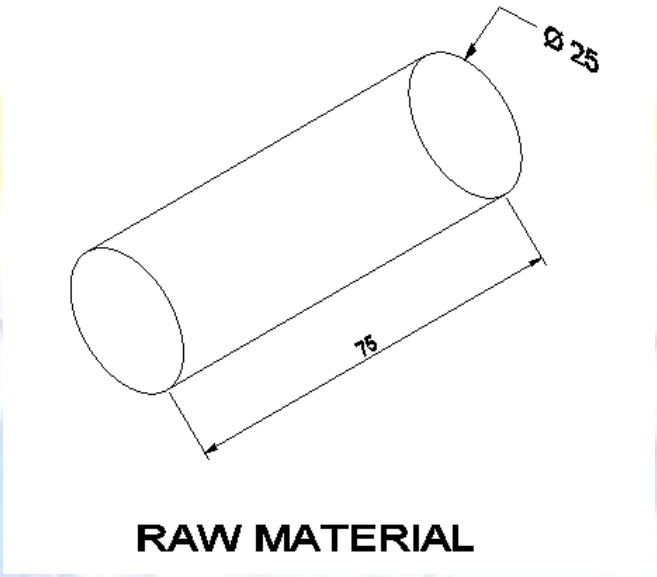
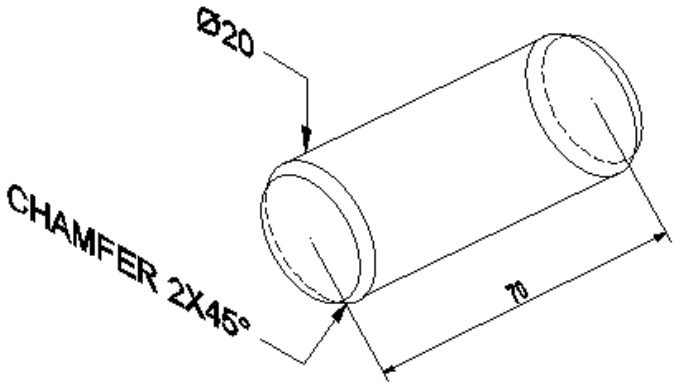
TURNING, FACING AND CHAMFERING



RAW MATERIAL



FINISHED WORK PIECE

ALL DIMENSIONS ARE IN mm.

TURNING, FACING AND CHAMFERING

Ex no :
Date :

Aim:

To make the turning, facing and chamfering on the given metal work piece to get the required dimension.

Application:

Mechanical industries

Material Supplied:

Mild steel rod of 25 mm diameter X 75mm length

Tools required:

1. Steel rule 2) Vernier caliper 3) Center lathe M/C
4. Single point cutting tool 5) Chuck key 6) Tool post key
7) Spanner 8) Cleaning brush

Sequence of Operation:

1) Checking 2) Work piece setting 3) Tool setting 4) Facing
5) Turning 6) Chamfering

Working Steps:

1) The given work piece is checked for its given dimensions
2) The work piece is hold in the three jaw chuck. Chuck key is used to tighten the job rigidly ensuring centering of the work piece.

3) The single point cutting tool is fixed in the tool post of the lathe machine using Tool post key and spanners. Sometimes the packing material like hacksaw blade pieces, thick sheet paper materials can be used to set the tool appropriately pointing towards the center of the job.

4) Facing operation is done to obtain the required length of the job.

5) Turning operation is done to obtain the required diameter of the job.

6) Chamfering is done to remove sharp edges and corners of the work piece by keeping the tool at an angle of 45^0 to the lathe axis.

7) Finally the work piece dimensions are checked to conform to the specification given in the drawing.

Pre Lab Question:

1) Define lathe?

2) List out the types of lathe?

3) Mention the main parts of lathe?

4) Mention different operations performed in lathe?

5) List out the lathe cutting tools?

Post Lab Question:

1) What are the different types of lathe chuck?

2) Mention the tool materials used in lathe?

3) Mention the tool post angle for facing, turning and chamfering process?

4) What is facing?

5) Define turning operation?

Result:

Hence the required shape and size are obtained using turning, facing and chamfering operations on the given work piece.