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Part 50: Processes

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



3/1699/CD

COMMITTEE DRAFT (CD)

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IEC TC 3 : DOCUMENTATION, GRAPHICAL SYMBOLS AND REPRESENTATIONS OF TECHNICAL INFORMATION

SECRETARIAT:

Sweden

SECRETARY:

Mr Mikael Törnkvist

OF INTEREST TO THE FOLLOWING COMMITTEES:

HORIZONTAL FUNCTION(S):

TC 3 Horizontal

ASPECTS CONCERNED:

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Recipients of this document are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Recipients of this document are invited to submit, with their comments, notification of any local regulations or technical reasons that may exist and should be considered should this proposal proceed, recognizing that failure to address such requirements could result in the need for new or existing "In Some Countries" clauses. (SEE [AC/22/2007](#) OR [NEW GUIDANCE DOC](#)).

TITLE:

Industrial systems, installations and equipment and industrial products -- Structuring principles and reference designation - Part 50: Processes

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**Industrial systems, installations and equipment and industrial products —
Structuring principles and reference designations****Part 50: Processes**

FOREWORD

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It is published as a double logo standard and has the status of a horizontal publication in accordance with IEC Guide 108.

119 The text of this standard is based on the following documents: [IN PROGRESS]

FDIS	Report on voting
3/[xxx]/FDIS	3/[xxx]/RVD

120
121 Full information on the voting for its approval can be found in the report on voting indicated in
122 the above table. In ISO, the standard has been approved by [xx] members out of [xx] having
123 cast a vote.

124 The language used for the development of this International Standard is English.

125 This document is to be read in conjunction with IEC 81346-1:2022. The provisions of the general
126 rules dealt with in IEC 81346-1 are only applicable to this document insofar as they are
127 specifically cited. When this document states “addition”, “modification” or “replacement”, the
128 relevant text in IEC 81346-1:2022 is to be adapted accordingly.

129 Subclauses that are numbered with a 101 (102, 103, etc.) suffix are additional to the same
130 subclause in IEC 81346-1:2022.

131 Tables and figures in this document that are new are numbered starting with 101.

132 New annexes in this document are lettered AA, BB, etc.

133 A list of parts of the 81346 International Standard, published under the general title *Industrial*
134 *systems, installations and equipment and industrial products — Structuring principles and*
135 *reference designations*, can be found on the IEC website.

136 This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in
137 accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available
138 at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are
139 described in greater detail at www.iec.ch/standardsdev/publications. [IN PROGRESS]

140 In this document, *italic type* is used as follows:

- 141 • terms defined in Clause 3 (applies to the text in Clause 3 only)
142 • in the description of the EXPRESS model, entity names and attribute identifiers.

143 The committee has decided that the contents of this document will remain unchanged until the
144 stability date indicated on the IEC website under webstore.iec.ch in the data related to the
145 specific document. At this date, the document will be

- 146 • reconfirmed,
147 • withdrawn,
148 • replaced by a revised edition, or
149 • amended.

150

151

152

INTRODUCTION

153 This document considers and supports the designation of processes and activities within
154 industrial systems. The application of a reference designation system tailored for this purpose
155 may lead to innovative perspectives and structuring of these elements, offering opportunities
156 and potential for enhanced efficiency and optimization.

157 The users of this standard will be able to manage processes, relation among these and related
158 properties in a more efficient and consistent way. When implemented, information across
159 various data processing systems can be handled in an unambiguous way.

160 The focus of this addition to the 81346 standard series is to define classes of processes which
161 are used in life cycle of a technical system or product.

162 The following advantages of designation systems in accordance with this international standard
163 and the 81346-standard series in general will be more and more important in the future:

- 164 • The reference designation system can be applied in several technical fields in the same
165 way and is not designed only for one.
- 166 • The reference designation is not bound to a fixed structural pattern. Thus, the
167 designation system is expandible, which makes the interpretability in some cases quite
168 complex. Therefore, an exact and computer sensible documentation and description is
169 essential.

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

Part 50: Processes

1 Scope

This part of 81346 International Standard, published jointly by IEC and ISO, provides, in combination with IEC 81346-1, rules and recommendations on the structuring of processes and the information on processes used in the life cycle of technical systems. It also provides classification schemes of those processes.

