

Sewing Faults



By: Muhammad Samiul Alam Mondal

Sewing Faults

By: Muhammad Samiul Alam Mondal

Introduction

Quality of product plays an important role in any industry. If a consumer does not like the quality of the product then the chances of sales become very less. Today, clothes play a very important role in the society. They help in creating an impression and define the human being in some aspects. Therefore it is very important to see to it that garments are made of high quality. In textile and Apparel Industry, sewing is one of the major processes in apparel production. It plays an important role in maintaining the quality of clothes. Hence it is important that all defects have to be avoided during sewing any apparel. In this paper, various faults or defects that can take place during sewing along with different remedies or methods to solve these defects are discussed.

Sewing Faults

Mainly there are three types:

- 1) Defects due to problem of stitch formation.
- 2) Defects due to fabric distortion.
- 3) Defects due to fabric damage along seam line.

1) DEFECTS DUE TO PROBLEM OF STITCH FORMATION

It can be classified as below:

Skipped/Slipped Stitch:

Where the stitch forming device misses the needle loop or the needle misses the looper loop a skipped or slipped stitch is formed. Skips are usually found where one seam crosses another seam and most of the time occurs right before or right after the heavy thickness.

Causes:

- a) Unsuitable Thread.
- b) Defected Needle.
- c) Wrong Needle Size.
- d) Poor feed of fabric.

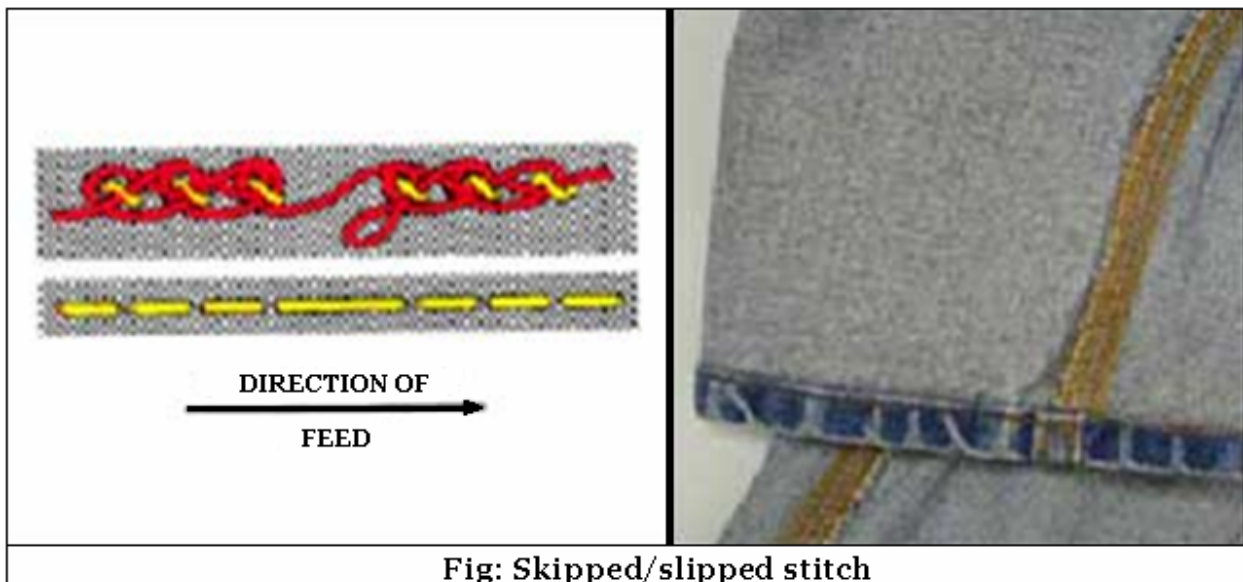


Fig: Skipped/slipped stitch

Remedies:

- a) Use right thread.
- b) Use right needle.
- c) Replace defect needle.
- d) Control threads tension.
- e) Use right feed mechanism.

Staggered/Wavy Stitch:

Causes:

- a) Comparatively thin needle.
- b) Blunt needle.
- c) Needle size and thread size not matching.

Remedies:

- a) Use blast sewing.
- b) Use right needle.
- c) Change blunt needle.

