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Oprema za plamensko varjenje - Ročni in strojni gorilniki za industrijsko uporabo za plamensko segrevanje, spajkanje in sorodne postopke

Gas welding equipment - Industrial manual and machine blowpipes for flame heating, flame brazing and allied processes

Gasschweißgeräte - Handgeführte Sonderbrenner und Maschinenbrenner für industrielle Prozesse zum Flammwärmen, Flammlöten und für verwandte Prozesse

Matériel de soudage aux gaz - Chalumeaux manuels et automatiques à usage industriel, pour le chauffage à la flamme, le brasage à la flamme et les techniques connexes

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ICS:

25.160.30 Varilna oprema Welding equipment

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English Version

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This Technical Report was approved by CEN on 29 July 2013. It has been drawn up by the Technical Committee CEN/TC 121.

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Foreword

This document (CEN/TR 13259:2013) has been prepared by Technical Committee CEN/TC 121 “Welding and allied processes”, the secretariat of which is held by DIN.

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This document supersedes CR 13259:1998.

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Introduction

Requests for official interpretations of any aspect of this Technical Report should be directed to the Secretariat of CEN/TC 121/SC 7 via the National Standards Body.

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CEN/TR 13259:2013 (E)**1 Scope**

This Technical Report refers to manual blowpipes and stationary machine blowpipes with free burning flames for heat treatment of work pieces. These blowpipes are, due to their type of construction, designed for special applications and do not fall under the scope of EN ISO 5172 and EN ISO 9012.

This Technical Report contains technical regulations, specifications and tests.

Blowpipes are intended for gaseous fuels in connection with oxygen, compressed air or aspirated air.

Flow rates are not expressly limited and depend on the thermal process to be performed.

2 Normative references

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

EN ISO 5172:2006, *Gas welding equipment — Blowpipes for gas welding, heating and cutting — Specifications and tests (ISO 5172:2006)*

EN 29090, *Gas tightness of equipment for gas welding and allied processes (ISO 9090)*

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

ISO 15296, *Gas welding equipment — Vocabulary — Terms used for gas welding equipment*

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 15296 and the following apply.

3.1

manual blowpipe

blowpipe, manually guided by the operator

3.2

machine blowpipe

blowpipe which for operation is fixed to a mechanical device and guided by it

3.2.1

semi-automatic machine blowpipe

blowpipe which is mechanically guided

Note 1 to entry: Operation manually performed.

3.2.2

automatic machine blowpipe

blowpipe operated independent of persons and controlled and monitored by control and regulation devices

3.3

blowpipe head

Note 1 to entry: The type of blowpipe head depends on its application.

Note 2 to entry: Table 1 gives examples for different blowpipe head constructions.

Table 1 — Types of blowpipes – application

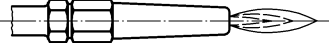

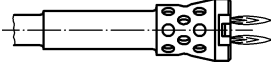



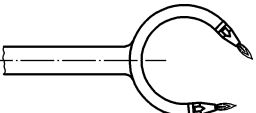


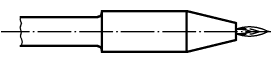
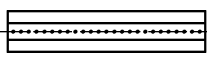
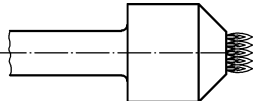
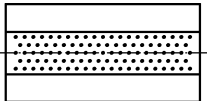
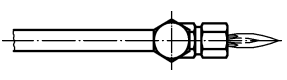
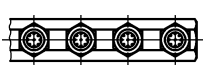
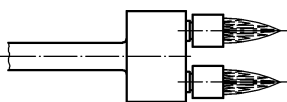
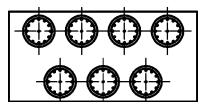
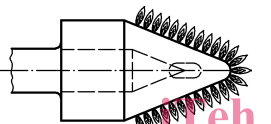

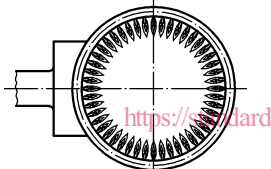
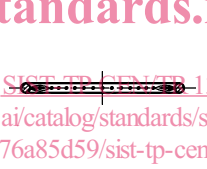
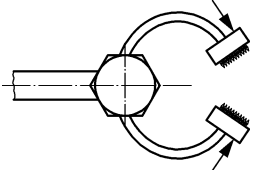
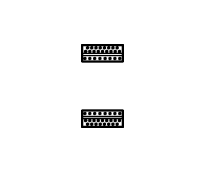
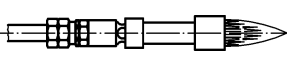

