AS 2885.5:2020

Australian STANDARD®

STANDARDS Australia

# Pipelines — Gas and liquid petroleum

## Part 5: Field pressure testing

AS 2885.5:2020

This Australian Standard® was prepared by ME-038, Petroleum Pipelines. It was approved on behalf of the Council of Standards Australia on 17 November 2020.

This Standard was published on 4 December 2020.

The following are represented on Committee ME-038:

APGA Research and Standards Committee
Australasian Corrosion Association
Australian Institute of Petroleum
Australian Petroleum Production and Exploration Association
Australian Pipelines and Gas Association
Department for Energy and Mining (South Australia)
Department of Mines, Industry Regulation and Safety (Western Australia)
Department of Natural Resources, Mines and Energy (Queensland)
Department of Planning and Environment – Division of Energy, Water and Portfolio Strategy (New South Wales)
Department of Primary Industry and Resources (Northern Territory)
Energy Networks Australia
Energy Safe Victoria
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Additional Interests

WorkSafe New Zealand

This Standard was issued in draft form for comment as DR AS 2885.5:2018.



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ISBN 978 1 76113 099 1

# Pipelines — Gas and liquid petroleum

## Part 5: Field pressure testing

First published as AS 1978—1977.
Jointly revised and redesignated as AS/NZS 2885.5:2002.
Third edition 2012.
Revised and redesignated as AS 2885.5:2020.

# Preface

This Standard was prepared by the Australian members of the joint Standards Australia/Standards New Zealand Committee ME-038, Petroleum Pipelines, to supersede AS/NZS 2885.5:2012, *Pipelines—Gas and liquid petroleum, Part 5: Field pressure testing.*

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

The objective of this document is to set out methods for the determination of the strength and the LEAK TIGHTNESS of a pipeline test section.

This document forms part of the AS(/NZS) 2885 series and as such refers to other parts in this series. A list of all parts can be found in the Standards Australia online catalogue.

Definitions used in this document and throughout the series are now listed in AS 2885.0.

The major changes in this revision are as follows:

(a) Alignment with AS/NZS 2885.1.

(b) Revision of definitions.

(c) Amplification of STRENGTH TEST Type 2.

(d) Amendment of the reporting requirements.

(e) Relocation of Appendix P, Test section analysis using engineering software, to Part 1 of this series (AS/NZS 2885.1).

(f) Revision of Appendix N, Safety in Pressure Testing, including the method of determining EXCLUSION ZONES.

(g) Deletion of the supplementary LEAK TEST method.

(h) Clarification of the requirements for measuring instruments.

The inclusion of roles and responsibilities in this document 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.

SMALL CAPS have been used throughout this document to indicate terms that are defined in Clause 1.3 and in AS 2885.0:2018 (e.g. CALIBRATION). Although "may", "should" and "shall" are defined terms, they do not appear in small caps. FULL CAPS have been used throughout this document to indicate abbreviations listed in Clause 1.5.

The terms "normative" and "informative" are used in Standards to define the application of the appendices to which they apply. A "normative" appendix is an integral part of a Standard, whereas an "informative" appendix is only for information and guidance.

# Contents

# Australian Standard®

# Pipelines — Gas and liquid petroleum

# Part 5: Field pressure testing

## Section 1 Scope and general

### 1.1 Scope and exclusions

#### 1.1.1 General

This document sets out methods for the pressure testing of petroleum pipelines constructed of steel, designed in accordance with AS/NZS 2885.1, and operated in accordance with AS 2885.3. It may also be used for testing other pipelines, including pipelines designed or operated in accordance with AS/NZS 4645.2.

Pressure testing is used to establish —

(a) the pressure limit (PL) in accordance with AS/NZS 2885.1 (STRENGTH TEST); and

(b) the LEAK TIGHTNESS of a test section (LEAK TEST).

Pressure testing with air or gas, while not recommended, is permitted by this document within the limits specified in AS/NZS 2885.1.

NOTE 1 References in this document to liquid or fluid may be generically applied as applicable to air or gas.

This document may also be applicable to high pressure steel pipelines designed and constructed to national Standards of other countries. This document may be applied for PRETESTING of pipe and COMPONENTS and for testing sections of pipe separate from the field test.

NOTE 2 For information on the history and basis of this document, see Appendix A.

#### 1.1.2 Exclusions

This document does not apply to pressure testing of pipe manufactured from plastic or fibreglass materials.

The determination of the pressure-volume-temperature relationship does not apply to plastic or fibreglass pipe. For fibreglass pipe, this relationship shall be established by other means for use in leak test determination.

NOTE The properties of these materials mean that the pipe may be damaged when tested by methods designed for steel pipe. Procedures appropriate to these materials and documented in another Standard should be used, or if required, developed.

### 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 1210, *Pressure vessels*

AS 1349, *Bourdon tube pressure and vacuum gauges*

AS 1894, *The storage and handling of non-flammable cryogenic and refrigerated liquids*