AS 3778.3.6—2001
ISO 2425:1999

Australian Standard™

Measurement of water flow in open channels

Part 3.6: Velocity-area methods—Measurement of flow in tidal channels

[ISO title: Measurement of liquid flow in open channels under tidal conditions]

Standards Australia

This Australian Standard was prepared by Committee CE-024, Measurement of Water Flow in Open Channels and Closed Conduits. It was approved on behalf of the Council of Standards Australia on 25 September 2000 and published on 12 March 2001.

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Australian Water and Wastewater Association

Department of Natural Resources, Qld

Institute of Instrumentation and Control Australia

Department of Land and Water Conservation, New South Wales

Department of Public Works and Services, New South Wales

South Australian Water Corporation

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Australian Standard™

Measurement of water flow in open channels

Part 3.6: Velocity-area methods—Measurement of flow in tidal channels

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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.

The Standard is identical to and is reproduced from ISO 2425:1999, *Measurement of liquid flow in open channels under tidal conditions.*

This Standard is Part 3.6 of AS 3778, *Measurement of water flow in open channels*, which is published in parts as follows:

AS		
3778		Measurement of water flow in open channels
3778.1	Part 1:	Vocabulary and symbols
3778.2	Part 2:	General
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References to International Standards should be replaced by references to equivalent Australian Standards, as follows:

Reference to International Standard		*Australian Standard*	
ISO		AS	
772	Liquid flow measurement in open channels—Vocabulary and symbols	3778 3778.1	Measurement of water flow in open channels Part 1: Vocabulary and symbols
748	Liquid flow measurement in open channels — Velocity area methods		
4369	Liquid flow measurement in open channels—The moving-boat method	3778.3.1	Part 3.1: Velocity-area methods—Measurement by current-meters and floats
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Velocity-area methods—Measurement of flow in tidal channels

1 Scope

This International Standard provides a summary of a selection of recommended methods available for the measurement of liquid flow in tidal channels, special consideration being given to those techniques that are either unique to or particularly appropriate for measurement under tidal conditions, including treatment of errors.

Reference is also made, where appropriate, to methods developed for measurement in non-tidal channels, but in such cases attention is drawn to their limitations with respect to practicality and/or accuracy.

This International Standard does not describe alternative methods, such as weirs, flumes, dilution gauging, salt velocity and floats, although they may be suitable under certain conditions, especially where the effect of tides only impedes and does not stop or reverse the passage of stream flow. These methods are described in detail in other International Standards.

The standard comprises two parts:

a) techniques for single measurements of tidal flow;

b) techniques appropriate for continuous measurement of tidal flow.

The cubature method of measurement, although currently not used, is included in annex A. Annex B presents methods suitable for measurement for tidal conditions, and annex C gives an example of the computation for a single vertical. Similar computations may be made for other verticals.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 7[illegible]3:1997, *Measurement of liquid flow in open channels — Velocity-area methods.*

ISO 772:1996, *Hydrometric determinations — Vocabulary and symbols.*

3 Terms and definitions

For the purposes of this International Standard, the terms and definitions given in ISO 772 apply.