



Pipelines—Gas and liquid petroleum

Part 0: General requirements



AS 2885.0:2018

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- Australian Institute of Petroleum
- Australian Petroleum Production and Exploration Association
- Australian Pipelines and Gas Association
- Department of Mines, Industry Regulation and Safety, WA
- Department of Natural Resources, Mines and Energy, Qld
- Department of Planning and Environment
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Preface

This Standard was prepared by the Australian members of Joint Standards Australia/Standards New Zealand Committee ME-038, Petroleum Pipelines, to supersede AS 2885.0—2008.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The inclusion of roles and responsibilities in the AS(/NZS) 2885 series of Standards, was approved by the Standards Development and Accreditation Committee on 1 May 2015, as a one-off exemption to the directives of *Standardization Guide 009: Preparation of Standards for Legislative Adoption*.

This Standard is the general and unifying Standard for a suite of Standards covering gas and liquid petroleum PIPELINE SYSTEMS.

The AS(/NZS) 2885 series comprises the following:

AS 2885.0, *Pipelines—Gas and liquid petroleum, Part 0: General requirements* (this Standard)

AS/NZS 2885.1, *Pipelines—Gas and liquid petroleum, Part 1: Design and construction*

AS/NZS 2885.2, *Pipelines—Gas and liquid petroleum, Part 2: Welding*

AS 2885.3, *Pipelines—Gas and liquid petroleum, Part 3: Operation and maintenance*

AS 2885.4, *Pipelines—Gas and liquid petroleum, Part 4: Submarine pipeline systems*

AS/NZS 2885.5, *Pipelines—Gas and liquid petroleum, Part 5: Field pressure testing*

AS/NZS 2885.6, *Pipelines—Gas and liquid petroleum, Part 6: Pipeline safety management*

Principal differences between this Standard and the previous edition of AS 2885.0 are:

- (a) Revision of [Figure 1.1](#), Limits of the AS(/NZS) 2885 series.
- (b) Relocation of the section on safety to [Section 2](#), to be consistent with the other Parts.
- (c) Terms and definitions from other Parts of the series have been moved into this Part and those other Parts now refer to this Standard. Hence, not all the terms in [Clause 1.5](#) appear in the main text of this Standard.

Small caps have been used throughout this document to indicate terms that are defined in [Clause 1.5](#), e.g. COMPETENT.

The terms “may”, “should” and “shall” are not in small caps but are defined terms that are used in this Standard to indicate an option (may), a recommendation (should) or a mandatory statement (shall).

The term “informative” has been used in this Standard to define the application of the appendix to which it applies. An “informative” appendix is only for information and guidance.

Other Standards play a primary and direct role in achieving the purposes of Committee ME-038. Current Standards that have been published by ME-038 include:

AS/NZS 1518, *External extruded high-density polyethylene coating system for pipes*.

AS 4822, *External field joint coatings for steel pipelines*.

AS 3862, *External fusion-bonded epoxy coating for steel pipes*.

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Introduction

The AS(/NZS) 2885 series of Standards (henceforth called “the AS(/NZS) 2885 series”) establishes requirements for the safe design, construction, inspection, testing, operation and maintenance of onshore and submarine PIPELINE SYSTEMS. These requirements are necessary for the protection of the general public and operating personnel, security of supply, and protection of the environment, as well as the protection of the PIPELINE SYSTEM against accidental damage.

The AS(/NZS) 2885 series is intended for pipelines constructed from steel pipe used for the transport of gas or liquid petroleum. The AS(/NZS) 2885 series also allows, under special circumstances, pipelines constructed from materials other than steel, and for application to fluids other than hydrocarbon fluids.

The AS(/NZS) 2885 series provides an authoritative source of important principles and practical guidelines for use by responsible and COMPETENT persons or organizations.

The AS(/NZS) 2885 series is not to be regarded as being either an instruction manual for untrained persons or a complete detailed specification. Although certain sections contain specific requirements, they do not replace the need for appropriate experience and engineering judgement. Fundamental, sound engineering principles should be followed when applying the requirements, principles and practical guidelines of the AS(/NZS) 2885 series.

The AS(/NZS) 2885 series does not supersede or take precedence over the requirements of any Statute or Regulation.

It is expected that users of this Standard will be familiar with all Parts of the AS(/NZS) 2885 series, as no Part is meant to be used in isolation.

