



## **DRAFT TANZANIA STANDARD**

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### **Textiles – Glossary of terms pertaining to defects in fabrics**

DRAFT FOR STAKEHOLDERS' COMMENTS ONLY

**TANZANIA BUREAU OF STANDARDS**

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## 0 Foreword

This Draft Tanzania Standard on the glossary of textile terms pertaining to defects in fabrics was prepared by the Technical Committee on Fabrics under the direction of the Textile Divisional Standards Committee.

This Draft Tanzania Standard has been prepared with a view to eliminating ambiguity and confusion arising from different interpretations of the defects in fabrics by the manufacturers and the buyers. The standard may help the inspectors during the inspection and the manufacturers in taking suitable remedial measures for the elimination of defects at different stages of manufacture.

In the preparation of this Draft Tanzania Standard, assistance was derived from:

*Textile terms and definitions*, published by the Textile Institute, Manchester, UK.

ASTM Designation: D 2367-65, *Definition of fabric defects*, published by the American Society for Testing and Materials.

KS 08 – 207:1979, *Glossary of textile terms pertaining to defects in fabrics*, published by the Kenya Bureau of Standards.

## 1. SCOPE

This Draft Tanzania Standard prescribes definitions of textile terms pertaining to defects in fabrics and some 'principal causes for some of the defects are also given.

## 2. DEFINITIONS

### A

**Atmospheric fading** – The fading of colour of dyed or printed textile material by the action of certain acidic gases.

### B

#### Bad cover

- a) A fabric appearance in which the spaces between the threads are more pronounced than required. The amount of cover can be affected by loom adjustments, set, or count, or reed, or by the construction of the yarn used.
- b) The appearance of a finished fabric in which the surface is not covered or the underlying structure concealed by the finishing materials used to the degree required.

NOTE – Cloth with bad cover is also called "Reedy cloth (see also Reediness).

**Bad odour** – An objectionable smell such as some fats, oils, fermented starch, mildew, chemicals, or contamination of cloth from any other source.

**Bar** – A bar running across the full width of a piece that differs in appearance from adjacent normal cloth. It may be shady or solid in appearance and may or may not run parallel to the picks. This is a general term covering several specific defects as under:

- a) *Dye bar (shade bar)* – A bar due to the difference in shade developed during dyeing or finishing.

Principal causes – Adverse chemical effect on cloth during processing, contamination of weft yarn before weaving, etc.

- b) *Finishing bar* – A bar due to the uneven appearance of the fabric.

Principal causes – Machine stoppage during the middle of processing in case of woolen and worsted fabrics, etc.

- c) *Pick bar* – A bar due to differences in pick spacing.

Principal causes – Mechanical faults in the loom, such as faulty gearing in the take-up motion, bent beam gudgeons or eccentric beam ruffles, uneven bearing surfaces at some point in the let-off motion, defective emery roller, the eccentricity of take-up roller, etc.

- d) *Setting-on (starting place)* – An isolated narrow bar running parallel with the picks, starting abruptly and gradually shading away to normal cloth. This is due to an abrupt change in the pick spacing followed by a gradual reversion to normal pick spacing.

Principal causes – Restarting loom after pick finding, un-weaving or pulling – back, prolonged loom stoppage or any other reason, etc.

NOTE – These bars may be referred to as standing places or pulling back places if the precise cause is known.

- e) *Tension bar* – A bar due to differences in weft tension.

Principal causes – Defective shuttle, buffer, check strap or jerky picking motion, etc.

**Weft bar** – A bar due to the differences in the material count, twist, luster, colour, or shade of adjacent groups of weft yarns (see fig. 1).

**Bias (bow, skewness)** – A fabric condition in which warp and weft yarns do not keep at right angles to each other.

Principal causes – Improper stretch during scouring, dyeing, or finishing; unequal tensions on the warp threads during weaving, etc.

**Bleeding, colour** – See Colour bleeding”.

**Blurred patches** – See Coloured blotches”.

**Box mark** – A width wise fine line showing stained or injured weft due to the rubbing by shuttle when it rebounds from the box.

Principal causes – Improper adjustment of shuttle box front plate, dirty shuttle boxes, etc.

**Broken ends (Missing end)** – A narrow warp-wise void in a fabric caused by breakage of warp yarns during weaving (see fig. 2).

**Broken filaments** (fabrics made from man-made fibers) – See “Fussy”.

**Broken pattern** – Self-descriptive; applies to woven as well as printed design fabric (see fig. 3) (see also “Mispick” and “Missing end”).

Principal causes – Wrong tying of threads, inserting a pick in a wrong shed, incorrect lifting of warp threads, defective working printing machine, etc.

