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Nederlandse norm

# **NEN-EN 13306**

(en)

Maintenance - Maintenance terminology

Vervangt NEN-EN 13306:2001;  
NEN-EN 13306:2008 Ontw.

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English Version

## Maintenance - Maintenance terminology

Maintenance - Terminologie de la maintenance

Instandhaltung - Begriffe der Instandhaltung

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## Contents

	Page
Foreword.....	3
Introduction.....	4
1 Scope.....	5
2 Fundamental terms.....	5
3 Item related terms.....	6
4 Properties of items.....	7
5 Failures and events.....	9
6 Faults and states.....	11
7 Maintenance types.....	12
8 Maintenance activities.....	14
9 Time related terms.....	16
10 Maintenance support and tools.....	18
11 Economic and technical factors.....	18
Annex A (informative) Maintenance – Overall view.....	20
Annex B (informative) States of an item.....	21
Annex C (informative) Times.....	22
Annex D (informative) Maintenance times.....	23
Annex E (informative) Criticality matrix.....	24
Annex F (informative) Identification of significant technical changes between this standard and the previous edition (EN 13306:2001).....	25
Bibliography.....	26
Index.....	27

## Foreword

This document (EN 13306:2010) has been prepared by Technical Committee CEN/TC 319 "Maintenance", the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2011, and conflicting national standards shall be withdrawn at the latest by February 2011.

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## Introduction

The purpose of this European Standard is to define the generic terms used for all types of maintenance and maintenance management irrespective of the type of item considered. Maintenance of software only is not covered in this standard. However, maintenance of items and systems containing software is considered.

It is the responsibility of any maintenance management to define its maintenance strategy according to the following main objectives:

- to ensure the availability of the item to function as required, at optimum costs;
- to consider the safety and any other mandatory requirements associated with the item;
- to consider any impact on the environment;
- to uphold the durability of the item and/or the quality of the product or service provided considering costs where necessary.

As a part of the requirement of CEN/TC 319 it was necessary to produce a comprehensive structured generic maintenance vocabulary standard containing the main terms and their definitions.

Maintenance provides an essential contribution to the dependability of an item. Correct and formal definitions are required which will give the user of associated maintenance standards a fuller understanding of the maintenance terms used. These terms may be of particular importance in the formulation of maintenance contracts.

The terms contained in this standard indicate that maintenance is not confined to the technical actions alone but includes other activities such as planning, documentation handling, etc.

The standard IEC 60050-191 has been used as a basis for the preparation of this standard but some terms have been modified. Not all terms specified in IEC 60050-191 are included in this European Standard. Readers are referred to this IEC standard for further definitions.

## 1 Scope

This European Standard specifies generic terms and definitions for the technical, administrative and managerial areas of maintenance. It may not be applicable to terms which are used for the maintenance of software only.

## 2 Fundamental terms

### 2.1 maintenance

combination of all technical, administrative and managerial actions during the life cycle of an item intended to retain it in, or restore it to, a state in which it can perform the required function

NOTE See also the definitions of improvement and modification.

### 2.2 maintenance management

all activities of the management that determine the maintenance objectives, strategies and responsibilities, and implementation of them by such means as maintenance planning, maintenance control, and the improvement of maintenance activities and economics

### 2.3 maintenance objective

target assigned and accepted for the maintenance activities

NOTE These targets may include for example availability, cost reduction, product quality, environment preservation, safety, asset value preservation.

### 2.4 maintenance strategy

management method used in order to achieve the maintenance objectives

NOTE Examples could be outsourcing of maintenance, allocation of resources, etc.

### 2.5 maintenance plan

structured and documented set of tasks that include the activities, procedures, resources and the time scale required to carry out maintenance

### 2.6 required function

function, combination of functions, or a total combination of functions of an item which are considered necessary to provide a given service

NOTE 1 To provide a given service may also include asset value preservation.

NOTE 2 The given service may be expressed or implied and may in some cases be below the original design specifications.

### 2.7 dependability

ability to perform as and when required

NOTE 1 Dependability characteristics include availability and its influencing factors (reliability, recoverability, maintainability, maintenance support performance) and, in some cases, durability, economics, integrity, safety, security and conditions of use.

**EN 13306:2010 (E)**

NOTE 2 Dependability is used descriptively as an umbrella term for the time-related quality characteristics of a product or service.

**2.8 maintenance supportability**  
**maintenance support performance**  
 ability of a maintenance organization to have the correct maintenance support at the necessary place to perform the required maintenance activity when required

**2.9 operation**  
 combination of all technical, administrative and managerial actions, other than maintenance actions, that results in the item being in use

NOTE Maintenance actions carried out by operators are not included in operation.

**3 Item related terms**

**3.1 item**  
 part, component, device, subsystem, functional unit, equipment or system that can be individually described and considered

NOTE 1 A number of items e.g. a population of items, or a sample, may itself be considered as an item.

NOTE 2 An item may consist of hardware, software or both

NOTE 3 Software consists of programs, procedures, rules, documentation and data of an information processing system.

**3.2 asset (physical)**  
 item formally accountable

**3.3 repairable item**  
 item which may be restored under given conditions, and after a failure to a state in which it can perform a required function

NOTE The given conditions may be economical, ecological, technical and/or others

**3.4 consumable item**  
 item or material which is expendable, may be regularly replaced and generally is not item specific

NOTE Generally, consumable items are relatively low cost compared to the item itself.

**3.5 spare part**  
 item intended to replace a corresponding item in order to retain or maintain the original required function of the item

NOTE 1 The original item may be subsequently repaired.

NOTE 2 In English, any item that is dedicated and/or exchangeable for a specific item is often referred to as replacement item.



**3.6****insurance spare part**

spare part which is not normally needed during the useful life of the item but whose unavailability would involve an unacceptable downtime due to its provisioning

NOTE If the spare part is expensive then for accountancy purposes such a part may be considered as a capital asset.

**3.7****indenture level**

level of sub-division within an item hierarchy

NOTE 1 Examples of indenture levels are: system, subsystem and component.

NOTE 2 From the maintenance perspective, the indenture level depends on the complexity of the item's construction, the accessibility to sub-items, skill level of maintenance personnel, test equipment facilities, safety considerations, etc.

**4 Properties of items****4.1****availability**

ability to be in a state to perform as and when required, under given conditions, assuming that the necessary external resources are provided

NOTE 1 This ability depends on the combined aspects of the reliability, maintainability and recoverability of the item and the maintenance supportability.

NOTE 2 Required external resources, other than maintenance resources, do not affect the availability of the item although the item may not be available from the user's viewpoint.

NOTE 3 Availability may be quantified using appropriate measures or indicators and is then referred to as availability performance.

**4.2****reliability**

ability of an item to perform a required function under given conditions for a given time interval

NOTE 1 It is assumed that the item is in a state to performed as required at the beginning of the time interval.

NOTE 2 Reliability may be quantified as a probability or performance indicators by using appropriate measures and is then referred to as reliability performance.

NOTE 3 In some cases a given number of unit of use can be considered instead of a given time interval (number of cycles, number of running hours, number of kilometres, etc.).

**4.3****intrinsic reliability****inherent reliability**

reliability of an item determined by design and manufacture

**4.4****maintainability**

ability of an item under given conditions of use, to be retained in, or restored to, a state in which it can perform a required function, when maintenance is performed under given conditions and using stated procedures and resources

NOTE Maintainability may be quantified using appropriate measures or indicators and is then referred to as maintainability performance.

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