

Australian Standard™

**Non-destructive testing—Qualification
and approval of personnel—Aerospace**



This Australian Standard was prepared by Committee MT-007, Non-destructive Testing of Metals and Minerals. It was approved on behalf of the Council of Standards Australia on 10 March 2006.

This Standard was published on 28 March 2006.

The following are represented on Committee MT-007:

Australian Railways Association
Australasian Aerospace Non-destructive Testing Committee
Australian Industry Group
Australian Institute for Non-Destructive Testing
ANSTO
Australian Pipeline Association
Bureau of Steel Manufacturers of Australia
Engineers Australia
Industrial Research Limited
NATA
New Zealand Non-Destructive Testing Association
TestSafe Australia
Victoria WorkCover
Welding Technology Institute of Australia

Keeping Standards up-to-date

Standards are living documents which reflect progress in science, technology and systems. To maintain their currency, all Standards are periodically reviewed, and new editions are published. Between editions, amendments may be issued. Standards may also be withdrawn. It is important that readers assure themselves they are using a current Standard, which should include any amendments which may have been published since the Standard was purchased.

Detailed information about Standards can be found by visiting the Standards Web Shop at www.standards.com.au and looking up the relevant Standard in the on-line catalogue.

Alternatively, the printed Catalogue provides information current at 1 January each year, and the monthly magazine, *The Global Standard*, has a full listing of revisions and amendments published each month.

Australian Standards™ and other products and services developed by Standards Australia are published and distributed under contract by SAI Global, which operates the Standards Web Shop.

We also welcome suggestions for improvement in our Standards, and especially encourage readers to notify us immediately of any apparent inaccuracies or ambiguities. Contact us via email at mail@standards.org.au, or write to the Chief Executive, Standards Australia, GPO Box 476, Sydney, NSW 2001.

This Standard was issued in draft form for comment as DR 05411.

Australian Standard™

**Non-destructive testing—Qualification
and approval of personnel—Aerospace**

Originated as AS 3669—1989.
Previous edition AS 3669—2004.
Fourth edition 2006.

COPYRIGHT

© Standards Australia

All rights are reserved. No part of this work may be reproduced or copied in any form or by any means, electronic or mechanical, including photocopying, without the written permission of the publisher.

Published by Standards Australia, GPO Box 476, Sydney, NSW 2001, Australia
ISBN 0 7337 7329 X

PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee MT-007, Non-Destructive Testing of Metals and Materials, at the request of the Australian Aerospace Non-destructive Testing Committee (AANDTC) to supersede AS 3669—2004.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

The objective of this Standard is to specify the requirements for the qualification and registration of personnel in the aerospace industry.

The objective of this revision is to make AS 3669 technically equivalent to EN 4179 and NAS 410.

During the preparation of this Standard cognisance was taken of the following documents from other Standards organizations:

EN

4179 Aerospace Series—Qualifications and approval of personnel for non-destructive testing (February 2003).

NAS

410 Revision 2—Certification and qualifications of non-destructive test personnel (February 2003).

The terms ‘normative’ and ‘informative’ have been used in this Standard to define the application of the appendix to which they apply. A ‘normative’ appendix is an integral part of a Standard, whereas an ‘informative’ appendix is only for information and guidance.

