ✓ Managing documentation
- ✓ Recruiting operators

Line Planning

Line Planning is the sequencing, scheduling and allocation of orders to the sewing line according to product category and shipment date. The following information are required for line planning

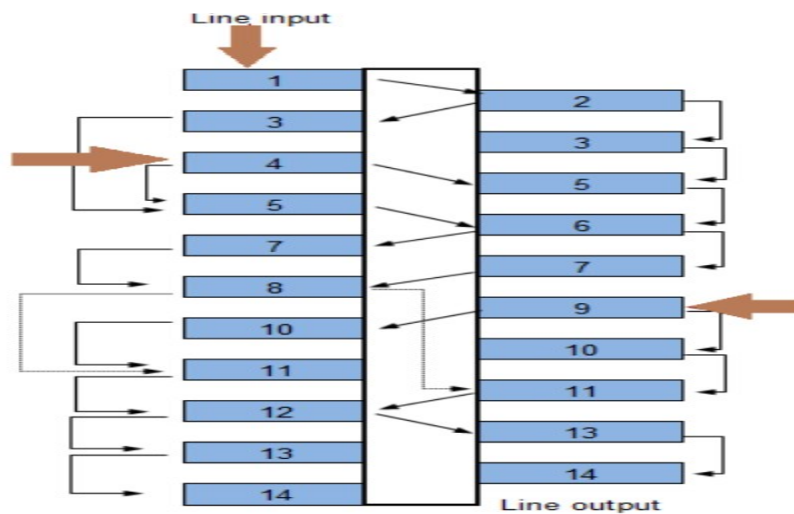
- ✓ Orders loading date
- ✓ Number of line is allocated for a particular order
- ✓ Number of days required to complete an order
- ✓ Daily line target
- ✓ The next order to be run after a particular order
- ✓ Order unloading date

Line Balancing

Line balancing is known as the systematic arrangement of machines and allocation of operation and helper in a sewing line in such a way that smooth production can be possible with minimizing the idle time. In the garments industry, Line balancing is known allocation of sewing machines, according to the garments pattern and design. The line arrangement of sewing machine depends on what types of garments manufacture in sewing floor. Proper line balancing in an apparel industry may increase productivity.

Line Layout

The sewing line layout can be defined as the way sewing workstations are placed in the sewing floor to form a line or batch that works on single style. The purpose of choosing one line layout over other is to achieve best production with existing resources. The line layout in a factory is not changed frequently. Line layout is designed at the time of plant set up and after that if factory wants to change production system they might need to redesign the line layout.



Machine setup

Different arrangements of machines in sewing lines are aimed towards optimal floor area utilization, better control, easier supervision, controlled installation and running costs, besides better housekeeping and conformance to compliance. There is no right or wrong layout as such; the aim is to maximize the use of floor area and easy maneuvering of machines to achieve efficiency in production.

Machine Used in sewing section

- ✓ Single Needle Lock Stitch machine (Plain machine)
- ✓ Double-needle lockstitch machine
- ✓ Three thread Over Lock Machine
- ✓ Four thread overlock machine
- ✓ Five thread overlock machine
- ✓ Six thread Over Lock Machine
- ✓ Flatlock machine
- ✓ Two Needle Vertical machine
- ✓ Single needle Chain stitch machine
- ✓ Two-needle chain stitch machine
- ✓ Kansai machine
- ✓ The feed of the arm
- ✓ Saddle stitch binding sewing machine
- ✓ Bar tack machine
- ✓ Velcro attach machine

- ✓ Velcro automatic cutting machine
- ✓ Buttonhole machine
- ✓ Button stitch machine
- ✓ Eyelet hole machine
- ✓ Snap button attach machine
- ✓ Blind stitch machine
- ✓ Zigzag machine
- ✓ Label cutter machine
- ✓ APW sewing machine
- ✓ Rectangular Sewing machines
- ✓ Embroidery machine
- ✓ Automatic 2-needle Belt-loop Attaching Machine
- ✓ Decorative Stitch Machine
- ✓ Cover stitch machine
- ✓ Round hole machine

Necessary tools, and equipment's for sewing sections

- ✓ Tailor's chalk
- ✓ Chalk in pencil form
- ✓ Measuring tape
- ✓ Sewing threads
- ✓ Needles
- ✓ Pencil
- ✓ Big Scissor
- ✓ Trimming scissors
- ✓ Extra needles to exchange broken needles
- ✓ Pressing machine with vacuum table
- ✓ Table for marking
- ✓ Locker to keep personal things of workers
- ✓ Table for Ironing
- ✓ Table for matching garments parts
- ✓ Table for quality inspection
- ✓ Temperature indicator Thermo meter

- ✓ Template / finished pattern
- ✓ Cooling Fan & Exhaust fan
- ✓ Sufficient Light to accomplish sewing task
- ✓ Tray
- ✓ Trimmer
- ✓ Awl
- ✓ Local iron
- ✓ Steam iron
- ✓ Stitch opener
- ✓ Pointer
- ✓ Rack to keep cut panels, accessories etc.
- ✓ Side box
- ✓ Sitting chair / stool for operator
- ✓ Various attachments like guide, gauge, jigs, and folder etc.
- ✓ Plastic Basket, bowl
- ✓ Waste Bin

Defects in sewing section

Sewing Defects:

- ✓ Needle damage
- ✓ Skipped stitch.
- ✓ Thread drawn-off.
- ✓ Seam puckering.
- ✓ Wrong stitch density.
- ✓ Uneven stitch.
- ✓ Staggered stitch.
- ✓ Defected stitch.
- ✓ Oil spot or stain.

