# Kinnitusdetailid. Pinnaelementide üleminekud. Osa 3: Eriotstarbelised poldid, kruvid ja tikkpoldid

Fasteners - Surface discontinuities - Part 3: Bolts, screws and studs for special requirements



## **EESTI STANDARDI EESSÕNA**

## **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 26157-3:1999 sisaldab Euroopa standardi EN 26157-3:1991 ingliskeelset teksti.

Käesolev dokument on jõustatud 23.11.1999 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 26157-3:1999 consists of the English text of the European standard EN 26157-3:1991.

This document is endorsed on 23.11.1999 with the notification being published in the official publication of the Estonian national standardisation organisation.

The standard is available from Estonian standardisation organisation.

## Käsitlusala:

EN 26157 see osa seab piirangud eriotstarbeliste poltide, kruvide ja tikkpoltide pinnaelementide üleminekute tüüpidele. Standardit kohaldatakse selliste poltide, kruvide ja tikkpoltide suhtes, mille keerme nimiläbimõõt on 5 mm ja suurem, mis on tooteklassist A ja B, mille nimipikkus I < 10 d (või pikem, kui nii on määratud), mis on materjaliklassist 12.9, mis on materjaliklassist 8.8, 9.8 ja 10.9, kui tootestandardites on nii määratud või tarnija ja ostja vahel kokku lepitud.

## Scope:

**ICS** 21.060.10

Võtmesõnad: kinnitusdetailid, kruvid, piirangud, pinnadefektid, poldid, tikkpoldid

# EUROPEAN STANDARD NORME EUROPÉENNE EUROPÄISCHE NORM

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Descriptors: Fasteners, bolts, screws, studs, surface defects.

## **English version**

#### **Fasteners**

# Surface discontinuities

Part 3: Bolts, screws and studs for special requirements (ISO 6157-3: 1988)

Eléments de fixation; défauts de surface. Partie 3: Boulons, vis et goujons pour applications particulières (ISO 6157-3: 1988) Verbindungselemente; Oberflächenfehler. Teil 3: Schrauben für besondere Anforderungen (ISO 6157-3: 1988)

This European Standard was approved by CEN on 1991-10-10 and is identical to the ISO Standard as referred to. 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.

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 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**

In 1990, ISO 6157-3: 1988 was submitted to the CEN PQ procedure.

Following the positive result of the PQ, CEN/BT agreed to submit ISO 6157-3: 1988 with the following modifications to Formal Vote.

In the French version, replace:

- 'boulon' by 'vis',
- 'boulon, vis' by 'vis'.

In accordance with the CEN/CENELEC Internal Regulations, 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.

## **Endorsement notice**

None of the second of the seco The text of the International Standard ISO 6157-3: 1988 was approved by CEN as a European Standard with agreed common modifications as given above.

# 1 Scope and field of application

1.1 This part of ISO 6157 establishes limits for various types of surface discontinuities on bolts, screws and studs for special requirements.

It applies to bolts, screws and studs with

- nominal thread diameters 5 mm and larger;
- product grades A and B;
- nominal lengths l < 10d (or longer if specified);
- property class 12.9;
- property classes 8.8, 9.8 and 10.9 when specified in product standards or agreed between supplier and purchaser.
- 1.2 Where the permissible limits for surface discontinuities indicated in clause 3 occur, the minimum values for the mechanical and functional properties specified in ISO 898-1 should still be met.

When fatigue strength requirements are specified, the fatigue strength should not be lower than that obtained on bolts without defects taken from the same lot.

## NOTES

1 The figures in clause 3 are examples only. They apply correspondingly also to other types of bolts, screws and studs.

2 The individual figures show the surface discontinuities exaggerated in some cases for clarity.

#### 2 References

ISO 468, Surface roughness — Parameters, their values and general rules for specifying requirements.

ISO 898-1, Mechanical properties of fasteners — Part 1: Bolts, screws and studs.

ISO 2859, Sampling procedures and tables for inspection by attributes.

ISO 3269, Fasteners - Acceptance inspection.

# 3 Types, causes, appearance and limits of surface discontinuities

## 3.1 Cracks

A crack is a clean (crystalline) fracture passing through or across the grain boundaries and may possibly follow inclusions of foreign elements. Cracks are normally caused by overstressing the metal during forging or other forming operations, or during heat treatment. Where parts are subjected to significant reheating, cracks usually are discoloured by scale.