The structuring principles and the classes of processes are intended to be applied for providing unambiguous identification of processes throughout their life cycles.

This document is also a horizontal publication intended for use by technical committees in preparation of publications related to reference designations in accordance with the principles laid down in IEC Guide 108.

2 Normative references

The following referenced documents are indispensable for the application 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.

IEC 81346-1:2022, *Industrial systems, installations and equipment, and industrial products – Structuring principles and reference designations – Part 1: Basic rules*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 81346-1:2022 and the following apply.

3.1 information

knowledge concerning objects, such as facts, events, things, processes, or ideas (including concepts) that, within a certain context, has a particular meaning

[SOURCE: IEV 171-01-01]

3.2 data

representation of *information* (3.1) in a formalized manner suitable for human or automatic processing

Note 1 to entry: Processing includes communication and interpretation.

Note 2 to entry: In English, the word "data" is generally used in plural form. For use in singular form, it can be called "data item".

[SOURCE: IEV 171-01-02]

3.3**object designation**

identifier of a specific *object* in a given context

3.4**prime process**

process that constitutes an overall step in the life cycle of a system

Note 1 to entry: A prime process is usually performed by an organization.

3.5**activity process**

process where the set of operations are performed in a given sequence

Note 1 to entry: A activity process is usually performed by a team.

3.6**task process**

process consisting of a specific work to be done

Note 1 to entry: A task process is usually performed by an individual.

Note 2 to entry: The work can be performed by using tools and resources.

3.7**procedure**

specified way to carry out an activity or a process

4 Concepts**4.1 Object**

IEC 81346-1:2022, clause 4.1 applies.

4.2 Aspect

IEC 81346-1:2022, clause 4.2 applies with the following addition:

Add the following bullet to the bullets of the 2nd paragraph:

- intended or accomplished activities constituting an object – the process aspect.

4.3 Systems

IEC 81346-1:2022, clause 4.3 applies.

4.4 Structuring

IEC 81346-1:2022, clause 4.4 applies.

4.5 Function

IEC 81346-1:2022, clause 4.5 applies.

4.6 Products and components

IEC 81346-1:2022, clause 4.6 applies.

4.7 Location

IEC 81346-1:2022, clause 4.7 applies.

4.8 Types

IEC 81346-1:2022, clause 4.8 applies.

4.9 Object occurrences and product individuals

IEC 81346-1:2022, clause 4.9 applies.

4.10 Relations between concepts

IEC 81346-1:2022, clause 4.10 applies.

4.101 Processes

4.101.1 General

In this document the process aspect is introduced to filter process information about an object that is of relevance to it throughout its life cycle.

The application of the process aspect involves a structured approach to identify and designate processes. The process aspect is used to describe what happens with an entity (e.g. system, person, organisation) over time. This allows designers to create references in areas of:

1. **Organizational Strategies and Plans** such as market analysis, product development, and marketing campaigns, designated to track progress and ensure alignment with organizational goals. This helps in managing and executing strategic initiatives effectively, provides a clear roadmap, aligns activities with strategic goals, and enhances the ability to monitor and adjust plans as needed.
2. **Overall Development Projects** where software, construction, or other fields, processes such as requirements gathering, design, implementation, testing, and deployment can to be clearly identified. Reference designations help in managing these phases systematically, ensuring systematic progress, improving coordination among different phases, and enhancing the ability to manage project timelines and deliverables.
3. **Work Breakdown Structures (WBS)**, used to break down a project into smaller, manageable sections. By applying reference designations to each process within the WBS, project managers can ensure that every task is clearly identified and tracked, facilitating better planning, execution, and monitoring. Thereby, clarity is enhanced, task management is improved and ensuring that all project components are accounted for and properly coordinated
4. **Standard Operating Procedures (SOPs)**, critical for maintaining consistency and quality. Reference designations for each procedure ensure that all steps are documented and easily accessible, which is essential for training, compliance and quality control. This promotes uniformity, ensures compliance with standards, and facilitates training and quality assurance.
5. **Lessons Learned Projects**, either as part of design projects, construction projects or other field processes, or as separate projects, where information such as cost, emissions, time and more, can be systemized, aggregated and related, for further analysis.