AS/NZS 2885.6:2018

Australian/New Zealand Standard™

Pipelines—Gas and liquid petroleum

Part 6: Pipeline safety management

This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee ME-038, Petroleum Pipelines. It was approved on behalf of the Council of Standards Australia on 14 November 2018 and by the New Zealand Standards Approval Board on 6 November 2018.
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The following are represented on Committee ME-038:

APGA Research and Standards Committee
Australasian Corrosion Association
Australian Industry Group
Australian Institute of Petroleum
Australian Petroleum Production and Exploration Association
Australian Pipelines and Gas Association
Department of Mines, Industry Regulation and Safety, WA
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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee ME-038, Petroleum Pipelines.

The inclusion of roles and responsibilities in AS/NZS 2885.6:2018, 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*.

The objective of this Standard is to provide requirements on PIPELINE SYSTEM safety management to prevent pipeline failure and resulting harm to people, disruption of supply to the community, and damage to the environment.

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

AS 2885.0, *Pipelines—Gas and liquid petroleum*, Part 0: *General requirements*

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* (this Standard)

This Standard is a new part in the series. AS 2885.1—2012 included requirements on the SAFETY MANAGEMENT PROCESS that were removed in its latest revision and superseded by reference to this Part 6. This Standard applies to pipeline safety management for the whole AS(/NZS) series of standards for gas and liquid petroleum pipelines, except for submarine pipelines covered by Part 4.

Small caps have been used in this document to indicate terms which have been defined in AS 2885.0 (for example, “PIPELINE SYSTEM”).

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.

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FOREWORD

Safety management is integral to the planning, design, construction, testing COMMISSIONING, operation, maintenance and abandonment of a PIPELINE SYSTEM.

AS 2885.0 identifies the LICENSEE as being accountable for the safety and integrity of the PIPELINE SYSTEM, so the LICENSEE is responsible for safety management.

PIPELINE SYSTEM safety management applies controls to identified THREATS and reduces residual risk to a level that is AS LOW AS REASONABLY PRACTICABLE (ALARP) through a SAFETY MANAGEMENT STUDY (SMS). THREATS that are not CONTROLLED are investigated by RISK ASSESSMENT.

Mandatory PHYSICAL and PROCEDURAL requirements are specified for control of external interference THREATS, which are known to be the events most likely to create a failure.

Mandatory requirements for "no RUPTURE" and maximum energy release rate are specified in AS/NZS 2885.1 for new PIPELINE SYSTEMS in HIGH CONSEQUENCE AREAS.

For existing pipelines in HIGH CONSEQUENCE AREAS, or where a change in land use will introduce a HIGH CONSEQUENCE AREA to an existing pipeline, an assessment against those requirements of AS/NZS 2885.1 is required and this Standard applies mandatory requirements for maintaining the risk at a level that is ALARP.

To help recognize the inherent risk of potential catastrophic outcomes in HIGH CONSEQUENCE AREAS, this Standard mandates that the LICENSEE be aware of the potential consequences and associated THREAT mitigation measures.

All controls require ongoing management so that they remain effective. The outcomes of the SAFETY MANAGEMENT PROCESS are incorporated in the PIPELINE MANAGEMENT SYSTEM.

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Australian/New Zealand Standard
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SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard specifies the SAFETY MANAGEMENT PROCESS for PIPELINE SYSTEMS and covers all elements of the system designed, constructed or operated under the AS(/NZS) 2885 series of Standards, including MAINLINE PIPE and PIPELINE ASSEMBLIES, STATIONS and control systems.

As safety management is a continuous process, this Standard applies throughout the life cycle of a PIPELINE SYSTEM from design to abandonment.

This Standard does not apply to workplace health and safety, construction safety, or environmental impacts other than resulting from a FAILURE EVENT, as other parts of the AS(/NZS) 2885 series contain specific requirements relevant to these areas.

NOTE: The APGA *Code of Environmental Practice* provides industry accepted guidance on environmental management through the planning and asset acquisition, construction, operational and decommissioning phases of a pipeline's lifecycle.

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 for informative purposes are listed in the Bibliography.

AS 2885.0, *Pipelines—Gas and liquid petroleum*, Part 0: *General requirem*ents

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

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

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

1.3 DEFINITIONS

For the purposes of this Standard the definitions in AS 2885.0 apply.

1.4 ABBREVIATIONS

ALARP	AS LOW AS REASONABLY PRACTICABLE
APGA	Australian Pipelines and Gas Association
CHAZOP	Control system HAZOP
FEED	Front-end engineering design
FMEA	Failure mode effects analysis
GIS	Geographic information system
HAZOP	Hazard and operability study