BRITISH STANDARD

BS EN
1256 : 1996

Gas welding equipment — Specification for hose assemblies for equipment for welding, cutting and allied processes

The European Standard EN 1256 : 1996 has the status of a British Standard

ICS 23.040.70 ; 25.160.30

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee WEE/18, Gas welding and cutting appliances, upon which the following bodies were represented:

British Compressed Gases Association
British Railways Board
Department of Trade and Industry (Consumer Safety Unit, CA Division)
Health and Safety Executive
L P Gas Association
Railway Industry Association
South Bank University
Welding Manufacturers' Association (BEAMA Ltd.)

This British Standard, having been prepared under the direction of the Engineering Sector Board, was published under the authority of the Standards Board and comes into effect on
15 December 1996

Amendments issued since publication

Amd. No.	Date	Text affected

The following BSI references relate to the work on this standard:
Committee reference WEE/18
Draft for comment 93/716808 DC

ISBN 0 580 26247 2

Contents

Foreword

This British Standard has been prepared under the direction of Technical Committee WEE/18 and is the English language version of EN 1256 : 1996 *Gas welding equipment — Specification for hose assemblies for equipment for welding, cutting and allied processes*, published by the European Committee for Standardization (CEN).

BS EN 1256 partially supersedes BS 1389 : 1986 (the rest being superseded by BS EN 560 : 1995) which has been withdrawn.

EN 1256 : 1996 was produced as a result of international discussion in which the UK took an active part.

Cross-references

Publication referred to	Corresponding British Standard
EN 559 : 1994	BS EN 559 : 1994 *Gas welding equipment — Rubber hoses for welding, cutting and allied processes*
EN 560 : 1994	BS EN 560 : 1995 *Gas welding equipment — Hose connections for welding, cutting and allied processes*
EN 29090 : 1992	BS EN 29090 : 1992 *Specification for gas tightness of equipment for gas welding and allied processes*
EN 29539 : 1992	BS EN 29539 : 1992 *Specification for materials for equipment used in gas welding, cutting and allied processes*

Compliance with a British Standard does not of itself confer immunity from legal obligations.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 1256

March 1996

ICS 23.040.70

Descriptors: Welding equipment, gas welding, gas cutting, hoses, rubber hoses, joining, pipe sockets, equipment specifications, leak tests, pressure tests, pressure resistance

English version

Gas welding equipment — Specification for hose assemblies for equipment for welding, cutting and allied processes

Matériel de soudage aux gaz — Spécifications relatives aux assemblages des tuyaux souples sur les douilles porte-tuyaux pour matériel de soudage, coupage et techniques connexes

Gasschweißgeräte — Festlegungen für Schlauchleitungen für Ausrüstungen zum Schweißen, Schneiden und verwandte Verfahren

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 the Technical Committee CEN/TC 121, Welding, the secretariat of which is held by DS.

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 September 1996, and conflicting national standards shall be withdrawn at the latest by September 1996.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of 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 the United Kingdom.

Contents

1 Scope

This European Standard specifies performance and test requirements of hose assemblies using rubber hose, if supplied in assembled condition for equipment for gas welding, cutting and allied processes. This standard is not applicable to hose assemblies upstream of the regulators.

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 559	*Gas welding equipment — Rubber hoses for welding, cutting and allied processes*
EN 560	*Gas welding equipment — Hose connections for equipment for welding, cutting and allied processes*
EN 29090	*Gas tightness of equipment for gas welding and allied processes* (ISO 9090 : 1989)
EN 29539	*Materials for equipment used in gas welding, cutting and allied processes* (ISO 9539 : 1988)

3 Definitions

For the purposes of this standard the following definitions apply.

3.1 hose assembly

An assembly consisting of a hose tail inserted into the end of a hose and secured by a suitable hose clamp.

Figure 1 shows a typical hose assembly.

3.2 hose tail

The end of a coupling device that is inserted into a hose.

3.3 hose clamp

A device that secures the hose to the hose tail.

4 Construction

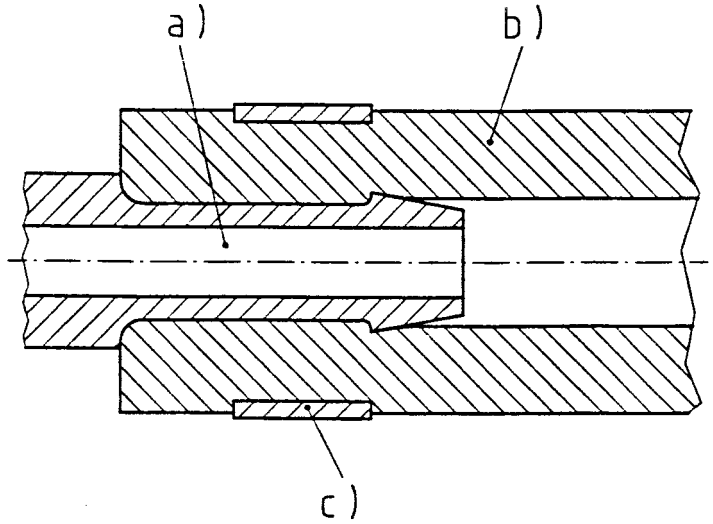
4.1 Materials

Hose connections used in hose assemblies shall conform to EN 560 and hoses shall conform to EN 559. Other components of the hose assembly in direct contact with the gas supplies shall conform to EN 29539. The materials used for the hose clamps shall be corrosion resistant or protected against corrosion.

