

PAINT COATING SELECTION AND SPECIFICATION: CHANGES TO AS/NZS 2312

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Introduction

Australian/ New Zealand Standard AS/NZS 2312 *Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings* provides guidelines for selection and specification of coating systems for corrosion protection of structural steelwork. The designer can choose from a selection of systems based on exposed service life to first maintenance for various environments. AS/NZS 2312 has recently undergone a major update. Galvanizing and metal spraying have now become separate standards. A short summary of the major changes to AS/NZS 2312 and use of the standard is provided.

Major Changes to AS/NZS 2312

A good summary of changes to AS/NZS 2312 and reasons are provided by the chairman of the revision process in (Francis, 2014). AS/NZS 2312 has been revised into three Parts.

The three parts are:

- AS/NZS 2312.1 Part 1: Paint Coatings
- AS/NZS 2312.2 Part 2: Hot Dip Galvanizing
- AS/NZS 2312.3 Part 3: Thermally Sprayed Metallic Coatings (in preparation)

All three parts are aligned with the relevant Australian and New Zealand corrosivity standards, i.e. AS 4312-2008 and Section 5 of NZS 3404.1:2009. Part 1 covers only liquid-applied paints whose main purpose is corrosion mitigation. It contains much of the information that was included in AS/NZS 2312:2002 with the following main changes.

Section 5 which covered metallic coatings has been deleted, Section 7 on coating selection has been moved to Section 5, Section 8 which covered powder coatings and tapes has been edited and moved to Appendix H, and Section 13 which covered health and safety has been deleted.

Part 1 has updated recommended coating systems and deleted some rarely used and problematic ones. Additional information is provided on contentious issues such as fabrication defects and warranties.

Part 2 completely replaces and updates the previous Section 5 on hot dip galvanizing (HDG) and is closely aligned to the ISO 14713 series of guides for zinc coatings. Also covered in Part 2 are mechanically plated and electrodeposited coatings, and 'duplex systems' where organic paint is applied to HDG.

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Part 3 (which will replace Section 5.2 Metal Spray Coatings in AS/NZS 2312:2002) has yet to be finalised, in part due to the delay in completing the revision of ISO 2063.

Use of the Standard

The main purpose of the standard has not changed in that it is designed, as noted in the preface, to:

"Provide guidance for architects, engineers, builders, the surface coating industry and users of protective services in general, on paint coating systems for the protection of steel work against corrosion."

It is important to note that the standard is only a guide. There are many useful and economic coating systems not included. The intention of the standard is to give specifiers a general direction in specifying coatings to compliment specialist advice from corrosion and coating experts. Some paint systems removed from the latest version of AS/NZS 2312 may still be a suitable system for a particular environment. For example the alkyd, ALK2, paint system has been removed as it was considered to be rarely specified by the standards committee. The ALK2 paint system could still be specified by reference to the 2002/2004 edition of AS/NZS 2312 as there was no technical reason for removal.

References

AS/NZS 2312:2002/2004, Guide to the Protection of Structural Steel against Atmospheric Corrosion by the Use of Protective Coatings, incorporating Amendment No 1:2004. Standards New Zealand, Wellington.

AS/NZS 2312.1: 2014 Guide To The Protection Of Structural Steel Against Atmospheric Corrosion By The Use Of Protective Coatings - Paint Coatings, Standards New Zealand, Wellington, 2014

AS/NZS 2312.2: 2014 Guide To The Protection Of Structural Steel Against Atmospheric Corrosion By The Use Of Protective Coatings - Hot Dip Galvanizing, Standards New Zealand, Wellington, 2014

Francis, R. A., 'Paint Coating Selection and Specification: Changes to AS/NZS 2312', Corrosion and Prevention 2014, Australia, Paper 017.