

This is a preview of "ISO 16809:2012". [Click here to purchase the full version from the ANSI store.](#)

First edition
2012-11-15

Non-destructive testing — Ultrasonic thickness measurement

Essais non destructifs — Mesurage de l'épaisseur par ultrasons



Reference number
ISO 16809:2012(E)

© ISO 2012

This is a preview of "ISO 16809:2012". [Click here to purchase the full version from the ANSI store.](#)



COPYRIGHT PROTECTED DOCUMENT

© ISO 2012

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

This is a preview of "ISO 16809:2012". Click here to purchase the full version from the ANSI store.

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Measurement modes	1
5 General requirements	3
5.1 Instruments	3
5.2 Probes.....	3
5.3 Couplant	3
5.4 Reference blocks.....	3
5.5 Test objects.....	3
5.6 Qualification of personnel	4
6 Application of the technique	4
6.1 Surface conditions and surface preparation.....	4
6.2 Technique.....	4
6.3 Selection of probe	6
6.4 Selection of instrument.....	6
6.5 Materials different from the reference.....	7
6.6 Special measuring conditions	7
7 Instrument setting	7
7.1 General	7
7.2 Methods.....	8
7.3 Check of settings.....	9
8 Influence on accuracy.....	10
8.1 Operational conditions	10
8.2 Equipment	13
8.3 Evaluation of accuracy	14
9 Influence of materials.....	14
9.1 General	14
9.2 Inhomogeneity	14
9.3 Anisotropy.....	14
9.4 Attenuation.....	14
9.5 Surface conditions	15
10 Test report.....	16
10.1 General	16
10.2 General information	16
10.3 Inspection data	17
Annex A (informative) Corrosion in vessels and piping	18
Annex B (informative) Instrument settings	22
Annex C (informative) Parameters influencing accuracy	25
Annex D (informative) Measuring technique selection	30
Bibliography.....	32

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 16809 was prepared by the European Committee for Standardization (CEN) as EN 14127:2011 and was adopted by Technical Committee ISO/TC 135, *Non-destructive testing*, Subcommittee SC 3, *Ultrasonic testing*.