

SHEET METAL SHOP SCOOP MAKING

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Ex No. 9

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Aim

To make a big scoop of given specification from a sheet metal piece

Application

It is a device use to carry, pick and transfer the things.

Material specification

Material: Galvanized iron

Sheet of dimensions: 300mm X 350mm thickness 33 gauge

Tool Required

1. Steel rule 2. Scriber 3. Straight snip 4. Stake 5. Anvil 6. Mallet

Sequence of operation

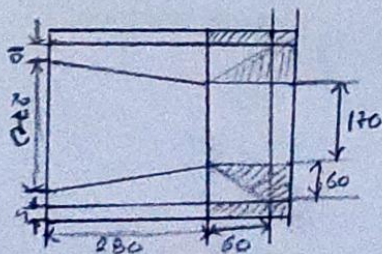
1) checking 2) layout marking 3) shearing 4) Polding 5) Locking and finishing

Checking:

Check whether the given sheet is having its dimension as 300mm X 350mm. If the dimension is excess trim off using hand shear. If it is less change the given sheet

Layout Marking:

- 1) Place the given sheet over working table, so that side of dimension 350 is horizontal
- 2) From reference point to draw the vertical line 280mm, 60mm and remaining portion 10mm for hemming allowance (Given interval 280mm for base and 60mm for top height)
- 3) Now place 300mm side, first to be draw 5mm line both sides. These line provided for hemming. Next to be marked 10mm both side
- 4) On the 280mm line to be mark both side 60mm point. (Note: should be mark after hemming line.) Then draw vertical line at both points. Connect the points above and the points below
- 5) Now you get square on top corner both side and draw the diagonal line from the bottom
- 6) Draw Hatch line shown in figure



unwanted portion

All measurements in MM

Shearing:

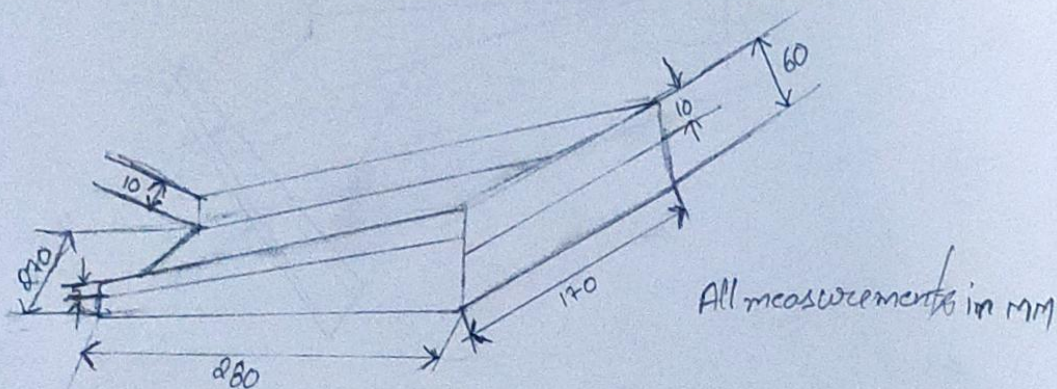
- 1) Remove the unwanted portion shown in the layout with the help of snip
- 2) while cutting, cut along the proper line and remove the unwanted portions

Folding

- 1) Keep the pattern over square and fold the 5mm hemming portion with 180° towards marking side
- 2) Then fold 60mm height portion with 30° opposite to marking side
- 3) Again fold two slant lines opposite to the marking side
- 4) The scoop is having two incomplete corners. To align the corner of stake, fold the triangular shape both side with help of mallet

Locking And Finishing

- 1) Fold the remaining portion 180° outwards using stake and mallet to lock the folds.
- 2) To make perfect shape using mallet
- 3) check for the dimension



PRE LAB QUESTIONS

- 1) What type of material used in sheet metal generally?
Steel mostly coated with tin or zinc galvanized steel
- 2) Explain the use of scoop
It is a device used to carry, pick and transfer the things
- 3) What is the minimum and maximum sheet metal thickness?
0.3mm to 3.2mm is minimum & maximum thickness of sheet metal
- 4) Mention the least count for steel rule
0.1mm
- 5) Define layout
The way in which the parts of something are arranged

POST LAB QUESTION

1) What is the purpose of anvil?

The Anvil is used for shaping and hemming sheet metal.

2) Which tool is used for measuring the thickness of sheet metal?

Sheet metal Gauge

3) Mention the diagonal angle in scoopmaking layout?

90°

4) At what stage the sheet metal is called as pattern?

After completely marking layout, and cutting the unwanted portion it is called pattern.

5) What is a G.I sheet? Why it is called so?

Galvanized iron sheet or steel sheets which have been coated with zinc.

RESULT

Thus the required scoop is made out of the given sheet metal piece as per the specification.

