

MORTISE AND TENON JOINT

Aim: - To make a Mortise and Tenon joint.

Tools required: -

1. Carpenter's vice
2. Steel Rule
3. Try square
4. Jack plane
5. Scriber
6. Cross cut saw
7. Marking gauge
8. Firmer chisel
9. Mallet
10. Wood rasp file and smooth file

Material required: - Wooden pieces of size 50 x 35 x 250 mm—2 Nos.

Sequence of operations: -

1. Measuring and Marking
2. Planning
3. Check for squareness
4. Removal of extra material
5. Sawing
6. Chiseling
7. Finishing

Procedure: -

1. The given reaper is checked for dimensions.
2. They are planed with jack plane and checked for straightness.
3. The two surfaces are checked for squareness with a try square.

4. Marking gauge is set and lines are marked at 30 and 45 mm to mark the thickness and width of the model respectively.

5. The excess material is first chiseled with firmer and then planned to correct size.

6. The mating dimensions of the parts X and Y are then marked using steel rule and marking gauge.

7. Using the crosscut saw, the portions to be removed are cut in both the pieces, followed by chiseling.

8. The ends of both the parts are chiseled to the exact lengths.

9. The fine finishing is given to the parts, if required so that, proper fitting is obtained.

10. The parts are fitted to obtain a slightly tight joint.

Safety precautions: -

1. Loose cloths are to be avoided.

2. Tools to be placed at their proper place.

3. Hands should not be placed in front of sharp edged tools.

4. Use only sharp tools.

5. Care should be taken, when thumb is used as a guide in cross cutting and ripping. 6. Handle while chiseling, sawing, and planning with care.

Result: - Mortise and Tenon joint is made as per the required dimensions.

