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Ta slovenski standard je istoveten z: EN 3638:2007

ICS:

49.025.10 Jekla Steels

SIST EN 3638:2009 en,de

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EUROPEAN STANDARD

EN 3638

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2007

ICS 49.025.10

English Version

**Aerospace series - Heat resisting alloy FE-PA2601
(X6NiCrTiMoV26-15) - Consumable electrode remelted -
Solution and precipitation treated - Sheet, strip and plate - 0,5
mm ≤ a ≤ 10 mm**

Série aérospatiale - Alliage résistant à chaud FE-PA2601
(X6NiCrTiMoV26-15) - Elaboré par électrode consommable
- Mis en solution et précipité - Tôles, bandes et plaques -
0,5 mm ≤ a ≤ 10 mm

Luft- und Raumfahrt - Hochwarmfeste Legierung FE-
PA2601 (X6NiCrTiMoV26-15) - Mit selbstverzehrender
Elektrode umgeschmolzen - Lösungsgeglüht und
ausgelagert - Bleche, Bänder und Platten - 0,5 mm ≤ a ≤ 10
mm

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 3638:2007 (E)**Foreword**

This document (EN 3638:2007) 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of an identical text or by endorsement, at the latest by September 2007, and conflicting national standards shall be withdrawn at the latest by September 2007.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 4500-3.

1 Scope

This standard specifies the requirements relating to:

Heat resisting alloy FE-PA2601 (X6NiCrTiMoV26-15)
Consumable electrode remelted
Solution and precipitation treated
Sheet, strip and plate
 $0,5 \text{ mm} \leq a \leq 10 \text{ mm}$

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. standards.iteh.ai/standards/sist/e241c26e-0de1-422c-8b04-7a94342ee56f/sist-en-3638-2009

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 4050-4, *Aerospace series — Test method for metallic materials — Ultrasonic inspection of bars, plates, forging stock and forgings — Part 4: Acceptance criteria*. ¹⁾

EN 4500-3, *Aerospace series — Metallic materials — Rules for drafting and presentation of material standards — Part 3: Specific rules for heat resisting alloys*. ¹⁾

EN 4700-1, *Aerospace series — Steel and heat resisting alloy — Wrought products — Technical specification — Part 1: Plate, sheet and strip*. ¹⁾

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

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1	Material designation	Heat resisting alloy FE-PA2601 (X6NiCrTiMoV26-15)														
2	Chemical composition %	Element	C	Si	Mn	P	S	Al	B	Cr	Mo	Ni	Ti	V	Pb	Fe
		min.	–	–	1,00	–	–	–	30 ^a	13,5	1,00	24,0	1,90	0,10	–	Base
		max.	0,080	1,00	2,00	0,020	0,015	0,35	100 ^a	16,0	1,50	27,0	2,30	0,50	20 ^a	
3	Method of melting	Consumable electrode remelted														
4.1	Form	Sheet, strip and plate														
4.2	Method of production	Rolled														
4.3	Limit dimension(s)	mm	0,5 ≤ a ≤ 10													
5	Technical specification	EN 4700-1														

6.1	Delivery condition	Solution treated and descaled														
	Heat treatment	980 °C ± 10 °C / t ≥ 15 min / AQ														
6.2	Delivery condition code	W														
7	Use condition	Solution and precipitation treated														
	Heat treatment	Delivery condition + 720 °C ± 10 °C / t = 16 h / AC														

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Characteristics
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8.1	Test sample(s)	Cut from sheet, strip or plate														
8.2	Test piece(s)	SIST EN 3638:2009 See EN 4700-1 https://standards.itech.ai/catalog/standards/sist/c241c26c-0dc1-422c-8b04-79511c000000/en-3638-2009														
8.3	Heat treatment	Delivery condition					Use condition									
9	Dimensions concerned	mm	0,5 ≤ a ≤ 5				5 < a ≤ 10				0,5 ≤ a ≤ 10					
10	Thickness of cladding on each face	%	–				–				–					
11	Direction of test piece	See EN 4700-1.				See EN 4700-1.				See EN 4700-1.						
12	Temperature	θ	°C				Ambient				Ambient					
13	Proof stress	R _{p0,2}	MPa				200 ≤ R _{p0,2} ≤ 390				200 ≤ R _{p0,2} ≤ 390					
14	T Strength	R _m	MPa				≤ 665				≤ 665					
15	Elongation	A	%				≥ 35				≥ 35					
16	Reduction of area	Z	%				–				–					
17	Hardness	HV ≤ 195				HB ≤ 190				HB ≥ 255 or HV ≥ 860						
18	Shear strength	R _c	MPa				–				–					
19	Bending	k	–				0,5; α = 180°				–					
20	Impact strength	–														
21	Temperature	θ	°C				–				650 ^b					
22	Time	h		–				t _R ≥ 23								
23	C Stress	σ _a	MPa				–				–					
24	Elongation	a	%				–				–					
25	Rupture stress	σ _R	MPa				–				450					
26	Elongation at rupture	A	%				–				≥ 2					
27	Notes (see line 98)	a, b														

34	Grain size	–	See EN 4700-1.	
		6	$0,5 \leq a \leq 3$	$3 < a \leq 10$
		7	$G \geq 5$	$G \geq 3$
44	External defects	–	See EN 4700-1.	
61	Internal defects	–	See EN 4700-1.	
		1	EN 4050-4	
		7	Class 4	
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95	Marking inspection	–	See EN 4700-1.	
96	Dimensional inspection	–	See EN 4700-1.	
98	Notes	–	^a p.p.m. ^b Proportional test piece.	
99	Typical use	–	–	

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