

Expt 03

SMITHY - CHISEL MAKINGAIM:

To make a chisel of given size by hand forging.

APPLICATION:

Chisels are special kind of cutting tools that widely used to sharpen, shape, reshape & carve hard materials like metal, stone or wood.

SUPPLIED MATERIAL SPECIFICATION:-

Mild steel rod of diameter 12mm & length 85mm.

TOOLS REQUIRED:

1. Caliper and steel rule.
2. Anvil.
3. Bolt header.
4. Tongs.
5. Sledge hammer.
6. Bottom swage.
7. Smoother.
8. Hand hammer.
9. Hot chisel.

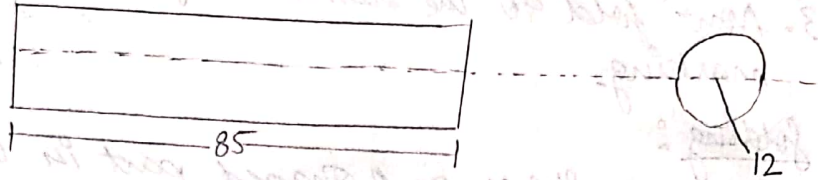
WORKING STEPS:

- I Preparing.
- II Upsetting.
- III Swaging.
- IV Finishing.
- V Checking.

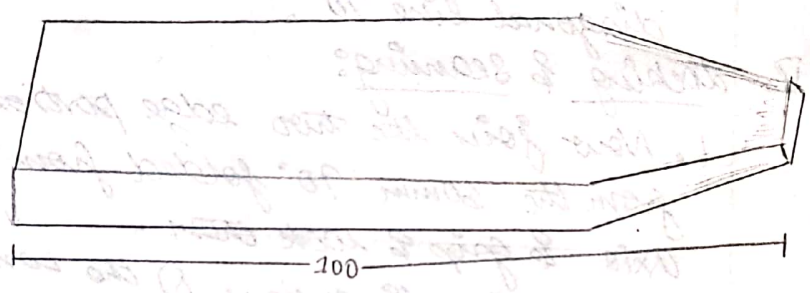
PROCEDURE:

1. Measure the dimension of given work piece.
2. Place the work piece inside the furnace & heat upto  $1000^{\circ}\text{C}$ .
3. Remove the work piece & place it on anvil.
4. Strike all the sides of work piece using sledge hammer to get square shape.
5. Heat the work piece again to red hot.
6. Strike the portion of the work piece on water and cool it.

1. Take the pattern over square block and the  
 the line as per pattern I already marked  
 with edge of the cloth  
 2. Fold the cloth marking 10 cm. on outside / 20  
 sides of cloth pattern in inner direction  
 3. Now fold the cloth pattern from bottom



1. Make a shape as a trapezoid but in one side  
 it is in one square  
 2. Now use a straight line of unmarked portion  
 (A-B-C)  
 3. Now fold the two sides of cloth from the



4. Now fold the two sides from A-B-C  
 5. Check for dimensions of the required shape  
 then the required shape is made out of the  
 given cloth material here.

RESULT :

Thus the required chisel is made out of the given stock.