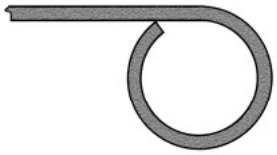
3. STRENGTHENING OF EDGES

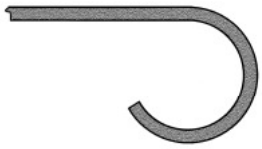
Poor design. Folded edges (Dutch folds) should be avoided. The small radius will tend to promote chipping and stresses during firing will aggravate this. The double thickness may result in entrapment of pretreatment chemicals. This will cause gas evolution in the void during firing which will diffuse into the metal and may cause spalling of the fired enamel. There will also be localised under-firing giving a poor finish and poor adhesion of the enamel.

Preferred design. A beaded edge will reduce the risk of chipping and under-firing.

4. ROLLED EDGES



Poor design. The closed rolled edge will tend to result in a build up of enamel, stress concentration and chipping or spalling of the enamel due to this and gas accumulation in the void during firing. Pretreatment chemicals may become trapped in the void resulting in gas evolution and enamel spalling. The enamel will tend to bridge the fine gap and will crack during cooling.



Preferred design. This will prevent enamel build up and the open roll eliminates the chance for pretreatment chemical entrapment and gas accumulation.

5. HOLES

Poor design. Enamel will build up due to surface tension and bead on the edge of the hole. This will chip during service or assembly.

Improved design. The enamel has been removed from the area around the hole, by brushing before firing.

Preferred design. The hole has been plunged. The enamel will tend to flow into the plunging during firing giving a smooth coating thickness, eliminating the risk of chipping whilst maintaining full corrosion protection.