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External field joint coatings for steel pipelines

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- Energy Networks Association
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Australian Standard®

External field joint coatings for steel pipelines

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PREFACE

This Standard was prepared by the Australian members of the Standards Australia/Standards New Zealand Committee ME-038, Petroleum Pipelines, to supersede AS 4822—2008.

The objective of this Standard is to provide manufacturers, suppliers, specifiers and users of oil and gas pipelines information on the application of and testing requirements for external field joint coatings (FJCs) of seamless or welded steel pipelines for onshore steel pipelines.

This revision updates requirements taking into account the latest version of ISO 21809-3, *Petroleum and natural gas industries — External coatings for buried or submerged pipelines used in pipeline transportation systems*, Part 3: *Field joint coatings*, and includes a new joint coating type, Amorphous low viscosity polyolefin coating.

The performance of field joint coatings is a critical part of the corrosion protection of steel pipelines. This Standard makes no appraisal of the relative performance of the coating systems that are covered herein. There should be careful selection of the field joint coating chosen for each application, taking into account its importance in providing satisfactory corrosion protection for the service life under the construction and operating conditions of the pipeline.

Statements expressed in mandatory terms in notes to figures and tables are deemed to be requirements of this Standard. All other notes are for information and guidance only.

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

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STANDARDS AUSTRALIA

Australian Standard
External field joint coatings for steel pipelines

S E C T I O N 1 S C O P E A N D G E N E R A L

1.1 SCOPE

This Standard sets out minimum requirements for the field joint coating (FJC) of seamless and welded steel buried onshore pipelines. It specifies the application and testing of corrosion protection coatings applied to steel surfaces left bare after the pipes and fittings (components) are joined by welding.

NOTES:

1 Field joints and other specific points are coated on site.

2 Information to be supplied at the time of order is given in Appendix A.

3 Coatings detailed in this Standard are suitable for use with cathodic protection systems.

1.2 NORMATIVE REFERENCES

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document:

NOTE: Documents referenced for informative purposes are listed in the Bibliography.

AS

1145 Determination of tensile properties of plastics materials

1145.3 Part 3: Test conditions for films and sheets

1391 Metallic materials—Tensile testing at ambient temperature

1627 Metal finishing—Preparation and pretreatment of surfaces

1627.2 Part 2: Power tool cleaning

1627.4 Part 4: Abrasive blast cleaning of steel

1627.9 Part 9: Pictorial surface preparation standards for painting steel surfaces

2706 Numerical values—Rounding and interpretation of limiting values

3862 External fusion-bonded epoxy coating for steel pipes

3894 Site testing of protective coatings

3894.1 Part 1: Non-conductive coatings—Continuity testing—High voltage (‘brush’) method

3894.3 Part 3: Determination of dry film thickness

3894.4 Part 4: Assessment of degree of cure

3894.5 Part 5: Determination of surface profile

3894.6 Part 6: Determination of residual contaminants

3894.9 Part 9: Determination of adhesion

4352 Tests for coating resistance to cathodic disbanding

ISO

868 Plastics and ebonite — Determination of indentation hardness by means of a durometer (Shore hardness)

4624 Paints and varnishes — Pull-off test for adhesion