

# Structures

## Master Specification

## ST-SS-S3 Galvanizing

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## ST-SS-S3 Galvanizing

### 1 General

- 1.1 This Part specifies the requirements for the hot dip galvanizing of steel work. The work shall be undertaken in accordance with any requirements specified by the Principal, the Drawings and the following reference:
- a) AS 4680 Hot-dip Galvanized (zinc) Coatings on Fabricated Ferrous Articles.

### 2 Quality Requirements

#### Quality Plan

- 2.1 At a minimum, the Contractor's Quality Plan shall include the following documents, procedures and/or instructions:
- a) inspection for the presence of defects in steel prior to galvanizing;
  - b) method of galvanizing;
  - c) inspection for appearance and the presence of defects after galvanizing;
  - d) verification of coating mass and thickness;
  - e) repair of damaged or uncoated areas; and
  - f) Inspection and Test Plan to verify the requirements of this Part.
- 2.2 If not provided beforehand, this documentation shall be submitted at least 28 days prior to the commencement of the work.
- 2.3 Provision of the documentation listed in this Clause shall constitute a **Hold Point**.

#### Program of Work and Notification

- 2.4 The Contractor shall provide a program of galvanizing work at least 28 days prior to galvanizing commencing. It shall clearly show the anticipated dates for cleaning, galvanizing, inspecting and transporting each article to be galvanized and allow sufficient time for an external inspection pre-galvanizing and post galvanizing (prior to transportation).
- 2.5 The Contractor shall provide 48 hours' notice prior to these activities commencing for each article.
- 2.6 Provision of the above program and notices shall constitute a **Hold Point**.

### 3 Design Requirements

- 3.1 The design shall be in accordance with Appendices C and D of AS 4680. The Contractor shall submit details of any venting or draining necessary to comply with Clause C6 of AS 4680.

### 4 Pre-Galvanizing Inspection

- 4.1 After fabrication and before galvanizing, welds shall be inspected for the presence of pinholes, perforation or any other defect which may impact on the effectiveness of the galvanizing process. Any defects shall be repaired. All sharp edges shall be removed by grinding to a minimum radius of 2 mm.

### 5 Post-Galvanizing Inspection

- 5.1 The Contractor shall undertake and document an inspection of each galvanized article to verify that the requirements of AS 4680 have been met. In addition to the requirements of AS 4680, Clause 7 "Appearance and Freedom from Defects", there shall be no individual areas of greater than 5 cm<sup>2</sup>

left uncoated after the galvanizing process, and the total uncoated area for the article shall not exceed 0.1%.

- 5.2 Testing as described in AS 4680, Clause 9 "Coating Mass and Thickness" shall be carried out on each article. If the article is to be coated after galvanizing, adherence shall be sufficient to allow sweep or brush blast cleaning, as described in Appendix I of AS 4680, without flaking or peeling.

## 6 Renovation of Damaged or Uncoated Areas

- 6.1 Any defective areas or areas which remain uncoated shall be repaired by the application of 2 coats of organic zinc rich primer, as approved under Australian Paint Approval Scheme APAS 2916, to a minimum total dry film thickness of 100  $\mu\text{m}$ .

## 7 Hold Points

- 7.1 The following is a summary of Hold Points referenced in this Part:

Document Ref.	Hold Point	Response Time
2.3	Submission of procedures / instructions	7 days
2.6	Submission of program and notification of galvanizing	2 days

## 8 Verification Requirements and Records

- 8.1 The following is a summary of records to be supplied by the Contractor to demonstrate compliance with this Part (in addition to records provided with Hold Points):

**Table ST-SS-S3 8-1 Verification Records**

Document Ref.	Record to be Provided
4	Pre-Galvanizing inspection records
5	Post-galvanizing defects and adherence inspection records
5	Coating mass, and thickness records
6	Record of repair of damaged or uncoated areas