

PART S37 GALVANIZING

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1. GENERAL

- .1 This Part specifies the requirements for the hot dip galvanizing of steel work. The work must be undertaken in accordance with any requirements specified in the Contract Specific Requirements, the Drawings and the following reference:

AS 4680 Hot-dip Galvanized (zinc) Coatings on Fabricated Ferrous Articles

2. QUALITY REQUIREMENTS

Quality Plan

- .1 At a minimum, the Contractor's Quality Plan must 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 If not provided beforehand, this documentation must be submitted at least 28 days prior to the commencement of the work.
- .3 Provision of the documentation listed in this Clause shall constitute a **HOLD POINT**.

Program of Work and Notification

- .4 The Contractor must provide a program of galvanizing work at least 28 days prior to galvanizing commencing. It must 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). The Contractor must provide 48 hours notice prior to these activities commencing for each article.
- .5 Provision of the above program and notices shall constitute a **HOLD POINT**.

3. DESIGN REQUIREMENTS

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

4. PRE GALVANIZING INSPECTION

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

5. POST GALVANIZING REQUIREMENTS

- .1 The Contractor must 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 must be no individual areas of greater than 5 cm² left uncoated after the galvanizing process, and the total uncoated area for the article must not exceed 0.1%.
- .2 Testing as described in AS 4680, Clause 9 "Coating Mass and Thickness" must be carried out on each article. If the article is to be coated after galvanizing, adherence must 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

- .1 Any defective areas or areas which remain uncoated must be repaired by the application of 2 coats of organic zinc rich primer, as approved under APAS-C-29/16, to a minimum total dry film thickness of 100 µm.

7. HOLD POINTS

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

| CLAUSE REF. | HOLD POINT | RESPONSE TIME |
|-------------|---|---------------|
| 2.1 | Submission of procedures / instructions | 7 days |
| 2.2 | Submission of program and notification of galvanizing | 2 days |

8. VERIFICATION REQUIREMENTS AND RECORDS

- .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):

| CLAUSE REF. | RECORD |
|-------------|---|
| 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 |