Field Inspection of New Line Pipe

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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.

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Introduction

This standard is based on API Specification 5L, Forty-sixth Edition. In the preparation of this standard, the concept of two basic levels of standard technical requirements for line pipe are expressed as two product specification levels (PSL 1 and PSL 2).

Level PSL 1: provides a standard quality level for line pipe (API 5L 46th Edition Annex E).

Level PSL 2: has additional mandatory requirements for chemical composition, notch toughness and strength properties and additional NDT.

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 (API 5L 46th Edition Annex E).

Also recognized is that additional requirements for particular applications may be necessary. To accommodate such needs, additional optional requirements for special applications are available, as follows:

— PSL 2 pipe ordered for sour service (API 5L 46th Edition Annex H);

— Pipe ordered as “Through the Flowline” (TFL) pipe (API 5L 46th Edition Annex I);

— PSL 2 pipe ordered for offshore service (API 5L 46th Edition Annex J);

— PSL 2 pipe ordered for applications requiring longitudinal plastic strain capacity (API 5L 46th Edition Annex N).

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.

API 5L does not provide guidance when it is necessary to specify the above supplementary requirements. Instead, it is the responsibility of the purchaser to specify, based upon the intended use and design requirements, which, if any, of the supplementary requirements apply for a particular purchase order.

Field Inspection of New Line Pipe

1 Scope

1.1 Coverage

This standard specifies requirements and gives recommendations for field inspection and testing of new line pipe. This standard covers the practices and technology commonly used in field inspection; however, certain practices may also be suitable for mill inspections.

This standard covers the qualification of inspection personnel, a description of inspection methods and apparatus calibration and standardization procedures for various inspection methods. The evaluation of imperfections and marking of inspected line pipe are included.

This standard is applicable to field inspection of line pipe and is not applicable for use as a basis for acceptance or rejection (for which the relevant purchasing specification is applicable, see 5.3.2).

1.2 Application and Basis for Inspection, Acceptance or Rejection

This standard contains practices recommended for use in the inspection of new line pipe subsequent to production by the manufacturer and ordering information for owners desiring to order inspection of new pipe in accordance with this document. The basis for performing an inspection may have its origin either in API 5L or in a supplemental specification or contract prepared by the owner. The inspections represented by the practices of API 5L may be placed in one of three categories as follows:

a) inspections specified,

b) inspections specified as one of several options, or

c) inspections not specified.

The 46th Edition of API 5L constitutes the basis for acceptance of pipe inspected in accordance with this standard, except that additional or more restrictive criteria may be contracted between the owner and the agency. Alternate editions of API 5L may be used provided the differences are identified and the requirements adjusted as applicable.

Regarding the determination of acceptance criteria, disposition, and responsibility for pipe inspected in accordance with this standard, the responsibility for pipe quality and contractual terms are to be agreed between the purchaser, manufacturer and/or seller. Section 6 contains ordering information for owners desiring to order inspection of new pipe in accordance with this document.

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. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any addenda) applies.

API Bulletin 5T1, *Imperfection Terminology*

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

API Recommended Practice 5UE, *Ultrasonic Evaluation of Pipe Imperfections*

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

API Specification 5L, *Line Pipe, 46th Edition*