
**Non-destructive testing — Ultrasonic
testing — Technique of testing
claddings produced by welding, rolling
and explosion**

*Essais non destructifs — Essais par ultrasons — Technique d'essai des
placages produits par soudage, laminage et explosion*



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Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Ultrasonic test system	1
4.1 General.....	1
4.2 Requirements regarding probes.....	2
4.3 Additional requirements.....	2
4.4 Instrument settings.....	3
5 Preparation of the test object	7
6 Test procedure	8
6.1 General.....	8
6.2 Movement of probe.....	8
6.3 Checking the instrument setting.....	8
6.4 Recording levels.....	8
7 Test report	8
Annex A (informative) Determination of focal zone	10
Bibliography	11

Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

ISO 17405 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 138, *Non-destructive testing*, in collaboration with ISO Technical Committee TC 135, *Non-destructive testing*, Subcommittee SC 3, *Ultrasonic testing*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Non-destructive testing — Ultrasonic testing — Technique of testing claddings produced by welding, rolling and explosion

1 Scope

This International Standard specifies the techniques for manual ultrasonic testing of claddings on steel applied by welding, rolling, and explosion using single-element or dual-element probes.

The test is intended to cover detection of two-dimensional or three-dimensional discontinuities in the cladding and in the region of the interface.

This International Standard does not give acceptance criteria nor define the extent of testing.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2400, *Non-destructive testing — Ultrasonic testing — Specification for calibration block No. 1*

EN 1330-4, *Non-destructive testing — Terminology — Part 4: Terms used in ultrasonic testing*

EN 12668-1, *Non-destructive testing — Characterization and verification of ultrasonic examination equipment — Part 1: Instruments*

EN 12668-2, *Non-destructive testing — Characterization and verification of ultrasonic examination equipment — Part 2: Probes*

EN 12668-3, *Non-destructive testing — Characterization and verification of ultrasonic examination equipment — Part 3: Combined equipment*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1330-4 and the following apply.

3.1

test object

part to be tested

3.2

test surface

areas of the surface of the test object to which probes have to be coupled

4 Ultrasonic test system

4.1 General

The ultrasonic pulse-echo technique is used. For two-dimensional discontinuities parallel to the test surface and three-dimensional discontinuities, straight beam probes (dual-element or single-element) shall be used for testing with longitudinal waves.