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Gas welding equipment — Safety devices —

Part 3: Decomposition blockers for low-pressure acetylene

Matériel de soudage au gaz — Dispositifs de sécurité —

Partie 3: Bloqueurs de décomposition pour l'acétylène basse pression

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Foreword

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

A list of all parts in the ISO 5175 series can be found on the ISO website.

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Gas welding equipment — Safety devices —

Part 3: Decomposition blockers for low-pressure acetylene

1 Scope

This document specifies the general requirements and tests for decomposition blockers downstream of pressure regulators in acetylene manifold systems (see ISO 14114). Decomposition blockers can be used in the low-pressure section (downstream of acetylene manifold system outlet) up to 0,15 MPa (1,5 bar) e.g. in pipelines, outlet points or for the protection of low-pressure sections in big pipe systems. Decomposition blockers can only be used in sections with pure acetylene. The possible backflow of oxygen or air into the section where the decomposition blocker is installed needs to be prevented by a non-return valve downstream of the decomposition blocker.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 554, *Standard atmospheres for conditioning and/or testing — Specifications*

ISO 5175-1, *Gas welding equipment — Safety devices — Part 1: Devices incorporating a flame (flashback) arrestor*

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 10225, *Gas welding equipment — Marking for equipment used for gas welding, cutting and allied processes*

3 Terms and definitions

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

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
decomposition blocker
safety device which stops acetylene decomposition incorporating a thermal or pressure sensitive cut off valve

3.2
pressure-sensitive cut-off valve
device which stops the gas flow in the event of a back-pressure wave from the downstream side

3.3
temperature-sensitive cut-off valve
device which stops the gas flow when a predetermined temperature is exceeded