**Broken pick (Missing pick)** – A pick missing from a portion of the width of fabric.

Principal causes – Cut shuttle eyes, tension rings or pins, sharp weft-forks prongs, sharp feeler tip, rough boxes, top shuttle riding over weft of the bottom shuttle in dropbox looms; rough shuttle; shuttle not entering the box straight, poor pirn-winding; pirn held loose in the shuttle. Pirn not centered in the shuttle; rough pickers etc.

**Burst selvedge** – See under “Defective selvedge”.

## C

**Cannage** – See „Teardrop”.

**Chafes** – Rough places in a cloth where rubbing has occurred.

**Clip marks (Pin marks)** – Enlarged pinholes, tears, or shift marks along the selvedge of the fabric.

Principal causes – Undue strain on the fabric during stentering.

**Cloudy cloth** – A term applied to cloudiness in dyed fabrics caused by uneven dyeing or faulty treatment during finishing. Cloudiness may also be due to defects in the yarns (see also Colour blurred).

**Cockling** – The curliness or crimpiness in fabrics.

Principal causes – Irregular shrinkage in milling or scouring when yarns of different counts or quality, or with varying tensions are woven together, defective processing; etc.

**Colour bleeding (Bleeding colour)**

a) Loss of dye from coloured material when immersed in water or solvent leading to an obvious colouration of the liquor or adjacent material.

b) Spreading of dye from one portion of a coloured design to contiguous areas.

**Colour blurred** – Dyed fabric having a patchy appearance.

Principal causes – Presence of improperly dispersed and/or improperly dissolved dyestuff.

**Colour flecks** – A small length of coloured yarns appearing in the cloth due to unwanted contamination of yarn.

Principal causes – Coloured threads, fabric pieces, etc present in fibre bales; colour marking used for identification at various stages of production; coloured fluff floating in ring frame department, etc.

**Colour stains** – See under “Stains”.

**Coloured blotches** (Blurred or dark patches) – An unwanted blotch in a printed pattern.

**Crack** – A narrow streak running parallel to the warp or weft yarns due to pronounced opening between two adjacent yarns (see fig 4) (see also “Reed mark”, “Warp crack” and “Weft crack”).

Principal causes – Mechanical defects in the loom such as loose crank-arm or crankshaft bearing, clutch not grabbing promptly, loom banging off, too much warp-wise play in the reed, improper let-off, damaged or defective reed, etc.

**Crease** – A break or line in a fabric caused by an unwanted sharp fold.

**Crease (printing)** – A break in design caused due to crease or wrinkles in the body or the selvedge of the cloth during printing.

**Crepillage** – Undesirable pebbly appearance in a fabric.

Principal cause – Insufficient or uneven weft tension.

**Curled selvedge** – See under “Defective selvedge”.

**Cut selvedge** – See under “Defective selvedge”.

**Cut weft** – A defect caused by the use of a weak weft with a strong warp, showing as pinholes in the finished fabric.

## D

**Defective Selvedge** – A general term covering several defects as under:

a) *Bad dyeing or printing on the selvedge* – Self-descriptive.

Principal cause – crease on the selvedge during dyeing or printing.

b) *Curled selvedge (rolled selvedge)* – Turned over selvedge.

Principal causes – Incorrect balance of cloth structure between body and selvedge, tension difference between body and selvedge yarn, differential shrinkage between selvedge and body of the cloth, excessive weft tension, etc.

c) *Cut selvedge (Burst or torn selvedge)* – Selvedge with cuts or tear (see fig. 5).

Principal causes – Selvedge sticking to the take-up roller at the time of doffing, damage caused during shearing, cropping, or other processes; etc.

d) *Distorted selvedge* – A selvedge that does not vary in width but which is not straight.

Principal cause – Uneven stretching during processing.

e) *Loopy Selvedge* – Selvedge with irregular weft loops extending beyond it (see Fig. 6)

Principal causes – Inadequate tension of weft yarn, wrong loom timing, catching of weft on race board and shuttle box, etc.

e) *Pulled in-selvedge* – Selvedge with edges pulled in.

Principal cause – Isolated tight picks.

g) *Rugged or rugged selvedge* – A wavy selvedge showing indentations or corrugation at the edges.

Principal cause – Variation in the tension of selvedge ends.

h) *Scalloped selvedge* – An abrupt narrow place in the selvedge of the finished cloth.

Principal cause – Clip of stentering machine failing to grip the selvedge.

i) *Slack selvedge* – A selvedge that is slack than the body of the fabric. This may cause cut, torn, or burst selvedges during subsequent processing (see fig. 7).

j) *Tight selvedge* – A selvedge that is tighter than the body of the fabric. This may cause cut, torn, or burst selvedges during subsequent processing.

