

EXPERIMENT NO.3

OBJECTIVE: Bolt making on lathe machine

APPARATUS: cutting saw, center lathe, pedestal grinder, HSS tool bit and straight Or right hand tool holder, center drill, live center, stock and die, metal Work vice.

PROCEDURE:

Cut hexagonal material to length, with allowance for facing.

2. Face one end in the Centre Lathe to 90 mm length overall.
3. Centre Drill one end for the live center.
4. Hold the hexagonal bar in the 3 jaw chuck by around 5-8 mm with the other end held by the live center.
5. Turn the 12 mm diameter for the thread x 80 mm long – measure With the micrometer, size to finish at 12 mm minus 0.05 – 0.10.
6. Adjust the tool and clean up the corner for the head of the bolt.
7. Chamfer the 12 diameter end at 45 degrees x 2 mm.
8. Hold the 12 diameter in the chuck and chamfer the head at 45degrees.
9. Hold by the 12 diameter and start the thread using the Stock and Die

With the tailstock ensuring that the axis is square to the die – use cutting compound.

10. When sufficient has been cut to ensure the trueness of the thread, Take it out of the lathe and finish the tread depth to 60 mm in the metal working vice.

Result: Bolt by lathe machine has been prepared

