Line Pipe

API SPECIFICATION 5L
FORTY-SIXTH EDITION, APRIL 2018

API MONOGRAM PROGRAM EFFECTIVE DATE: MAY 1, 2019

ERRATA 1, MAY 2018

energy API
AMERICAN PETROLEUM INSTITUTE

Date of Issue: May 2018

Affected Publication: API Specification 5L, *Line Pipe*, Forty-Sixth Edition, April 2018

Errata 1

Page 60, Table 22:

The top five rows of the table shall read like below. Cells surrounded by a red box contain updated values:

114.3 (4.500) to < 141.3 (5.563)	≥ 12.6 (0.495)	11.3 (0.445) to < 12.6 (0.495)	10.9 (0.429) to < 11.3 (0.445)	1[illegible] to < [illegible]
141.3 (5.563) to < 168.3 (6.625)	≥ 11.9 (0.469)	9.8 (0.387) to < 11.9 (0.469)	9.4 (0.370) to < 9.8 (0.387)	8.6 (0.338) to < 9.4 (0.370)
168.3 (6.625) to < 219.1 (8.625)	≥ 11.7 (0.460)	9.2 (0.361) to < 11.7 (0.460)	8.5 (0.333) to < 9.2 (0.361)	[illegible]6 (0.301) to < 8.6 (0.333)
219.1 (8.625) to < 273.1 (10.750)	≥ 11.4 (0.449)	8.9 (0.350) to < 11.4 (0.449)	8.1 (0.3[illegible]) to < 8.9 (0.3[illegible])	6.5 (0.257) to < 8.1 (0.317)
273.1 (10.750) to < 323.9 (12.750)	≥ 11.2 (0.442)	8.7 (0.343) to < 11.2 (0.442)	[illegible]0.310) to < [illegible] (0.343)	6.2 (0.245) to < 7.9 (0.310)

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— the term “shall” denotes a minimum requirement in order to conform to the standard;

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Suggested revisions are invited and should be submitted to the Standards Department, API, 1220 L Street, NW, Washington, DC 20005, standards@api.org.

Contents

Contents

Contents

Contents

Introduction

This specification is based on API Spec 5L, 45th Edition.

In the preparation of this document, the technical committee maintained the concept of two basic levels of standard technical requirements for line pipe expressed as two product specification levels (PSL 1 and PSL 2). Level PSL 1 provides a standard quality level for line pipe. Level PSL 2 has additional mandatory requirements for chemical composition, notch toughness and strength properties, and additional nondestructive testing. Requirements that apply to only PSL 1 or to only PSL 2 are so designated. Requirements that are not designated to a specific PSL designation apply to both PSL 1 and PSL 2 pipe.

The technical committee also recognized that the petroleum and natural gas industries often specify additional requirements for particular applications. In order to accommodate such needs, optional additional requirements for special applications are available, as follows:

— PSL 2 pipe ordered with a qualified manufacturing procedure (Annex B), the requirements of which have been enhanced to include verification detail of critical processes in the production of feedstock material, line pipe manufacture, and product testing and inspection;

— PSL 2 pipe ordered with resistance to ductile fracture propagation in gas pipelines (Annex G);

— PSL 2 pipe ordered for sour service (Annex H);

— pipe ordered as “through the flowline” pipe (Annex I);

— PSL 2 pipe ordered for offshore service (Annex J).

The following new annex has been added to this specification:

— PSL 2 Pipe Ordered for Applications Requiring Longitudinal Plastic Strain Capacity (Annex N).

The requirements of the annex apply only when specified on the purchase order.

When pipe is ordered for dual or multiple applications, the requirements of more than one annex for special applications can be invoked. In such instances, if a technical conflict arises due to applying the requirements of more than one annex for special applications, the most stringent requirement applicable to the intended service shall apply.

This specification does not provide guidance on when it is necessary to specify the above supplementary requirements. Instead, it is the responsibility of the purchaser to specify, based on the intended use and design requirements, which, if any, of the supplementary requirements apply for a particular purchase order.

Consideration has been given to traditional symbols (denoting mechanical or physical properties or their values, dimensions, or test parameters) and the format of equations that have been widely used and which (in their traditional format) maintain strong links with other widely used standards and specifications, and with the original scientific work that led to their derivation. Accordingly, some symbols and equations, most specifically those in 9.2 and Table F.1 and Annex P, have been retained in their traditional form to avoid causing confusion. Where changes have been made, care has been taken to ensure that the new symbol replacing the traditional one has been fully and clearly defined.

Line Pipe

1 Scope

1.1 Coverage

This specification specifies requirements for the manufacture of two product specification levels (PSL 1 and PSL 2) of seamless and welded steel pipe for use in pipeline transportation systems in the petroleum and natural gas industries.

This specification is not applicable to cast pipe.

1.2 Application of the API Monogram

If the product is manufactured at a facility licensed by the American Petroleum Institute (API) and is intended to be supplied bearing the API Monogram, the requirements of Annex A apply.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any addenda or errata) applies.

API Recommended Practice 5A3, *Thread Compounds for Casing, Tubing, and Line Pipe*

API Recommended Practice 5L3, *Drop-Weight Tear Tests on Line Pipe*

API Specification 5B, *Threading, Gauging, and Thread Inspection of Casing, Tubing, and Line Pipe Threads*

API Standard 5T1, *Imperfection Terminology*

ASNT SNT-TC-1A [1], *Recommended Practice No. SNT-TC-1A — Non-Destructive Testing*

ASTM A370 [2], *Standard Test Methods and Definitions for Mechanical Testing of Steel Products*

ASTM A435, *Standard Specification for Straight-Beam Ultrasonic Examination of Steel Plates*

ASTM A578, *Standard Specification for Straight-Beam Ultrasonic Examination of Plain and Clad Steel Plates for Special Applications*

ASTM A751, *Standard Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products*

ASTM A941, *Standard Terminology Relating to Steel, Stainless Steel, Related Alloys, and Ferroalloys*

ASTM A956, *Standard Test Method for Leeb Hardness Testing of Steel Products*

[1] American Society for Nondestructive Testing, 1711 Arlingate Lane, Columbus, Ohio 43228, https://www.asnt.org.

[2] ASTM International, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428, https://www.astm.org.