11. FABRICATED BOX STRUCTURES

**Poor design.** This may have been produced by welding on the corners which is poor practice. This design is very weak and will distort during firing. It will be very difficult to achieve an even coating of enamel and there will tend to be chipping on the outer and inner faces. Burn off of enamel will occur on all of the sharp edges.

![Poor design diagram]

**Improved design.** The corners have been rounded and the weld moved away from the corners. However it is still very weak and will tend to distort during firing.

![Improved design diagram]

**Preferred design.** The addition of a picture frame support will strengthen the box. Ideally this should be on both the back and the front. This will minimise distortion by making a much stronger assembly.

![Preferred design diagram]

These are just a few examples, but they exhibit the general principles of good design to minimise problems with the application of vitreous enamel and problems in processing and in final service. It is also important to work within the parameters of good practice, good process control and sensible specification of materials.