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SLOVENSKI STANDARD
SIST EN 2465:2008
01-februar-2008

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Aerospace series - Steel FE-PA3901 (X2CrNi18-9) - Softened - 450 MPa <= Rm <= 680 MPa - Bar for machining - 0,4 mm <= De <= 100 mm

Luft- und Raumfahrt - Stahl FE-PA3901 (X2CrNi18-9) - Weichgeglüht - 450 MPa <= Rm <= 680 MPa - Stangen zur spanenden Bearbeitung - 0,4 mm <= De <= 100 mm

Série aérospatiale - Acier FE-PA3901 (X2CrNi18-9) - Adouci - 450 MPa <= Rm <= 680 MPa - Barres pour usinage - 0,4 mm <= De <= 100 mm

Ta slovenski standard je istoveten z: **EN 2465:2007**

ICS:

49.025.10

SIST EN 2465:2008 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 2465

October 2007

ICS 49.025.10

English Version

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This European Standard was approved by CEN on 23 June 2007.

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

Management Centre: rue de Stassart, 36   B-1050 Brussels

Ref. No. EN 2465:2007: E

Foreword

This document (EN 2465:2007) 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of an identical text or by endorsement, at the latest by April 2008, and conflicting national standards shall be withdrawn at the latest by April 2008.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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Introduction

This 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 standard has been prepared in accordance with EN 4500-5.

1 Scope

This standard specifies the requirements relating to:

Steel FE-PA3901 (X2CrNi18-9)
Softened
450 MPa $\leq R_m \leq$ 680 MPa
Bar for machining
4 mm $\leq D_e \leq$ 100 mm

for aerospace applications.

2 Normative references

The following referenced documents are indispensable for the application 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 4500-5, *Aerospace series — Metallic materials — Rules for drafting and presentation of material standards — Part 5: Specific rules for steels.* [1]

EN 4700-2, *Aerospace series — Steel and heat resisting alloys — Wrought products — Technical specification — Part 2: Bar and section.* [1]

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[1] Published as ASD Prestandard at the date of publication of this standard.

1	Material designation			Steel FE-PA3901 (X2CrNi18-9)							
2	Chemical composition %	Element		C	Si	Mn	S [a]	P [a]	Cr [a]	Ni [a]	Fe
		min.		–	–	–	–	–	17,5	8,0	Base
		max.		0,030	1,0	2,0	0,030	0,045	19,5	10,0	
3	Method of melting			Air melted							
4.1	Form			Bar for machining							
4.2	Method of production			EN 4700-2							
4.3	Limit dimension(s)		mm	$4 \leq D_e \leq 100$							
5	Technical specification			EN 4700-2							

6.1	Delivery condition	Softened
	Heat treatment	1 000 °C $\leq \theta \leq$ 1 100 °C / AC or WQ
6.2	Delivery condition code	U
7	Use condition	Delivery condition
	Heat treatment	–

Characteristics

8.1	Test sample(s)			See EN 4700-2.	
8.2	Test piece(s)			See EN 4700-2.	
8.3	Heat treatment			Delivery condition	
9	Dimensions concerned		mm	$4 \leq D_e \leq 50$	$50 < D_e \leq 100$
10	Thickness of cladding on each face		%	–	
11	Direction of test piece			L	
12		Temperature	θ	°C	Ambient	
13		Proof stress	$R_{p0,2}$	MPa	≥ 180	≥ 170
14	T	Strength	R_m	MPa	$450 \leq R_m \leq 680$	
15		Elongation	A	%	≥ 45	
16		Reduction of area	Z	%	–	
17	Hardness			HB ≤ 200	
18	Shear strength	R_c	MPa	–	
19	Bending	k	–	–	
20	Impact strength			–	
21		Temperature	θ	°C	–	
22		Time		h	–	
23	C	Stress	σ_a	MPa	–	
24		Elongation	a	%	–	
25		Rupture stress	σ_R	MPa	–	
26		Elongation at rupture	A	%	–	
27	Notes (see line 98)			a	

44	External defects	–	EN 4700-2
50	Cleanliness/inclusion content	–	EN 4700-2
		7	Category 2
61	Internal defects	–	EN 4700-2
		7	Class 2
95	Marking inspection	–	See EN 4700-2.
96	Dimensional inspection	–	See EN 4700-2.
98	Notes	–	[a] For specific welding applications (e.g. high power beam), and after agreement between manufacturer and purchaser: - maximum content of S and P should be reduced to 0,005 % and 0,020 %, respectively; - ratio between Cr and Ni according to SUUTALA Formula should be > 1,67 %; - S + P + B should be ≤ 0,025 %.
99	Typical use	–	–

100	–	Product qualification	–	See EN 4700-2.
				Qualification programme to be agreed between manufacturer and purchaser.

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100	–	Product qualification	–	See EN 4700-2.
				Qualification programme to be agreed between manufacturer and purchaser.