Principal causes – incorrect balance of the cloth structure between the body and the selvedge, selvedge yarns woven at high tensions, etc.

k) *Uneven Selvedge* – Selvedges that vary in width.

Principal causes – Variation in weft tensions, lack of control on the number of selvedge ends or tension thereof, etc.

**Doctor stain** – See under "Stains".

**Double ends** – More ends weaving as one than required due to the wrong draw (see fig. 8).

**Double pick** – The insertion of more picks than required in the same shed during weaving. This fault may appear as a line across the width of the cloth.

Principal cause – Restarting of loom without finding correct shed when weft breaks.

**Dyestuff stain** – See under "Stains".

## F

**Fingermark** – An irregular spot showing variation in picks per unit length for a limited width.

Principal causes – Spreading of warp ends while loom is in motion, pressure upon cloth between reed and take-up roller, etc.

**Float** – a place in the fabric where warp and weft yarns escape the required interlacement (see fig. 9).

Principal causes – Matting-up of broken ends, large knot or waste in warp threads, defective warp tension, defective shuttle flight etc.

**Fuzzy (hairy, broken filament)** – Fibrous appearance of a cloth. This might aggravate the cloudiness of the cloth.

Principal cause – Presence of abraded yarns.

## G

**Gas fading** – See atmospheric fading.

**Gout** – Foreign matter, usually lint or waste, accidentally woven into the fabric (see fig. 10).

## H

**Hairy** – See “Fuzzy”.

**Hang pick** (Pick hang) – A pick that is out of line for a short distance, producing a triangular hole in the fabric.

Principal cause – Incorrectly tied knots.

**Hanging threads (printing)** – Loose threads in the face of a printed fabric causing break of patterns (see also loose threads”).

**Hard size** – Hard gummed specks are visible on the surface of the cloth.

Principal cause – Use of cold or old size.

**Harness skip (warp skip)** – Warp yarn appears more or less continuously on the surface of the fabric due to non-interlacement with weft.

Principal causes – Healed or harness eye broke, the irregular height of harness, improper timing of heads, broken dobby peg or defect in the jacquard, etc.

**Holes** – Self-descriptive.

Principal causes – Careless handling of cloth roll at doffing; rough take-up roller, defective temples, improper singeing, adverse effect of chemicals during finishing, insect damage, some warp and weft floats or slubs which get milled up in scouring and form a thick place on the cloth getting cut on the shearing machine, removal of foreign matter sticking or entangled in a piece of fabric, etc.

## J

**Jerk-in weft** – See Weft trail.

## K

**Kitties** – Small particles of trash motes or leaf bits visible on the surface of the cloth.

**Knots** – Big knots of warp or weft yarns present in the cloth.

## L

**Lashed-in weft** – See Weft trail".

**Listing (shading)** – A gradual variation in a tone or depth of shade.

**Loopy selvedge** – See under Defective selvedge".

**Loose threads** – Threads loose on the face of the fabric (see also „Hanging threads).

Principal cause – Long and short ends of warp not removed after piecing up.

## M

**Mending** – A process of repairing broken threads in a fabric.

**Mill rigs** – Creases produced in milling.

**Mispick** – A pick placed in the wrong shed of the warp (see also „Broken Pattern").

**Missing end** – See Broken end".

**Missing pick** – See Broken pick".

**Mixed end** – See Wrong end".

**Mixed weft** – An unintentional mixing of two or more lots or types or both of weft yarns.

NOTE – This may lead to the formation of weft bars.

## N

**Neppy fabric** – A fabric having neps on the surface due to neppy warp or weft yarns or both.

## O

**Off-side printing stain** – See under Stains".

**Oil or grease stain** – See under Stains".

**Oily warp** – See under Stains".

**Oily weft** – See under Stains".

**Overlapping pattern** (Printing) – Self-descriptive.

## P

**Perching** – A process of examining cloth for defects in open width, drawn over roller or perch against good light.

**Pick bar** – See under Bar".

**Pick hang** – See Hang pick".

**Picking-out mark** – A weft-wise band or bar characterized by fuzzy appearance due to the pulling out of the faulty picks and inserting fresh picks.

**Pin marks** – See Clip marks”.

**Pulled-in selvedge** – See under Defective selvedge”.

**Pulled-in weft** – See Weft trail”.

**Pulling** – Back laces – See under Bar”.

## R

**Ragged selvedge** – See under Defective selvedge”.

**Reed mark** – a pronounced warp-way crack in a woven fabric caused by damage or defective reed (See fig 11) (see also crack”).

**Reediness** – Fine cracks between groups of warp end appearing uniformly across the cloth (see fig. 12).

Principal causes – Faulty timing and setting of the loom, faulty denting in the reed, unevenly manufactured reed, etc.

