



SLOVENSKI STANDARD

SIST EN 62381:2007

01-julij-2007

Avtomatizacijski sistemi v procesni industriji – Tovarniški prevzemni preskus (FAT), prevzemni preskus pri prevzemniku (SAT) in preskus integracije pri prevzemniku (SIT) (IEC 62381:2006)

Automation systems in the process industry - Factory acceptance test (FAT), site acceptance test (SAT) and site integration test (SIT) (IEC 62381:2006)

Automatisierungssysteme in der Prozessindustrie - Werksabnahme (FAT), Abnahme der installierten Anlage (SAT) und Integrationstest (SIT) (IEC 62381:2006)

Systemes d'automatisme dans les industries de processus - Essais d'acceptation en usine, essais d'acceptation sur site et essais d'integration sur site (IEC 62381:2006)

Ta slovenski standard je istoveten z: EN 62381:2007

ICS:

25.040.01	Sistemi za avtomatizacijo v industriji na splošno	Industrial automation systems in general
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**Automation systems in the process industry -
Factory acceptance test (FAT), site acceptance test (SAT)
and site integration test (SIT)
(IEC 62381:2006)**

Systèmes d'automatisme
dans les industries de processus -
Essais d'acceptation en usine,
essais d'acceptation sur site
et essais d'intégration sur site
(CEI 62381:2006)

Automatisierungssysteme
in der Prozessindustrie -
Werksabnahme (FAT),
Abnahme der installierten Anlage (SAT)
und Integrationstest (SIT)
(IEC 62381:2006)

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This European Standard was approved by CENELEC on 2007-02-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 65/385/FDIS, future edition 1 of IEC 62381, prepared by IEC TC 65, Industrial-process measurement and control, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62381 on 2007-02-01.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2007-11-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2010-02-01

Endorsement notice

The text of the International Standard IEC 62381:2006 was approved by CENELEC as a European Standard without any modification.

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INTERNATIONAL STANDARD

IEC 62381

First edition
2006-11

Automation systems in the process industry – Factory acceptance test (FAT), site acceptance test (SAT), and site integration test (SIT)

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CONTENTS

INTRODUCTION.....	5
FOREWORD.....	3
1 Scope.....	6
2 Terms and definitions.....	9
3 Abbreviations	10
4 General preparation before conducting the FAT	11
4.1 Documents typically prepared by owner/contractor	11
4.2 Documents typically prepared by vendor	11
5 Factory acceptance test	12
5.1 General.....	12
5.2 FAT test schedule	12
5.3 Test procedure.....	13
5.4 FAT rework	16
5.5 Documentation of FAT in accordance with Annex A.....	16
6 Site acceptance test.....	16
6.1 General.....	16
6.2 SAT test schedule.....	16
7 Site integration test	17
7.1 General.....	17
7.2 SIT test schedule	17
Annex A (informative) FAT checklists.....	18
Annex B (informative) SAT checklist	30
Annex C (informative) SIT checklist	31
Annex D (informative) FAT certificate	32
Annex E (informative) SAT certificate	33
Annex F (informative) SIT certificate.....	34
Annex G (informative) Automation system acceptance certificate.....	35
Annex H (informative) FAT punch list.....	36
Annex I (informative) SAT punch list.....	37
Annex J (informative) SIT punch list.....	38
Figure 1 – Diagram depicting typical sequence of events for FAT, SAT and SIT with respect to the project milestones	7
Figure 2 – Diagram depicting the relationship for the SAT and SIT between the DCS and subsystems.....	8
Figure 3 – Diagram depicting the relationship between the FAT, SAT and SIT with the relevant plant levels.....	9

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**AUTOMATION SYSTEMS IN THE PROCESS INDUSTRY –
FACTORY ACCEPTANCE TEST (FAT),
SITE ACCEPTANCE TEST (SAT), AND SITE INTEGRATION TEST (SIT)**

FOREWORD

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International Standard IEC 62381 has been prepared by IEC technical committee 65: Industrial-process measurement and control.

This standard cancels and replaces IEC/PAS 62381 published in 2004. This first edition constitutes a technical revision.

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

FDIS	Report on voting
65/385/FDIS	65/394/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 maintenance result 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.

A bilingual version of this publication may be issued at a later date.

