

## Hot Dip Galvanising (HDG)

**1.2.6**

### Troubleshooting problems associated with painted HDG Steel

The following are the most commonly seen complaints and some of the possible causes.

#### ★ Coating Delamination

- **Inadequate degreasing** prior to painting.
- **Insufficient abrasion** prior to painting - look for a shiny surface on the underside of the paint flakes.
- **Excessive primer film build** if a single pack etch primer was used.
- **Incorrect coating choice** (eg an alkyd primer or topcoat applied directly to the surface – see Dulux Protective Coatings Tech Note No. 1.2.5).



White rusting of zinc layer caused delamination of the coating

#### ★ Coating Blistering and the presence of white powder (white rust) under coating

- Insufficient **number of coats**.
- Insufficient **coating thickness**.
- Use of **acid wash** during preparation.
- Excessive **temperature/humidity** (eg used under insulation on ducting).
- Inconsistent **coverage** (eg misses, pinholes, edges not stripe coated, handling/erection damage not repaired).
- **Chemical Exposure** - (eg ducting & purlins in swimming centres with chlorinated/heated pools).
- **Contamination between coats** - eg primed in shop then taken to site for storage and erection before topcoating.
- **Insufficient cleaning** of the galvanised surface - contaminants not removed prior to painting.



Little or no surface profile on the substrate caused coating failure.

#### ★ Red Rust Staining

- **Insufficient film build** of zinc layer – **zinc depletion**.
- **Excessive abrasion**, removing too much of the galvanising.
- **Damage** to galvanising **not repaired** prior to painting (eg cut edges, grinding, welding should be repaired with a zinc rich primer, swarf from cutting, grinding etc not removed prior to painting).



Inadequate zinc layer was quickly depleted, allowing steel substrate to corrode

For more information, please contact the Dulux Protective Coatings Technical Consultant in your state.