

Fasteners — Surface discontinuities —

Part 3: Bolts, screws and studs for special requirements

The European Standard EN 26157-3:1991 has the status of a
British Standard

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National foreword

This British Standard has been prepared under the direction of the General Mechanical Engineering Standards Policy Committee and is the English language version of EN 26157-3:1991 “*Fasteners — Surface discontinuities — Part 3: Bolts, screws and studs for special requirements*”, published by the European Committee for Standardization (CEN). It is identical with ISO 6157-3:1988, published by the International Organization for Standardization (ISO). EN 26157-3:1991 was produced as a result of international discussion in which the UK took an active part.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 16, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

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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)

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CEN

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Foreword

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

Following the positive result of the P.Q., 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 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.

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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 $l \leq 10d$ (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.

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

NOTE 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.