

Irish Standard I.S. EN 13001-3-6:2018

Cranes - General design - Part 3-6: Limit states and proof of competence of machinery - Hydraulic cylinders

© CEN 2018 No copying without NSAI permission except as permitted by copyright law.

I.S. EN 13001-3-6:2018

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R.~xxx: Standard~Recommendation-recommendation~based~on~the~consensus~of~an~expert~panel~and~subject~to~public~consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on: Published:

EN 13001-3-6:2018 2018-02-28

This document was published ICS number:

under the authority of the NSAI and comes into effect on: 23.100.20

53.020.20 2018-03-18

NOTE: If blank see CEN/CENELEC cover page

NSAI T +353 1 807 3800 Sales:

 1 Swift Square,
 F +353 1 807 3838
 T +353 1 857 6730

 Northwood, Santry
 E standards@nsai.ie
 F +353 1 857 6729

 Dublin 9
 W NSAI.ie
 W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

This is a free page sample. Access the full version online.

National Foreword

I.S. EN 13001-3-6:2018 is the adopted Irish version of the European Document EN 13001-3-6:2018, Cranes - General design - Part 3-6: Limit states and proof of competence of machinery - Hydraulic cylinders

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

For relationships with other publications refer to the NSAI web store.

Compliance with this document does not of itself confer immunity from legal obligations.

In line with international standards practice the decimal point is shown as a comma (,) throughout this document.

This is a free page sample. Access the full version online.

This page is intentionally left blank

EUROPEAN STANDARD

EN 13001-3-6

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2018

ICS 23.100.20; 53.020.20

English Version

Cranes - General design - Part 3-6: Limit states and proof of competence of machinery - Hydraulic cylinders

Appareils de levage à charge suspendue - Conception générale - Partie 3-6 : États limites et vérification d'aptitude des éléments de mécanismes - Vérins hydrauliques Krane - Konstruktion allgemein - Teil 3-6: Grenzzustände und Sicherheitsnachweis von Maschinenbauteilen - Hydraulikzylinder

This European Standard was approved by CEN on 13 November 2017.

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.

CEN members are the national standards bodies of 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 United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 13001-3-6:2018 (E)

Cont	ontents		
Europ	ean foreword	4	
Introd	uction	5	
1	Scope	6	
2	Normative references	6	
3	Terms, definitions and symbols	7	
3.1	Terms and definitions		
3.2	Symbols an abbreviations		
3.3	Terminology		
4	General	12	
4.1	Documentation	12	
4.2	Materials for hydraulic cylinders	12	
4.2.1	General requirements	12	
4.2.2	Grades and qualities	13	
5	Proof of static strength	13	
5.1	General	13	
5.2	Limit design stresses	15	
5.2.1	General		
5.2.2	Limit design stress in structural members		
5.2.3	Limit design stresses in welded connections		
5.3	Linear stress analysis		
5.3.1	General		
5.3.2	Typical load cases and boundary conditions		
5.3.3	Cylinder tube		
5.3.4	Cylinder bottom		
5.3.5	Piston rod welds		
5.3.6	Cylinder head		
5.3.7	Cylinder tube and piston rod threads		
5.3.8	Thread undercuts and locking wire grooves		
5.3.9	Oil connector welds		
	Connecting interfaces to crane structure		
5.4	Nonlinear stress analysis		
5.4.1 5.4.2	General Standard cylinder with end moments		
5.4.2 5.4.3	Support leg		
5.4.3 5.5	Execution of the proof		
5.5.1	Proof for load bearing components		
5.5. 2	Proof for bolted connections		
5.5.3	Proof for welded connections		
6	Proof of fatigue strength		
6.1	General		
6.2	Stress histories		
6.3	Execution of the proof		
6.4	Limit design stress range		
6.5	Details for consideration		



The is a new provider i arenade and chare publication at the limit below	This is a free preview.	Purchase the	entire publication	at the link below:
--	-------------------------	--------------	--------------------	--------------------

Product Page

- Dooking for additional Standards? Visit Intertek Inform Infostore
- Dearn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation