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Measurement of water flow in open channels

Part 2.2: General — Selection, establishment and operation of a gauging station (ISO 18365:2013, IDT)



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- Institute of Instrumentation, Control & Automation Australia
- Irrigation Australia
- Joint Accreditation System of Australia & New Zealand
- National Measurement Institute
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Preface

This Standard was prepared by the Standards Australia Committee CE-024, Measurement of water flow in open channels and closed conduits, to supersede AS 3778.2.2:2001, *Measurement of water flow in open channels, Part 2.2: General — Establishment and operation of a gauging station*.

The objective of this document is to give requirements for the establishment and operation of a gauging station for the measurement of stage, or stage and discharge, of a lake, reservoir, river or canal or other artificial open channel. It also describes how a gauging station utilizing one of the measurement methods listed should be operated and maintained.

Requirements are provided for stage only measurement stations, stage-discharge stations and direct-discharge measurement stations in natural channels, as well as for stage-discharge stations with artificial structures. Additionally, some requirements are given for measurements under difficult conditions, such as under ice conditions.

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Contents

Preface	ii
Foreword	v
1 Scope	1
2 Normative references	1
3 Terms, definitions and symbols	1
4 General requirements and considerations	1
4.1 Requirements	1
4.2 Other constraints	2
5 Water level (Stage) only gauging stations	2
5.1 Preliminary survey and selection criteria	2
5.1.1 General	2
5.1.2 Preliminary survey	2
5.1.3 Selection criteria	3
5.2 Stage measurement and recording	3
5.2.1 General	3
5.2.2 Vertical staff gauge	3
5.2.3 Ramp or inclined gauge	3
5.2.4 Wire or tape weight gauge	4
5.2.5 Other methods	4
5.2.6 Stage recording	4
6 Stage-discharge gauging stations	4
6.1 General	4
6.2 Main elements of a stage-discharge gauging station	5
6.2.1 General	5
6.2.2 Control section or control reach	5
6.2.3 Section suitable for discharge measurements	5
6.2.4 Discharge measurements	5
6.2.5 Tracer dilution methods for measuring discharge	6
7 Stage- discharge gauging stations using hydraulic structures	6
7.1 General	6
7.2 Site selection	6
7.3 Types of hydraulic structures	6
8 Velocity-discharge gauging stations	7
8.1 Applications and types of instrument	7
8.2 Site selection	8
8.3 Calibration	8
8.4 Transit time (acoustic) method	8
8.5 Doppler	9
8.6 Acoustic (echo) correlation velocity meters	10
8.7 Electromagnetic method (Full channel width coil)	10
9 Measurement under difficult conditions	10
9.1 Ice and frost conditions	10
9.1.1 General	10
9.1.2 Stilling well	10
9.1.3 Diaphragm pressure sensor	10
9.2 Weed growth	11
9.3 Extreme sedimentation conditions	11
10 Operation and maintenance	11
10.1 General	11
10.2 Water level (Stage) only gauging stations	11

10.3	Stage-discharge gauging stations.....	12
10.4	Stage-discharge gauging stations using hydraulic structures	12
10.5	Velocity-discharge gauging stations.....	12
Annex A	(informative) Applicable conditions for selection of discharge measurement method	13
Bibliography	15

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 procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

The committee responsible for this document is ISO/TC 113, *Hydrometry*, Subcommittee SC 1, Velocity area methods.

ISO 18365 cancels and replaces ISO 1100-1:1996 and ISO/TR 8363:1997, which have been merged and technically revised.

NOTES

Australian Standard®

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1 Scope

This International Standard gives requirements for the establishment and operation of a gauging station for the measurement of stage, or stage and discharge, of a lake, reservoir, river or canal or other artificial open channel. It also describes how a gauging station utilizing one of the measurement methods listed should be operated and maintained.

Requirements are provided for stage only measurement stations, stage–discharge stations and direct–discharge measurement stations in natural channels, as well as for stage–discharge stations with artificial structures. Additionally, some requirements are given for measurements under difficult conditions, such as under ice conditions.

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.

ISO 772, *Hydrometry — Vocabulary and symbols*

3 Terms, definitions and symbols

For the purposes of this document, the terms, definitions and symbols given in ISO 772 apply.

4 General requirements and considerations

4.1 Requirements

Before commencing work on establishment and operation of a gauging station, the following requirements shall be identified:

- a) range of levels required to be measured;
- b) range of flows required to be measured;
- c) customer's requirements for type of data;
- d) customer's requirements for timeliness of data;
- e) allowable uncertainty in the results;
- f) other potential users of the data;
- g) life expectancy of the station;
- h) available budget;
- i) agreements for access to land and construction permits.