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Technical guidelines for the development of small hydropower plants —

Part 1: **Vocabulary**

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Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Terms related to hydrology **1**
4.1 Hydrological observation 1
4.2 Hydrologic data processing 3
4.3 Hydrological computation 3

5 Terms related to engineering geology **5**

6 Terms related to hydraulic engineering and energy **6**

7 Terms related to hydraulic structure **8**
7.1 Structure type 8
7.2 Dam 9
7.3 Water gate/sluice 10
7.4 Spillway 10
7.5 Power house 12
7.6 Forebay and penstock 13
7.7 Surge chamber 14
7.8 Tailrace structures 15
7.9 Tunnel, culvert and culvert pipe 15
7.10 Intake 16
7.11 Sediment management facility 16

8 Terms related to engineering construction **17**
8.1 Diversion 17
8.2 Closure 17
8.3 Cofferdam 18
8.4 Pit drainage 18

9 Terms related to hydraulic machinery **19**
9.1 Hydraulic turbines 19
9.1.1 Types of hydraulic turbine 19
9.1.2 Turbine parameters and turbine characteristics 22
9.2 Hydro turbine generator 25
9.2.1 Types of hydro turbine generator 25
9.2.2 Parameters of a hydro turbine generator 25
9.3 Hydro turbine governing system 26
9.4 Oil, compressed air and cooling water supply systems 26
9.4.1 Oil system 26
9.4.2 Compressed air system 27
9.4.3 Water supplying and discharging system 27
9.5 Valve 28
9.6 Installation and testing of turbine generator units 29

10 Terms related to hydro mechanical structure **30**
10.1 Gate 30
10.2 Trash rack and trash-removal device 31
10.3 Hoist and crane 32

11 Terms related to electrical system **32**
11.1 System operation mode 32
11.2 Main electrical connection 33
11.3 Transformer 34

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11.4 Switchgear installation 35
11.4.1 Switching device 35
11.4.2 Transformers for measurement and protection 36
11.4.3 Bus and cable 36
11.5 Excitation system 37
11.6 Supervisory control and protection system 38
11.6.1 Supervisory and control system 38
11.6.2 Relay protection 42
11.6.3 Synchronizing system 42
11.7 Lightning protection and grounding 43
11.8 Plant service power and near region and construction power supply 44
11.9 Direct-current system 45
11.10 Communication 45
12 Terms related to social and environmental impact assessment 46
13 Terms related to economic evaluation and project investment 47
Annex A (informative) **Workshop contributors 49**
Bibliography 51
Alphabetical index of terms 52

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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 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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

International Workshop Agreement IWA 33 was approved at a workshop hosted by the Standardization Administration of China (SAC) and Austrian Standards International (ASI), in association with the International Center on Small Hydro Power (ICSHP), held in Hangzhou, China, in June, 2019.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

A list of all parts in the IWA 33 series can be found on the ISO website.

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Introduction

Small hydropower (SHP) is increasingly recognized as an important renewable energy solution to the challenge of electrifying remote rural areas. However, while most countries in Europe, in North and South America and in China have high degrees of installed capacity, the potential of SHP in many developing countries remains untapped and is hindered by a number of factors including the lack of globally agreed good practices or standards for SHP development.

The technical guidelines for the development of small hydropower plants contained in this document address the current limitations of the regulations applied to technical guidelines for SHP plants by applying the expertise and best practices that exist across the globe. It is intended for countries to utilize this document to support their current policy, technology and ecosystems. Countries that have limited institutional and technical capacities will be able to enhance their knowledge base in developing SHP plants, thereby attracting more investment in SHP projects, encouraging favourable policies and subsequently assisting in economic development at a national level. This document will be valuable for all countries, but especially allow for the sharing of experience and best practices between countries that have limited technical know-how.

This document is the result of a collaborative effort between the United Nations Industrial Development Organization (UNIDO) and the International Network on Small Hydro Power (INSHP). About 80 international experts and 40 international agencies were involved in this document's preparation and peer review. This document can be used as the principles and basis for the planning, design, construction and management of SHP plants up to 30 MW.

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Technical guidelines for the development of small hydropower plants —

Part 1: Vocabulary

1 Scope

This document defines the professional technical terms and definitions commonly used for small hydropower (SHP) plants.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Terms related to hydrology

4.1 Hydrological observation

4.1.1
precipitation
liquid or solid products of the condensation or sublimation of water vapour falling from clouds or deposited from air on to the ground

Note 1 to entry: It is the amount of precipitation on a unit of horizontal surface per unit time.

[SOURCE: UNESCO/WMO, WMO-No. 385, Section 2 No. 1114]

4.1.2
precipitation days
number of days with daily precipitation more than 0,1 mm within a specified period of time

4.1.3
precipitation duration
period of time during which continuous precipitation occurs at a specific point or within a specific area

[SOURCE: UNESCO/WMO, WMO-No. 385, Section 2 No. 1115]

4.1.4
precipitation intensity
rainfall intensity
rate at which precipitation occurs, expressed in units of depth per unit of time

[SOURCE: UNESCO/WMO, WMO-No. 385, Section 2 No. 1157]

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