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Irish Standard I.S. EN 62381:2012

Automation systems in the process industry - Factory acceptance test (FAT), site acceptance test (SAT) and site integration test (SIT) (IEC 62381:2012 (EQV))

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

(IEC 62381:2012)

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EN 62381:2012

I.S. EN 62381:2012 - 2 -

Foreword

The text of document 65E/222/FDIS, future edition 2 of IEC 62381, 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 62381:2012.

The following dates are fixed:

•	latest date by which the document has to be implemented at national level by publication of an identical national	(dop)	2012-12-28
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IEC 61331 series	NOTE	Harmonized in EN 61331 series.
IEC 62337	NOTE	Harmonized as EN 62337.

- 2 -

CONTENTS

FOI	REWC	PRD	3	
INT	RODU	JCTION	5	
1	Scop	e	6	
2	Norm	ative references	9	
3	Terms, definitions and abbreviated terms			
	3.1	Terms and definitions	9	
	3.2	Abbreviated terms	11	
4	Gene	ral preparation before conducting the FAT	11	
	4.1	Overview	11	
	4.2	Documents typically prepared by owner/contractor	12	
	4.3	Documents typically prepared by vendor	12	
5	Facto	ry acceptance test	12	
	5.1	General	12	
	5.2	FAT test plan	13	
	5.3	Test procedure	13	
		5.3.1 Test set-up	13	
		5.3.2 Conducting of test	14	
		5.3.3 Application check procedures	15	
	5.4	FAT rework	16	
~	5.5	Documentation of FAT in accordance with Annex A	16	
6	Site a		17	
	6.1	General	17	
7	6.2 Site i	SAT test plan	17	
1	Sile		17	
	7.1	General	1/	
٨٣٣	1.Z	STI test plan	18	
Ann		(informative) PAT test report	19	
Anr	iex B		31	
Anr	iex C	(informative) SIT check list	32	
Annex D (informative) FAT certificate				
Annex E (informative) SAT certificate				
Annex F (informative) SIT certificate				
Anr	nex G	(informative) Automation system acceptance certificate	36	
Anr	nex H	(informative) FAT punch list	37	
Anr	nex I (i	nformative) SAT punch list	38	
Anr	nex J (informative) SIT punch list	39	
Bib	liograp	bhy	40	
Fig	ure 1 -	- Diagram depicting typical sequence of events for FAT, SAT and SIT with	-	
res			/	
Figure 2 – Diagram depicting the relationship for the SAT and SIT between the DCS				
Figu		- Diagram denicting the relationship between the EAT SAT and SIT, with the	0	
rele	evant p	blant levels	8	

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- 3 -

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 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 62708¹.

¹ To be published.

- 4 -

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

FDIS	Report on voting
65E/222/FDIS	65E/227/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.

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- 5 -

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 is intended to 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.

- 6 -

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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.

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).

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



NOTE 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





System SAT



Communication SIT



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



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