

British Standard Glossary of technical terms for Automatic steam traps

[ISO title: Automatic steam traps—Definition of technical terms]

Glossaire des termes techniques des purgeurs automatiques de vapeur d'eau

Glossar der technischen Ausdrücke für automatische Kondensationswasserabscheider

National foreword

This British Standard has been prepared under the direction of the Mechanical Engineering Standards Committee and is one of a series implementing international standards in the development of which the United Kingdom has played an active part.

This standard is identical with ISO 6552 - 1980 'Automatic steam traps—Definition of technical terms' prepared by Technical Committee ISO/TC 153, Valves, of the International Organization for Standardization (ISO).

For an introduction to the subject matter of this standard, which would usually appear in the foreword, see clause 0.

Terminology and conventions. The text of the international standard has been approved as suitable for

publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is especially drawn to the following.

The comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Wherever the words 'International Standard' appear, referring to this standard, they should read as 'British Standard'.

NOTE. With reference to the definition for nominal pressure given in 2.2, the final four words should be read as 'in the appropriate International Standard'.

0 Introduction

The purpose of this International Standard is to establish precise definitions for technical terms and expressions which are commonly used to describe with a certain accuracy an automatic steam trap under operating conditions.

This International Standard has to be considered in conjunction with every other International Standard using these terms and expressions to describe the technical characteristics or performances of an automatic steam trap.

1 Scope and field of application

This International Standard gives the definitions of the major technical terms and expressions used to describe an automatic steam trap as far as dimension, pressure, temperature and flow rate are concerned, as well as their corresponding symbols and units.

2 Definition of technical terms

2.1 Dimension

Term	Symbol	Unit	Definition
Nominal size	DN	—	Numerical designation of size which is common to all components in a piping system other than components designated by outside diameters. It is a convenient round number for reference purposes and is only loosely related to manufacturing dimensions. In any case, the nominal size DN cannot be subject to measurement and shall not be used for purposes of calculation.

2.2 Pressure

Term	Symbol	Units ¹⁾	Definition
Nominal pressure	PN	—	Numerical designation which is a convenient number for reference purposes. All equipment of the same nominal size (DN) designated by the same PN number shall have the same mating dimensions. The permissible working pressure depends upon the material, the design and the working temperature, and shall be selected from the pressure/temperature rating tables in this International Standard.
Maximum allowable pressure	PMA	bar MPa	Maximum pressure that the shell of the steam trap can withstand permanently at a given temperature.
Maximum operating pressure	PMO	bar MPa	Pressure for which a steam trap is rated by the manufacturer. This pressure is normally a function of the limitations related to the internal equipment of the steam trap.
Operating pressure	PO	bar MPa	Pressure measured at the inlet of the steam trap under operating conditions.
Operating back pressure	POB	bar MPa	Pressure measured at the outlet of the steam trap under operating conditions.
Maximum operating back pressure	PMOB	bar MPa	Maximum permissible pressure at the outlet of the steam trap allowing correct functioning.
Operating differential pressure	ΔP	bar MPa	Difference between the operating pressure and the operating back pressure.
Maximum differential pressure	ΔPMX	bar MPa	Maximum difference between operating pressure and operating back pressure.
Minimum differential pressure	ΔPMN	bar MPa	Minimum difference between operating pressure and operating back pressure.
Test pressure	PT	bar MPa	Pressure applied to the steam trap under test.
Maximum test pressure	PTMX	bar MPa	Maximum test pressure of the steam trap including its internal mechanism.

1) 1 bar = 0,1 MPa.

2.3 Temperature

Term	Symbol	Unit	Definition
Basic temperature	TB	°C	Temperature taken into consideration in the determination of the dimensions of the steam trap.
Maximum allowable temperature	TMA	°C	Maximum temperature to which the shell of the steam trap can be raised permanently at a given temperature.
Maximum operating temperature	TMO	°C	Maximum temperature for which the operation of the steam trap is guaranteed.
Operating temperature	TO	°C	Temperature measured at the inlet of the steam trap under operating conditions.

2.4 Flow rate

Term	Symbol	Unit	Definition
Cold condensate capacity	QC	kg/h	Maximum mass of condensate that the steam trap can discharge in 1 h at a given differential pressure and a temperature of 20 °C, the trap being fully open.
Hot condensate capacity	QH	kg/h	Maximum mass of condensate that a steam trap can discharge in 1 h at a given differential pressure and temperature.

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The following BSI references relate to the work on this standard: Committee reference MEE/191 Draft for comment 79/72972 DC

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British Standards Institution · 2 Park Street London W1A 2BS · Telephone 01-629 9000 · Telex 266933