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## Industrial systems, installations and equipment and industrial products — Structuring principles and reference designations —

### Part 12: Construction works and building services

*Systèmes industriels, installations et appareils, et produits  
industriels — Principes de structurations et désignations de  
référence —*

*Partie 12: Travaux de construction et services bâtiment*



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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](http://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](http://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 on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 10, *Technical product documentation*, Subcommittee SC 10, *Process plant documentation*, in cooperation with Technical Committee IEC/TC 3, *Information structures and elements, identification and marking principles, documentation and graphical symbols*.

Documents in the 80000 to 89999 range of reference numbers are developed by collaboration between ISO and IEC.

IEC 81346 consists of the following basic parts, under the general title *Industrial systems, installations and equipment and industrial products — Structuring principles and reference designations*:

- *Part 1: Basic rules*
- *Part 2: Classification of objects and codes for classes*

A list of all parts in the ISO 81346 series can be found on the ISO website.

## Introduction

This document considers and supports the planning, erection, utilization and operation of construction works. The application of a reference designation system for construction works (RDS-CW) may lead to restructuring and reorientation of these activities and thereby offers the potential for increasing efficiency and economization. The following advantages of designation systems will become increasingly important in the future.

- The reference designation system can be applied in several technical fields in the same way and is not designed only for one. So, technical, structural and constructive objects, for example, can be treated in the same way – a basis for company-wide synergy effects.
- The reference designation system allows for integrating any kind of systems and components without changing the once defined designations.
- The reference designation is not bound to a fixed structural pattern. Thus the designation system is vertically and horizontally expandable, which makes the interpretability in some cases quite complex. Therefore an exact and computer-interpretable documentation and description is essential.
- The application of different aspects allows for designation of system elements by function, realizing products or location independently of each other.
- The different aspects in structuring and the possibility of creating relations between objects represented in these structures offer search and filter criteria and information correlations in a much greater variety than before.

Users of this document will be able to manage object occurrences and related properties in a more efficient and consistent way. When implemented, information across various data processing systems can be handled in an unambiguous way. Other well-known information structures besides the reference designation structures in this document are:

- organization structures;
- utilization structures;
- cost structures;
- performance structures;
- real estate structures.

These and other structures can be linked to each other, or to the reference-designation-based structures, so that requirements of flexibility and individuality can be fulfilled.

New three-letter codes are used according to IEC 3/1224A/CD (IEC 81346-2:2009), Table 3.

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# Industrial systems, installations and equipment and industrial products — Structuring principles and reference designations —

## Part 12: Construction works and building services

### 1 Scope

This document establishes rules for structuring of systems and the formulation of reference designations and provides classes for systems in the field of construction works and building services. This document also specifies a classification of objects and corresponding letter codes for use in reference designations of object occurrences.

This document is not intended for manufacturers or system-related designations of individuals (e.g. inventory number or serial number) or for product types (e.g. article number or parts number).

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 4157-2:1998, *Construction drawings — Designation systems — Part 2: Room names and numbers*

ISO 15519-1, *Specification for diagrams for process industry — Part 1: General rules*

IEC 61082-1, *Preparation of Documents used in electrotechnology — Part 1: Rules*

IEC 81346-1:2009, *Industrial systems, installations and equipment and industrial products — Structuring principles and reference designations — Part 1: Basic rules*

IEC 81346-2:2009, *Industrial systems, installations and equipment and industrial products — Structuring principles and reference designations — Part 2: Classification of objects and codes for classes*

IEC 61175-1, *Industrial systems, installations and equipment and industrial products — Designation of signals*

IEC 61355-1:2008, *Classification and designation of documents for plants, systems and equipment — Part 1: Rules and classification tables*

IEC 61666, *Industrial systems, installations and equipment and industrial products — Identification of terminals within a system*