

BS EN ISO 15615:2013



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Gas welding equipment — Acetylene manifold systems for welding, cutting and allied processes — Safety requirements in high-pressure devices

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National foreword

This British Standard is the UK implementation of EN ISO 15615:2013. It supersedes BS EN ISO 15615:2002, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee WEE/18, Gas welding and cutting appliances.

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

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English Version

Gas welding equipment - Acetylene manifold systems for
welding, cutting and allied processes - Safety requirements in
high-pressure devices (ISO 15615:2013)

Matériel de soudage aux gaz - Centrales de détente pour la
distribution d'acétylène pour le soudage, le coupage et les
techniques connexes - Exigences de sécurité pour les
dispositifs haute pression (ISO 15615:2013)

Gasschweißgeräte - Acetylenflaschen-Batterieanlagen für
Schweißen, Schneiden und verwandte Prozesse -
Sicherheitsanforderungen für Hochdruckeinrichtungen (ISO
15615:2013)

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN ISO 15615:2013) has been prepared by Technical Committee ISO/TC 44 "Welding and allied processes" in collaboration with Technical Committee CEN/TC 121 "Welding" the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by October 2013, and conflicting national standards shall be withdrawn at the latest by October 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 15615:2002.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 15615:2013 has been approved by CEN as EN ISO 15615:2013 without any modification.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 15615 was prepared by Technical Committee ISO/TC 44, *Welding and allied processes*, Subcommittee SC 8, *Equipment for gas welding, cutting and allied processes*.

This second edition cancels and replaces the first edition (ISO 15615:2002), which has been technically revised.

Requests for official interpretations of any aspect of this International Standard should be directed to the Secretariat of ISO/TC 44/SC 8 via your national standards body. A complete listing of these bodies can be found at www.iso.org.

Gas welding equipment — Acetylene manifold systems for welding, cutting and allied processes — Safety requirements in high-pressure devices

1 Scope

This International Standard establishes the general specifications, requirements and tests for devices located on the high-pressure side of acetylene manifold systems as defined in ISO 14114. It does not cover the high-pressure piping, flexible hoses and the regulator.

NOTE The terms “upstream” and “downstream” refer to the normal direction of gas flow in the device.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2503:2009, *Gas welding equipment — Pressure regulators and pressure regulators with flow-metering devices for gas cylinders used in welding, cutting and allied processes up to 300 bar (30 MPa)*

ISO 9090, *Gas tightness of equipment for gas welding and allied processes*

ISO 9539, *Gas welding equipment — Materials for equipment used in gas welding, cutting and allied processes*

ISO 10297, *Gas cylinders — Cylinder valves — Specification and type testing*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

non-return valve

device which prevents passage of gas in the direction opposite to flow

[ISO 15296:2004]

3.2

manual quick-acting shut-off valve

manually activated device to quickly stop the gas flow

[ISO 15296:2004]

3.3

automatic quick-acting shut-off device

self-acting device which closes quickly, e.g. when triggered by an acetylene explosion in the high-pressure manifold pipework

[ISO 15296:2004]

3.4

remotely actuated shut-off valve

quick-acting shut-off valve which quickly stops the gas flow when remotely triggered

3.5

automatic pressure-actuated shut-off valve

device which automatically stops the gas supply to the regulator when the downstream pressure rises above the maximum operating pressure

3.6

three-way valve

device which allows gas flow from one side of the high-pressure manifold to enter the regulator while isolating flow from the second side

Note 1 to entry: Its position can be reversed so that gas flows from the second side while the first side is isolated. It prevents simultaneous flow from both sides.

3.7

stop valve

device to prevent, when closed, the flow of gas

3.8

multifunctional safety device

device which incorporates two or more of the safety functions

[ISO 15296:2004]

3.9

pressure gauge

device which shows the actual pressure of the assembly (digital or analogue readouts) (e.g. used in the high-pressure line of manifold systems or in pressure regulators for manifold systems.)

4 Design

Components within the devices should be designed to remain at the same electrostatic potential as the body of the device during operation. All metal components in contact with gas should be electrically continuous to prevent static electricity discharges.

5 Requirements

5.1 General

The general requirements (see [5.2](#)) apply to all the devices defined in [Clause 3](#). The multifunctional safety devices shall meet the general and additional requirements corresponding to each function.

5.2 General requirements

5.2.1 Materials

Materials used for devices shall be in accordance with ISO 9539.

5.2.2 External gas tightness

The general requirements on external gas tightness shall be in accordance with ISO 9090 at all times, before and after the tests.