

# Grey Fabric Inspection

## **Process Definition:**

Grey fabric inspection is the process of identifying weaving faults in the fabric just after the grey fabric production in the loom.

## **Equipment:**

1. Inspection table
2. Fabric inspection machine(Nazer, L 90P, Pakistan)

## **Key Accessories**

Nipper, Pointer, Cutter, Comb etc.

## **Safety measures:**

1. Smoking inside the inspection area is strictly prohibited.
2. Fire extinguishers are placed in the inspection area and all are trained to use it.
3. No fabric stack is placed in front of electric panels.

## **Inspection procedure**

### **Operation staff:**

Cloth doffer, cloth mender, inspector

### **Machine set up:**

Machine set up	Parameter range	Set value
1) Roller speed	100-1500 rev/hour.	590-600 rev/hour.
2) Light	N/A	Artificial light
3) Length measuring meter	N/A	Attached with the machine.

**Checks list before inspection:**

1. Machine parameters are set
2. Man power is made available
3. All the tools/accessories are made available
4. Fabric is made ready for inspection.

**Method:**

1. As the fabric reaches its “set cut length” in the loom the cloth is cut and the cloth roll is doffed off from the loom.
2. The cloth roll might also be cut and doffed off before the preset length as and when it is needed.
3. According to set rule the “cloth doffer” cuts and doffs off cloth roll and record the doff length in the loom quality/doffing card and also sticks a doffing stickers over the cloth roll for identification.
4. The roll is then unrolled over the inspection table where it is visually checked yard to yard (100%) against light and repaired or mended for any smaller extent of faults like protruding or projecting yarn, yarn naps, slubs, crack, floats, oil stains which can’t be repaired, the fault area is identified by putting yarn tails or laces in the selvedge area.
5. The mended fabric is then inspected over the grey fabric inspection machine visually against light in a pre-set speed (m/min).

**Investigation:**

In the inspection table the operator finds out faults in the fabric and analyses their intensity by visual inspection. Some of the common weaving faults are:

1. Stop mark
2. Pick faults, e.g.-miss pick and double pick.
3. Wrong density /drawing
4. Pattern or design break
5. Selvedge faults, e.g.-lashing in, cut selvedge.
6. Oil stain.
7. Crack, hole
8. Missing ends
9. Slubs.

As per standard, designed and set by Q.C. department of BTL, the intensity of some of the major and common weaving faults are marked with points (Numerical value ) ranging 1 to 6,6being the highest point for every faults. The defects found and the points given against them are recorded in the grey fabric inspection sheet in the case of solid dyed fabric and in yarn dyed fabric inspection sheet for yarn dyed fabric. The measured length, fabric sort, yarn lot, machine number etc. are also written down at the tail end of each fabric piece. Apart from these two forms another form called grey fabric inspection daily production sheet is filled to keep the record of total inspected grey fabric in the shifts in a day. At the bottom of this sheet total amount of rejection is also shown. All the data entered in this form are done according to various sort, construction and quality.

**Acceptance of fabric:**

- Any piece of fabric with the rating of total 36 points faults per 100 linear meter is allowed to pass as 'A' grade fabric. 36-50 is the point range for 'B' grade fabric.
- Any piece having more than 50 points is graded as 'C' which is rejected.
- A minimum of 20 meter 'A' grade fabric is allowed to pass with other long pieces. Pieces less than 20 meter is recorded as cut pieces.

**Rejection of fabric:**

Any area of the fabric that contains-

1. Objectionable (too frequent) presence of weaving faults like stop/starting mark and pick faults.
2. Oil or grease spot.
3. Crack/holes, floats and warp end miss etc. are cut to a separate pieces and recorded as rejected.

Any fabric having points more than 50 is graded as “C” and also rejected.

**Q.C. Sample test:**

Q.C department of BTL monitors all these checks and recording systems.

**Response to weaving faults:**

As a response to any weaving faults and rejection , cloth inspector directly contacts with the head or in charge of the weaving department along with his report for immediate remedial measures.

**Response to equipment faults:**

Faults	Response
1) Pin faults	To inform maintenance, Mechanical Engineer
2) Disturbance in roller tape	
3) Disturbance in motor belt	
4) Failure in the digital monitor	
5) Fuse malfunction	
6) Any electrical disturbance.	

**Machine area cleaning:**

Inspection area is cleaned twice a day by the helpers.

**Storage:**

The grey fabrics thus inspected are piled separately according to lot and sort/quality or construction and to store; store upon receiving the production sheet physically checks and receives the fabric.