SLOVENSKI STANDARD
SIST EN 2031:2018

01-november-2018

Aeronavtika - Jeklo 102Cr6 (1.2067) - Utrjeno in mehko žarjeno - Palice

Aerospace series - Steel 102Cr6 (1.2067) - Hardened and tempered - Bars

Luft- und Raumfahrt - Stahl 102Cr6 (1.2067) - Gehärtet und angelassen - Stangen

Série aérospatiale - Acier 102Cr6 (1.2067) - Trempé et revenu - Barre

Ta slovenski standard je istoveten z: **EN 2031:2018**

ICS:

49.025.10	Jekla	Steels

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EUROPEAN STANDARD

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English Version

Aerospace series - Steel 102Cr6 (1.2067) - Hardened and tempered - Bars

Série aérospatiale - Acier 102Cr6 (1.2067) - Trempé et revenu - Barres

Luft- und Raumfahrt - Stahl 102Cr6 (1.2067) - Gehärtet und angelassen - Stangen

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

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European foreword

This document (EN 2031:2018) 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 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of an identical text or by endorsement, at the latest by February 2019, and conflicting national standards shall be withdrawn at the latest by February 2019.

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Introduction

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

1 Scope

This European Standard specifies the requirements relating to:

Steel 102Cr6 (1.2067)
Hardened and tempered
Bars

for aerospace applications.

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 4258, *Aerospace series — Metallic materials — General organization of standardization — Links between types of EN standards and their use*

EN 4500-005, *Aerospace series — Metallic materials — Rules for drafting and presentation of material standards — Part 005: Specific rules for steels*

EN 4700-002, *Aerospace series — Steel and heat resisting alloys — Wrought products — Technical specification — Part 002: Bar and section*

3 Requirements

See Table 1.

Table 1 — Requirements for steel 102Cr6 (1.2067)

1	Material designation		Steel 102Cr6 (1.2067)							
2	Chemical composition %	Element	C	Si	Mn	P	S	Cr	Mo	Ni
		min.	0,95	0,15	0,25	–	–	1,35	–	–
		max.	1,10	0,35	0,45	0,030	0,020	1,65	–	0,40
3	Method of melting		Air melted							
4.1	Form		Bars							
4.2	Method of production		–							
4.3	Limit dimension(s)	mm	–							
5	Technical specification		EN 4700-002							

6.1	Delivery condition	Spheroidised
	Heat treatment	–
6.2	Delivery condition code	–
7	Use condition	Hardened and tempered
	Heat treatment	Delivery condition + 830 °C ≤ θ ≤ 870 °C/OQ + Temper 150 °C ≤ θ ≤ 190 °C

				Characteristics		
8.1	Test sample(s)			–	–	Disc: a = 10 mm
8.2	Test piece(s)			–	–	Reference [a]
8.3	Heat treatment			Spheroidised	Hardened and tempered	See line 29.
9	Dimensions concerned		mm	–	≤ 25	–
10	Thickness of cladding on each face		%	–		
11	Direction of test piece			–		
12	T	Temperature	θ °C	–		
13	T	Proof stress	$R_{p0,2}$ MPa*	–		
14	T	Strength	R_m MPa*	–		
15	T	Elongation	A %	–		
16	T	Reduction of area	Z %	–		
17	Hardness			HB ≤ 207	HV [b] ≥ 740 HRC ≥ 61	HV [b] ≥ 740 HRC ≥ 61
18	Shear strength		R_c MPa*	–		
19	Bending		k –	–		
20	Impact strength			–		
21	C	Temperature	θ °C	–		
22	C	Time	h	–		
23	C	Stress	σ_a MPa*	–		
24	C	Elongation	a %	–		
25	C	Rupture stress	σ_R MPa*	–		
26	C	Elongation at rupture	A %	–		
27	Notes (see line 98)			*, a, b		

28	–	–	–
29	Reference heat treatment	–	Hardened and tempered 830 °C ± 10 °C / OQ + Temper 180 °C ± 5 °C
30	Microstructure	–	Carbides shall be fine and non-aligned
95	Marking inspection	–	–
96	Dimensional inspection	–	–
98	Notes	–	* 1 MPa = 1 N/mm². a Optional test. b Method to be used in case of conflict.
99	Typical use	–	Bearings