SLOVENSKI STANDARD
SIST EN 62337:2012

01-junij-2012

Nadomešča:
SIST EN 62337:2007

Prevzemni postopki za električne, merilne in nadzorne sisteme v procesni industriji - Posamezne faze in mejniki (IEC 62337:2012)

Commissioning of electrical, instrumentation and control systems in the process industry - Specific phases and milestones (IEC 62337:2012)

Inbetriebnahme elektrischer und leittechnischer Systeme in der verfahrenstechnischen Industrie - Phasen und Meilensteine (IEC 62337:2012)

Mise en service des systèmes électriques, de mesure et de commande dans l'industrie de transformation - Phases et jalons spécifiques (CEI 62337:2012)

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ICS:

25.040.01	Sistemi za avtomatizacijo v industriji na splošno	Industrial automation systems in general

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NORME EUROPÉENNE

EUROPÄISCHE NORM

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English version

Commissioning of electrical, instrumentation and control systems in the process industry - Specific phases and milestones

(IEC 62337:2012)

Mise en service des systèmes électriques, de mesure et de commande dans l'industrie de transformation - Phases et jalons specifiques (CEI 62337:2012)

Inbetriebnahme elektrischer und leittechnischer Systeme in der verfahrenstechnischen Industrie - Phasen und Meilensteine (IEC 62337:2012)

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Ref. No. EN 62337:2012 E

Foreword

The text of document 65E/221/FDIS, future edition 2 of IEC 62337, prepared by SC 65E, "Devices and integration in enterprise systems", of IEC TC 65, "Industrial-process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62337:2012.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2012-12-28
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2015-03-28

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The text of the International Standard IEC 62337:2012 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 61331 series	NOTE	Harmonized in EN 61331 series.
IEC 61355-1	NOTE	Harmonized as EN 61355-1.

Annex ZA
(normative)
Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 62079	-	Preparation of instructions - Structuring, content and presentation	EN 62079	-
IEC 62424	-	Representation of process control engineering - Requests in P&I diagrams and data exchange between P&ID tools and PCE-CAE tools	EN 62424	-
ISO 10628-2[1])	-	Diagrams for the chemical and petrochemical industry - Part 2: Graphical symbols	EN ISO 10628-2[1)]	-
ANSI/ISA S7.0.01	-	Quality Standard for Instrument Air	-	-

[1]) At draft stage.

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Commissioning of electrical, instrumentation and control systems in the process industry – Specific phases and milestones

Mise en service des systèmes électriques, de mesure et de commande dans l'industrie de transformation – Phases et jalons spécifiques

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSIONING OF ELECTRICAL, INSTRUMENTATION AND CONTROL SYSTEMS IN THE PROCESS INDUSTRY – SPECIFIC PHASES AND MILESTONES

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 62337 has been prepared by subcommittee 65E: Devices and integration in enterprise systems of IEC technical committee 65: Industrial-process measurement, control and automation.

This second edition cancels and replaces the first edition published in 2006. This edition constitutes a technical revision.

The main changes with respect to the previous edition are listed below:

– The definition of the documents mentioned in this standard is in accordance with future IEC 62708[1].

[1] To be published.

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

FDIS	Report on voting
65E/221/FDIS	65E/226/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

There is an increasing trend in the process industry to award the construction of whole plants to contractors on a lump-sum turnkey or similar commercial basis. Experience has shown that both the process industry (hereinafter called “the owner”) and the contractor have long and expensive discussions to lay down unambiguously the scope of activities to be taken by the contractor and the owner and their responsibilities to achieve the handover of the plant.

