

CRA Line Pipe

API SPECIFICATION 5LC
FOURTH EDITION, MARCH 2015

ERRATA, OCTOBER 2015

API MONOGRAM PROGRAM EFFECTIVE DATE: SEPTEMBER 3, 2015

REAFFIRMED, JULY 2020



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Foreword

This edition of API Specification 5LC supersedes the Third Edition and includes items approved by letter ballot through January 2014. Portions of this publication have been changed from the previous edition. Substantive changes are indicated with **gray shading and blue font**, but API makes no warranty as to the accuracy of such notations. Nonsubstantive changes will not be indicated with shading and colored font.

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- the term “should” denotes a recommendation or that which is advised but not required in order to conform to the recommended practice;
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This document was produced under API standardization procedures that ensure appropriate notification and participation in the developmental process and is designated as an API standard. Questions concerning the interpretation of the content of this publication or comments and questions concerning the procedures under which this publication was developed should be directed in writing to the Director of Standards, American Petroleum Institute, 200 Massachusetts Avenue, NW, Suite 1100, Washington, DC 20001. Requests for permission to reproduce or translate all or any part of the material published herein should also be addressed to the director.

Generally, API standards are reviewed and revised, reaffirmed, or withdrawn at least every five years. A one-time extension of up to two years may be added to this review cycle. Status of the publication can be ascertained from the API Standards Department, telephone (202) 682-8000. A catalog of API publications and materials is published annually by API, 200 Massachusetts Avenue, NW, Suite 1100, Washington, DC 20001.

Suggested revisions are invited and should be submitted to the Standards Department, API, 200 Massachusetts Avenue, NW, Suite 1100, Washington, DC 20001, standards@api.org.

Suggestions for Ordering API CRA Line Pipe

In placing orders for line pipe to be manufactured in accordance with API Specification 5LC, the purchaser should specify the following on the purchase order:

| | |
|---|----------------|
| Specification..... | API Spec 5LC |
| Quantity | |
| Grade..... | Tables 4 and 7 |
| Type of Pipe..... | Section 4.1 c) |
| Size | |
| Nominal Diameter: | |
| Standard-weight Plain-end Pipe..... | Table 12 |
| Extra-strong Plain-end Pipe..... | Table 12 |
| Double-extra-strong Plain-end Pipe..... | Table 12 |
| Outside Diameter: | |
| Regular-weight Plain-end Pipe..... | Table 12 |
| Special Plain-end Pipe..... | Table 12 |
| Weight per Foot or Wall Thickness..... | Table 12 |
| Nominal Length..... | Section 10.5 |
| End Finish..... | Section 10 |
| Delivery Date and Shipping Instructions | |

The purchaser should also state on the purchase order their requirements concerning the following stipulations, which are optional with the purchaser:

| | |
|---|---------------------------|
| Certificate of Compliance..... | Section 1.5 |
| Chemical Analysis Test Reports..... | Section 6.5 |
| Acceptance and Maximum Allowable Percent of Joints..... | Section 10.7 |
| Alternative Bevel, Plain-end Pipe in Sizes | |
| 2 ³ / ₈ in. OD and larger..... | Section 10.8 |
| Defect Repair Procedures..... | Sections 12.7, 12.8, 12.9 |
| Markings in Metric Units..... | Section 13.1 b) |
| Purchaser Inspection..... | Annex G |
| Monogram Marking *..... | Annex A, Section A.4 |

* Users of this specification should note that there is no longer a requirement for marking a product with the API monogram. The American Petroleum Institute continues to license use of the monogram on products covered by this specification but it is administered by the staff of the Institute separately from the specification. The policy describing licensing and use of the monogram is contained in Annex A. No other use of the monogram is permitted. Nonlicensees may mark products in conformance with Section 13 and licensees may mark products in conformance with Annex A or Section 13.

Attention is called to the following stipulations which are subject to agreement between the purchaser and the manufacturer:

| | |
|---|---------------------------|
| Chemical Composition..... | Section 6.1 |
| Intermediate Grades..... | Section 7.1, Table D.1 |
| Flattening Test Orientation..... | Section 7.9 |
| Intermediate Diameters..... | Section 10.2 |
| Intermediate Wall Thickness..... | Section 10.3 |
| Supplementary Requirements..... | Annex B |
| Supplementary Hydrostatic Test..... | Section 9.4 |
| Hydrostatic Test Pressure..... | Section 9.3 |
| Lengths Applied to Carloads..... | Table 16 |
| Nonstandard Length and Length Tolerances..... | Section 10.5 |
| Repair of Welds of Electric-welded Pipe..... | Section 12.7 b) |
| Marking Requirements..... | Sections 13.1, 13.4, 13.5 |

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CRA Line Pipe

1 Scope

1.1 Coverage

This specification covers seamless, centrifugal cast, and welded alloy line pipe with improved corrosion resistant properties. The purpose of this specification is to provide standards for pipe with improved corrosion resistance suitable for use in conveying gas, water, and oil in both the oil and natural gas industries.

The size designations are nominal pipe sizes (NPS). In the text paragraphs herein, where pipe size limits (or size ranges) are given, these are outside diameter sizes except where stated to be nominal. These outside diameter size limits and ranges apply also to the corresponding nominal sizes. The primary product is beveled pipe. If plain-end square cut or other special end preparation is desired, this shall be subject to agreement between the purchaser and manufacturer. Included are NPS 1 in. through 42 in. Grades covered by this specification are LC30-1812, LC52-1200, LC65-2205, LC65-2506, LC30-2242, and [LC80-2507¹](#).

1.2 Application of the API Monogram

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

2 Normative References

For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies. For a list of other documents and articles associated with this standard, please see the Bibliography. The following referenced documents, either referenced in full or in part, are indispensable for the application of this document.

API Specification 5L, *Specification for Line Pipe*

API Specification Q1, *Specification for Quality Management System Requirements for Manufacturing Organizations for the Petroleum and Natural Gas Industry*

[ANSI²/NACE³ MR0175, Petroleum and natural gas industries—Material for use in H₂S-containing environments in oil and gas production—Part 3: Cracking-resistant CRAs \(corrosion-resistant alloys\) and other alloys](#)

ASTM A262⁴, *Standard Practices for Detecting Susceptibility to Intergranular Attack in Austenitic Stainless Steels, Practice E*

ASTM A370, *Methods and Definitions for Mechanical Testing of Steel Products, Annex II—Steel Tubular Products*

ASTM A751, *Methods, Practices and Definitions for Chemical Analysis of Steel Products*

ASTM E4, *Practices for Load Verification of Testing Products*

ASTM E10, *Standard Method of Test for Brinell Hardness of Metallic Materials*

¹ [Seamless only.](#)

² American National Standards Institute, 1899 L Street, NW, 11th Floor, Washington, DC 20036, [www.ansi.org](#).

³ NACE International, 1440 South Creek Drive, Houston, Texas 77084, [www.nace.org](#).

⁴ ASTM International, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428, [www.astm.org](#).