

TECHNICAL REPORT

ISO
TR 9823

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Liquid flow measurement in open channels — Velocity-area method using a restricted number of verticals

*Mesure de débit des liquides dans les canaux découverts — Méthode
d'exploration du champ des vitesses utilisant un nombre réduit de
verticales*



Reference number
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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.

The main task of technical committees is to prepare International Standards, but in exceptional circumstances a technical committee may propose the publication of a Technical Report of one of the following types:

- type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;
- type 3, 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).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

ISO/TR 9823, which is a Technical Report of type 2, was prepared by Technical Committee ISO/TC 113, *Measurement of liquid flow in open channels*.

Annexes A and B form an integral part of this Technical Report.

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International Organization for Standardization
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Introduction

The measurement of discharge using the velocity-area method is a laborious and costly procedure. There is often a great temptation to use fewer verticals for the measurement than is recommended in ISO 748 but such a short-cut can lead to considerable loss in the accuracy of the discharge determination. This Technical Report illustrates how the accuracy of such a short-cut discharge measurement can be improved considerably by optimization of the interpolation method.