

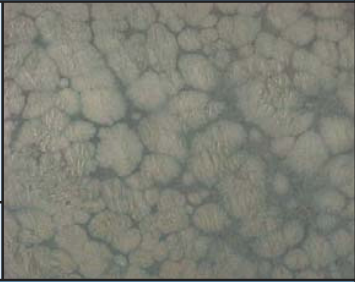







SC	DESCRIPTION	CAUSE	EFFECT / REMEDY RESPONSIBILITY	A/R/N C/REP	EXAMPLE
11	DISTORTION. Distortion is the unwanted warping that occasionally becomes evident after hot dip galvanizing	The hot dip galvanizing process occurs at a molten zinc temperature of 450 deg C. This is at the lower end of the stress relieving temperature for treating steel. Thus, any inherent rolling or welding stresses in the fabrication, are likely to be released. This may result in a dimensional change, i.e. distortion.	Use symmetrical designs; Use sections of similar thickness; Stiffen unsupported thin wall sections; Use preformed members with the correct minimum bend radii; Use balanced or staggered welding techniques; Make use of temporary braces on thin walled sections such as troughs, cylinders and angle frames. Avoid quenching after galvanizing. Components can be straightened after hot dip galvanizing.	A / N	
				REP if possible D/G	
12	DRAINAGE SPIKES. Spikes and teardrops of zinc often appear along the edge of a component after hot dip galvanizing.	The edge most likely to have these spikes is the last to leave the bath on withdrawal. This applies particularly to complex fabrications.	Drainage spikes are easily removed at the bath while still molten but with complex fabrications, the solidified spikes will be removed by fettling by the galvanizer prior to inspection.	A / N	
				C / REP if possible G	
13	DULL GREY OR MOTTLED COATING APPEARANCE. Dull grey or mottled coatings can appear as a dark grey circular patten, a localised dull patch or, may extend over the entire surface of the component.	This appearance indicates the presence of extensive iron/zinc alloy phase growth, caused by steels with high reactive levels of Silicon and Phosphorous in steels.	Although not as aesthetically pleasing as a coating with free zinc on the surface, a dull grey coating provides similar or better corrosion protection.	A	
				D/S	
14	ENTRAPMENT OF ASH. Ash which has not been removed from the surface of the molten zinc prior to immersion of steel can be trapped on the steel surface as it is immersed and result in an uncoated surface beneath the trapped ash.	Inadequate skimming of ash from the molten zinc surface prior to dipping.	On removal of ash, small uncoated surfaces shall be repaired according to the requirements of SANS 121 / ISO 1461. Large defects are a cause for rejection and require stripping and re-galvanizing.	REP (if small uncoated area R (if large, negotiable)	
				G	
15	FLAKING OR DELAMINATION OF COATING No adhesion of zinc to steel surface. Thick, rough coating.	High phosphorous content (greater than 0,03% causes entire coating to delaminate from the steel.	Use a steel that has a phosphorous content of lower than 0,03%.	R / N	
				D / S	
16	FLUX DEPOSITS, STAINS AND INCLUSIONS Flux deposits or stains from the galvanizing process may adhere to the steel or become included in the coating. Flux residues are black, brown, grey or yellowish non-metallic deposits consisting mainly of ammonium chloride.	Flux deposits or stains may occur as a result of excessive "dusting" with ammonium chloride on withdrawal from the molten zinc. Flux inclusions can occur when a surface flux blanket is applied to the zinc surface (wet galvanizing). Flux blankets are normally only used for specialised processes, e.g. galvanizing of tubes and fasteners.	Flux deposits or stains should be removed and the underlying coating measured to determine whether it conforms to the minimum requirements of the specification.	A	
				C / REP if necessary G	