4.2 Materials finishes

Any finishing lacquer or paint applied to the exterior of the devices shall be prevented from entering any of the orifices.

Adhesive lubricant or filler paste shall not be used when making the hose assemblies.



a) hose tail
b) hose
c) hose clamp

Figure 1. Typical hose assembly

4.3 Hose assembly

The hose tail shall be fitted to the hose by means of a suitable hose clamp.

The hose clamp shall be positioned so that its relationship with the hose tail will not cause damage to the hose lining during assembling and tightening.

Before fitting any connections the hose shall be free from cuts, abrasions or any other external damage and, internally, free from dirt, talcum powder, rubber fragments or other detritus that could interfere with the correct gas flow and the operation of safety devices. The hose clamps shall not have prominent parts which can cause damage to the operator's hands.

5 Operational criteria

The physical strength and resultant safety of the hose assembly shall comply with clause **6**.

6 Performance requirements and test methods

6.1 General

The tests given in this clause shall be applicable for type test only.

NOTE. The tests referred to in this clause are for type test only. They are not intended as a programme for production testing of all hose connectors and hose assemblies, although they are suitable for quality control checks.

6.2 Gas tightness

6.2.1 *General*

When tested in accordance with EN 29090, leakage from the hose assembly shall not exceed the maximum permissible rate given in that standard.

6.2.2 *Test method*

The hose assembly shall be tested in accordance with the relevant requirements of EN 29090.

6.2.3 *Acceptance requirements*

The hose assembly shall be considered gas tight if it complies with the maximum permissible leakage rate given in EN 29090.

6.3 Resistance to separation under pressure

6.3.1 *Test method*

When pressurized with an internal hydrostatic pressure of three times the maximum working pressure of the hose, the hose shall not separate from the hose tail.

NOTE. Pneumatic testing may be used for this test provided adequate safety precautions are taken to protect persons at risk in the event of equipment failure.

6.3.2 *Acceptance requirements*

When tested in accordance with **6.3.1** the hose shall not separate from the hose tail.

6.4 Resistance to separation under axial load

6.4.1 *Test method*

When the unpressurized hose assembly is subjected to load, applied in an axial direction (see table 1) for 2 min, no separation of the hose assembly nor fracture of components shall occur. After removal of the load, the hose assembly, when tested in accordance with **6.2**, shall remain gas tight.

Table 1. Axial load for separation test

Hose bore (nominal) mm	**Axial load** N
5	440
6,3	520
8	650
10	850

6.4.2 *Acceptance requirements*

When tested in accordance with **6.4.1** there shall be no separation of the hose assembly or fracture of the components while under axial loading and the hose assembly shall remain gas tight after removal of the load.

Annex A (informative)

Guidance on hose tail dimensions

Because of variations in elasticity and dimensions permitted, together with the variable results that can occur according to the type of hose clamp selected for fixing the hose to the hose tail, it is not practicable to specify dimensions for a hose tail. However, where possible, the dimensions given in table A.1 and shown in figure A.1 should be used for guidance.

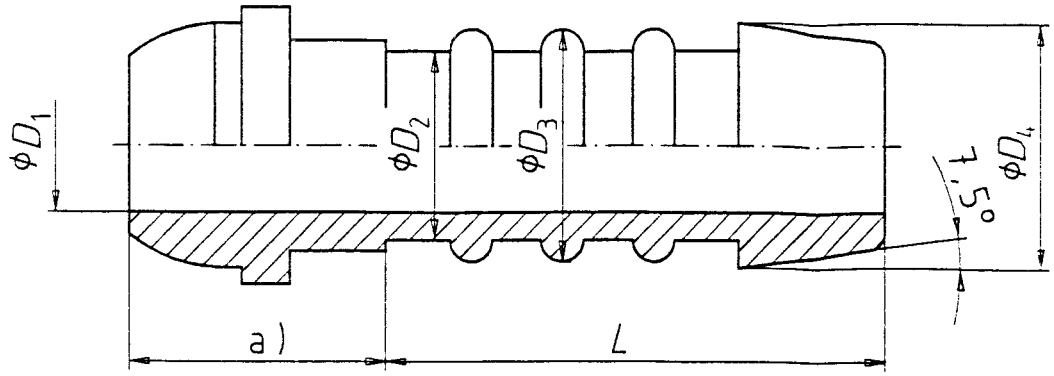
Table A.1 Suggested dimensions for hose tail

