Hot Dip Galvanizing Update

THE EFFECT OF STEEL COMPOSITION ON HOT DIP GALVANIZING

- ☑ Steels high in silicon and phosphorous will have a normal protective galvanized finish, but may appear duller than usual. This is the result of greater reactivity between the zinc and the steel, producing a thicker coating which your galvanizer has no control over. This thicker coating will actually provide a longer protective life since durability is directly proportional to coating thickness.

- ☑ A thicker dull grey finish will occur on steel with silicon content in the range of 0.04 to 0.14%, moderates on steel containing 0.15 to 0.25% silicon but increases again for silicon levels above 0.25%.

- ☑ In steel containing silicon and phosphorous, the phosphorous can have a disproportionate effect. For hot rolled steels, when $Si + 2.5 \times P \leq 0.09\%$, the coated surface will normally be shiny.

- ☑ If you are aware prior to galvanizing that the composition falls outside the above parameters, contact your galvanizer for advice. It should be remembered that the initial finish is transitory in nature and will progressively turn to a matt grey with uniform appearance.

- ☑ All work will be completed to AS/NZS 4680.

Galvanizing…it's only natural!

One of the advantages of hot dip galvanizing is that it is an alloy reaction between zinc, a naturally occurring product, and steel.

This is what makes hot dip galvanizing a unique and robust protective coating for steel compared to the smooth character of manufactured liquid coatings that need to be manually or mechanically applied.

The surface finish of hot dip galvanized steel will reflect both the chemical composition and surface texture of the steel. Your galvanizer cannot control the steel characteristics.

Where the appearance of the hot dip galvanized finish is critical to the customer's requirements, we recommend that a worked sample of the steel should be galvanized as a trial prior to full fabrication. Remember, the corrosion protection does not reduce if the coating is initially dull and may actually provide a longer life.