**Ruled selvedge** – See under Defective selvedge”.

**Rolled threads** – Over-riding of contiguous threads in case of fabrics where double drawn ends or double picks are used.

**Rope mark** – Long irregularly shifting longitudinal markings on dyed or finished goods, caused during wet processing of fabric in rope form.

Principal causes – Formation of creases along which abrasion or felting may occur, imperfect penetration or circulation of the processing liquors, etc.

**Rugged selvedge** – See under Defective selvedge”.

**Rust stain** – See under Stains”.

## S

**Scalloped selvedge** – See under Defective selvedge”.

**Seam Mark** – A pressure mark in the cloth produced by the thickness of a seam during scouring, dyeing, or finishing operations.

**Seconds** – Textile products which owing to some faults or imperfections do not meet an agreed standard of quality.

**Section mark** – Bands or bars running lengthwise in a piece of fabric at regular intervals in a part or full width of the fabric.

Principal cause – Difference in tension of sections during sectional warping.

**Selvedge marks** – More or less regular pressure marks in the body of the finished cloth along the selvedge.

Principal cause – Rolling or folding of selvedges during finishing operations.

**Set mark (Start-up mark)** – See under Bar”.

**Setting-on place** – See under Bar”.

**Shade Bar** – See under Bar”.

**Shading** – See Listing”.

**Shaft-hold** – A band of floats across the full width of the cloth.

Principal cause – Healds shafts held up on down due to defect in shedding motion.

**Shiner** (Fabrics made from man-made fibres) – A warp or weft thread, which is more lustrous than its adjacent thread.

Principle cause – Excessive tension applied to yarn during processing.

**Shuttle fly** – A portion of the weft thread not properly interlaced with the warp (see fig. 13) (see also „Float”).

Principal cause – Shuttle flying over some of the warp ends of the top layer of the shed.

**Shuttle marks** – Width wise marks due to abrasion of warp yarns by the shuttle.

Principal causes – Faulty shedding or picking motion.

**Slack end** – A warp thread or part of it woven in the cloth under insufficient tension.

**Slack pick** – A pick woven in the cloth under insufficient tension.

**Slack selvage** – See under Defective selvage”.

**Slough-off** – Bulk of weft yarn which slips off the pirn and gets entangled in the fabric.

Principle cause – Loose winding of the yarn on to the weft pirn.

**Slub** – Abnormally thick places of varying lengths in a yarn present in the cloth.

**Smash** – Ruptured cloth structure characterized by many broken warp ends and floating picks (see fig. 14).

Principle cause – Shuttle trap, breakage of one or both heald straps causing the heald to drop and damage the warp, defective picking motion etc.

**Specky fabric** – Dyed fabric which has small specks of white colour or of lighter shade appearing on the cloth.

Principle causes – Presence of oil spots, neps or vegetable matter, fibrillation of silk filaments, etc.

**Standing places** – See under Bar”.

**Starting places** – See under Bar”.

**Stains** – It is a general term covering discolouration, spot or mark on fabrics. Some of the principal types are enumerated below:

- a) *Colour stains* (Dyestuff stain) – An unwanted coloured mark on a fabric.
- b) *Doctor stain* (streak) (Printing) – A wavy white or coloured streak in the warp direction on printed cloth. This is caused by damaged or incorrectly set doctor blades on the printing machine, presence of dried colours or impurities in the emulsion.
- c) *Off side printing stain* (Printing) – Colour stain on the back of the fabric due to excessive penetration of dyestuff during printing.
- d) *Oil or grease stain* – Conspicuous yellow, black or brown spot on cloth due to the presence of oil or grease.
- e) *Oily warp* – Oil or grease stain appearing in warp yarns in a fabric.

- a) *Oily weft* – Oil or grease stain appearing in weft yarns in a fabric.
- b) *Rust stain* – Brown or black stain on fabric due to rust.

Principal causes – Use of rusty reeds, water dropping from rusty pipes, careless pilling of damp cloth on stillages with rusted nails, etc.

**Sticker** – A distortion in the weave characterized by tight and slack places in the same warp yarn of a fabric.

Principal causes – Movement of warp yarns restricted due to some knot or slub catching lease-rods, drop wires, healds, reeds or due to rolled ends, etc.

**Streak** – See under Stains".

## T

**Tacking cut** – Small sewing holes along the selvedge of the fabric.

NOTE – Tacking is sewing of cloth along edges to protect face of fabric during wet processing.

**Tail ends** – Uncut weft-ends protruding out of the selvedge, more common in automatic looms.

**Tear drop (Cannage)** – A fabric condition characterized by short elliptical deviations of one or more adjoining picks. Tear drops are most pronounced in taffetas and grosgrain weaves.

