

# British Standard

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Specification and  
qualification of  
welding  
procedures for  
metallic  
materials —  
Welding  
procedure  
specification —

Part 2: Gas welding

The European Standard EN ISO 15609-2:2001, with the incorporation of amendment A1:2003, has the status of a British Standard







## National foreword

This British Standard is the official English language version of EN ISO 15609-2:2001, including amendment A1:2003. It is identical with ISO 15609-2:2001.

The UK participation in its preparation was entrusted to Technical Committee WEE/36, Approval testing of welding procedures and welders, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

A list of organizations represented on this committee can be obtained on request to its secretary.

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### Summary of pages

This document comprises a front cover, an inside front cover, the EN ISO title page, pages 2 to 7 and a back cover.

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### Amendments issued since publication

Amd. No.	Date	Comments
14953	9 February 2004	Revision to foreword and deletion of Annex ZA

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English version

Specification and qualification of welding procedures for metallic materials – Welding procedure specification -  
Part 2: Gas welding (ISO 15609-2:2001)  
(includes amendment A1:2003)

Descriptif et qualification d'un mode opératoire de soudage pour les matériaux métalliques - Descriptif d'un mode opératoire de soudage - Partie 2: Soudage aux gaz (ISO 15609-2:2001)  
(inclut l'amendement A1:2003)

Anforderung und Anerkennung von Schweißverfahren für metallische Werkstoffe - Schweißanweisung - Teil 2: Gasschweißen (ISO 15609-2:2001)  
(enthält Änderung A1:2003)

This European Standard was approved by CEN on 2 May 2001; amendment A1 was approved by CEN on 20 November 2003.

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## Foreword

The text of EN ISO 15609-2:2001 has been prepared by Technical Committee CEN/TC 121 "Welding", the secretariat of which is held by DS, in collaboration with Technical Committee ISO/TC 44 "Welding and allied processes".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2002, and conflicting national standards shall be withdrawn at the latest by March 2002.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

Annex A is informative.

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## Foreword to amendment A1

This document EN ISO 15609-2:2001/A1:2003 has been prepared by Technical Committee CEN/TC 121

"Welding", the secretariat of which is held by DS, in collaboration with Technical Committee ISO/TC 44 "Welding and allied processes".

This Amendment to the European Standard EN ISO 15609-2:2001 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2004, and conflicting national standards shall be withdrawn at the latest by June 2004.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

## 1 Scope

This European Standard specifies requirements for the content of welding procedure specifications for gas welding processes.

This standard is part of a series of standards, details of this series are given in prEN ISO 15607, annex A.

Variables listed in this standard are those influencing the quality of the welded joint.

## 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 (including amendments).

EN ISO 6947, Welds - Working positions - Definitions of angles of slope and rotation (ISO 6947:1993).

EN ISO 4063, Welding and allied processes – Nomenclature of processes and reference numbers (ISO 4063:1998).

prEN ISO 15607, Specification and approval of welding procedures for metallic materials – General rules (ISO/DIS 15607:2000).

CR ISO 15608, Welding – Guidelines for a metallic material grouping system (ISO/TR 15608:2000).

## 3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in prEN ISO 15607 apply.

## 4 Technical contents of Welding Procedure Specification (WPS)

### 4.1 General

The Welding Procedure Specification (WPS) shall give details of how a welding operation is to be successfully performed.

Welding Procedure Specifications may cover a certain range of thickness of the joined parts and may also cover a range of parent materials or welding consumables. Some manufacturers may prefer additionally to prepare work instructions for each specific job as part of detailed production planning.

Information listed in 4.2 to 4.4 is adequate for most gas welding procedures. For some applications it may be necessary to supplement or reduce the list.

Ranges and tolerances, according to the relevant standard of the series (see prEN ISO 15607) and to the manufacturer's experience, shall be specified where appropriate.

An example of the WPS-format is shown in annex A.



## 4.2 Information related to the manufacturer

Identification of the manufacturer;

Identification of the WPS;

Reference to the Welding Procedure Qualification Record (WPQR) or other documents as required.

## 4.3 Information related to the parent material

### 4.3.1 Parent material type

Designation of the material, and reference standard;

Number of the group as given in CR ISO 15608.

A WPS may cover more than one group of materials.

### 4.3.2 Material dimensions

Thickness ranges of the joint ;

Outside diameter ranges for pipes.

## 4.4 Information common to all welding procedures

### 4.4.1 Welding process

The welding process in accordance with EN ISO 4063.

### 4.4.2 Joint design

Sketch of the joint design showing configuration and dimensions. Details may be given by reference to an appropriate standard on joint design.

Weld run sequence, if essential for the properties of the weld.

### 4.4.3 Welding position

Applicable welding positions in accordance with EN ISO 6947.

### 4.4.4 Initial and interpass preparation and cleaning

Information related to groove cleaning, degreasing, jiggling and tack welding, grinding and gouging including methods to be used.

### 4.4.5 Welding technique

Leftward welding or rightward welding.



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**4.4.6 Welding data**

Nozzle size ;

Fuel gas type and pressure ;

O<sub>2</sub> pressure ;

Type of flame.

**4.4.7 Welding consumables, designation**

Designation, manufacturer and trade name.

**4.4.8 Welding consumables, dimensions**

Diameter of rod.

**4.4.9 Post-weld heat-treatment**

For any post-weld heat-treatment, procedure to be followed (or reference to a separate post-weld heat-treatment specification).



**Annex A**  
(informative)

**Manufacturer's Welding Procedure Specification (WPS)**

Manufacturer's welding procedure

Reference No. :	Method of preparation and cleaning :
WPQR No. :	Parent material designation :
Manufacturer :	Parent material group :
Welding process :	Material thickness (mm) :
Joint type :	Outside diameter (mm) :
Weld preparation details (Sketch)*	Welding position :

Joint design	Welding sequences

Welding details

Run	Process	Welding technique	Welding data					Welding consumables	
			Nozzle size	Fuel gas type	Fuel gas pressure	O <sub>2</sub> pressure	Type of flame	Designation	Dimension

Post-weld heat treatment :  
 Time, temperature, method :  
 Heating and cooling rates\* :  
 Remarks :

.....  
 Manufacturer  
 (name, signature, date)

\_\_\_\_\_

\* If required

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