TECHNICAL REPORT

ISO/TR 15377

Second edition
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Measurement of fluid flow by means of pressure-differential devices — Guidelines for the specification of orifice plates, nozzles and Venturi tubes beyond the scope of ISO 5167

Mesurage du débit des fluides au moyen d'appareils déprimogènes — Lignes directrices pour la spécification des diaphragmes, des tuyères et des tubes Venturi non couverts par l'ISO 5167

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TR 15377 was prepared by Technical Committee ISO/TC 30, *Measurement of fluid flow in closed conduits*, Subcommittee SC 2, *Pressure differential devices*.

This second edition cancels and replaces the first edition (ISO/TR 15377:1998), which has been technically revised. It incorporates Technical Corrigendum ISO/TR 15377:1998/Cor.1:1999.

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1 Scope

This Technical Report describes the geometry and method of use for conical-entrance orifice plates, quarter-circle orifice plates, eccentric orifice plates and Venturi tubes with 10,5° convergent angles. Recommendations are also given for square-edged orifice plates and nozzles under conditions outside the scope of ISO 5167.

NOTE The data on which this report is based are old or incomplete in some cases.

2 Normative references

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

ISO 4006, *Measurement of fluid flow in closed conduits — Vocabulary and symbols*

ISO 5167-1:2003, *Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full — Part 1: General principles and requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 4006 and ISO 5167-1 apply.

4 Symbols

For the purposes of this document, the symbols given in Table 1 apply.