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1 Scope

This publication provides specifications, definitions and performance tests for hose line safety devices for systems and equipment using fuel gases and oxygen or compressed air for welding, cutting, and allied processes.

This publication gives users an overview of the available types of safety devices and their function.

For connections, this publication does not cover nor preclude incorporating modified connections with soft tips, O-rings, filters, restrictors, or other features for special applications.

This publication does not apply to pressure relief devices incorporated in regulators. Pressure relief valves in regulators shall be in accordance with CGA E-4, *Standard for Gas Pressure Regulators* [1].¹

2 Definitions

For the purposes of this publication, the following definitions apply.

2.1 Flashback

Rapid, sustained, or momentary retrogression of a flame upstream in compressed gas systems.

NOTE—This is a potentially hazardous situation that could result in various degrees of damage to upstream equipment and/or severe burns to personnel.

2.2 Flashback arrestor

Device designed to protect equipment upstream of the device from a flashback, see Figure 1.

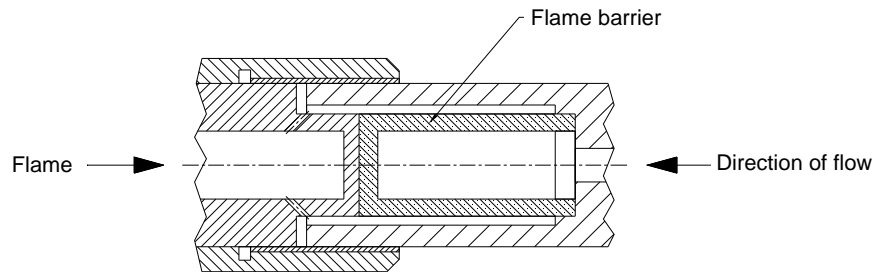


Figure 1—Typical flashback arrestor

2.3 Safety device

Any device that, by design, when installed and used according to the specifications of the manufacturer of the device, will decrease the incidence and/or severity of equipment damage and/or personal injury in an event or condition resulting when equipment is misused, damaged, or malfunctions.

2.4 Upstream/downstream

Refers to a location relative to the flow of gas.

NOTE—The normal direction of flow should be understood as gas movement from an upstream source or supply towards a downstream use or process.

2.5 Valves

2.5.1 Check valve (nonreturn valve)

Device designed to reduce the possibility of reverse flow of gas, see Figure 2.

WARNING: Check valves are not intended to act as a fire stop (flashback arrestor) nor will they function as a fire stop.

¹ References are shown by bracketed numbers and are listed in order of appearance in the reference section.