
International Standard



6552

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Automatic steam traps — Definition of technical terms

Purgeurs automatiques de vapeur d'eau — Définition des termes techniques

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 6552 was developed by Technical Committee ISO/TC 153, *General purpose industrial valves*, and was circulated to the member bodies in March 1979.

It has been approved by the member bodies of the following countries :

Australia	Germany, F.R.	Poland
Austria	India	Romania
Belgium	Italy	Sweden
Canada	Japan	Switzerland
Chile	Korea, Rep. of	United Kingdom
Denmark	Libyan Arab Jamahiriya	USA
Finland	Netherlands	USSR
France	Norway	

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Czechoslovakia
South Africa, Rep. of

Automatic steam traps – Definition of technical terms

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	—	<p>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.</p> <p>In any case, the nominal size DN cannot be subject to measurement and shall not be used for purposes of calculation.</p>

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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