CONTENTS

	<i>Page</i>
FOREWORD.....	5
SECTION 1 SCOPE AND GENERAL	
1.1 SCOPE	6
1.2 REFERENCED DOCUMENTS	6
1.3 DEFINITIONS	6
SECTION 2 METHODS AND LEVELS	
2.1 TYPES OF METHODS.....	10
2.2 LEVEL OF QUALIFICATION	10
2.3 LEVELS OF APPROVAL.....	10
SECTION 3 GENERAL REQUIREMENTS	
3.1 WRITTEN PRACTICE	11
3.2 PERSONNEL	11
3.3 METHODS.....	12
3.4 COMPLIANCE	12
3.5 RESPONSIBILITY	12
SECTION 4 REQUIREMENTS FOR QUALIFICATION	
4.1 LEVELS OF QUALIFICATION	13
4.2 TRAINEE.....	13
4.3 LEVEL 1 ‘LIMITED’	13
4.4 LEVEL 1	13
4.5 LEVEL 2	14
4.6 LEVEL 3	14
4.7 INSTRUCTOR.....	15
4.8 AUDITOR.....	15
SECTION 5 TRAINING AND EXPERIENCE	
5.1 TRAINING.....	16
5.2 MINIMUM REQUIRED TRAINING HOURS.....	17
5.3 EXPERIENCE.....	17
SECTION 6 EXAMINATIONS	
6.1 PURPOSE	19
6.2 ADMINISTRATION OF EXAMINATIONS	21
SECTION 7 APPROVAL	
7.1 GENERAL	22
7.2 RECORDS.....	22
7.3 LOSS OF APPROVAL.....	22
7.4 REINSTATEMENT OF APPROVAL	23
7.5 REAPPROVAL FOR LEVEL 1 ‘LIMITED’ LEVEL 1 AND LEVEL 2	23
7.6 REAPPROVAL FOR LEVEL 3	23

APPENDICES

A	CREDIT SYSTEM FOR REAPPROVAL OF LEVEL 3 NDT PERSONNEL	24
B	ALTERNATIVE TO THE TRAINING, EXPERIENCE AND EXAMINATION REQUIREMENTS OF THIS STANDARD	26

FOREWORD

The European Aerospace Industry established, in December 1998, the International Aerospace Quality Group (IAQG) with the purpose of achieving significant improvements in quality and reductions in cost.

This organization, with representatives from Aerospace companies in Americas, Asia and Europe, have agreed to take responsibility for the technical content of the NDT personnel approval requirements of NAS 410 and EN 4179.

In April 2005, the AANDTC meet and agreed that AS 3669 needed to be harmonized with NAS 410/EN 4179 with this change meeting many of the industry's needs with respect to compliance with EASA, FAA and CASA.

This Standard applies to personnel using NDT methods to test and/or accept materials, products, components, assemblies or sub-assemblies. It also applies to those individuals directly responsible for the technical adequacy for the NDT methods used, as well as personnel performing external NDT technical audits or providing technical NDT training.

This Standard merges the NDT personnel approval requirements of NAS 410, EN 4179 and AS 3669. It introduces the concept of a National Aerospace NDT Board (NANDTB) from EN 4179, though it is not mandatory to have such a board it is the preferred option when complying with this document.

STANDARDS AUSTRALIA

Australian Standard

Non-destructive testing—Qualification and approval of personnel— Aerospace

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE

This Standard establishes the minimum requirements for the qualifications and approval of personnel involved in non-destructive testing (NDT). These requirements include training, experience and examination for people performing NDT in the aerospace manufacturing, service, maintenance and overhaul industries.

This Standard is not intended to apply to individuals who have only administrative authority over the personnel identified above, nor does it apply to research personnel developing technology for subsequent approval by a certified Level 3.

Individuals currently certified in accordance with either NAS 410 and EN 4179 may have their current approval period extended to the maximum limits defined in Clause 8 of this Standard. Personnel do not need to recertify to the requirements of this Standard until their current or extended approval expires.

NOTE: In Europe, the word ‘certification’ may only be used when the certification process complies with the requirements of ISO/IEC 17024 and the term ‘approval’ would be used to denote a written statement by an employer that an individual has met specific requirements.

1.2 REFERENCED DOCUMENTS

The following documents are referred to in this Standard:

AS	
3998	Non-destructive testing—Qualification and certification of personnel (Identical with ISO 9712)
ISO/IEC	
17024	Conformity assessment—General requirements for bodies operating certification of persons (Published in Australia as AS ISO/IEC 17024)
EN	
473	Non-destructive testing—Qualification and certification of NDT personnel—General principles
4179	Aerospace Series—Qualification and approval of personnel for non-destructive testing
NAS	
410	Revision 2—Certification and qualification of non-destructive test personnel

1.3 DEFINITIONS

For the purpose of this Standard, the definitions below apply.