SVENSK STANDARD
SS-EN ISO 6413:2018

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SWEDISH STANDARDS INSTITUTE

Teknisk produktdokumentation – Ritning av splines och serrationer (ISO 6413:2018)

Technical product documentation – Representation of splines and serrations (ISO 6413:2018)

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Europastandarden EN ISO 6413:2018 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av EN ISO 6413:2018.

Denna standard ersätter SS-EN ISO 6413, utgåva 1

The European Standard EN ISO 6413:2018 has the status of a Swedish Standard. This document contains the official version of EN ISO 6413:2018.

This standard supersedes the SS-EN ISO 6413, edition 1

Upplysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00. Standarder kan beställas hos SIS som även lämnar allmänna upplysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), telephone +46 8 555 520 00. Standards may be ordered from SIS, who can also provide general information about Swedish and foreign standards.

Denna standard är framtagen av kommittén för Teknisk dokumentation, SIS/TK 507/AG 01.

Har du synpunkter på innehållet i den här standarden, vill du delta i ett kommande revideringsarbete eller vara med och ta fram andra standarder inom området? Gå in på www.sis.se - där hittar du mer information.

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 6413

October 2018

ICS 21.120.30; 01.100.20

Supersedes EN ISO 6413:1994

English Version

Technical product documentation - Representation of splines and serrations (ISO 6413:2018)

Documentation technique de produits - Représentation des cannelures et des dentelures (ISO 6413:2018)

Technische Produktdokumentation - Darstellungen von Keilwellen und Kerbverzahnungen (ISO 6413:2018)

This European Standard was approved by CEN on 6 August 2018.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (EN ISO 6413:2018) has been prepared by Technical Committee ISO/TC 10 "Technical product documentation" in collaboration with Technical Committee CEN/SS F01 “Technical drawings” the secretariat of which is held by CCMC.

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 April 2019, and conflicting national standards shall be withdrawn at the latest by April 2019.

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.

This document supersedes EN ISO 6413:1994.

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

Endorsement notice

The text of ISO 6413:2018 has been approved by CEN as EN ISO 6413:2018 without any modification.

Introduction

The representations of splines in technical product documentation are different from those used in mechanical drawings. In mechanical drawings, the drawings of spline teeth are complicated.

This document improves the efficiency of drawing.

Technical product documentation — Representation of splines and serrations

1 Scope

This document specifies the rules and graphical symbols for the representations of splines and serrations in technical product documentation.

Two methods of representation are specified:

a) complete representation;

b) simplified representation.

The rules and graphical symbols specified in this document are applicable to detail drawings of parts (shafts and hubs) and to assembly drawings of joints.

NOTE For uniformity, all the figures in this document have been drawn in the first-angle orthographic projection. A third-angle orthographic projection could equally have been used without prejudice to principles established.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 128-24:2014, *Technical drawings — General principles of presentation — Part 24: Lines on mechanical engineering drawings*

ISO 3098-2, *Technical product documentation — Lettering — Part 2: Latin alphabet, numerals and marks*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
spline joint
connecting, coaxial elements that transmit torque through the simultaneous engagement of equally spaced teeth situated around the periphery of a cylindrical external member with similar spaced mating spaces situated around the inner surface of the related cylindrical internal member

[SOURCE: ISO 4156-1:2005, 3.1]

3.2
involute spline
member of a spline joint having teeth or spaces that have involute flank profiles

[SOURCE: ISO 4156-1:2005, 3.2]

3.3
straight-sided spline
member of a spline joint with teeth or spaces that have straight-sided flank profiles

3.4
serration
member of a spline joint with teeth or spaces

Note 1 to entry: Serrations generally have flank profiles of 60° pressure angle.

4 Designation

4.1 Graphical symbols

The type of spline joint is indicated by graphical symbols: for the straight-sided spline as shown in Figure 1 and for the involute spline and serrations as shown in Figure 2.

