
UNIT 4 LEATHER CUTTING BY MACHINE

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4.1 INTRODUCTION

Press cutting is one of the methods of Upper cutting. This method is much popular in industry in comparison to hand cutting as this increases the production per hour. For leather upper cutting we use swing beam press. Machine cutting is done with the cutting dies. These are also called knives. This method of cutting is more cost effective if the order of production is in large quantity, e.g. 1000 pairs per day and so on.

Objectives

After studying of this unit, you will be able to

- read the cutter's ticket,
- cut various shape, upper and lining components, from different materials using dies and swing beam press as per the given specification,
- assess the faults of machine cutting,
- assess the faults of cut components as per the given specifications,
- cut the components pair wise,
- bundle the components pair wise,
- to organize the work station and do the work effectively,
- maintain the machine cutting tools, and
- know the safety hazards concerned with press cutting.

4.2 THEORY

Given a work ticket for five pairs of any uppers the participant has to select the correct type and amount of material as indicated on the work ticket and the dies of upper and lining components of correct size. The participant has to cut then five pairs of upper components from corrected grain leather by swing beam press using the appropriate dies, within the specified cutting allowance. They have to cut lining from synthetics and fabrics and interlining components also.

4.3 MACHINES AND EQUIPMENTS

Before commencing the practical exercises you must have the following required materials with you :

- Upper leather in required quantity.

- Lining leather and fabric in required quantity.
- Interlining as per requirement.
- Cutting dies for upper and lining.
- Cutting knife.
- Rubber for bundling.
- Silver marking refill for pair numbering.
- Packing polythene bag.
- Cutters ticket – The entry of the sizes the pairs to be cut and the quantity received must be entered in the cutters ticket.

4.4 PROCEDURE

- Closely inspect the leather for any defects. These include surface marks, flay cuts and loose offal.
- Mark these areas for easy identification.
- Check the flesh side of the leather for warble holes and flay cuts.
- Check for the correct line of tightness, as this will vary slightly from skin to skin.
- Check the components to be cut, make sure that all parts are there. (In case any pattern is missing then it is very difficult to match the grain at a later stage – so first check for the pattern).
- Ensure that the workbench is clean.
- From your cutting sheet select the largest size patterns.
- Select your skins (Large skins for large sizes).
- A clicker would also have a set of small size patterns to run in.
- Cutting starts normally from the backbone and we move towards the belly in squarely manner.
- Cutting of component is done as per the quality specification keeping in mind the quality region and lines of tightness.
- Bundling of cut components is done as follows :
 - (i) Elastic bands are paced on each group of the components.
 - (ii) Then completed five pairs are bundled securely together.
- Leather area saved must be measured using a grading tool and the area is to be written down on flesh side of the leather.
- The instructor must enter the saved area in the cutters ticket.
- The cut components are bundled properly.
- Similarly lining to be cut as per the specification, bundle and submitted with the upper components.
- As the cutter cuts, he must ensure quality is acceptable.
- Interlocking of patterns to be done most economically to avoid wastage.
- Large wastage between cuts is not acceptable.
- All pieces should cut to the exact shape of the pattern.
- Cut the components out side the beam press; make sure the press is completely set.

4.5 INSPECTIONS

Quality Assessment

The cut component must be checked for quality by the cutter himself/herself before presenting it to the instructor. Following guidelines are given :

- All pieces should cut to the exact shape of the pattern.
- The upper components must be cut as per the line of tightness.
- The upper components must be cut as per the quality region.
- Upper components to be cut as per the specification.
- Similarly lining to be cut as per the specification.
- No visible defects on the components.
- No deep defects in the allowance area as it weakens the material.
- Top line should be tight.
- Complete number of pairs as per the cutters ticket.

4.6 RESULT

Five pairs of upper and lining components cut as per the specification and bundled pair wise should be presented to the instructor. They shall match the specifications given in the cutters ticket.

4.7 PRECAUTIONS (SAFETY)

- (i) All clicking presses should only operate with the use of both hands.
- (ii) Only the actual knife being used should be on the clicking board.
- (iii) Scissors and hand knives should not be allowed on the clicking board.
- (iv) Elastic bands should not be flicked around the room.
- (v) Leather scrap should be placed in the rubbish bins and not allowed to fall around peoples' feet.
- (vi) Do not attempt to do your own electrical repairs.
- (vii) Clicking knives should not be struck on the edge of the beam to release them, from the board, they can spring up.
- (viii) When using the grindstone for making or shaping hand-cutting knives use safety. Do not use a grindstone without glasses.
- (ix) Long hair or loose clothing should not be allowed near machinery.
- (x) Care should be taken when handling knives, many have sharp edges. Pins, etc. which can cut your fingers.
- (xi) Never place your hands or fingers under the beam of the press to release a knife.
- (xii) Do not have anything on the clicking board after you turn off the machine. When the power is turn off the beam automatically lowers itself on to the cutting board.

FURTHER READINGS

Swayam Siddha manual on *Press Cutting*.

Swayam Siddha manual on *Cutting Corrected Grain*.

PRACTIAL FOR UPPER CUTTING

Unit 3 is related to cut complete pairs (quantity as per the instructions given by the instructor) from full grain leather (bull calf and glazed kid) by hand held knife.

Unit 4 is devoted to cut complete pairs of upper and lining from corrected grain leather by machine.

Further readings recommend some titles for reference, given at the end of the block. The block for further readings also should help you to fill in the gap if any.