The AS(/NZS) 2885 series of Standards comprises the following Parts:

- (a) AS 2885.0, Part 0: General requirements: provides general requirements and guidance on the principles, scope, purpose, application and other aspects of the AS(/NZS) 2885 series.
- (b) AS/NZS 2885.1, Part 1: Design and construction: specifies requirements for design and construction of onshore steel PIPELINE SYSTEMS that are used to transmit hydrocarbon fluids and allows application to some other pipeline materials and fluids.
- (c) AS/NZS 2885.2, Part 2: Welding: specifies the requirements for welding of steel pipelines, covering welding safety, fabrication, qualification and inspection requirements.
- (d) AS 2885.3, Part 3: Operation and maintenance: specifies the requirements for the operation and maintenance of steel PIPELINE SYSTEMS transmitting hydrocarbon fluids.
- (e) AS/NZS 2885.4, Part 4: Submarine pipeline systems: defines the application of DNVGL-ST-F101, *Submarine pipeline systems*, which is the standard for design, construction and operation of offshore submarine PIPELINE SYSTEMS. DNVGL-ST-F101 is a complete standard and, except as defined in AS/NZS 2885.4, the requirements of the other Parts of the AS(/NZS) 2885 series do not apply.
- (f) AS/NZS 2885.5, Part 5: Field pressure testing: specifies the requirements for the pressure testing of steel pipelines used to transmit hydrocarbon fluids.
- (g) AS/NZS 2885.6, Part 6: Pipeline safety management: specifies the SAFETY MANAGEMENT PROCESS for steel PIPELINE SYSTEMS covering PIPELINE SYSTEM design, construction and operation. Pipeline safety management is a continuous process, so AS/NZS 2885.6 applies throughout the lifecycle of a hydrocarbon transmission PIPELINE SYSTEM.

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Pipelines—Gas and liquid petroleum

Part 0: General requirements

1 Scope and general

1.1 Scope of this Standard (Part 0)

This Part 0 of the AS(/NZS) 2885 series provides general requirements and guidance on the principles, scope, purpose, application and other aspects of the AS(/NZS) 2885 series.

NOTE [Appendix A](#) provides a rationale for the AS(/NZS) 2885 series.

1.2 Scope of AS(/NZS) 2885 series

1.2.1 Inclusions

AS(/NZS) 2885 series applies to PIPELINE SYSTEMS, that are used to transmit single-phase and multi-phase hydrocarbon fluids, such as natural and manufactured gas, liquefied petroleum gas, natural gasoline, crude oil, natural gas liquids and liquid petroleum products.

The AS(/NZS) 2885 series also provides for PIPELINE SYSTEMS intended to transport fluids that are predominantly carbon dioxide. AS/NZS 2885.1 identifies areas that require specific design attention for carbon dioxide.

NOTE ISO 27913 provides useful additional information on CO₂ pipelines. AS(/NZS) 2885 series remains the governing standard.

[Figure 1.1](#) shows the scope of PIPELINE SYSTEMS covered by the AS(/NZS) 2885 series.

The requirements of the AS(/NZS) 2885 series are based on experience and practices for typical high-pressure hydrocarbon transmission PIPELINE SYSTEMS used in Australia. Certain requirements may not be practical for “unusual” PIPELINE SYSTEMS, such as those that operate at low pressures, and large diameter thick wall pipes. Where the requirements of the AS(/NZS) 2885 series are not capable of being implemented or are determined to be unnecessary for pipeline safety, the fundamental principles of the AS(/NZS) 2885 series should be used to develop alternatives that meet the objective of the AS(/NZS) 2885 series.

AS/NZS 2885.4 defines the application of DNV GL ST-F101 (DNV GL, *Submarine pipeline systems*) for design, construction and operation of offshore submarine PIPELINE SYSTEMS. The requirements of the parts of the AS(/NZS) 2885 series do not apply unless specifically referenced in AS/NZS 2885.4.

1.2.2 Inclusions — Special circumstances

The use of the AS(/NZS) 2885 series in circumstances listed below is not precluded, but is not expressly covered:

- (a) PIPELINE SYSTEMS which operate at pressures above ASME Class 1500.
- (b) PIPELINE SYSTEMS that are designed and constructed from fibreglass materials, from corrosion resistant alloys or from materials other than steel.
- (c) PIPELINE SYSTEMS transporting other fluids (e.g. slurries and non-hydrocarbon gases such as carbon dioxide).

The application of the AS(/NZS) 2885 series to these circumstances requires special consideration.