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INTRODUCTION

There is an increasing trend in the process industry to shorten the time period for project execution. At the same time, the complexity of automation systems is being increased due to the number of connected systems and the use of new technologies, for example, fieldbus systems.

Experience has shown that the owner, the contractor and the vendor have long and extensive discussions to unambiguously lay down the scope of activities and responsibilities in order to achieve a timely delivery and acceptance of automation systems.

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

The annexes of this standard contain forms which may be used in the test procedures. Buyers of this standard may copy these forms for their own purposes only in the required amount.

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).

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AUTOMATION SYSTEMS IN THE PROCESS INDUSTRY – FACTORY ACCEPTANCE TEST (FAT), SITE ACCEPTANCE TEST (SAT), AND SITE INTEGRATION TEST (SIT)

1 Scope

This International Standard defines procedures and specifications for the Factory Acceptance Test (FAT), the Site Acceptance Test (SAT), and the Site Integration Test (SIT). These tests are carried out to prove that the automation system is in accordance with the specification.

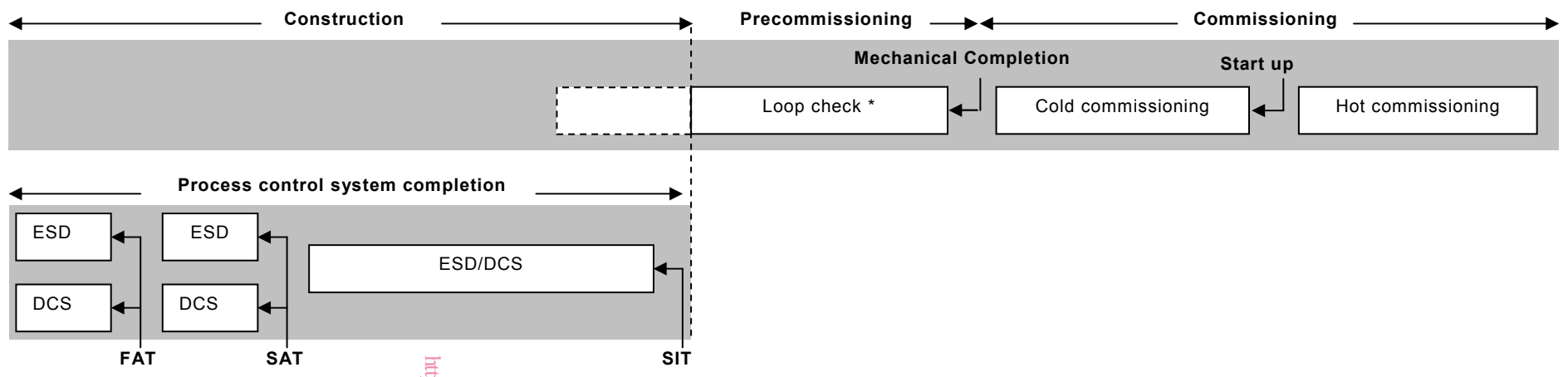
Engineering and manufacturing activities prior to these tests are not covered by this standard.

The description of activities described in this standard can be taken as a guideline and adapted to the specific requirements of the process/plant/equipment. A typical sequence of activities and events is shown in Figure 1, their relationship in Figures 2 and 3.

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- Prerequisite for FAT
- SW complete
 - System hooked up
 - Vendor in-house test completed

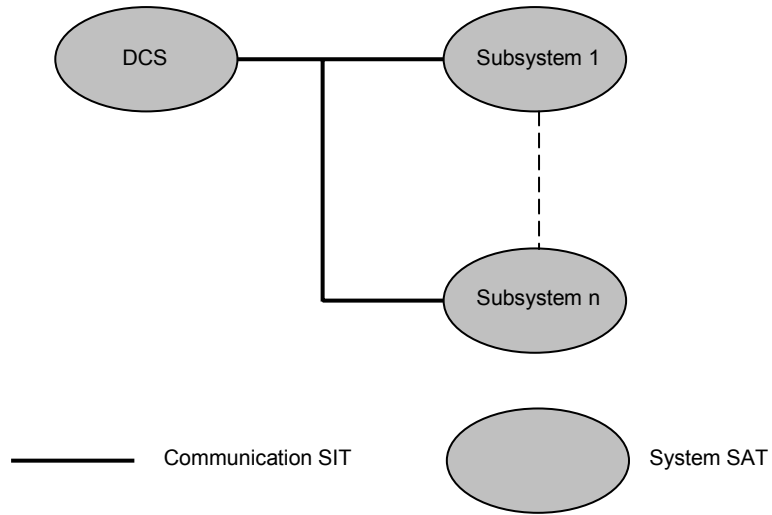
- Prerequisite for SAT
- Shipment of system to site
 - Proper installation
 - System start-up

