BSI Standards Publication

Method for condition assessment of immobile constructed assets

bsi.

National foreword

This Published Document is the UK implementation of CEN/TS 17385:2019.

The UK participation in its preparation was entrusted to Technical Committee DS/1, Dependability.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

This Published Document was published under the authority of the Standards Policy and Strategy Committee on 30 November 2019.

Amendments/corrigenda issued since publication

Date	Text affected

TECHNICAL SPECIFICATION

SPÉCIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

CEN/TS 17385

November 2019

ICS 03.100.01

English Version

Method for condition assessment of immobile constructed assets

Méthode pour l'évaluation de l'état des biens
immeubles construits

Condition-Assessment-Verfahren

This Technical Specification (CEN/TS) was approved by CEN on 19 August 2019 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. CEN/TS 17385:2019 E

Contents

Page

European foreword

This document (CEN/TS 17385:2019) has been prepared by Technical Committee CEN/TC 319 "Maintenance", the secretariat of which is held by UNI.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to announce this Technical Specification: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The condition of an immobile constructed asset is one of the factors which determine the value of the asset. The asset value is also influenced by the quality of the maintenance performed. As maintenance costs are a significant part of the total cost of ownership of a constructed asset, maintenance actions will be carefully weighed against their benefit.

The method in this standard provides an objective evaluation of the physical condition of an asset and is based on that by NEN for the Dutch market in 2006 and may be used to identify and justify a maintenance plan for the asset.

Condition assessment can be applied to all immobile constructed assets, including infrastructure assets such as buildings and bridges. However, this method is less suitable for assets such as electrical and mechanical equipment. It offers a specific survey methodology to evaluate and record defects, which can be ascertained by any means necessary.

A condition assessment is based on non-destructive surveys to identify quantitative and qualitative aspects of defects in an item and hence determine its condition class. Dismantling, sampling and drilling inspection holes can be included in the assessment. The condition class shall deliver fact-based data to managers, whom should be enabled to distinguish between medium- and long-term maintenance measures in relationship to the desired level of maintenance. Alternative maintenance scenarios can thus be developed and evaluated against the value of the asset, which in turn may lead to a change in asset management policy.

A condition assessment has an explicit technical approach and is one of many influential aspects playing a role in supporting property management. Aspects like safety, compliance with legislation, quality of use, social quality, location, flexibility, breakdown risks may play a significant role too, but are all excluded from the scope of this Technical Specification. Condition assessment is just one aspect for evaluating and supporting organization policy. The organization policy therefore defines how and where the condition class is relevant within the set maintenance plans.

This document has the following objectives:

- to deliver uniformity in the condition assessment of assets, systems and elements, expressed by a condition class. The condition class is a measure of the degradation of the asset and a rating based on objectively registered defects;

- to deliver unity and insight into the sorts of defects. Each defect is weighted against the parameters severity, level of degradation and extent;

- to deliver fact-based input data to enable a priority proposition for maintenance action when weighted against all relevant aspects;

- to deliver a method to set out maintenance plans and evaluating the functioning of maintenance management on different organization levels.

1   Scope

This document describes a method to assess the physical condition of all types of immobile constructed assets in a uniform and objective way. The assessment results in a condition class, which expresses the technical state of maintenance of an asset at any certain moment in time on a six-point scale. It therefore can represent either the deterioration of an asset or part thereof or the physical condition at the time of commissioning. By repeating the assessment at regular intervals, it is possible to monitor the degradation of the asset over time.

This document offers a uniform, objective and reproducible method with traceable results. It describes how to achieve the condition class, based on non-destructive observation of defects off any asset or part thereof by using a predefined breakdown structure. The appropriate breakdown structure of an asset is dependent upon the asset concerned and guidance for defining a uniform breakdown structure is given in Annex C.
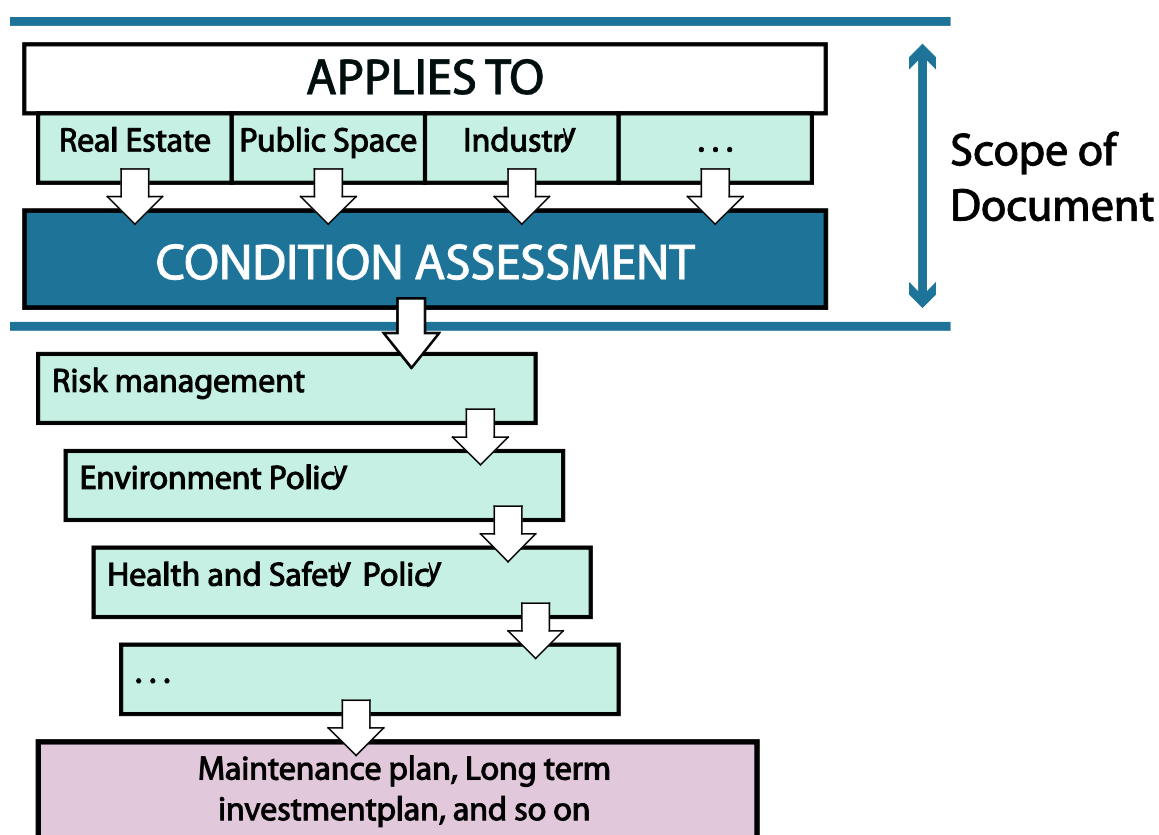
Figure 1 — Applicability of condition assessment

This document as part of an Asset Management plan can be applied to:

a)   evaluate the actual physical condition of a single asset or portfolio of assets;

b)   establish a maintenance strategy based on the actual condition of the assets;

c)   support financial planning;

d)   encourage and support communication about the actual condition versus the desired condition.