Principal causes – Insufficient warp tension, incorrect harness timing, over-sized warp, uneven penetration of sizing solutions, etc.

**Temple mark** – Holes or surface disturbances along the selvedge of a fabric due to bad or improperly adjusted temples (see fig. 15).

**Tender spots** – Places abnormally weakened during any of the operations through which the cloth passes. There are latent defects which cannot be detected in normal inspection.

**Tension bar** – See under Bar".

**Thick end** – See Wrong end".

**Thick place** – A bar across the width of a fabric due to closer spacing of picks or due to coarser weft yarns (see also under Bar").

**Thin place** – A bar across the width of a fabric due to wider spacing of picks or due to finer weft yarns (see also under Bar").

**Tight pick** – A pick woven in the cloth under excessive tension.

**Tight end** – A warp yarn or part of it woven in the cloth under excessive tension.

**Tight selvedge** – See under Defective selvedge".

**Torn selvedge** – See under Defective selvedge".

## U

**Uneven dyeing** – A fabric that shows variation in shade throughout the piece at regular or irregular intervals.

Principal causes – Faulty dyeing methods or materials, the difference in count or twist in yarns in the fabric, etc.

**Uneven selvedge** – See under Defective selvedge”.

**Uneven shrinkage** – A wavy warp-wise condition in the cloth which prevents it from lying flat on a horizontal surface.

**Uneven surface** (uneven cover, uneven napping, uneven shearing) – An irregular surface characterized by non-uniformity in the physical configuration of the yarns or fibres making up the surface of the cloth.

**Uneven width** – Variation in the width of the fabric.

Principal causes – Uneven weft tension during weaving, defective stentering, etc.

## W

**Warp crack** – See „Crack”.

**Warp snarls** – A short length of warp yarn that has twisted on itself owing to high twist or insufficient tension. The snarling may occur during or prior to the weaving process.

**Warp skip** – See Harness skip”.

**Warp streaks** – Short, narrow warp-wise bands which are characterized by some difference in shade or luster from the adjacent normal warp.

Principal causes – Ends having different dyeing affinities, different dyed lots getting mixed up in the warp, rough healds or drop-wires, sharp or cut section on lease reed of warper, variation in count or twist of warp yarns, portions of warp yarns stained with oil or grease which resist-dyeing, etc.

### Water-mark

- a) An unwanted ripple effect produced by the pressure of the surface of one layer of fabric on another.
- b) An unwanted light mark on a fabric caused by contamination with water prior to tinting or dyeing on a pad-mangle, resulting in a reduction in uptake of dye liquor.

**Wavy cloth** – A cloth that does not lie flat on a cutting table (see also „Cockling”).

Principal causes – Sections of tight or loose yarns either in warp or weft.

**Weathered piece** – Fabric with discolouration or soil marks on its edges or folds produced due to exposure during storage or transit.

**Weft bar** – See under Bar”.

**Weft crack** – See “Crack”.

**Weft curling** – See Weft snarls”.

**Weft kinks** – See Weft snarls”.

**Weft snarls** – (Weft curling, Weft kinks) – A short length of weft yarn that has twisted on itself owing to high twist or insufficient tension. The snarling may occur during or prior to the weaving process (see fig. 16).

**Weft Trail (Pulled-in weft, Lashed-in weft, Jerk-in weft)** – An extra yarn dragged into the cloth with regular pick (see fig. 17).

**Wrong denting** – Wrong order of drawing the ends through the reed.

**Wrong draw** – Wrong order of drawing the ends through the harness or healds.

**Wrong ends – (Mixed end, Thick end)** – A thread which differs in material, count filaments twist, luster, colour or shade from the adjacent normal thread (see also „Broken pattern”).

NOTE – In woven or warp-knitted fabrics, the defect would appear as a vertical line running warp-way where as in weft knitted fabrics the defect would appear as a horizontal strip running across the fabric and repeated at regular intervals.