- Prerequisite for SIT
- Systems properly connected
 - SAT complete

*The loop check can actually be started during the construction phase once the required infrastructure has been installed

Figure 1 – Diagram depicting typical sequence of events for FAT, SAT and SIT with respect to the project milestones

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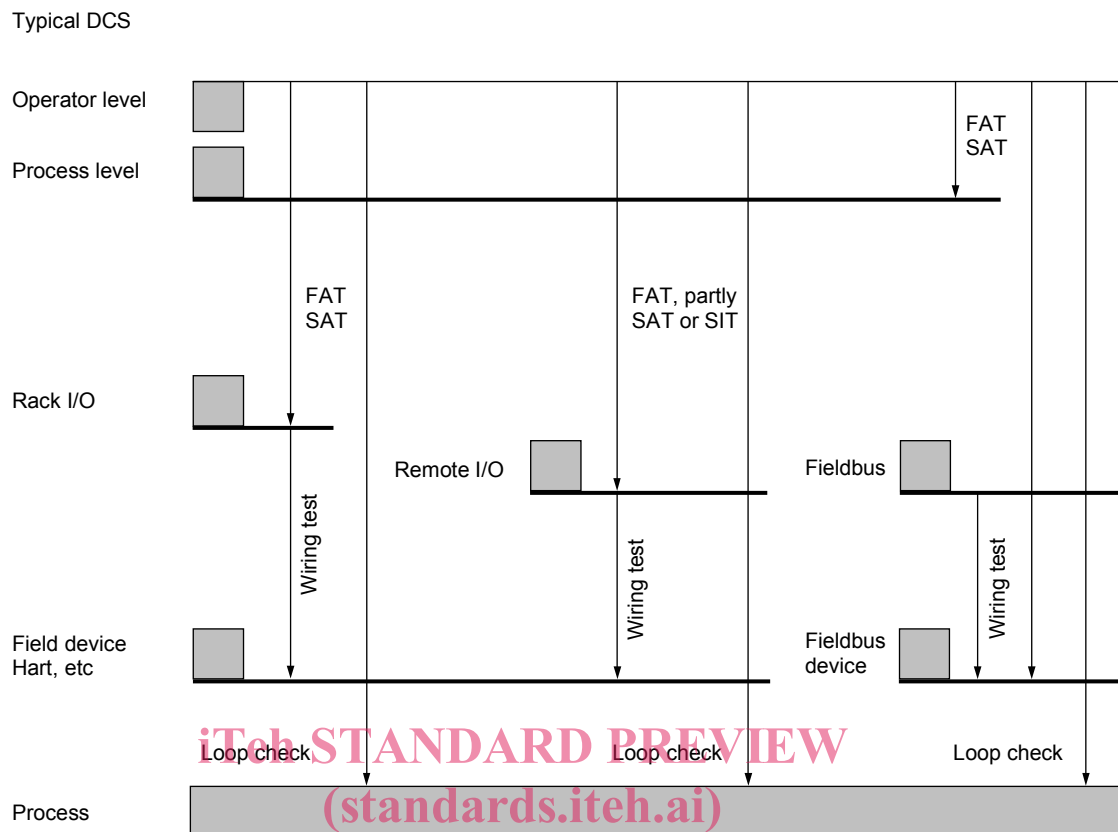
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Figure 2 – Diagram depicting the relationship for the SAT and SIT between the DCS and subsystems

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Figure 3 – Diagram depicting the relationship between the FAT, SAT and SIT with the relevant plant levels

2 Terms and definitions

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

2.1

automation system

DCS- or PLC-based system for the monitoring and controlling of production facilities in the process industry, including control systems based on fieldbus technologies

2.2

tag

unambiguous alphanumeric descriptor which identifies a sensor or actuator

2.3

factory acceptance test

activity to demonstrate that the vendor system and additionally supplied systems are in accordance with the specification

2.4

site acceptance test

activity to demonstrate that the installation of the various vendor systems are in accordance with the applicable specifications and installation instructions