

COATING SPECIFICATION

REPAIR OF INORGANIC ZINC SILICATE (IZS) COATED STRUCTURES

COATING SPECIFICATION: H3

ISSUE: 4

DATE: FEBRUARY 2023

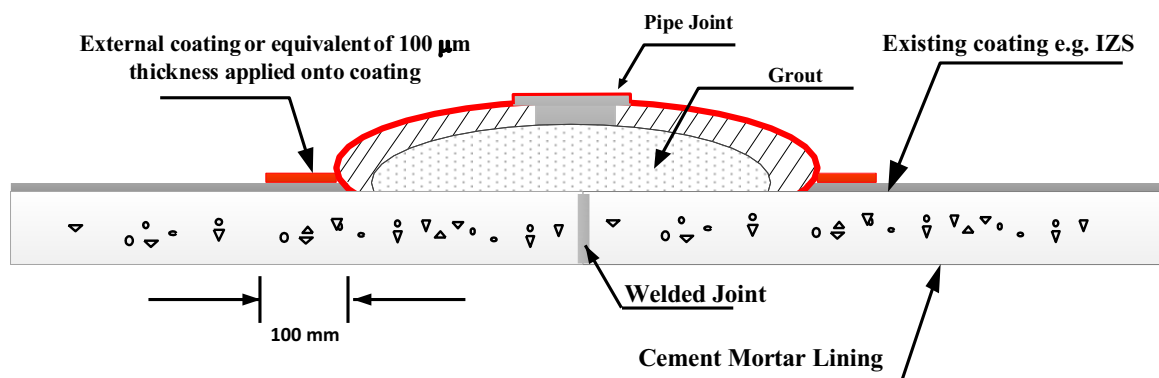
1.0 SCOPE

This document summarises the procedure for the application of 2 coats of an approved two pack epoxy zinc or single pack zinc rich primer (such as Zinga[®]) to achieve 100 microns minimum dry film thickness.

Refer Design Standard, DS 95 (Standard for the Selection, Preparation, Application, Inspection and Testing of Protective Coatings on Water Corporation Assets) for additional information or clarification.

2.0 PURPOSE

The purpose of this coating specification is to repair IZS coated items, e.g. newly installed weld bands in IZS coated pipelines. Refer [Figure 1].



Coating is highlighted in **Red** colour

Figure 1 Welded band joint – Repair of IZS coating

3.0 DEFINITIONS

ACA: Australasian Corrosion Association.

Contractor: The service provider or its sub-contractor who will undertake the works.

Corporation: the Water Corporation and the Principal for the purposes of externally contracted asset delivery.

DFT: Dry Film Thickness.

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ITP: The detailed Inspection and Test Plan(s) for the Works.

NACE: National Association of Corrosion Engineers.

Superintendent: The Superintendent for the contract, as defined in the conditions of contract, who is appointed by the Water Corporation to manage/oversee the work under the contract on behalf of the Water Corporation.

Works: The surface preparation, coating application and inspection to be undertaken by the contractor to which this coating specification applies.

4.0 SURFACE PREPARATION

- 4.1 Oil or dirt shall be removed by solvent cleaning or other approved methods.
- 4.2 The surface of steel shall be blast cleaned to achieve a **Class 3** (white metal) finish in accordance with AS/NZS 1627.4. If dust or media containment is an issue, as a minimum requirement surfaces shall be hand and power tool cleaned in accordance with AS 1627.2 or St3 (ISO 8505-1:1998). Use of a MBX[®] Bristle Blaster is the Water Corporation preferred power tool clean method to provide adequate profile.
- 4.3 Care shall be taken not to polish or burnish the surface.
- 4.4 Coating shall not be applied to surfaces which have become contaminated or have deteriorated after preparation. When coating onto IZS, ensure existing surface is free of salts.

5.0 COATING MATERIALS

- 5.1 Coating materials used for attaining the specified standard shall be selected in accordance with Appendix 3 of DS-95 unless approved otherwise by the Principal. This approval is required before coating commences.
- 5.2 The coating components shall be thoroughly mixed in the specified proportions. Material so prepared shall be used within the “pot-life” period by the manufacturer for the relevant site conditions.
- 5.3 Coating specifications inclusive of datasheets, coating application, method statements and ITP’s shall be submitted to the Principal for approval at least 10 working days prior to commencement of the work.
- 5.4 Recommended drying times between coats for onsite conditions shall not be exceeded.

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6.0 ATMOSPHERIC CONDITIONS

- 6.1 Prior to and during coating application, the contractor shall record details pertaining to environmental conditions including ambient and surface temperature, relative humidity and dew point.
- 6.2 Coating application shall not commence if any one of the following conditions exists:
- The relative humidity is above 85%;
 - The substrate temperature is less than dew point plus 3°C;
 - The substrate temperature is below 10°C;
 - The substrate temperature is above 55°C;
 - The surface to be coated is wet or damp;
 - The specified cleanliness of the surface deteriorates;
 - If the weather is deteriorating or is unfavorable for application or curing;
 - If the pot life of the paint has been exceeded.

7.0 COATING THICKNESS

- 7.1 Application of the coating materials shall be in accordance with the coating manufacturer's recommended practices.
- 7.2 Brush apply 2 coats of an approved two pack epoxy zinc or single pack zinc rich primer to achieve 100 microns minimum dry film thickness.
- 7.3 Application of the coating by conventional or airless spray is accessible depending on requirement of the works.

8.0 COATING FINISH

- 8.1 The finished coating shall be of uniform thickness, colour, appearance and gloss. It shall be fully cured, insoluble, adherent, coherent and free from holidays, laps, sags, blistering, checking, wrinkling, overspray, patchiness and any other defects that may impair the performance and/or appearance of the coating.

9.0 INSPECTION AND TESTING OF COATING

- 9.1 Finished coating thickness shall be determined using suitable instruments standardised (zeroed) on a smooth uncoated metal plate in accordance with AS 3894.3.

10.0 REPAIR OF A DEFECTIVE COATING AND RETESTING

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- 10.1 Defects such as pinholes, cracks, blisters, voids, foreign inclusions and irregular profile peaks shall be marked for repair and retested upon full cure of the repaired coating.
- 10.2 To supplement these records, prior to any works commencing, an Inspection Test Plan (ITP) shall be forwarded to the Corporation for review a minimum of ten working days prior to the commencement of work.

11.0 CONTRACTOR'S RESPONSIBILITY

- 11.1 The Contractor shall supply all necessary plant, equipment, materials and labour, prepare the surface and apply and maintain the protective coating in accordance with this specification
- 11.2 The preceding inspection clauses shall not relieve the Contractor of their responsibility to supply materials and perform work in accordance with the requirements of any overriding contract documentation.

Document Revision History					
Sect	Issue	Date	Revision Description	RVWD	APROV
9	4	09/02/2023	Amend surface preparation	AO	SS

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