



SLOVENSKI STANDARD SIST EN 2469:2009

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<https://standards.iteh.ai/catalog/standards/sist/7feb9ae3-0975-493b-83de-f1eb17a853af/sist-en-2469-2009>

Ta slovenski standard je istoveten z: EN 2469:2007

ICS:

49.025.10 Jekla Steels

SIST EN 2469:2009 en,de

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EUROPEAN STANDARD

EN 2469

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2007

ICS 49.025.10

English Version

**Aerospace series - Steel FE-PA3901 (X1CrNi18-10) - Air melted
- Softened - Wires - $0,4 \text{ mm} \leq D \leq 12,5 \text{ mm}$ - $450 \text{ MPa} \leq R_m \leq$
 650 MPa**

Série aérospatiale - Acier FE-PA3901 (X1CrNi18-10) -
Élaboré à l'air - Trempé - Fils - $0,4 \text{ mm} \leq D \leq 12,5 \text{ mm}$ -
 $450 \text{ MPa} \leq R_m \leq 650 \text{ MPa}$

Luft- und Raumfahrt - Stahl FE-PA3901 (X1CrNi18-10) -
Lufterschmolzen - Abgeschreckt - Drähte - $0,4 \text{ mm} \leq D \leq$
 $12,5 \text{ mm}$ - $450 \text{ MPa} \leq R_m \leq 650 \text{ MPa}$

This European Standard was approved by CEN on 5 October 2006.

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 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 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

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

EN 2469:2007 (E)**Foreword**

This document (EN 2469:2007) 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 September 2007, and conflicting national standards shall be withdrawn at the latest by September 2007.

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.

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

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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 (X1CrNi18-10)
Air melted
Softened
Wires
 $0,4 \text{ mm} \leq D \leq 12,5 \text{ mm}$
 $450 \text{ MPa} \leq R_m \leq 650 \text{ MPa}$

for aerospace applications.

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2 Normative references (standards.iteh.ai)

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 2002-6, *Aerospace series — Metallic materials — Test methods — Part 6: Bend testing.*¹⁾

EN 2043, *Aerospace series — Metallic materials — General requirements for semi-finished product qualification (excluding forgings and castings).*¹⁾

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 4700-4, *Aerospace series — Steel and heat resisting alloys — Wrought products — Technical specification — Part 4: Wire.*¹⁾

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

EN 2469:2006 (E)

1	Material designation		Steel FE-PA3901 (X1CrNi18-10)							
2	Chemical composition %	Element	C	Si	Mn	P	S	Cr	Ni	Fe
		min.	–	–	–	–	–	17,0	9,0	Base
		max.	0,030	1,00	2,00	0,035	0,025	19,0	12,0	
3	Method of melting		Air melted							
4.1	Form		Wires							
4.2	Method of production		–							
4.3	Limit dimension(s)	mm	$0,4 \leq D \leq 12,5$							
5	Technical specification		EN 4700-4							

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

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Characteristics
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8.1	Test sample(s)		EN 4700-4									
8.2	Test piece(s)		EN 4700-4 https://standards.iteh.ai/catalog/standards/sist/7feb9ac3-0975-493b-83de-f1eb17a853af/sist-en-2469-2006									
8.3	Heat treatment		Softened									
9	Dimensions concerned	mm	$0,4 \leq D \leq 6$				$6 < D \leq 12,5$					
10	Thickness of cladding on each face	%	–				–					
11	Direction of test piece		–				–					
12	Temperature	θ	°C		Ambient				Ambient			
13	Proof stress	$R_{p0,2}$	MPa		≥ 180				≥ 180			
14	T Strength	R_m	MPa		$450 \leq R_m \leq 650$				$450 \leq R_m \leq 650$			
15	Elongation	A	%		≥ 40				≥ 45			
16	Reduction of area	Z	%		–				–			
17	Hardness		$\leq 201\ \text{HB} ; \leq 212\ \text{HV}^a$				$\leq 201\ \text{HB} ; \leq 212\ \text{HV}^a$					
18	Shear strength	R_c	MPa		–							
19	Bending	k	–		–							
20	Impact strength		–									
21	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									

37	Bending of wires (single bend test)	1	EN 2002-6
		2	One end of each coil
		3	$D \leq 3 \text{ mm}$
		7	$\alpha = 180^\circ$; in contact
38	Corrosion (intergranular corrosion)	–	See EN 4700-4.
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95	Marking inspection	–	See EN 4700-4.
96	Dimensional inspection	–	See EN 4700-4.
98	Notes	–	^a HV for $D \leq 5 \text{ mm}$
99	Typical use	–	Austenitic corrosion resisting steel.

EN 2469:2006 (E)

100	-	Product qualification	-	See EN 2043.
				Qualification programme to be agreed between manufacturer and purchaser.
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