
**Determination of the film thickness of
coatings using an ultrasonic gage**

*Détermination de l'épaisseur du feuil de revêtement par mesurage
ultrasons*



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Foreword

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The committee responsible for this document is ISO/TC 35, *Paints and varnishes*, Subcommittee SC 9, *General test methods for paints and varnishes*.

Determination of the film thickness of coatings using an ultrasonic gage

1 Scope

This Technical Specification describes a method for determining the film thickness of coatings on metallic and non-metallic substrates using an ultrasonic gauge.

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 4618, *Paints and varnishes — Terms and definitions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4618 and the following apply.

3.1

ultrasonic wave

acoustic wave having a frequency higher than the range of audibility of the human ear, generally taken as higher than 20 kHz

[SOURCE: EN 1330-4:2010, 3.1.1]

3.2

longitudinal wave **compressional wave**

wave in which the particle motion in a material is in the same direction as the propagation of the wave

[SOURCE: EN 1330-4:2010, 2.3.1]

3.3

echo

ultrasonic pulse reflected to the probe

[SOURCE: EN 1330-4:2010, 5.5.2]

3.4

echo height **echo amplitude**

height of an *echo* (3.3) indication on the screen

[SOURCE: EN 1330-4:2010, 5.5.5]

3.5

ultrasonic impulse

short-lived ultrasound signal

3.6

ultrasonic sensor **ultrasonic probe**

device for sending and receiving *ultrasonic waves* (3.1), mostly based on piezoelectric materials