EESTI STANDARD EVS-EN 275:2000

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Wood preservatives - Determination of the protective effectiveness against marine borers

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 275:2000 sisaldab Euroopa standardi EN 275:1992 ingliskeelset teksti.	This Estonian standard EVS-EN 275:2000 consists of the English text of the European standard EN 275:1992.
Standard on kinnitatud Eesti Standardikeskuse 11.01.2000 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 11.01.2000 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

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English version

Wood preservatives - Determination of the protective effectiveness against marine borers

Produits de préservation du bois - Détermination de l'efficacité protectrice vis-à-vis des organismes térébrants marins

Holzschutzmittel - Bestimmung der Schutzwirkung gegenüber marinen Organismen

This European Standard was approved by CEN on 1992-09-25. CEN 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 CEN member.

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

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

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

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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Foreword

This European Standard was drawn up by the Technical Committee CEN/TC 38 "Durability of wood and wood-based products", the secretariat of which is held by AFNOR.

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 March 1993, and conflicting national standards shall be withdrawn at the latest by March 1993.

This European Standard has been approved by CEN, and in accordance with the Common CEN/CENELEC Rules, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

INTRODUCTION

This European Standard describes a marine test method which provides a basis for assessing the effectiveness of a wood preservative used to prevent attack of timber in sea-water by marine borers.

The method is only suitable for testing preservatives which are intended to prevent attack by marine wood-boring organisms of treated timber for use in more or less permanent contact with sea-water. It is not suitable for assessing the effectiveness of preservatives against micro-organisms.

The main objective of the method described is to evaluate the relative effectiveness of a wood preservative applied by vacuum/pressure impregnation. For this reason permeable timbers are used throughout so that the protective efficacy of various retentions of the preservative can be determined.

However, it is recognized that modifications of the method may be used for other purposes, e.g. to determine the relative efficacy of a preservative treatment or to determine the natural durability of the heartwood and sapwood of a selected timber species.

The method is primarily intended for testing in temperate waters where teredine and limnorids borers dominate. However, it is also capable of being used in the tropics where attack by pholads and specific crustacean borers may be very destructive.

The test is intended to run for a minimum period (five years or until the point of failure) before any interpretation of the results can be made.

Variations in the test conditions can be expected from one test site to another depending on temperature, salinity, population density of the various marine borer species, etc. This will inevitably influence the general rate of attack. However, by comparing the results obtained for specimens treated with the test product with those obtained for specimens treated with a reference preservative and those obtained with untreated control specimens, the relative protective effectiveness of the product tested can be evaluated.

The procedures described in this standard method are intended to be carried out by suitably trained and/or supervised specialists. Appropriate safety precautions should be observed throughout the use of this standard.

1 SCOPE

This European Standard specifies a marine test method for the determination of the relative effectiveness of a wood preservative applied by vacuum/pressure impregnation or other processes which would lead to deep penetration of the test specimens in order to prevent attack of timber in sea-water by marine wood-boring organisms.

The protective effect is assessed in relation to that of a reference preservative applied by a standard treatment. It is important to realize that the relationship between the results of these marine tests and performance in service can still vary for different preservatives.

This method is applicable for testing any type of wood preservative, provided that complete penetration of the test specimen is achieved.

NOTE : After suitable modification, it is possible to assess the effectiveness of a preservative product in other wood species or its effectiveness when applied by methods other than vacuum and pressure impregnation but only provided that a complete impregnation of the test specimens is achieved (1).

2 DEFINITIONS

For the purposes of this standard, the following definitions apply.

2.1 representative sample : A sample having its physical or chemical characteristics identical to the volumetric average characteristics of the total volume being sampled.

2.2 supplier : The sponsor of the test.

3 PRINCIPLE

Test specimens are vacuum/pressure impregnated with preservative solutions to a given range of preservative retentions. After drying and, if necessary, an appropriate fixation period, the test specimens are submerged in the sea at a location where relevant marine borers are prevalent. A single test site is regarded as adequate provided molluscan and crustacean borers are both active in this site. Additional sites with different water and/or climate characteristics are optional.

Removal of the test specimens from the water for inspection at regular intervals, with not more than 12 months between each inspection, and examination for marine borer attack, visually as well as by X-ray. The condition of the treated specimens is compared with that of untreated control test specimens and that of test specimens treated with a reference preservative, both of which indicate the aggressiveness of the individual site.

4 APPARATUS

4.1 Ordinary laboratory equipment.

4.2 X-ray apparatus, with tungsten target and beryllium window with voltage and current continuously variable in the following ranges :

Voltage : 10 kV to 50 kV
Current : 0 mA to 15 mA.

4.3 Treatment plant, capable of impregnating the timber, (see 7.2).

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1) The only specific European aspect of this standard lies in the choice of the obligatory reference species Pinus sylvestris. The method can be used with any other timber species of preference and is not specific to Europe in its field of application.