First edition 2006-07-01

Non-destructive testing — Guidelines for NDT training syllabuses

Essais non destructifs — Lignes directrices pour les programmes de formation en END



ISO/TR 25107:2006(E)

This is a preview of "ISO/TR 25107:2006". Click here to purchase the full version from the ANSI store.

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2006

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

Cont	tents F	Page	
Foreword		iv	
		v	
1	Scope	1	
2	Normative references	1	
3	Terms and definitions	1	
4 4.1 4.2 4.3 4.4 4.5	Introduction to NDT Role Task of NDT personnel History of NDT Terminology of NDT General environmental and safety considerations	1 2 2	
5	Radiographic testing — Levels 1, 2 and 3	3	
6	Ultrasonic testing — Levels 1, 2 and 3	19	
7	Eddy current testing — Levels 1, 2 and 3	25	
8	Penetrant testing — Levels 1, 2 and 3	31	
9	Magnetic particle testing — Levels 1, 2 and 3	35	
10	Leak testing — Levels 1, 2 and 3	41	
11	Acoustic emissions testing — Levels 1, 2 and 3	58	
12	Visual testing — Levels 1, 2 and 3	67	
Biblio	graphy	78	

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.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

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/TR 25107 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 138, *Non-destructive testing*, in collaboration with Technical Committee ISO/TC 135, *Non-destructive testing*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

Introduction

With this Technical Report, ISO/TC135 and CEN/TC138 present to the worldwide non-destructive testing (NDT) community their recommendations for the minimum technical knowledge to be required of NDT personnel. These recommendations provide means for evaluating and documenting the competence of personnel whose duties demand the appropriate theoretical and practical knowledge.

As part of the efforts to streamline and harmonize the training and certification of NDT personnel, ISO/TC 135 and CEN/TC 138 have been actively involved in developing guidelines for training syllabuses (this Technical Report) and for NDT training organizations (ISO/TR 27108). These documents are intended to serve those involved in training and to be useful in achieving a uniform level of training material and — consequently — in the competence of personnel.

This document, together with ISO/TR 27108, represents two years of effort for working groups of the two technical committees in the promotion of harmonization and mutual recognition of minimum requirements taken from the different existing certification schemes.

The content of this first edition has been based on the experience of the experts as well as on comments from the end-user industries, as well as the most recent edition of the International Committee for Non-destructive testing (ICNDT) recommended guidelines.

The time allotment for the different topics takes into account the latest developments in each method and, as a consequence, the total duration can be sometimes greater than the minimum duration required by ISO 9712 and EN 473.

This Technical Report is to be revised in the coming years in order to maintain a workable document in line with the development of NDT methods and techniques.

ISO/TC 135 and CEN/TC 138 wish to express their appreciation to all those who contributed to the production of this publication.