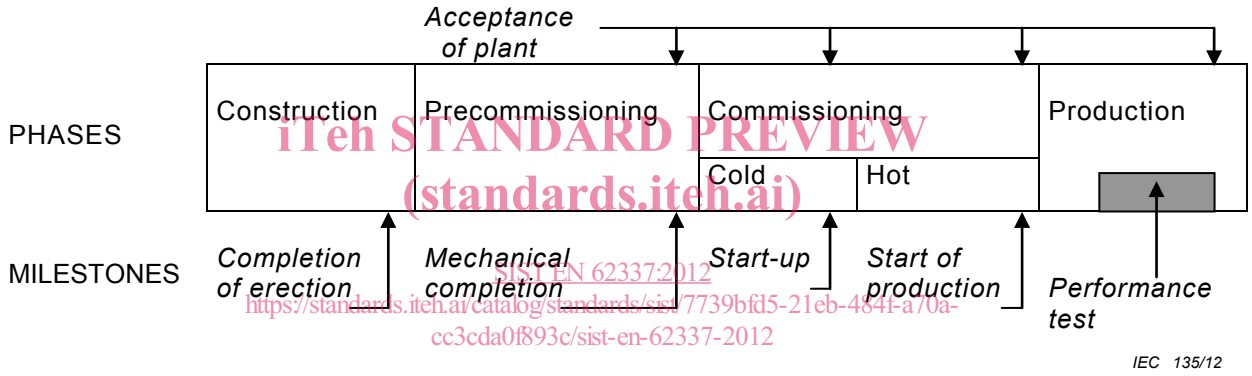
This standard is intended to lead to an improvement and acceleration of the negotiation phase and to a mutual understanding about the scope of the activities of each party.

COMMISSIONING OF ELECTRICAL, INSTRUMENTATION AND CONTROL SYSTEMS IN THE PROCESS INDUSTRY – SPECIFIC PHASES AND MILESTONES

1 Scope

This International Standard defines specific phases and milestones (see Figure 1) in the commissioning of electrical, instrumentation and control systems in the process industry. By way of example, it describes activities following the "completion-of-erection" milestone of the project and prior to the "acceptance-of-the-plant" phase by the owner. Such activities need to be adapted for each type of process/plant concerned.

NOTE This standard assumes that the "acceptance-of-the-plant" milestone will occur after the performance test. If there is a reduced scope, this document should be adapted accordingly.



NOTE Construction and precommissioning activities could be overlapping.

Figure 1 – Definition of phases and milestones

For application in the pharmaceutical or other highly specialized industries, additional guidelines (for example, *Good Automated Manufacturing Practice* (GAMP)), definitions and stipulations should apply in accordance with existing standards, for example, for GMP Compliance 21 CFR (FDA) and the Standard Operating Procedure of the European Medicines Agency (SOP/INSP/2003).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62079, *Preparation of instruction – Structuring, content and presentation*

IEC 62424, *Representation of process control engineering – Requests in P&I diagrams and data exchange between P&ID tools and PCE-CAE tools*

ISO 10628-2, *Diagrams for chemical and petrochemical industry – Part 2: Graphical symbols*

ISA-S7.0.01, *Quality standard for instrument air*

3 Terms and definition

For the purposes of this document, the following terms and definitions apply[2].

3.1
precommissioning
phase during which the activities of non-operating adjustments, cold alignment checks, cleaning, and testing of machinery take place

NOTE Refer to Annex B for the detailed activities.

3.2
mechanical completion
milestone which is achieved when the plant, or any part thereof, has been erected and tested in accordance with drawings, specifications, instructions, and applicable codes and regulations to the extent necessary to permit cold commissioning

NOTE This includes completion of all necessary electrical and instrumentation work. This is a milestone marking the end of the precommissioning activities.

3.3
cold commissioning
phase during which the activities associated with the testing and operation of equipment or facilities using test media such as water or inert substances, prior to introducing any chemical in the system, take place

3.4
start-up
milestone marking the end of cold commissioning

NOTE At this stage, the operating range of every instrument loop should already be adjusted to reflect the actual working condition.

3.5
hot commissioning
phase during which the activities associated with the testing and operation of equipment or facilities using the actual process chemical, prior to making an actual production run, take place

3.6
start of production
milestone marking the end of hot commissioning

NOTE At this stage, the plant is ready for full and continuous operation.

3.7
performance test
milestone at which time the production plant runs to its design capacity

NOTE This test, carried out by the owner's personnel with the help and supervision of the contractor, serves to demonstrate the contractor's process performance and consumption guarantees as specified in the contract.

3.8
acceptance of plant
milestone in which the formal turnover of the plant from the contractor to the owner is carried out

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2 Future standard IEC 62708 will provide additional information on the terms used in this document.