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Industrial automation systems and integration — Integration of life-cycle data for process plants including oil and gas production facilities —

Part 4:
Initial reference data

Systèmes d'automatisation industrielle et intégration — Intégration de données de cycle de vie pour les industries de "process", y compris les usines de production de pétrole et de gaz —

Partie 4: Données de référence initiales

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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.

This document was prepared by Technical Committee ISO/TC 184, *Automation systems and integration*, Subcommittee SC 4, *Industrial data*.

This second edition cancels and replaces the first edition (ISO/TS 15926-4:2007), which has been technically revised. It also incorporates the Amendment ISO/TS 15926-4:2007/Amd.1:2010.

The main changes compared to the previous edition are as follows:

— revision of the units of measure module to comply with ISO 80000 and IEC 80000;

— incorporation of the amendment to the first edition.

A list of all parts in the ISO 15926 series can be found on the ISO website.

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.

Introduction

ISO 15926 is an International Standard for the representation of process industries facility life-cycle information. This representation is specified by a generic, conceptual data model that is suitable as the basis for implementation in a shared database or data warehouse. The data model is designed to be used in conjunction with reference data, i.e. standard instances that represent information common to a number of users, production facilities, or both. The support for a specific life-cycle activity depends on the use of appropriate reference data in conjunction with the data model.

ISO 15926 is organized as a series of parts, each published separately. This document specifies the initial set of reference data items.

The structure of ISO 15926 is as follows:

— ISO 15926-1 provides an overview of ISO 15926;

— ISO 15926-2 contains a generic, conceptual data model that supports representation of all life-cycle aspects of a process plant;

— ISO/TS 15926-3 contains a reference data library for geometry and topology;

— ISO/TS 15926-4 contains a reference data library for physical objects, activities, properties and other reference data necessary to record information about a process plant;

— ISO/TS 15926-6 specifies the information necessary within a reference data library used by a part of ISO 15926;

— ISO/TS 15926-7 specifies an implementation method for ISO 15926-2 using templates;

— ISO/TS 15926-8 specifies an OWL representation of the data model in ISO 15926-2 for use with templates;

— ISO 15926-10 specifies conformance requirements for process plant data according to ISO 15926-2;

— ISO/TS 15926-11 specifies a simplified implementation methodology ISO 15926-2 using RDF triples;

— ISO/TS 15926-12 contains an OWL representation of the ISO 15926-2 data model, with a direct semantics subset;

— ISO 15926-13 specifies the use of the ISO 15926-2 data model for the representation of asset planning information and contains an XML schema for the exchange of this information between systems.