**Wrong weft** – See under Bar”.

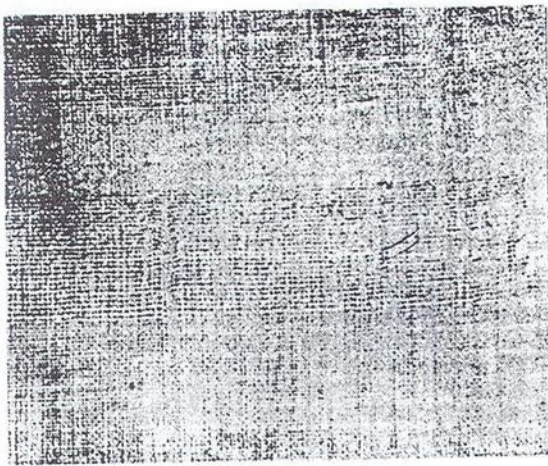


FIG. 1. WEFT BAR

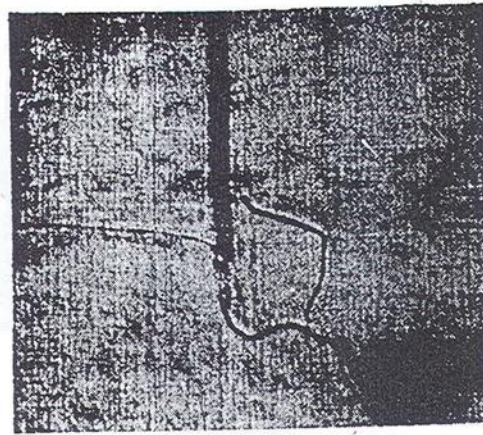


FIG. 2. BROKEN ENDS

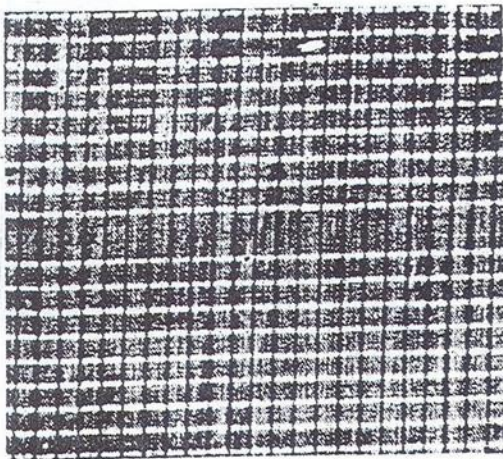


FIG. 3. BROKEN PATTERN

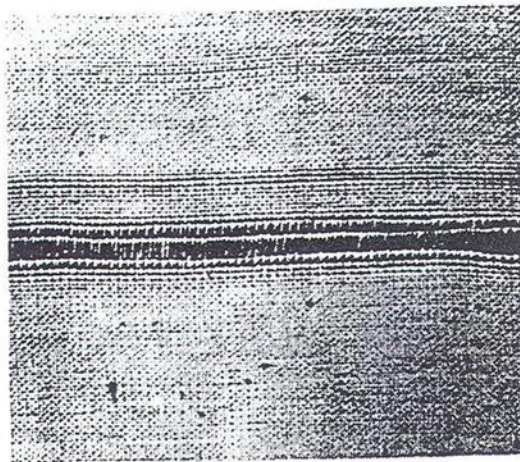


FIG. 4. CRACK



FIG. 5. TORN SELVEDGE

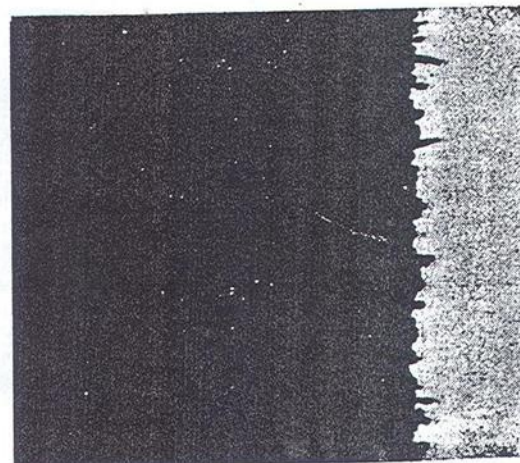


FIG. 6. LOOPY SELVEDGE

