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Hydrometry — Hydrometric data transmission systems — Specification of system requirements

Hydrométrie — Systèmes de transmission des données hydrométriques — Spécification des exigences des systèmes

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Foreword

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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 (see 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 5, *Instruments, equipment and data management.*

This first edition of ISO 24155 cancels and replaces ISO/TS 24155:2007.

Introduction

Hydrometric data transmission systems provide data for the day-to-day management of water resources and for warning and forecasting of floods, droughts and conditions affecting water quality and public health. The systems transmit data measured at remote telemetry stations to a receiving centre for further processing.

This International Standard defines and standardizes the required specifications of hydrometric data transmission systems. It does not describe the specifications of the equipment and units constituting hydrometric data transmission systems, but does describe the functional performance that the hydrometric data transmission systems should provide.

Hydrometry — Hydrometric data transmission systems — Specification of system requirements

1 Scope

This International Standard specifies the technical requirements that should be considered in designing and operating hydrometric data transmission systems (HDTS) and also the necessary functions of those systems. The scope of HDTS is shown in Annex A.

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*

ISO 80000-1, *Quantities and units — Part 1: General*

ISO/IEC 2382, *Information technology — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 772 and ISO/IEC 2382 apply.

4 Basic requirements

4.1 General

This Clause specifies the general requirements for designing an HDTS.

An HDTS shall be designed to meet the basic requirements, defined hereinafter, taking into consideration functionality, geographical structures, time structures, installation conditions, reliability, safety, maintainability and economy. The final system specifications should be determined through the process of repetitive discussions among technological specialists in hydrological and telecommunications fields.

The conceptual configuration of an HDTS is shown in Annex A.

4.2 Objectives of use

An HDTS shall be designed with a full understanding of the necessity and importance of hydrometric services for appropriate water management in drainage basins, such as needed for early warning of high flood levels, or low flows in ecologically sensitive rivers, in which this system is to be used.

4.3 Functional requirements

The functional requirements for an HDTS are classified into the following:

a) **Mandatory requirements:** the minimum requirements that an HDTS designer shall comply with in designing the system. The mandatory requirements include legal requirements, for example, for the site where the system will be installed, and applicable specifications of various standards.