
Aeronavtika - Jeklo X8CrNiTi18-10 (1.4878/1.4544) - Popuščano - $500 \leq R_m \leq 750$ MPa - Cevi za konstrukcije - $0,5 \leq a \leq 5$ mm

Aerospace series - Steel X8CrNiTi18-10 (1.4878/1.4544) - Softened - $500 \leq R_m \leq 750$ MPa - Tubes for structures - $0,5 \leq a \leq 5$ mm

Luft- und Raumfahrt - Stahl X8CrNiTi18-10 (1.4878/1.4544) - Weichgeglüht - $500 \leq R_m \leq 750$ MPa - Konstruktionsrohre - $0,5 \leq a \leq 5$ mm

Série aérospatiale - Acier X8CrNiTi18-10 (1.4878/1.4544) - Adouci - $500 \leq R_m \leq 750$ MPa - Tubes pour structures - $0,5 \leq a \leq 5$ mm

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Ta slovenski standard je istoveten z: EN 3489:2019

ICS:

49.025.10	Jekla	Steels
77.140.75	Jeklene cevi in cevni profili za posebne namene	Steel pipes and tubes for specific use

SIST EN 3489:2020**en,fr,de**

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EUROPEAN STANDARD

EN 3489

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2019

ICS 49.025.10

English Version

**Aerospace series - Steel X8CrNiTi18-10 (1.4878/1.4544) -
Softened - $500 \leq R_m \leq 750$ MPa - Tubes for structures - $0,5$
 $\leq a \leq 5$ mm**

S?ie a?ospatiale - Acier X8CrNiTi18-10
(1.4878/1.4544) - Adouci - $500 \leq R_m \leq 750$ MPa -
Tubes pour structures - $0,5 \leq a \leq 5$ mm

Luft- und Raumfahrt - Stahl X8CrNiTi18-10
(1.4878/1.4544) - Weichgegl?t - $500 \leq R_m \leq 750$ MPa -
Konstruktionsrohe - $0,5 \leq a \leq 5$ mm

This European Standard was approved by CEN on 22 April 2019.

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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: Rue de la Science 23, B-1040 Brussels

Contents	Page
European foreword	3
Introduction	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Requirements	5
Bibliography	8

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SIST EN 3489:2020

<https://standards.iteh.ai/catalog/standards/sist/1fd11d13-59ed-4833-a3a1-b4d9372a7dba/sist-en-3489-2020>

European foreword

This document (EN 3489:2019) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2020, and conflicting national standards shall be withdrawn at the latest by June 2020.

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.

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

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EN 3489:2019 (E)

Introduction

This document is part of the series of EN metallic material standards for aerospace applications. The general organization of this series is described in EN 4258.

This document has been prepared in accordance with EN 4500-005.

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1 Scope

This document specifies the requirements relating to:

Steel X8CrNiTi18-10 (1.4878/1.4544)
Softened
 $500 \leq R_m \leq 750$ MPa
Tubes for structures
 $0,5 \leq a \leq 5$ mm

for aerospace applications.

ASD-STAN designation: FE-PA13.

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.

EN 2069-4, *Aerospace series — Inspection and testing requirements for steel wrought products — Part 004: Inspection and testing requirements for tubes* ¹⁾

3 Terms and definitions

No terms and definitions are listed in this document.

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

- ISO Online browsing platform: available at <http://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

4 Requirements

See Table 1.

1) Published as ASD-STAN Standard at the date of publication of this standard by AeroSpace and Defence industries Association of Europe - Standardization (ASD-STAN), <http://www.asd-stan.org/>

EN 3489:2019 (E)

Table 1 — Requirements for Steel X8CrNiTi18-10 (1.4878/1.4544)

1	Material designation		Steel X8CrNiTi18-10 (1.4878/1.4544)								
2	Chemical composition %	Element	C	Si	Mn	P	S	Cr	Ni	Ti	Fe
		min.	-	-	-	-	-	17,0	9,0	5 × % C	Rem.
		max.	0,08	1,00	2,00	0,035	0,025	19,0	11,0	0,60	
3	Method of melting		Air melted								
4.1	Form		Seamless tubes								
4.2	Method of production		-								
4.3	Limit dimension(s)	mm	0,5 ≤ a ≤ 5								
5	Technical specification		EN 2069-4								

6.1	Delivery condition		Softened								
	Heat treatment		1 050 ≤ θ ≤ 1 100 °C/AQ or WQ								
6.2	Delivery condition code		U								
7	Use condition		-								
	Heat treatment		As delivered								

Characteristics

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8.1	Test sample(s)		-									
8.2	Test piece(s)		-									
8.3	Heat treatment		In the delivery condition									
9	Dimensions concerned	mm	0,5 ≤ a ≤ 5									
10	Thickness of cladding on each face	%	-									
11	Direction of test piece		-									
12	Temperature	θ	°C	Ambient								
13	Proof stress	R _{p0,2}	MPa *	≥ 210								
14	T	Strength	R _m	MPa *	500 ≤ R _m ≤ 750							
15		Elongation	A	%	A _{50 mm} ≥ 40 (≥ 35) ^a							
16		Reduction of area	Z	%	-							
17		Hardness		≤ 207 HV								
18	Shear strength	R _c	MPa *	-								
19	Bending	k	-	-								
20	Impact strength		-									
21	C	Temperature	θ	°C	-							
22		Time		h	-							
23		Stress	σ _a	MPa *	-							
24		Elongation	a	%	-							
25		Rupture stress	σ _R	MPa *	-							
26		Elongation at rupture	A	%	-							
27	Notes (see line 98)		*) a									

38	Intergranular corrosion	-	In acidified copper sulphate
97	Designation	-	-
98	Notes	-	*) 1 MPa = 1 N/mm ² a Value in bracket for strip test pieces
99	Typical use	-	Austenitic corrosion resisting steel, weldable
100	-	Product qualification	-
			Qualification programme to be agreed between manufacturer and purchaser.

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