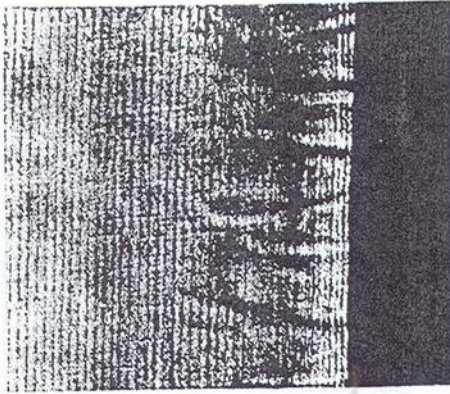


FIG. 7. SLACK SELVEDGE

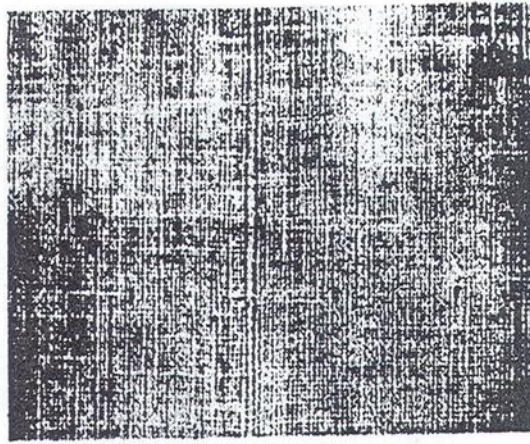


FIG. 8. DOUBLE ENDS

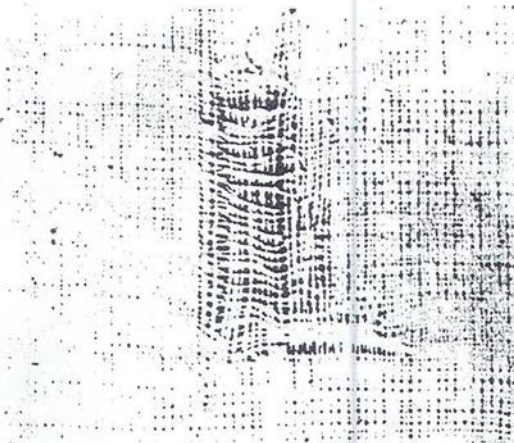


FIG. 9. FLOAT

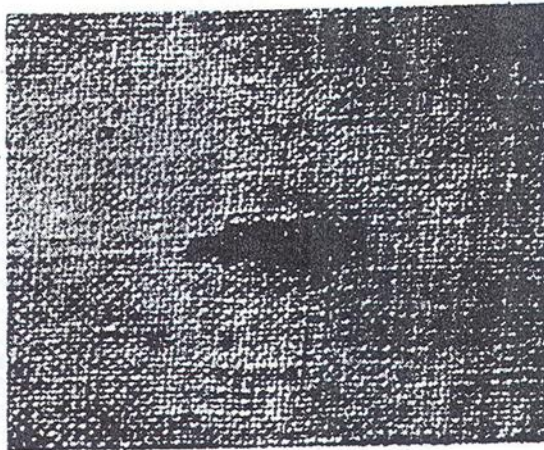


FIG. 10. GOUT

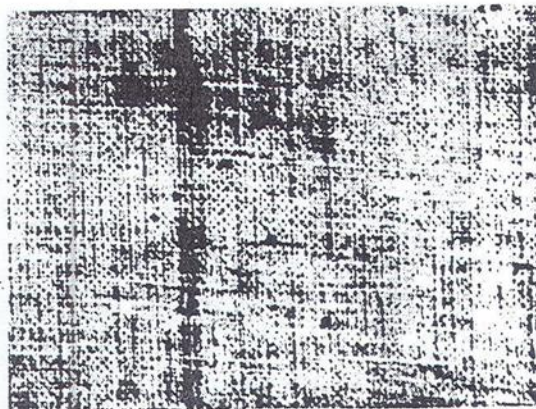


FIG. 11. REED MARK

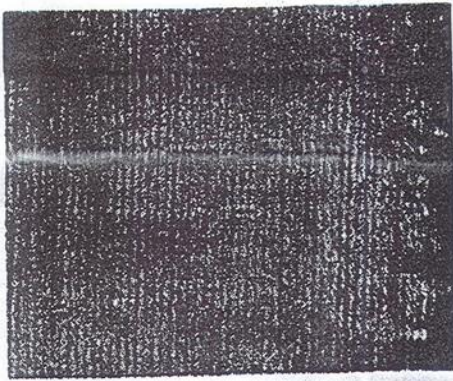


FIG. 12. REEDINESS

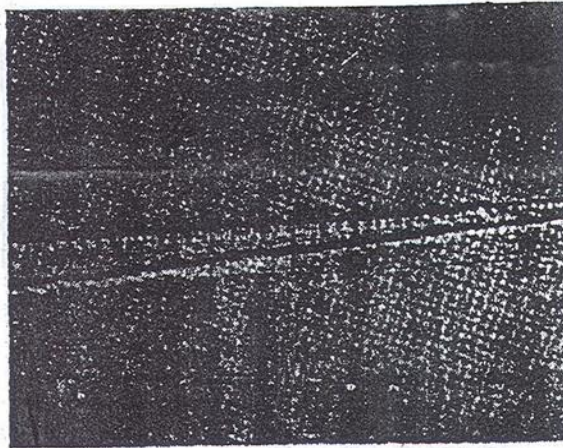