Seaming Defects

- ✓ Uneven width.
- ✓ Uneven seam line.

- ✓ Not secured by backstitch.
- ✓ Twisting.
- ✓ No matching of check or stripe.
- ✓ No matching of the seam.
- ✓ Unexpected materials are attached to the sewing.
- ✓ Not sewn by matching face side or back side of fabrics.
- ✓ Use of wrong stitch type.
- ✓ Wrong shade matching of sewing thread.

Assembly Defects

- ✓ Defected finished components by size i.e. imperfect size and shape of finished components.
- ✓ Imperfect garments size.
- ✓ Use of the wrong ticket.
- ✓ Missing of any parts or predetermined design of garments.
- ✓ Imperfect alignment of components i.e. button, hook, and so on) in the proper place.
- ✓ Wrong placing or creasing of interlining.
- ✓ Looseness or tightness of interlining.
- ✓ Folding of any parts of garments that are seen to bad appearance.
- ✓ Shade variation of garments.
- ✓ The false direction of fabric parts in the garments.

Sewing Section Inspection

For smooth and perfect sewing operation, we need to identify few factors which are important in garment sewing section. Generally there are three steps for inspection of garments sewing section. They are as following:

- ✓ Sewing Inspection
- ✓ Seaming Inspection
- ✓ Assembling Inspection

Sewing Inspection

- ✓ There should not any needle mark.
- ✓ There should not be only defective stitch such as slipped stitch, staggered stitch, unbalanced stitches.
- ✓ Seam puckering should be avoided.
- ✓ Stitch density should be uniform.
- ✓ There should not have uneven stitch length.
- ✓ Oil spot or uneven stitch length should be inspected.

Seaming Inspection

- ✓ Unequal width of seam.
- ✓ Insecure seam.
- ✓ Miss matching of stripe and checks between two components along seam line.
- ✓ Trapping of foreign materials inside the seam.
- ✓ When face and back side of fabrics are not matched.
- ✓ Application of wrong stitch type or wrong seam type.
- ✓ Shade variation between sewing.

Assembling Inspection

- ✓ Improper size and shape of any component.
- ✓ Wrong size of garments.
- ✓ Skipping of any design in garments.
- ✓ Pocket Assembling Process in Garments
- ✓ Lack of proper placement of any component in garments.
- ✓ Improper placing and fusing of interlining.
- ✓ Shade variation from component to component.

Quality Controlling Standard Operating Procedure in sewing section

- ✓ Quality inspectors check the sample and trim card of his process at the very beginning of a style. Inspector also checks SPI, thread, label,
- ✓ Inspectors know his all measurement of his checkpoint and will have to explain clearly if anybody asks.
- ✓ No defect allowed passing from QI checkpoint and the defect will be limited in one bundle in any process.
- ✓ Bundle cut has to maintain as per the cutting report, short and mistake bundle not to pass by QC checkpoint.
- ✓ Measurement tape hanging on every QI neck
- ✓ Every in-process report to be updated, to be signed by QC and line supervisor in every hour.
- ✓ Any process mistake and size mistake body go back to operation making the correction.
- ✓ Every running style Sample and Trim card showing operation clearly displayed on each line.
- ✓ Every quality inspector following up machine cleaning before breaking up the factory every day and 100% machine having oil cards.
- ✓ Washed Garments not allowed to keep the sewing line. If there any GMTS in sewing line, Output QI and Line QC have to handover in finishing.
- ✓ Every Line QC is responsible for all types of buyer requirements of his line.

Process improvement in Sewing Section

In sewing room, the breakdown of the total work content of a garment into operations has traditionally included long, medium and short operations, the actual length being influenced by the amount of work content in the garment, predicted quantity of output of an individual style, and the number employed in the company manufacturing it, with the consequent potential for specialization among its operators and managers. In this case there are some methods are applied for the process improvement in sewing section .These are as follows

- ✓ Time study
- ✓ Identification of Bottleneck
- ✓ Reduction of SMV, Manpower and Bottleneck Constraints
- ✓ Calculation of Sewing Line Performance
- ✓ Calculation of Sewing Productivity
- ✓ Calculation of Sewing Line Efficiency

Conclusion

From the above study it can be said that Sewing section should be well equipped to get an optimal result in bulk production. Sewing section is one of the biggest and important departments in the apparel industry. In the contest of garment sense, all other section will become in vain without it. Many of us treated it as the heart of garments manufacturing process. It is one of the most active parts in the garment industry. Thus, sewing function is considered an important operation in apparel manufacturing business. It's not quite an easy task. As we know all fabric cut panels become separated before making a perfect garment, later those cutting parts are joined together and make a quality garment for the customer or buyer with the help of various types of sewing machines, threads, needles, tools, and equipment. Sewing operators, technician, merchandiser and quality guys played an important role to make a complete garment.