

Work Item Number	#1076
Title of Work Item	Industry Normative Reference for full length wall thickness inspection – 10893-12 into API Spec 5CT, API Spec 5DP
Ballot Revision Level	1st
Type of Ballot (Initial, Comment, Comment resolution (reference API ballot#), 1 st Re-ballot, 2 nd Re-ballot, etc.)	Initial
Submitter Name(s)	Rodger Lawson, Brad Millard
API Document Modified	API 5CT
API Document, API Modifying Document(s) and Revision Level(s)	API 5CT 11 th Edition
Revision Key	Current API document in black, Deletions in Blue strikethrough, Additions in Green Previous ballot text in Red

Work Item Charge:

Part A – Resource Plan

I. Background and Information:

1. What is the scope of the proposed work or standard (for new documents/revisions) or proposed WG charge (for SC Work Items)?

The purpose of this SRRR is to provide an industry normative reference for full length wall thickness inspection when called out in SC5 specifications where none is provided currently. Examples include API 5CT, API 5DP. Note API 5L and 5CRA currently reference 10893-12 for full length wall thickness inspection. ASTM currently does not have a standard for full length wall thickness inspection – ASTM E213, for example, is for flaw inspection only.

2.
 - a. Explain the business need for the proposed action. Indicate potential cost savings to industry where possible.
 - b. What are the implications of not initiating the proposed action? Include potential safety, reliability, environmental and financial impacts that may arise.

A normative reference is not currently available for full length wall thickness inspection for API 5CT and 5DP (and potentially other SC5 documents to be determined). This effort would harmonize the requirements for full length wall thickness inspection with API 5L and API 5CRA

Ballot Text:

This document is not an API Standard; it is under consideration within an API technical committee but has not received all approvals required to become an API Standard. It shall not be reproduced or circulated or quoted, in whole or in part, outside of API committee activities except with the approval of the Chairman of the committee having jurisdiction and staff of the API Standards Dept. Copyright API. All rights reserved.

2 Normative References

ISO 10893-12 Nondestructive Testing of Steel Tubes – Part 12 “Automatic Full Peripheral Ultrasonic Wall Thickness Testing of Seamless and Welded (Except Submerged Arc-Welded) Steel Tubes”

9.13.4 Wall Thickness Measurement

Each length of pipe, coupling stock, coupling material, or accessory material shall be measured to verify conformance with wall thickness requirements. Wall thickness measurements shall be made with a mechanical caliper, a go/no-go gauge or with a properly calibrated NDE device of appropriate accuracy.

In case of dispute, the measurement determined by use of the mechanical caliper shall govern. The mechanical caliper shall be fitted with contact pins having circular cross-sections of 6.4 mm ($1/4$ in.) diameter. The end of the pin contacting the inside surface of the product shall be rounded to a maximum radius of 38.1 mm ($1\ 1/2$ in.) for product sizes Label 1: $6\ 5/8$, and larger, a maximum radius of $d/4$ for products less than Label 1: $6\ 5/8$, with a minimum radius of 3.2 mm ($1/8$ in.). The end of the pin contacting the outside surface of the product shall be either flat or rounded to a radius of not less than 38.1 mm ($1\ 1/2$ in.).

To ensure conformance to wall thickness requirements, all seamless pipe and coupling stock requiring electromagnetic or ultrasonic inspection as specified in Table C.37 or Table E.37 shall have the wall thickness verified in a helical or longitudinal path over the full length of the pipe or coupling stock, excluding end areas not covered by automated systems, in accordance with a documented procedure. The location of the wall-thickness verification equipment shall be at the discretion of the manufacturer.

For Grades L80 13Cr, C90, T95, C110, and Q125 **continuous wall thickness measurement shall be performed according to ISO 10893-12.** Wall thickness shall be measured over the full body, with a minimum coverage of 100 % of the surface area covered by the automatic system. The minimum measured wall thickness for each length shall be recorded. Traceability and/or reporting of each length is only required when specified in the purchase agreement.

NOTE See A.21 (SR 49) for additional requirements for all other grades.

Accessory material shall have the wall thickness verified if specified in the purchase agreement.

A.13 SR 41—Supplemental Inspection When Hydrostatic Test Pressure Is Limited to 69.0 MPa (10,000 psi)

This document is not an API Standard; it is under consideration within an API technical committee but has not received all approvals required to become an API Standard. It shall not be reproduced or circulated or quoted, in whole or in part, outside of API committee activities except with the approval of the Chairman of the committee having jurisdiction and staff of the API Standards Dept. Copyright API. All rights reserved.

A.13.1 SR 41.1—Wall Thickness Measuring, Recording, and Reporting

For each length of pipe, the wall thickness shall be measured and recorded over the full length with a minimum coverage of 100 % of the surface area covered by the automatic system according to ISO 10893-12. The minimum measured wall thickness for each length shall be recorded. Traceability and/or reporting of minimum measured wall thickness to each unique length is required only when specified in the purchase agreement.

A.21 SR 49—Wall Thickness Measurement—All Grades (9.13.4)

Wall thickness shall be measured over the full body, with a minimum coverage of 100 % of the surface area covered by the automatic system according to 10893-12. The minimum measured wall thickness for each pipe shall be recorded. Traceability and/or reporting of each pipe is only required when specified in the purchase agreement.

*This document is not an API Standard; it is under consideration within an API technical committee but has not received all approvals required to become an API Standard. It shall not be reproduced or circulated or quoted, in whole or in part, outside of API committee activities except with the approval of the Chairman of the committee having jurisdiction and staff of the API Standards Dept.
Copyright API. All rights reserved.*

Draft—For Committee Review