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## Industriell processtyrning – Acceptansprovning inför leverans (FAT), acceptansprovning efter leverans (SAT) och integrationsprovning (SIT)

*Automation systems in the process industry –*

*Factory acceptance test (FAT), site acceptance test (SAT) and site integration test (SIT)*

Som svensk standard gäller europastandarden EN 62381:2007. Den svenska standarden innehåller den officiella engelska språkversionen av EN 62381:2007.

### Nationellt förord

Europastandarden EN 62381:2007

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 62381, First edition, 2006 - Automation systems in the process industry - Factory acceptance test (FAT), site acceptance test (SAT) and site integration test (SIT)**

utarbetad inom International Electrotechnical Commission, IEC.

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ICS 25.040.01

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Denna standard är fastställd av SEK Svensk Elstandard, som också kan lämna upplysningar om **sakinnehållet** i standarden.  
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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)

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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

## 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

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## 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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## 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).

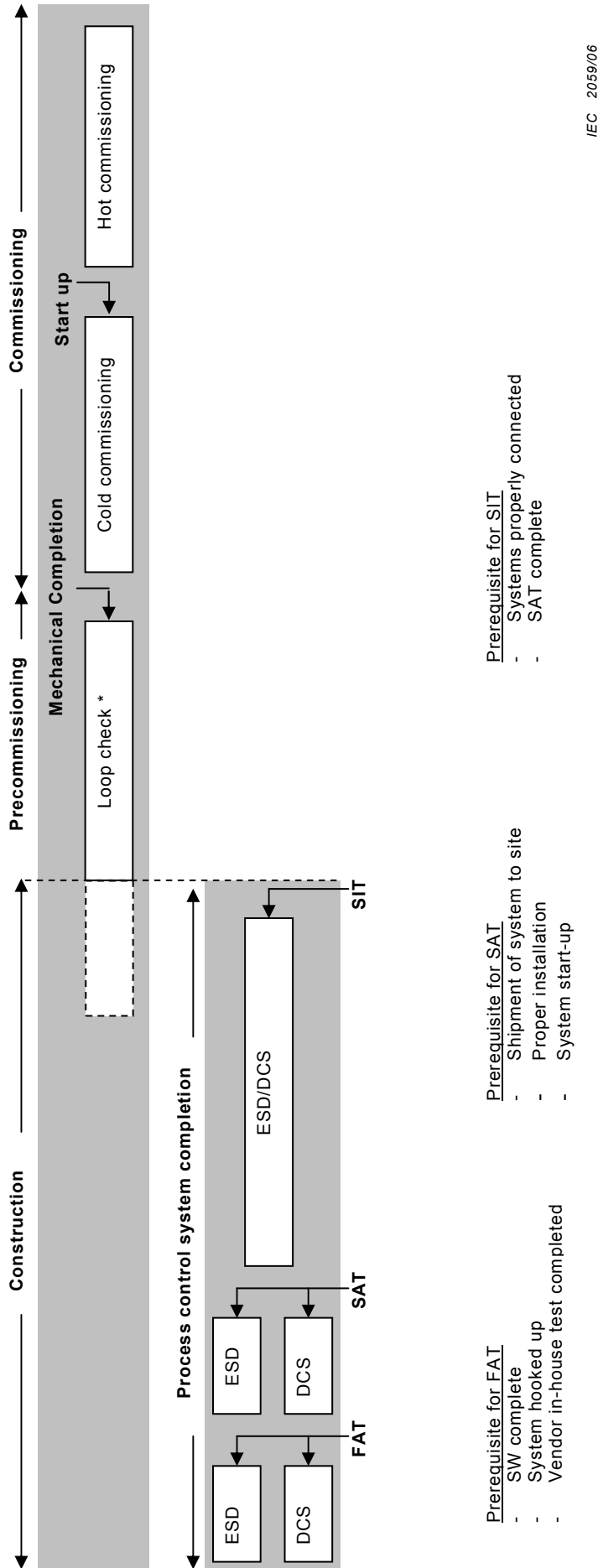
## **AUTOMATION SYSTEMS IN THE PROCESS INDUSTRY – FACTORY ACCEPTANCE TEST (FAT), SITE ACCEPTANCE TEST (SAT), AND SITE INTEGRATION TEST (SIT)**

