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Part 14: Manufacturing systems

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Responsible Committee Secretary: **Mr Simon Bounds (BSI)**Direct tel: **0208 996 7281**E-mail: simon.bounds@bsigroup.com

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.

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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.	



3/1675/CD

COMMITTEE DRAFT (CD)

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SECRETARIAT:

Sweden

SECRETARY:

Mr Mikael Törnkvist

OF INTEREST TO THE FOLLOWING COMMITTEES:

TC 44,TC 65,SC 65A,SyC SM

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 14: Manufacturing systems

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Documents

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CONTENTS

FOREWORD	4
INTRODUCTION	6
1 Scope	8
2 Normative references	8
3 Terms and definitions	8
3.1 Terms defined in IEC 81346-1:2022	9
3.2 Terms defined in this document	9
4 General concepts	10
4.1 Object	10
4.2 Aspect	10
4.3 Systems	10
4.3.101 Prime systems	10
4.3.102 Technical systems	10
4.3.103 Component systems	11
4.4 Structuring	11
4.5 Function	11
4.6 Products and components	11
4.7 Location	11
4.8 Types	11
4.9 Object occurrences and product individuals	11
4.10 Relations between concepts	11
5 Structuring principles	12
5.1 General	12
5.2 Forming structures	12
5.3 Function-oriented structure	12
5.4 Product-oriented structure	12
5.5 Location-oriented structure	12
5.6 Type-oriented structure	12
5.7 Structures based on "other aspects"	12
5.8 Structures based on more than one aspect	12
6 Construction of reference designations	12
6.1 General	12
6.2 Format of reference designations	12
6.2.1 Single level	12
6.2.2 Multi-level	13
6.2.3 Use of letter codes	13
6.3 Different structures within the same aspect	14
7 Reference designation set	15
8 Designation of locations	15
8.1 General	15
8.2 Assemblies	15
9 Presentation of reference designations	15
9.1 Reference designation	15

9.2	Reference designation set	15
9.3	Presentation of identifiers for the top-node	15
10	Labelling	15
11	Presentation of properties for an object	15
12	Application of the reference designation system	15
	Annexes	16
	Annex AA (normative) Classification letter codes for systems	17
	AA.1 General	17
	AA.2 Classes of prime systems for manufacturing	17
	AA.3 Classes of technical systems	18
	Annex BB (informative) Example of reference designation within a system	24
	Bibliography	27
	 Figure 1 – Relation between prime systems, technical systems and component systems	13
	Figure 2 – Relation between construction complexes, construction entities and construction spaces	14
	Figure BB.1 – Process flow diagram for a material handling plant	24
	Figure BB.2 – Overview diagram of part of the material process system (=M1) and part of the power supply system (=B1) supporting the material processing system	25
	Figure BB.3 – Structure tree for parts of the material handling plant	26
	 Table 1 – Examples of using ? in a class code	13
	Table 2 – Examples of objects or systems	14
	Table 3 – Application of annexes of IEC 81346-1:2022	16
	Table AA.1 – Classes of prime systems for manufacturing	17
	Table AA.2 – Classes of technical systems	18

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

Part 14: Manufacturing Systems

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.

50 The text of this standard is based on the following documents:

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

51
52 Full information on the voting for its approval can be found in the report on voting indicated in
53 the above table. In ISO, the standard has been approved by xx members out of xx having cast
54 a vote.

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

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

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

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

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

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

67 This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in
68 accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available
69 at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are
70 described in greater detail at www.iec.ch/standardsdev/publications.

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

- 74 • reconfirmed,
- 75 • withdrawn,
- 76 • replaced by a revised edition, or
- 77 • amended.

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INTRODUCTION

This document considers and supports planning, design, utilization and maintenance of manufacturing systems. The application of a reference designation system for manufacturing systems (RDS-MS) may lead to new views and structuring of these activities and thereby offers chances and potentials of increasing efficiency and economization.

This document is aligned with the structuring rules provided in IEC 81346-1, the classification principles of IEC 81346-2. It also follows the principles for the classification of prime systems and technical systems provided in ISO 81346-10 and ISO 81346-12.

The focus of this part of the 81346 international standard series is to define classes of systems which are used in manufacturing, and to provide general guidelines for structuring of these systems.

The following advantages of designation systems in accordance with this document and the 81346 international standard series are:

- The reference designation system can be applied to several technical fields. Mechanical, electrical and process equipment can be treated the same way – a basis for companywide synergy effects;
- The reference designation system allows integrating any kind of systems and components without changing the once defined designations;
- The application of different aspects allows, for instance, the designation of functions independently from realizing products and their location. The different representation of systems through multiple aspects and the relations between these, allows for a more inclusive and complete reference model of systems.

The users of this standard will be able to manage objects, relation among these 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.

Manufacturing is considered as a major part in the Five-sector model of the economic sector:

- primary sector (natural sector);
- secondary sector (industrial sector);
- tertiary sector (service sector);
- quaternary sector (information sector);
- quinary sector (human services sector);

The natural sector can be subdivided into:

- biotic sector;
- geological sector.

The industrial sector can be subdivided into:

- manufacturing sector;
 - light industry;
 - electrical and optical;
 - chemicals;
 - materials;
 - heavy industry.

122 • utilities, partly covered by ISO 81346-10;

123 • construction, partly covered by ISO 81346-12.

124 This part of the 81346 international standard is intended to cover manufacturing systems in the
125 geological sector, the construction sector and the manufacturing sector including its sub-
126 sectors. The specifications in this document apply for processing, transportation and storage of
127 final products, as well as for auxiliary systems to support the manufacturing process such as
128 electrical systems, management systems and waste disposal systems.

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