

PURPOSE

This document details inspection, cleaning and repair procedures for general operations and maintenance. This should assist relevant stakeholders in maintaining the performance, corrosion protection and aesthetics, of the applied coating system/s which will aid in the longevity of the applied system/s.

GENERAL

All coatings require a level of maintenance and cleaning to keep them in the best possible condition over their expected service life, up until the time to the next planned maintenance repaint.

The Australian Standard AS/NZS 2312:1:2014 sets out the expected Service Life of the Coating System, and the Corrosivity Categories in which they may be situated.

In addition to steel it also covers some alternate substrates such as Galvanised Steel and Concrete with coating systems.

The Australian Standard AS/NZS 2312:1:2014 Section 8 - Maintenance of Paint Coating Systems, sets out guidelines for the ongoing maintenance of protective coatings, with consideration to many factors including:

- Initial Inspections and Assessments
- Criteria for When Assessing to Repair
- Surface Preparation
- Surface Contamination
- Environmental Protection
- Repainting and Repairs
- Repainting of Welded Structures

The global standard, ISO12944:2017 Sections 4,5 and 7, also provides details on surface preparation, coating options etc. It is important to note that both AS/NZS 2312:1:2014 and ISO12944:2017 refer to level of corrosivity of environment. This environment needs to be taken into consideration when ascertaining the level and frequency of maintenance to be carried out.

For instance, an asset in a low level of corrosivity environment (C1) may be able to last many years without any risk of corrosion occurring and maintenance being required whereas an asset located in a coastal environment (C5/M) may require inspection, maintenance and repair upon an annual basis.

RELATED DOCUMENTS

This document must be read in conjunction with:

- The original coating specification
- The maintenance specification (where applicable)
- Surface preparation information sheets
- Related Australian Standards

INSPECTION

Regular inspection is highly recommended for all coating systems.

Routine visual inspection by qualified person/s is recommended to identify areas of coating which require cleaning and / or specific areas which may have been exposed to micro-environment conditions i.e., excessive bird droppings or 'pooling' areas.

Areas subject to severe environments or subject to wear or mechanical damage should be inspected more frequently. Inspection should also verify coating film continuity and performance, particularly in relation to corrosion protection. Any corroded areas, regardless of cause, shall be repaired routinely and as soon as practically possible in accordance with the relevant repair specification.

It is recommended that the cause of corrosion be identified, and subsequent mitigation controls be implemented where possible to eliminate/reduce further corrosion. It is expected that repairs are undertaken as part of general operations and maintenance to aid the coating system in achieving its intended durability period for its exposure category (as defined within relevant standards i.e., AS/NZS 2312:1:2014 and ISO12944:2017), until such time that the next major maintenance is required. Such protocol may assist in asset life-cycle cost reductions.

It is important that all inspections be appropriately documented and damaged/degrading areas (particularly where corrosion products are present) be repaired as soon as practical. Inspections shall be carried out at twelve months after the initial coating application and inspection, and at minimum five yearly intervals thereafter.

CLEANING

Coating durability is affected in part by coating cleanliness.

Cleaning may be required or desired for structures which are exposed to high levels of atmospheric contamination such as dirt and / or salt deposits. Rainfall may aid this process, however parts of the structure which are not directly exposed to the elements may require specific cleaning and repair/s on an 'as required' or scheduled basis.

A regular cleaning regime can extend the coating life cycle, reducing the need for major maintenance. It is strongly recommended that the owner set in place a regular cleaning procedure.

The following table details recommended cleaning procedures based on the degree of dirt build up / corrosion. It is crucial to ensure that the cleaning procedures employed do not damage the coating finish which may in turn cause premature breakdown.

Degree of dirt build up/ corrosion	Recommended Cleaning Procedure
Minor dust/dirt build up	Remove dirt and dust by sweeping or vacuuming
Gloss loss, chalking, staining	Remove dirt and stains with a mild detergent, remove all cleaning products
Cracking, flaking, peeling (small areas)	Remove damaged coating products and repair affected areas if required, alternatively ensure inspection frequency is increased for these areas
Corrosion where less than 1% of the coated surface shows signs of corrosion (e.g. rust)	Repair damaged coatings by removal of corrosion products using a suitable surface preparation method taking particular attention not to damage surrounding coatings. Repair surface using a Sherwin-Williams supplied maintenance system. Identify cause of corrosion and rectify.

All cleaning shall be performed in accordance to the relevant sections of AS1627.

The relevant sections will be determined by the level of surface preparation required by the specified coatings system.

Examples of the most commonly used sections are noted below.

AS1627.1 – Cleaning with solvents or alkaline solutions

AS1627.2 – Hand and power tool cleaning

AS1627.4 – Abrasive blast cleaning

REPAIRS

Typically, coating touch up and repairs will be noticeable given that the existing coating has been in-service and often subjected to the elements for some time and is then spot repaired with fresh coating/s.

Further, often the repair application method (due to size and costs) differs from the original application method.

Once the functional repair has been conducted (primarily for corrosion protection purposes), should the repair site be deemed to be in a high traffic / prominent location, where the visual appearance is important, the entire member/section (of the spot repair site) should be top coated for uniformity purposes.

All repairs shall be carried out in accordance with the relevant repair specification provided by Wattyl and performed by a suitably qualified contractor. Quality Assurance record keeping shall be performed in accordance to AS3894.10,11,12.



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