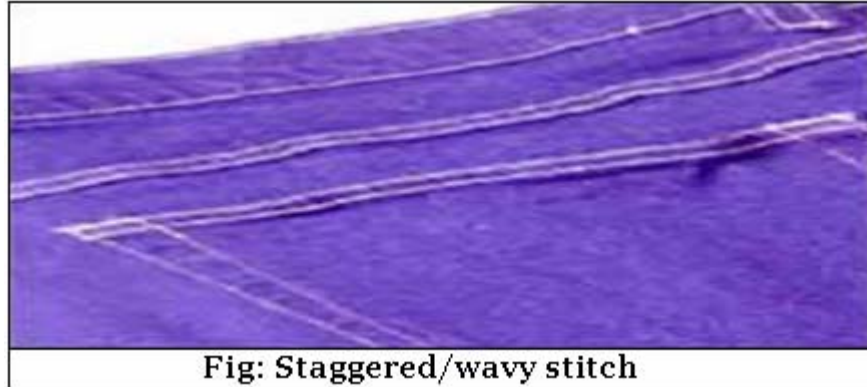


Fig: Staggered/wavy stitch

Unbalanced stitch:

Causes:

- a) Thread tension.
- b) Thread passes through wrong path.
- c) Case & positioning finger snagging.

Remedies:

- a) Control threads tension.
- b) Control threads twisting.
- c) Make bobbin case smooth & re-seal positioning finger.
- d) Lubricate thread.



Fig: Unbalanced stitch

Variable stitch density:

Causes:

- a) Sticky slippery fabric.
- b) Wrong feed mechanism.

Remedies:

- a) Use right feed mechanism.
- b) Adjust feed mechanism with fabric.

Thread breakage:

Causes:

- a) Chipping of metal surface of guard over hook & needle hole in throat plate etc with sharp hole.
- b) If thread fails to unwrap from thread package.

- c) If obstructed in the thread guider.
- d) Snarling before tension disk.

Remedies:

- a) Change bobbin /hook/throat plate etc with sharp hole.
- b) Set thread guides above thread package having a distance 2.5 times the length of thread package.

Broken Stitches:

Cause:

Where the thread is being broken where one seam crosses another seam (ex: bar tacks on top of waistband stitching, seat seam on top of riser seam).

Remedies:

- Where the thread is being cut, use a large diameter thread on operations.
- Make sure the proper stitch balance is being used.
- Use needles with appropriate needle point.
- At regular intervals on operations change the needles where they are occurring frequently.



Fig: Broken stitch



Fig: Loose tension

Loose tension:

Cause:

If needle thread & bobbin thread tension is not matched then it occurs.

Remedies:

- ▲ Tension should be matched.
- ▲ Operator should be careful.

2) DEFECTS DUE TO FABRIC DISTORTION OR PUCKERING

Generally pucker may arise along sewing line for following cases:



Fig: Puckering

- **Unequal Stretch on Fabric:**

Causes:

- a) It is formed due to limitation of feed mechanism.
- b) If 2/more plies fabrics are sewn together, 1 ply will be feed more than other & seam pucker create due to uneven stretch.
- c) Lacking of skill of operator.

Remedies:

- a) Improved feed mechanism,
- b) Skilled operator.

- **Fabric Dimensional Stability:**

Causes:

When 2/more layers of fabrics are sewn together & 1 layer shrink more than another after washing differential seam pucker is formed.

Remedies:

- i. Should test shrinkage of 2 types of fabrics before sewing.
- ii. Shrinkage difference must be less than 2%.

- **Extension in Sewing Thread:**

Causes:

- a) While sewing threads are subjected to tension & for tension, thread will be extended & after sewing when thread get chance of relaxation, then seam puckered may be allowed.
- b) Sewing threads extension low.

Remedies:

- a) By changing the sewing thread.
- b) Thread's tension should be kept as low as possible.

- **Sewing Thread Shrinkage:**

Causes:

- a) After sewing, if the sewing threads shrink, then it occurred.
- b) They are seen after washing or ironing.

Remedies:

- a) Synthetic thread may be used.
- b) Shrinkage of sewing thread must be equal to fabric shrinkage.

- **Fabric construction:**

Causes:

In a compact fabric of high EPI & PPI, while sewing of such fabrics, the threads are displaced around the needle & because of lack of space; pucker may be seen along the holes created by needles.

Remedies:

- a) Fine needle & thread must be used.
- b) Reduction of stitch density.
- c) By using chain stitch instead of lock stitch.

• **Mismatched Pattern:**

Causes:

- a) Occur due to design's fault.
- b) If 2 patterns pieces of unequal length are joined, then 1 is joined with another by creating connection, seam creates pucker.

Remedies:

- a) Skilled worker.
- b) Should be careful during addition.

3) DEFECTS DUE TO FABRIC DAMAGE ALONG SEAM LINE

There are two types of damage.

Mechanical damage

Causes:

- a) It is seen after washing and wear.
- b) For using bent blunt or damaged needle.

Remedies:

- a) M/c should be reduced.
- b) Application of lubricant.
- c) Needle should be free from fault.

