EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 287-2

February 1992

+ A1

May 1997

UDC 621.791-057.2 : 377.127.6 : 669.71

Descriptors: Welding, fusion welding, steels, gas shielded welding, aluminium, aluminium alloys, welders (personnel), approval, specification, inspection, tests, acceptability, quality certificate

English version

Approval testing of welders — Fusion welding — Part 2: Aluminium and aluminium alloys (includes amendment A1 : 1997)

Qualification des soudeurs — Soudage par fusion — Partie 2: Aluminium et ses alliages (inclut l'amendement A1 : 1997)

Prüfung von Schweißern — Schmelzschweißen — Teil 2: Aluminium und Aluminiumlegierungen (enthält Änderung A1 : 1996)

This European Standard was approved by CEN on 1992-02-21. Amendment A1 was approved on 1996-12-11. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

This standard has been prepared by Working Group 2 Approval requirements for welding and allied processes personnel of CEN/TC 121 Welding.

For this standard, ISO/DIS 9606-2, *Approval testing of welders — Fusion welding — Part 2: Aluminium and aluminium alloys*, was considered and used as a basis. However, alterations were necessary due to the consideration of experience and updated knowledge.

In accordance with the Common CEN/CENELEC Rules being part of the Internal Regulations of CEN, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

Foreword of amendment A1

This Amendment EN 287-2 : 1992/A1 : 1997 to EN 287-2 : 1992 has been prepared by Technical Committee CEN/TC 121, Welding, the secretariat of which is held by DS.

This Amendment to the European Standard EN 287-2 : 1992 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 1997, and conflicting national standards shall be withdrawn at the latest by November 1997.

This Amendment to the European Standard EN 287-2 : 1992 has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements by EU Directive(s).

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Contents

0 Introduction

This standard covers the principles to be observed in the approval testing of welder performance for the fusion welding of aluminium and its alloys. The term 'aluminium' stands for aluminium and weldable aluminium alloys.

The quality of work involved in welding depends on the skill of the welder to a high degree.

The ability of the welder to follow verbal or written instructions and testing of his skill are therefore important factors in ensuring the quality of the welded product.

Testing of skill to this standard depends on welding methods in which uniform rules and test conditions are complied with, and standard test pieces are used.

This standard applies to processes where the skill of the welder has a significant influence on weld quality.

This standard is intended to provide the basis for the mutual recognition by examining bodies for approval relating to welders' competence in the various fields of application. Tests shall be carried out in accordance with this standard unless more severe tests are specified by the relevant application standard when these shall be applied.

The same test weld may be used to approve a welding procedure and a welder provided that all the relevant requirements, e.g. test piece dimensions, are satisfied (see EN 288-4).

The welder's skill and job knowledge continue to be approved only if the welder is working with reasonable continuity on welding work within the extent of approval.

All new approvals are to be in accordance with this standard from the date of this issue.

However, this standard does not invalidate previous welders approvals made to former national standards or specifications, providing the intent of the technical requirements is satisfied and the previous approvals are relevant to the application and production work on which they are to be employed.

Also, where additional tests have to be carried out to make the approval technically equivalent it is only necessary to do the additional tests on a test piece which should be made in accordance with this standard. Consideration of previous approvals to former national standards or specifications should be at the time of the enquiry/contract stage and agreed between the contracting parties.

1 Scope

This standard specifies essential requirements, ranges of approval, test conditions, acceptance requirements and certification for the approval testing of welder performance for the welding of aluminium. The recommended format for the certificate of approval testing is given in annex A.

During the approval test the welder should be required to show adequate practical experience and job knowledge (test non mandatory) of the welding processes, materials and safety requirements for which he is to be approved; information on these aspects is given in annex C.

This standard is applicable when the welder's approval testing is required by the purchaser, by inspection authorities or by other organizations.

This standard applies to the approval testing of welders for the fusion welding of aluminium using a gas shield.

The welding processes referred to in this standard include those fusion welding processes which are designated as manual or partly mechanized welding. This standard does not cover fully mechanized and automatic welding processes (see **5.2**).

This standard covers approval testing of welders for work on semi-finished and finished products made from wrought, forged or cast material types listed in **5.4**.

The certificate of approval testing is issued under the sole responsibility of the examiner or examining body.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 288-2	*Specification and approval of welding procedures for metallic materials — Part 2: Welding procedure specification for arc welding*
EN 288-4	*Specification and approval of welding procedures for metallic materials — Part 4: Welding procedure tests for the arc welding of aluminium and its alloys*
EN 571-1	*Non-destructive testing — Penetrant inspection — Part 1: General principles for the examination*
EN 910	*Welded butt joints in metallic materials — Bend tests*
EN 1320	*Welded joints in metallic materials — Fracture tests*
EN 1321	*Destructive examination of welds — Macroscopic and microscopic examination of welds*
prEN 1435	*Non-destructive examination of welds — Radiographic examination of welded joints*