

AS 1929—1981

Australian Standard[®]

**NON-DESTRUCTIVE TESTING
GLOSSARY OF TERMS**

The following scientific, industrial and governmental organizations and departments were officially represented on the committee entrusted with the preparation of this standard:

Australian Atomic Energy Commission
Australian Gas Association
Australian Institute for Non-destructive Testing
Australian Welding Institute
Bureau of Steel Manufacturers of Australia
Confederation of Australian Industry
Department of Defence
Department of Industrial Relations, N.S.W.
Department of Labour and Industry, Victoria
Department of Productivity
Electricity Supply Association of Australia
Institute of Australian Foundrymen (N.S.W. Division)
National Association of Testing Authorities
Railways of Australia Committee
Society of Automotive Engineers—Australasia

This standard, prepared by Committee MT/7, Non-destructive Testing of Metals and Materials, was approved on behalf of the Council of the Standards Association of Australia on 19 February 1981, and was published on 1 June 1981.

Review of Australian Standards. *To keep abreast of progress in industry, Australian Standards are subject to periodic review and are kept up to date by the issue of amendments or new editions as necessary. It is important therefore that Standards users ensure that they are in possession of the latest edition, and any amendments thereto.*

Full details of all Australian Standards and related publications will be found in the Standards Australia Catalogue of Publications; this information is supplemented each month by the magazine 'The Australian Standard', which subscribing members receive, and which gives details of new publications, new editions and amendments, and of withdrawn Standards.

Suggestions for improvements to Australian Standards, addressed to the head office of Standards Australia, are welcomed. Notification of any inaccuracy or ambiguity found in an Australian Standard should be made without delay in order that the matter may be investigated and appropriate action taken.

AS 1929—1981

Australian Standard[®]

NON-DESTRUCTIVE TESTING GLOSSARY OF TERMS

First published (as AS B259 Pts 1-5)	1968
AS 1929 first published	1977
Second edition	1981

PUBLISHED BY STANDARDS AUSTRALIA
(STANDARDS ASSOCIATION OF AUSTRALIA)
1 THE CRESCENT, HOMEBUSH, NSW 2140

ISBN 0 7262 2205 4

PREFACE

This edition of this standard was prepared by the Association's Committee on Non-destructive Testing to replace the 1977 edition which was a revision of AS B259, Parts 1 to 5—1968.

Some terms have been deleted because their meaning is not restricted to non-destructive testing. Known errors have been corrected and additional terms added. Of significance are those related to radioactivity; in particular the rad, rem and roentgen have been replaced by the SI units gray (Gy), sievert (Sv) and coulombs per kilogram (C/kg) respectively. The numbers allocated to the terms for reference from the Index have been deleted and the Index now gives only the relevant Section number, the terms within the Sections being in alphabetical order.

AS B259, which was BS 3683, Parts 1 to 5, endorsed as the Australian standard, was issued in separate parts. The committee decided that Australian industry would be best served by the issue of one glossary which covered all the fields of non-destructive testing. This standard accordingly reflects that decision.

During preparation of the standard, BS 3683, Parts 1 to 5, and the following publications were considered:

ISO/R 947— Addendum 1	Explanations on the Significance of the Principal Radiographic Terms Used in ISO Recommendations
BS 3455	Glossary of Terms Used in Nuclear Science and Technology
ASTM E 268—1968	Terms Relating to Electromagnetic Testing.

The committee also considered a publication issued by the Aerospace Industries Association (USA) 'Glossary of Terms Frequently Used in Non-destructive Testing'. Acknowledgement is made of the assistance obtained from these sources.

Terms which specifically relate to a particular field of testing have been placed in the appropriate section, cross referencing being used where terms are related. General physical terms which have widespread use and are not confined to non-destructive testing have not been included.

CONTENTS

	<i>Page</i>
GLOSSARY	
Section 1. General Terms	3
Section 2. Terms Used in Acoustic Testing	4
Section 3. Terms Used in Electromagnetic Testing	14
Section 4. Terms Used in Magnetic Particle Testing	16
Section 5. Terms Used in Penetrant Testing	19
Section 6. Terms Used in Radiation Testing	20
INDEX	28

© Copyright — STANDARDS AUSTRALIA

Users of Standards are reminded that copyright subsists in all Standards Australia publications and software. Except where the Copyright Act allows and except where provided for below no publications or software produced by Standards Australia may be reproduced, stored in a retrieval system in any form or transmitted by any means without prior permission in writing from Standards Australia. Permission may be conditional on an appropriate royalty payment. Requests for permission and information on commercial software royalties should be directed to the head office of Standards Australia.

Standards Australia will permit up to 10 percent of the technical content pages of a Standard to be copied for use exclusively in-house by purchasers of the Standard without payment of a royalty or advice to Standards Australia.

Standards Australia will also permit the inclusion of its copyright material in computer software programs for no royalty payment provided such programs are used exclusively in-house by the creators of the programs.

Care should be taken to ensure that material used is from the current edition of the Standard and that it is updated whenever the Standard is amended or revised. The number and date of the Standard should therefore be clearly identified.

The use of material in print form or in computer software programs to be used commercially, with or without payment, or in commercial contracts is subject to the payment of a royalty. This policy may be varied by Standards Australia at any time.

STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard
for
NON-DESTRUCTIVE TESTING—GLOSSARY OF TERMS

SECTION 1. GENERAL TERMS

Term	Definition
acoustic testing	The method of non-destructive testing which uses acoustic energy usually within the frequency range 1 MHz to 5 MHz.
defect	A discontinuity whose size, shape, orientation, location or properties make it detrimental to the useful service of the product in which it occurs or which exceeds the accept/reject criteria for the given design.
discontinuity	<p>Any imperfection or interruption in the normal physical structure or configuration of a product, such as cracks, laps, seams, inclusions, porosity, lamination or change in grain structure.</p> <p>NOTE: A discontinuity may or may not affect the usefulness of the product.</p>
eddy current testing	The method in which eddy current flow is induced and monitored in the product under test. Changes in current flow are subsequently analysed.
electromagnetic testing	The method of non-destructive testing which uses electromagnetic energy having frequencies less than visible light. It covers eddy current, magnetic field, leakage field pick-up and direct current conduction tests.
indication	A response or evidence of a response in non destructive testing that requires interpretation to determine its significance.
magnetic particle testing	The method of non-destructive testing which involves the generation of a magnetic flux within magnetic materials, used to detect surface or near surface discontinuities. Testing also involves the application of suitable magnetic particles to the surface of the material to give an indication of a discontinuity.
non-destructive testing	Testing of materials to detect internal, surface and concealed defects or discontinuities using methods which do not damage or destroy the material under test.
penetrant testing	The method of non-destructive testing which involves the application of a penetrant to materials to detect and locate discontinuities such as laps, folds, cracks, porosity and fissures which are open to the surface. The method also involves the removal of excess penetrant, and, if necessary, the application of a developer to produce a visible indication of a discontinuity.
radiation testing	The method of non-destructive testing which uses X-rays or gamma rays in order to produce a graphic record on sensitized film which indicates comparative soundness of the material under test.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-