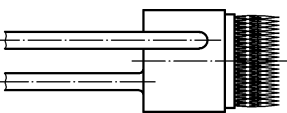
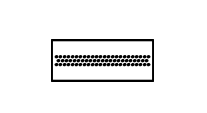
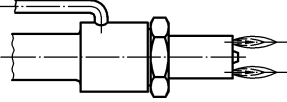
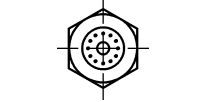
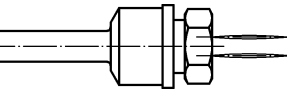
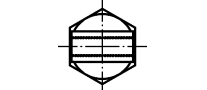
	Blowpipe head	Flame shape	use by H = hand M = machine	application	combination
single flame blowpipe (with and without stabilisation flame)			H/M	<ul style="list-style-type: none"> — preheating — flame-straightening — flame brazing and soldering 	<ul style="list-style-type: none"> — fuel gas — oxygen — compressed air
multi-flame blowpipe			H	<ul style="list-style-type: none"> — flame-hardening — hot forming 	<ul style="list-style-type: none"> — fuel gas — oxygen — compressed air
			H/M	<ul style="list-style-type: none"> — fusion welding — general gas flame processes 	
twin head blowpipe		 	H/M	<ul style="list-style-type: none"> — preheating — hot forming — flame brazing 	<ul style="list-style-type: none"> — fuel gas — oxygen — compressed air
single row blowpipe			H/M	<ul style="list-style-type: none"> — flame-annealing — flame-hardening 	<ul style="list-style-type: none"> — fuel gas — oxygen

Table 1 (continued)

	Blowpipe head	Flame shape	use by H = hand M = machine	application	combination
multi row blowpipe			M	<ul style="list-style-type: none"> — hot forming — fusion welding — flame brazing and soldering 	<ul style="list-style-type: none"> — fuel gas — oxygen — compressed air
single row nozzle blowpipe			M	<ul style="list-style-type: none"> — pre-heating — flame brazing and soldering 	<ul style="list-style-type: none"> — fuel gas — oxygen — compressed air
multi row nozzle blowpipe			M	<ul style="list-style-type: none"> — pre-heating — flame brazing and soldering 	<ul style="list-style-type: none"> — fuel gas — oxygen — compressed air — aspirated air
profile blowpipe			M	<ul style="list-style-type: none"> — flame-heating — flame-hardening — special applications 	<ul style="list-style-type: none"> — fuel gas — oxygen — compressed air
ring blowpipe			H/M	<ul style="list-style-type: none"> — pre-heating — flame-heating — hot forming — flame-hardening 	<ul style="list-style-type: none"> — fuel gas — oxygen — compressed air
flame- hardening blowpipe			M	<ul style="list-style-type: none"> — flame-hardening 	<ul style="list-style-type: none"> — fuel gas — oxygen
air-aspirated blowpipe			H/M	<ul style="list-style-type: none"> — flame brazing and soldering — ignition flame 	<ul style="list-style-type: none"> — fuel gas — aspirated air
diffusion blowpipe			M	<ul style="list-style-type: none"> — flame-heating — flame-polishing 	<ul style="list-style-type: none"> — fuel gas — oxygen
nozzle mixing blowpipe			H/M	<ul style="list-style-type: none"> — flame-heating — hot forming 	<ul style="list-style-type: none"> — fuel gas — oxygen
microjet blowpipe			M	<ul style="list-style-type: none"> — flame brazing and soldering 	<ul style="list-style-type: none"> — fuel gas — oxygen — compressed air

3.3.1**single flame blowpipe**

flame shape of the blowpipe which consists of one flame

Note 1 to entry: For slowly burning fuel gases, the single flame can be supported by concentrically arranged stabilising flames.

3.3.2**multi-flame blowpipe**

flame shape from the blowpipe head which consists of one or more concentric flame circles

3.3.3**twin head blowpipe**

blowpipe which is supplied by one mixing device

Note 1 to entry: Several blowpipe nozzles enclose the work piece.

3.3.4**single row blowpipe**

flame shape from the blowpipe head is composed of one row of flames

Note 1 to entry: Flame openings are in-line with the blowpipe head.

3.3.5**multi row blowpipe**

flame shape from the blowpipe head which is composed of several flame rows, the number and position of which depend on the specific intended use

3.3.6**single row nozzle blowpipe**

flame shape from the blowpipe head which is composed of several single nozzles applying linear heat to the work piece

3.3.7**multi row nozzle blowpipe**

flame shape from the blowpipe head which consists of several single nozzles which form the flame shape

3.3.8**profile blowpipe**

flame shape blowpipe with a blowpipe geometry and shape depending on the intended use

3.3.9**ring blowpipe**

flame shape from the blowpipe which circularly encloses or covers the work piece

3.3.10**flame-hardening blowpipe**

flame shape from the blowpipe with integrated quenching shower which is adapted to the work piece

3.3.11**air-aspirated blowpipe**

blowpipe in which the flame is produced according to the "Bunsen burner principle"

Note 1 to entry: Regulation of the burner capacity is made by closing or opening the air supply and adjusting the fuel gas pressure.