Dimensions in millimetres

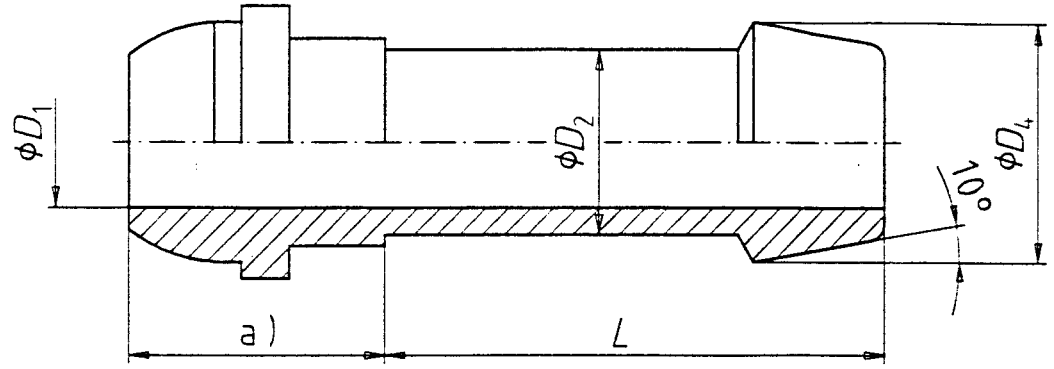
Nominal hose bore	$L_{min.}$	$D_{1max.}$	$D_{2\ -0}^{0,2}$	$D_{3\ -0}^{0,2}$	$D_{4\ max.}$
5,0	20,5	4,1	5,35	6,3	7,25
6,3	20,5	5,2	6,65	7,6	8,55
8,0	25,5	6,2	8,35	9,3	10,25
10,0	25,5	8,2	10,35	11,3	12,25
12,5	32,5	10,2	12,85	13,8	14,75
16,0	32,5	12,2	16,35	17,3	18,25
20,0	37,5	15,2	20,35	21,3	22,25

NOTE. It is important that the hose tail profiles have no sharp edges that could cut the hose or hose lining whilst in use.

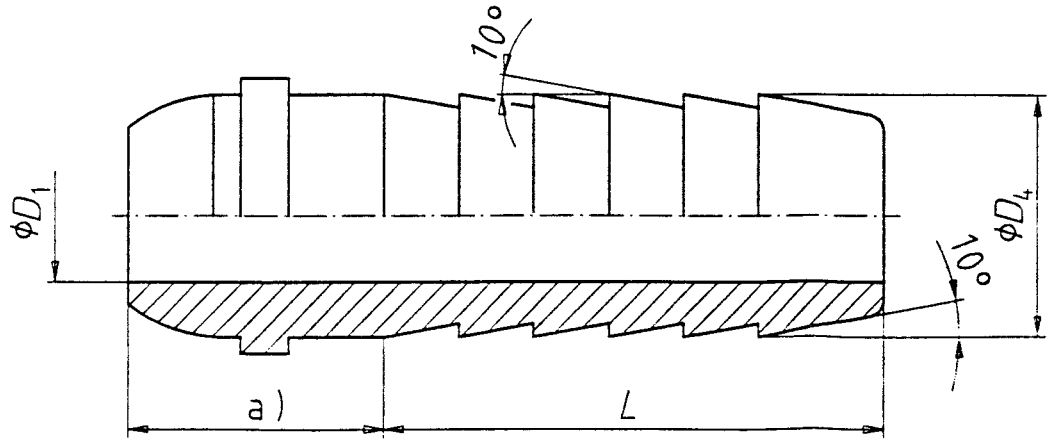
1)



2)



3)



a) Dimensions in accordance with EN 560

Figure A.1 Examples of a hose tail profile

List of references

See national foreword

BSI — British Standards Institution

BSI is the independent national body responsible for preparing British Standards. It presents the UK view on standards in Europe and at the international level. It is incorporated by Royal Charter.

Revisions

British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover. Tel: 020 8996 9000. Fax: 020 8996 7400.

BSI offers members an individual updating service called PLUS which ensures that subscribers automatically receive the latest editions of standards.

Buying standards

Orders for all BSI, international and foreign standards publications should be addressed to Customer Services. Tel: 020 8996 9001. Fax: 020 8996 7001.

In response to orders for international standards, it is BSI policy to supply the BSI implementation of those that have been published as British Standards, unless otherwise requested.

Information on standards

BSI provides a wide range of information on national, European and international standards through its Library and its Technical Help to Exporters Service. Various BSI electronic information services are also available which give details on all its products and services. Contact the Information Centre. Tel: 020 8996 7111. Fax: 020 8996 7048.

Subscribing members of BSI are kept up to date with standards developments and receive substantial discounts on the purchase price of standards. For details of these and other benefits contact Membership Administration. Tel: 020 8996 7002. Fax: 020 8996 7001.

Copyright

BSI
389 Chiswick High Road
London
W4 4AL