### **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.

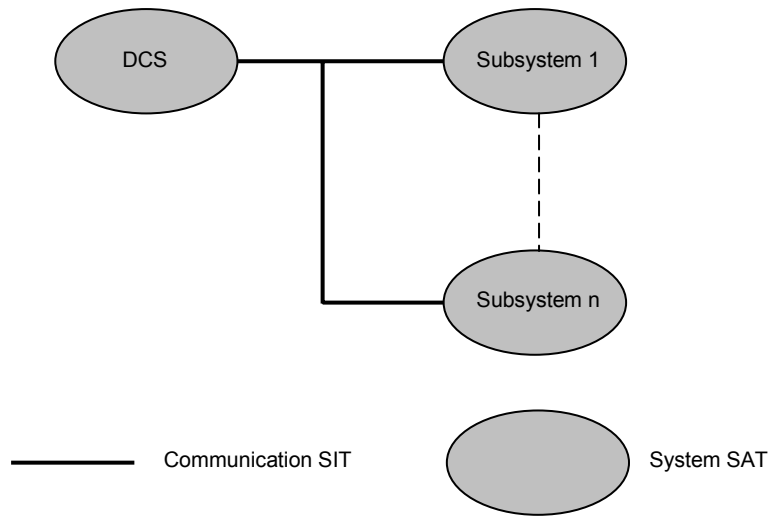
The description of activities described in this standard can be taken as a guideline and adapted to the specific requirements of the process/plant/equipment. A typical sequence of activities and events is shown in Figure 1, their relationship in Figures 2 and 3.



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

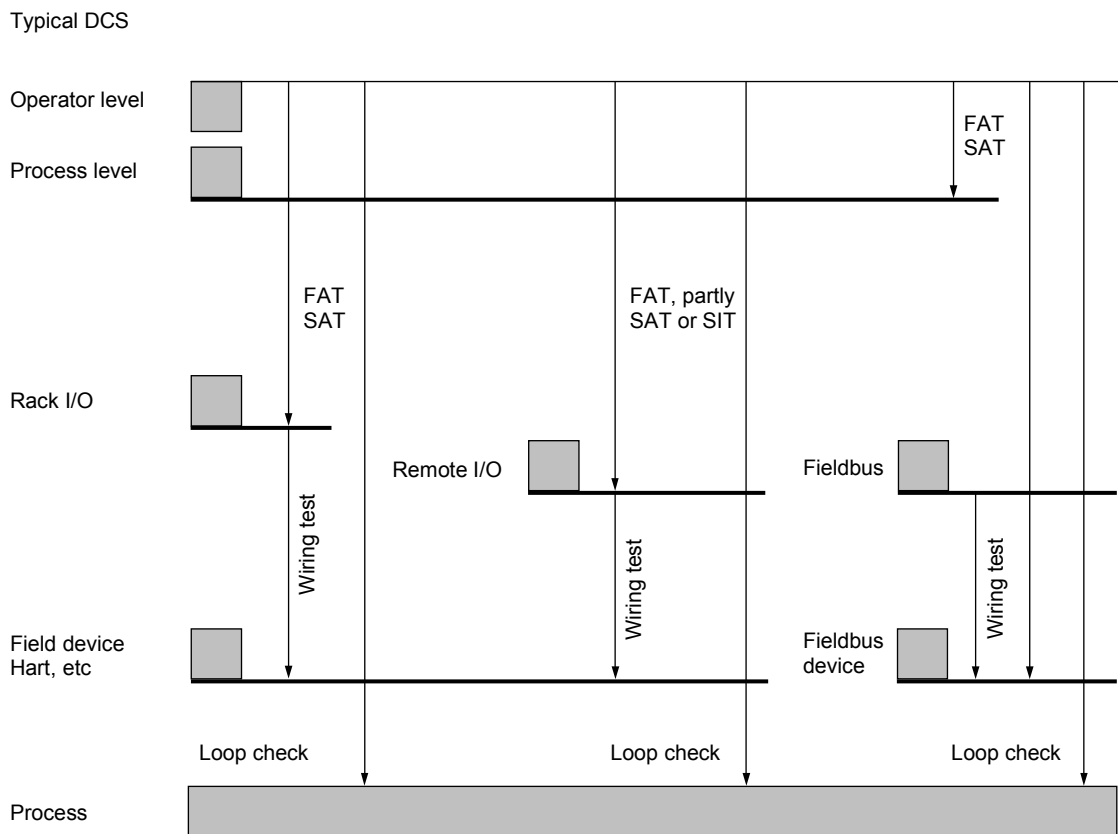
**Figure 1 – Diagram depicting typical sequence of events for FAT, SAT and SIT with respect to the project milestones**





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**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**