Needle heating damage

Causes:

- a. As synthetic fabrics are melted at around 250° c of needle groove in needle & eye is closed.
- b. Temp in needle due to friction, damage both fabric & needle.

Remedies:

- a) Slowdown in sewing speed.
- b) Using finer needle.

Some Other Sewing Faults

Unraveling Seams:

Cause:

Generally occurs on 401 chain stitch seams where either the stitch has been broken or a skipped stitch has occurred. Unless the seam is re-stitched, this will cause seam failure.



Fig: Unraveling seam

Remedies:

- Proper machine maintenance and sewing machine adjustments have to be insured;
- For correct material handling techniques, observe sewing operators.

Re-stitched Seams

Where there is a "splice" on the stitch line. The seam does not appear to be 1st quality merchandise, if this occurs on topstitching. It is caused by:

- a. Thread breaks or thread run-out during sewing; or
- b. Cut or broken stitches during a subsequent treatment of the finished product (i.e., stone washing).

Remedies:

- Use a better quality sewing thread. To minimize sewing interruptions, this may include going to a higher performance thread specifically designed for that purpose.
- Insure sewing machine adjustments and proper machine maintenance;
- Make sure sewing machines are properly maintained and adjusted for the fabric and sewing operation
- Observe sewing operators for correct material handling techniques.

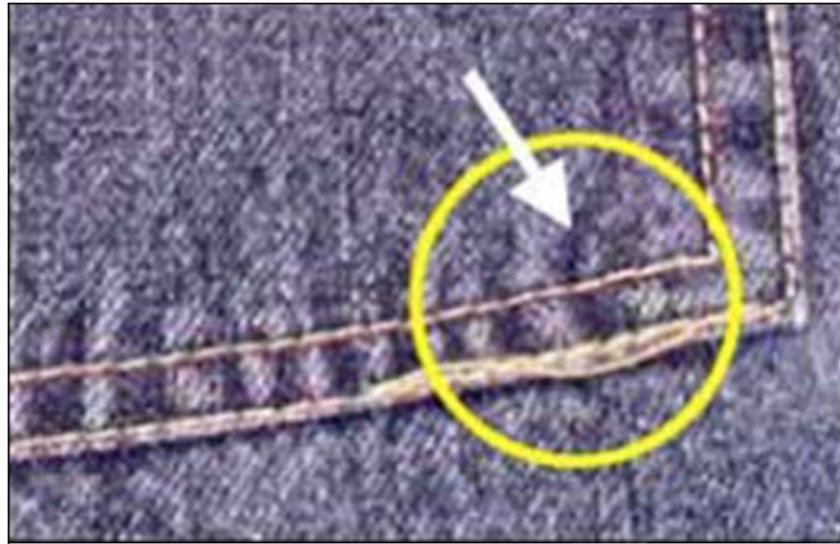


Fig: Re-stitched seam

Non Sewing Faults

- a. Defects occurred due to handling, for instance spoilage, staining etc.
- b. Defects occurring due to oil mark.
- c. Defects occurring due to dirty spot.

Size Measurement Faults

During manufacturing of garments size of some parts are measured as requirement. After assembling full garments is also measured so that the dimension of garments is ok. Faults occur in this time is very rare.

During size measurement the parts which are measured are –

- 1) Chest
- 2) Waist



Fig: Spot



Fig: Dirty spot

- 3) Shoulder
- 4) Sleeve length
- 5) Sleeve opening
- 6) Body length
- 7) Neck width
- 8) Front neck drop
- 9) Back neck drop
- 10) Collar Height
- 11) Arm hole
- 12) Placket length
- 13) Pocket length
- 14) Pocket width
- 15) Bottom part
- 16) Hem opening

Garment Twist

A rotation, usually lateral, between different panels of a garment resulting from the release of latent stresses during laundering of the woven or knitted fabric forming the garment. Torque or spirally may also be used to refer a twist.

References

- *Inspection report from*
 - *Beximco Fashion Ltd.*
 - *Tosrifa Industries Ltd. (Garment Division)*
 - *Patriot Group.*
 - *AKH knitting and Dyeing Ltd. (Garment Division)*
 - *DBL Group (Garment Division)*
 - *Norp Knit Industries Ltd. (Garment Division)*
 - *Advance Composite Textile Ltd. (Garment Divison)*
- *“Defects in Garments” by D. Gopalkrishnan and Arpita Nayak.*
- *“Garments Technology” by Mr. Omor Faruqe.*
- *fiber2fashion.com*
- *harrisscarfe.com.au/suppliers/pdf/inspectionprocedure.pdf*