Flanges and their joints - Bolting - Part 3: Classification of bolt materials for steel flanges, class designated

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 1515-3:2005 sisaldab Euroopa standardi EN 1515-3:2005 ingliskeelset teksti. Käesolev dokument on jõustatud 25.11.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 1515-3:2005 consists of the English text of the European standard EN 1515-3:2005. This document is endorsed on 25.11.2005 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard covers the classification of bolt materials used in combination with steel flanges according to EN 1759-1 (Class designated).	**Scope:** This European Standard covers the classification of bolt materials used in combination with steel flanges according to EN 1759-1 (Class designated).

ICS 21.060.10, 23.040.60

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English Version

Flanges and their joints - Bolting - Part 3: Classification of bolt materials for steel flanges, class designated

Brides et leur assemblages - Boulonnerie - Partie 3: Classification de matériaux de boulonnerie pour brides en acier, désignées Class

Flansche und ihre Verbindungen - Schrauben und Muttern - Teil 3: Klassifizierung von Schraubenwerkstoffen für Stahlflansches, nach Class bezeichnet

This European Standard was approved by CEN on 8 August 2005.

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Foreword

This European Standard (EN 1515-3:2005) has been prepared by Technical Committee CEN/TC 74 “Flanges and their joints”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by March 2006, and conflicting national standards shall be withdrawn at the latest by March 2006.

EN 1515 "Flanges and their joints – Bolting" consists of three Parts:

— *Part 1: Selection of bolting;*

— *Part 2: Classification of bolt materials for steel flanges, PN designated;*

— *Part 3: Classification of bolt materials for steel flanges, Class designated.*

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This European Standard covers the classification of bolt materials used in combination with steel flanges according to EN 1759-1 (Class designated).

Bolt materials are listed in EN 1515-1; flange material groups are listed in EN 1759-1.

2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1759-1:2004, *Flanges and their joint — Circular flanges for pipes, valves, fittings and accessories, Class designated — Part 1: Steel flanges NPS 1/2 to 24.*

EN 1515-1, *Flanges and their joints — Bolting — Part 1: Selection of bolting.*

EN 10269, *Steels and nickel alloys for fasteners with specified elevated and/or low temperature properties.*

EN ISO 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs (ISO 898-1:1999).*

EN ISO 3506-1, *Mechanical properties of corrosion-resistant stainless steel fasteners — Part 1: Bolts, screws and studs (ISO 3506-1:1997).*

3 Classification of bolt materials

The classification of bolt materials as given in Table 1 is based on the rules given in ASME B16.5 (see also annex A).

All bolting materials are subject to the following limitations:

a) High strength bolting (allowable stress 170 N/mm^2 and above; see Table A.1) may be used in any flanged joint. During assembly however, care should be taken not to over-stress the flanges (e. g. by means of torque control).

b) Intermediate strength bolting may be used in any flanged joint, provided the ability according to EN 1759-1:2004, 5.3.1 is verified.

c) Low strength bolting (allowable stress 140 N/mm^2 and below; see Table A.1) is restricted to CL 150 and CL 300. The ability according to EN 1759-1:2004, 5.3.1 shall be verified, with special consideration of the gasket.