CGA

Compressed Gas Association

The Standard For Safety Since 1913

CGA E-5—2017

OXY-FUEL TORCH STANDARD

SIXTH EDITION

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Work Item 15-016
Industrial Gases Apparatus Committee

NOTE—Technical changes from the previous edition are underlined.

NOTE—Appendix A (Informative) is for information only.

SIXTH EDITION: 2017
FIFTH EDITION: 2010
FOURTH EDITION: 2004
THIRD EDITION: 1998

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1 Scope

This standard applies to oxy-fuel gas torches and cutting attachments used for cutting, welding, scarfing, heating, and other similar processes. It contains design and manufacturing requirements for torch materials, construction, safety, performance, test procedures, and marking.

This standard does not apply to air-fuel torches that use compressed air, air at atmospheric pressure, or liquid fuels. It does not include special devices, welding tips, cutting tips, multiflame heating tips, or accessories for special functions.

2 Definitions

For the purpose of this standard, the following definitions apply.

2.1 Publication terminology

2.1.1 Shall
Indicates that the procedure is mandatory. It is used wherever the criterion for conformance to specific recommendations allows no deviation.

2.1.2 Should
Indicates that a procedure is recommended.

2.1.3 May
Indicates that the procedure is optional.

2.1.4 Will
Is used only to indicate the future, not a degree of requirement.

2.1.5 Can
Indicates a possibility or ability.

2.2 Technical definitions

2.2.1 Cutting attachment
Attachment for cutting metals that is used with a welding or heating torch.

2.2.2 Cutting tip
Nozzle for cutting metals (usually expendable) designed to produce preheat flames and a jet of oxygen.

2.2.3 Cutting torch
Torch designed primarily to cut ferrous metals with preheat flames and cutting oxygen.

2.2.4 Heating tip
Nozzle (usually multi-orifice) for heating objects.

NOTE—A heating tip may be used with a welding torch, a heating torch, or a cutting torch (instead of a cutting tip).

2.2.5 Heating torch
Torch designed primarily for heating.

NOTE—A heating torch usually has a higher flow capacity than a welding torch.

2.2.6 Injector mixer
Mixer in which the pressure of the fuel gas measured immediately before the point of mixing is lower than the pressure of the gas mixture measured between the point of mixing and the tip.