SLOVENSKI STANDARD
SIST EN 13001-3-1:2012+A1:2013/oprA2:2016

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Žerjavi - Konstrukcija, splošno - 3-1. del: Mejna stanja in dokaz varnosti jeklene nosilne konstrukcije - Dopolnilo A2

Cranes - General Design - Part 3-1: Limit States and proof competence of steel structure

Krane - Konstruktion allgemein - Teil 3-1: Grenzzustände und Sicherheitsnachweis von Stahltragwerken

Appareils de levage à charge suspendue - Conception générale - Partie 3-1: Etats limites et vérification d'aptitude des charpentes en acier

Ta slovenski standard je istoveten z: **EN 13001-3-1:2012+A1:2013/prA2**

ICS:

53.020.20 Dvigala Cranes

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT EN 13001-3-1:2012+A1:2013

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English Version

Cranes - General Design - Part 3-1: Limit States and proof competence of steel structure

Appareils de levage à charge suspendue - Conception générale - Partie 3-1: Etats limites et vérification d'aptitude des charpentes en acier

Krane - Konstruktion allgemein - Teil 3-1: Grenzzustände und Sicherheitsnachweis von Stahltragwerken

This draft amendment is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 147.

This draft amendment A2, if approved, will modify the European Standard EN 13001-3-1:2012+A1:2013. If this draft becomes an amendment, CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for inclusion of this amendment into the relevant national standard without any alteration.

This draft amendment was established by CEN 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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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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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 13001-3-1:2012+A1:2013/prA2:2016) has been prepared by Technical Committee CEN/TC 147 “Cranes — Safety”, the secretariat of which is held by BSI.

This document is currently submitted to the CEN Enquiry.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

1 Modification to the European foreword

After the 9th paragraph, add the following:

"CEN/TC 147/WG 2 has made a new consolidation of EN 13001-3-1 to adapt the standard as follows:

— New steel qualities from EN 10149-2 and stainless steels from EN 10088-2 added to Clause 4.2.1.

— Application of bolt preloading scatter in Clause 5.2.3.3 was modified.

— Fatigue strength specific resistance factors were adjusted in Clause 6.1.

— Formula for assessing combined effect of normal and shear stresses was changed in Clause 6.5.4.

— Characteristic fatigue strengths modified for notch cases D.3.29 and D.3.30.

— Number of minor changes for reasons of editorial and technical accuracy."

2 Modification to the Introduction

In the first paragraph replace the following part of the text: "conform with the essential health" *with* "conform to the essential health"

3 Modification to the Normative references

Delete the following references:

"EN 1990:2002, *Eurocode — Basis of structural design"*

"EN 10045-1:1990, *Metallic materials — Charpy impact test — Part 1: Test method"*

Add the following references:

"EN 10088-2:2014, *Stainless steels — Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes"*

"EN ISO 148-1:2011, *Metallic materials — Charpy pendulum impact test — Part 1: test method"*

Replace "EN ISO 898-1:2009, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs with specified property classes — Coarse thread and fine pitch thread (*ISO 898-1:2009*)" with "*EN ISO 898-1:2013, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs with specified property classes — Coarse thread and fine pitch thread (*ISO 898-1:2013*)"*

Replace "EN ISO 5817:2007, *Welding — Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) — Quality levels for imperfections (*ISO 5817:2003*, corrected version:2005, including Technical Corrigendum 1:2006)" with* EN ISO 5817:2014, *Welding — Fusion-welded joints in steel, nickel, titanium and their alloys (beam welding excluded) — Quality levels for imperfections (*ISO 5817:2014*)*"

4 Modifications to Clause 3, Terms, definitions, symbols and abbreviations

Delete "and the basic list of definitions as provided in EN 1990:2002"

5 Modifications to 3.2 Symbols and abbreviations

In Table 1, replace the existing description for f_y *with the following:* "yield stress of material, specified or measured" and for f_{yp} *with: "*yield stress of pins, specified or measured"

6 Modifications to 4.2.1 Grades and qualities

Add the following item at the end of the list:

"e) Austenitic stainless steels EN 10088-2."

Add the following sentence after indent e):

"Where stainless steels are welded, special attention should be given to the welding process and corrosion effects.

Replace the existing paragraph after this new sentence with:

Table 2 shows specific values for the nominal value of strength f_u, f_y. For limit design stresses f_{Rd} see 5.2. The values given are applicable for temperatures up to 150°C. For more information see the specific European Standard."

Replace Table 2 as follows:

"Table 2 — Specific values of steels for structural members

Steel	Standard	Thickness *t* mm	Nominal strength	
			f_y	f_u
			yield	ultimate
			N/mm²	N/mm²
S235	EN 10025–2	$t \leq 16$	235	340
		$16 < t \leq 40$	225	
		$40 < t \leq 100$	215	
		$100 < t \leq 150$	195	
S275		$t \leq 16$	275	430
		$16 < t \leq 40$	265	
		$40 < t \leq 63$	255	
		$63 < t \leq 80$	245	
		$80 < t \leq 100$	235	
		$100 < t \leq 150$	225	
S355		$t \leq 16$	355	490
		$16 < t \leq 40$	345	
		$40 < t \leq 63$	335	
		$63 < t \leq 80$	325	
		$80 < t \leq 100$	315	
		$100 < t \leq 150$	295	
S355	EN 10025–3 (N) EN 10025–4 (M)	$t \leq 16$	355	450
		$16 < t \leq 40$	345	
		$40 < t \leq 63$	335	
		$63 < t \leq 80$ (N)	325	
		$80 < t \leq 100$ (N)	315	
		$100 < t \leq 150$ (N)	295	
S420		$t \leq 16$	420	500
		$16 < t \leq 40$	400	
		$40 < t \leq 63$	390	
		$63 < t \leq 80$ (N)	370	
		$80 < t \leq 100$ (N)	360	
		$100 < t \leq 150$ (N)	340	
S460		$t \leq 16$	460	530
		$16 < t \leq 40$	440	
		$40 < t \leq 63$	430	
		$63 < t \leq 80$ (N)	410	
		$80 < t \leq 100$ (N)	400	

Steel	Standard	Thickness t mm	Nominal strength	
			f_y	f_u
			yield	ultimate
			N/mm²	N/mm²
S460	EN 10025–6	$3 < t \leq 50$	460	550
		$50 < t \leq 100$	440	
S500		$3 < t \leq 50$	500	590
		$50 < t \leq 100$	480	
S550		$3 < t \leq 50$	550	640
		$50 < t \leq 100$	530	
S620		$3 < t \leq 50$	620	700
		$50 < t \leq 100$	580	
S690		$3 < t \leq 50$	690	770
		$50 < t \leq 100$	650	760
S890		$3 < t \leq 50$	890	940
		$50 < t \leq 100$	830	880
S960		$3 < t \leq 50$	960	980
S315	EN 10149–3 EN 10149–2	all t	315	390
S355			355	430
S420			420	480
S460	EN 10149–2	all t	460	520
S500			500	550
S550			550	600
S600			600	650
S650		$t \leq 8$	650	700
		$t > 8$	630	
S700		$t \leq 8$	700	750
		$t > 8$	680	
S900		all t	900	930
S960			960	980
X2CrNi18–9	EN 10088–2	$t \leq 75$	200 a)	500 a)
X5CrNi18–10			210 a)	520 a)
X2CrNi19–11			200 a)	500 a)
X2CrNiMo17–12–2			220 a)	520 a)
X5CrNiMo17–12–2			220 a)	520 a)

a) 0,2 % - proof strength and tensile strength for hot rolled plate

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