

Australian Standard[®]

Pipelines—Gas and liquid petroleum

Part 3: Operation and maintenance



This Australian Standard® was prepared by Committee ME-038, Petroleum Pipelines. It was approved on behalf of the Council of Standards Australia on 6 March 2012. This Standard was published on 20 September 2012.

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- Welding Technology Institute of Australia

Additional Interests:

- Independent Chairperson
-

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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Pipelines—Gas and liquid petroleum

Part 3: Operation and maintenance

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PREFACE

This Standard was prepared by the joint Standards Australia/Standards New Zealand Committee ME-038, Petroleum Pipelines, to supersede AS 2885.3—2001.

This Standard is the result of a consensus among Australian and New Zealand representatives on the Joint Committee to produce it as an Australian Standard.

The objective of this Standard is to provide important principles, practices and guidelines for use by competent persons and organizations involved in the operation and maintenance of high-pressure petroleum pipelines.

Significant changes in this revision

This Standard is a result of a comprehensive revision of AS 2885.3—2001. It reflects significant changes that have taken place in the industry and within the regulatory environment since the original publication. It has been revised to reflect these changes and is based on a management system philosophy.

The changes to the Standard enable it to be viewed as a stand-alone document whilst retaining and strengthening the references to AS 2885.1, *Pipelines—Gas and liquid petroleum, Part 1: Design and construction* and AS 2885.2, *Pipelines—Gas and liquid petroleum, Part 2: Welding*.

The readability of the document has been improved by drawing together like requirements into common sections and basing the structure on the pipeline lifecycle.

It also incorporates changes—

- (a) to harmonize it with AS 2885.0, *Pipelines—Gas and liquid petroleum Part 0: General requirements*, AS 2885.1, *Pipelines—Gas and liquid petroleum, Part 1: Design and construction* and AS 2885.5, *Pipelines—Gas and liquid petroleum, Part 5: Field pressure testing* (Section 2), to eliminate inconsistencies between the parts; and
- (b) to recognize agreement by Committee ME-038 to adopt a change to the use of ‘Approval’ as defined in AS 2885.0.

The most important changes include the following:

- (i) The inclusion of a new section ‘Pipeline management system’ (Section 2) incorporating management system elements and a governance approach.

NOTES:

- 1 This has required the removal of the term ‘safety and operating plan’ to allow for the many document naming conventions around Australia and within the industry.
 - 2 This revision has been reviewed and updated to correlate with the requirements of ‘safety case’ regimes.
- (ii) The inclusion of a new section ‘Anomaly assessment and defect repair’ (Section 9); ‘anomaly assessment and repair’ identified as a weakness in the previous version.

This Section provides a level assessment approach to anomaly assessment and includes greater guidance on assessing a broader range of pipe wall anomalies.

MOP is introduced to provide an operational parameter that can be adjusted within the limitations of MAOP and provide a basis for safe operation of a pipeline during anomaly assessment and defect repair.

A table for glass-reinforced epoxy pipeline defect assessment has also been included for guidance.

- (iii) An update to pipeline integrity management. A new requirement has been introduced to develop a pipeline integrity management plan (PIMP) to provide a greater focus on the technical aspects of integrity management.
- (iv) The inclusion of a station integrity section, to group all station operation and maintenance issues together and acknowledge that stations needed a greater level of guidance as they are becoming more complex and integrated into pipeline infrastructure.
- (v) An update to the 'Change of operating conditions and remaining life review' (Section 10) to include remaining life review. 'Review of design life' has been changed to 'Remaining life review' so that the focus is on how long the asset will be fit for purpose and to integrate with an integrity management approach for the life of the asset.
- (vi) The incorporation of an appendix to indicate how the pipeline management system approach aligns to safety case regimes.
- (vii) A revision of the 'Pipeline structural integrity' (Section 6) relating to coating systems and cathodic protection.
- (viii) The modification and update of safety and environment issues into a 'Site safety and environmental management' (Section 4). Inclusion of common industry procedures such as job hazard analysis and permit to work to acknowledge that the pipeline industry has adopted these practices and adapted them for specific use in this industry.
- (ix) An update to the 'External interference management' (Section 7). Revision of this Section included classification of external interference controls into detection and control and addition of guidance on vehicle load limits.
- (x) Minor updates to other section (e.g. Record management), where required.
- (xi) An update of a 'Site safety and environmental management (Section 4)' section to cover specific issues relating to pipeline operation and maintenance activities.

The terms 'normative' and 'informative' are 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 Pipelines—Gas and liquid petroleum

Part 3: Operation and maintenance

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies the minimum requirements for the operation and maintenance of pipelines complying with AS 2885.0.

NOTE: Other fluids may be transported in accordance with AS 2885.0.

The fundamental principles on which this Standard is based are the following:

- (a) Important matters relating to safety, engineering design, materials, testing, inspection and operation are required to be reviewed and approved by the Licensee.
- (b) A documented pipeline management system is required to be implemented to provide for continued integrity, monitoring and safe operation of the pipeline.
- (c) Where the Standard does not provide detailed requirements appropriate to a specific item, the principles and guidelines set out in the Standard are the basis on which an engineering assessment is made by competent persons. Specific requirements of the Standard do not replace the need for appropriate experience and engineering judgement.

1.2 APPROVAL

Each document prepared for a pipeline in accordance with this Standard shall be approved as required by AS 2885.0.

Documents nominated in this Standard as requiring approval shall be approved by the Licensee and not be delegated. All other documents shall be approved by the person, position or organization nominated in the Licensee's approval matrix, in accordance with the approval requirements specified in Appendix D.

1.3 APPLICATION

This Standard applies to the operation and maintenance of pipelines designed in accordance with AS 2885.1.

Operation and maintenance procedures and practices for pipelines shall comply with the most recent edition of this Standard.

Licensees who operate and maintain pipelines that are not designed and constructed in accordance with AS 2885.1, and where it is not feasible to physically modify the pipeline, may apply this Standard, provided the areas of non-compliance with AS 2885.1 are documented and are subject to a safety management study. Any actions required to control threats shall be approved in the pipeline management system.

1.4 RETROSPECTIVE APPLICATION

Retrospective application of this Standard is governed by AS 2885.0.