FIG. 13. SHUTTLE FLY

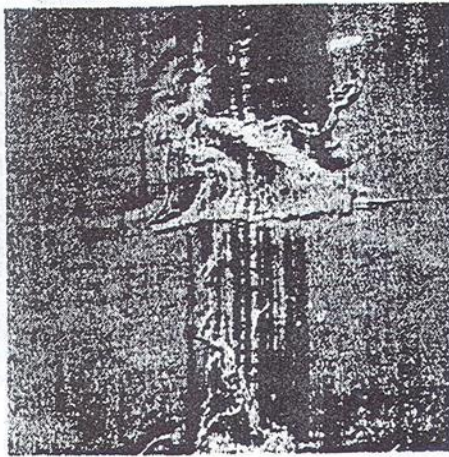


FIG. 14. SMASH

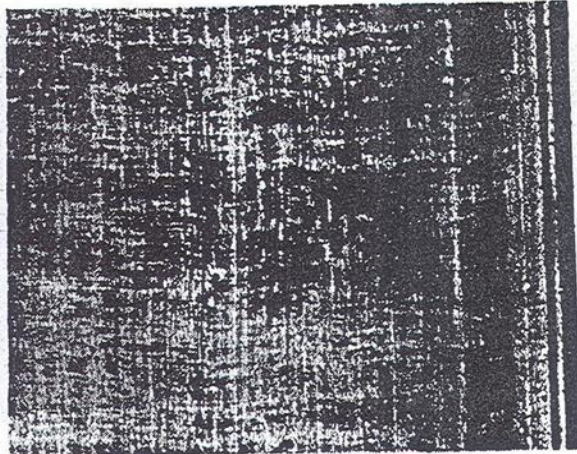


FIG. 15. TEMPLE MARKS

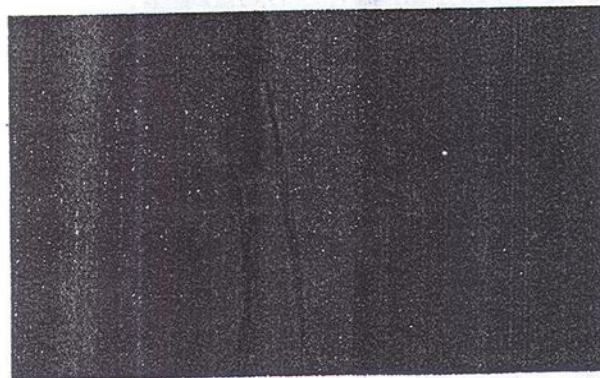


FIG. 16. WEFT SNARLS

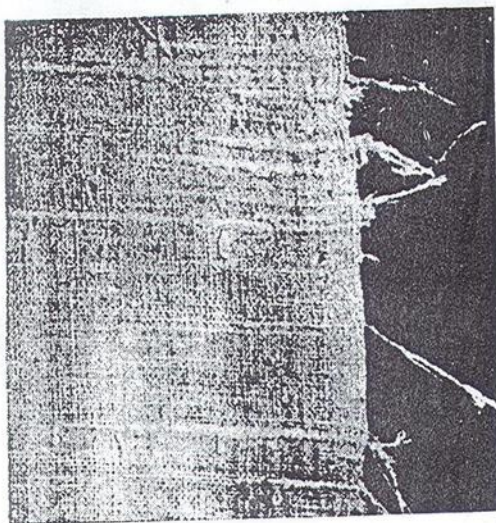


FIG. 17. WEFT TRAIL

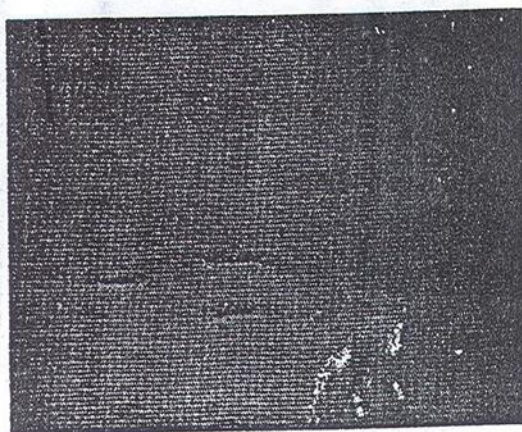


FIG. 18. SLUG

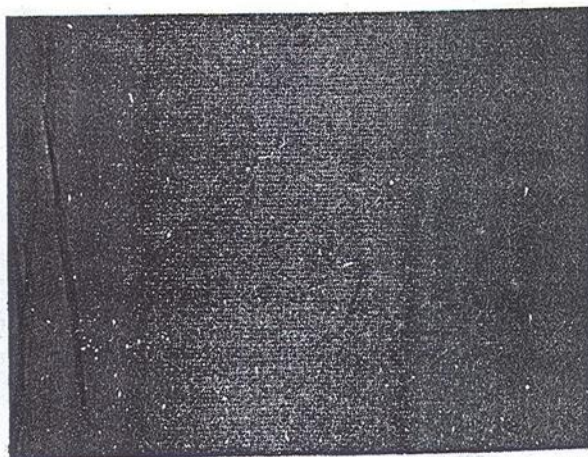


FIG. 19. CREASE

