

Stage 2 Design and Technology – Material Products

Specialised Skills Application Task 1

Task – Produce a timber mirror frame

This task is to make a timber mirror frame that meets the specifications and constraints given. Tools, processes and components will need to be used in a correct, efficient and safe way to produce high quality joints of the solid timber. Any extra embellishments will need proper investigation and analysis.

Constraints/Specifications

- The frame will need to house a 300 x 300 mirror that is 5mm in thickness
- Material to be used is Radiata Pine (70 x 35).
- It will need to be machined to 60 x 19 (+/-1mm)
- The jointing technique to be used is the Halved Corner Joint
- It will also need to be rebated to fit the mirror
- The frame is to be finished with a suitable clear finish applied with spray equipment

About Radiata Pine

Radiata Pine is an inexpensive, readily available wood that is easy to work with, without compromising on aesthetics when finished properly. It has nice, straight grain, however knots are fairly common. Because of its open grain structure, treatment to preserve it can be done to a high standard, meaning it can be used in any environment.

Steps

1. Timber is first chosen and checked to be square. Then it is run through the thicknesser, considering the way the grain goes, until it is at the specified dimensions (60 x 19mm). At this stage it is good to leave the timber a millimetre or so over the 19mm thickness, in preparation for sanding later on.
2. The timber is then cut to the required lengths, taking into consideration the 300 x 300 mirror and the timber width of 60mm. This gives us 4 lengths of pine at 420, however a 5mm rebate is needed on all sides, bringing the lengths down 10mm to 410mm.
3. The Halved Corner Joints are now cut on the ends of each length, making sure that the side length rebates cover the top and bottom lengths. These are cut on the drop saw, making many cuts halfway through the wood 60mm up the length.



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4. The excess wood is then chiseled out and the joint cleaned up with a chisel and sandpaper. Then the joints are glued with Cross-linking PVA and clamped together. The frame is then checked to be square before leaving the glue to dry.



5. Once dry, the 5mm rebate is cut using a router and the corners squared with a chisel. The frame is also sanded to prepare for finishing.



6. An extra shelf was added to the base of the frame to add to aesthetics and also versatility to be used in either bathrooms or other areas where small items may have a need to be stored.