Figure 1 — Straight-sided spline

Figure 2 — Involute spline and serrations

Apply the rules for the proportions and dimensions of graphical symbols as specified in Annex A.

4.2 Method for indication designation

The designation should be indicated near the feature. Always connect it to the contour of the spline joint by a leader line (see Figure 3).

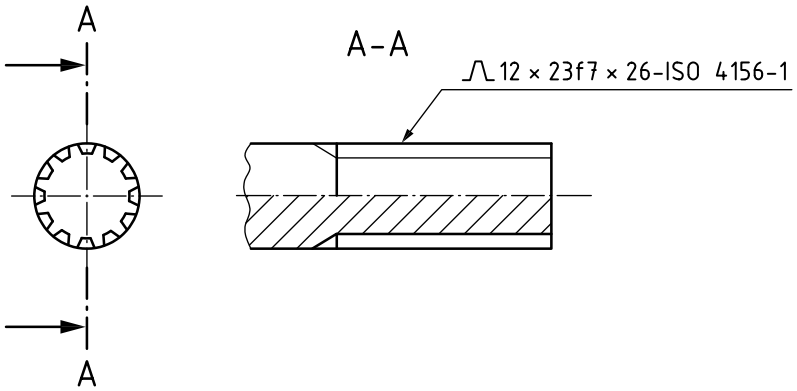

Figure 3 — Examples of indication

Where a spline joint is not in accordance with this document as mentioned above, or where the requirement is modified, the necessary data shall be tabulated on the drawing or any other associated document and shall be cross-referenced by a leader line and graphical symbol to the applicable contour.

5 Complete representation of spline joints

A complete representation of spline joints showing all details with their true dimensions is generally not necessary in technical product documentation and should be avoided.

When such a representation has to be made, the drawing rules laid down in ISO 128-24 shall be applied.

If necessary, a designation of the spline joint in accordance with Clause 4 may be added.

Figure 4 shows an example of a complete representation of a straight-sided spline joint.

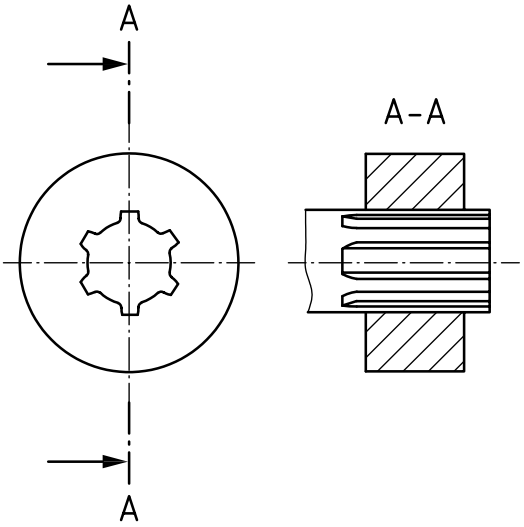

Figure 4 — Example of a complete representation of a straight-sided spline joint

Figure 5 shows an example of a complete representation of an involute spline joint.

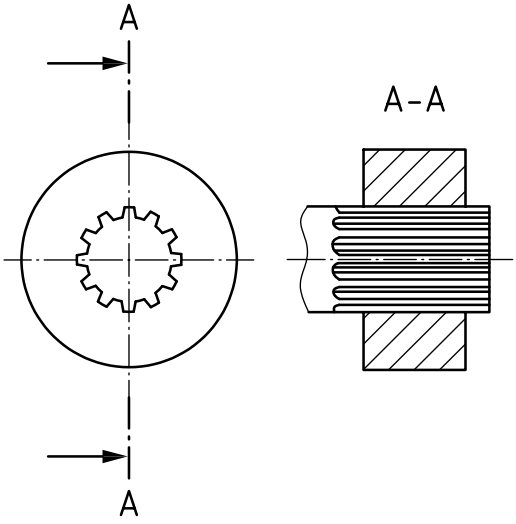

Figure 5 — Example of a complete representation of an involute spline joint

Figure 6 shows an example of a complete representation of a serration.