
Aeronavtika - Jeklo FE-PL2108 (35NiCrMo16) - $1100 \text{ MPa} \leq R_m \leq 1300 \text{ MPa}$ - Izkovki
- $De \leq 100 \text{ mm}$

Aerospace series - Steel FE-PL2108 (35NiCrMo16) - $1100 \text{ MPa} \leq R_m \leq 1300 \text{ MPa}$ -
Forgings - $De \leq 100 \text{ mm}$

Luft- und Raumfahrt - Stahl FE-PL2108 (35NiCrMo16) - $1100 \text{ MPa} \leq R_m \leq 1300 \text{ MPa}$ -
Gesenk- und Freiformschmiedestücke - $De \leq 100 \text{ mm}$

Série aérospatiale - Acier FE-PL2108 (35NiCrMo16) - $1100 \text{ MPa} \leq R_m \leq 1300 \text{ MPa}$ -
Pièces forgées et matricées - $De \leq 100 \text{ mm}$

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Ta slovenski standard je istoveten z: EN 2483:2010

ICS:

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Steels

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 2483

December 2010

ICS 49.025.10

English Version

Aerospace series - Steel FE-PL2108 (35NiCrMo16) - 1 100 MPa
 $\leq R_m \leq 1\,300\text{ MPa}$ - Forgings - $D_e \leq 100\text{ mm}$

Série aérospatiale - Acier FE-PL2108 (35NiCrMo16) - 1 100
MPa $\leq R_m \leq 1\,300\text{ MPa}$ - Pièces forgées et matricées - D_e
 $\leq 100\text{ mm}$

Luft- und Raumfahrt - Stahl FE-PL2108 (35NiCrMo16) - 1
100 MPa $\leq R_m \leq 1\,300\text{ MPa}$ - Gesenk- und
Freiformschmiedestücke - $D_e \leq 100\text{ mm}$

This European Standard was approved by CEN on 2 July 2010.

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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

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Foreword

This document (EN 2483:2010) 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 June 2011, and conflicting national standards shall be withdrawn at the latest by June 2011.

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, Croatia, 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-PL2108 (36NiCrMo16)
 $1\,100\text{ MPa} \leq R_m \leq 1\,300\text{ MPa}$
 Forgings
 $D_e \leq 100\text{ mm}$

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. [SIST EN 2483:2011](https://standards.iteh.ai/catalog/standards/sist/7849c5a6-c1c1-422a-87b1-1e60502c11e1/en-2483-2011)

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 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 4700-006, *Aerospace series — Steel and heat resisting alloys — Wrought products — Technical specification — Part 006: Pre-production and production forgings*

¹⁾ Published as ASD-STAN Prestandard at the date of publication of this standard by Aerospace and Defence Industries Association of Europe-Standardization (ASD-STAN) (www.asd-stan.org).

1	Material designation		Steel FE-PL2108 (36NiCrMo16)								
2	Chemical composition %	Element	C	Si	Mn	P	S	Cr	Mo	Ni	Fe
		min.	0,30	0,15	0,30	–	–	1,60	0,25	3,50	Base
		max.	0,40	0,40	0,60	0,025	0,020	2,00	0,60	4,20	
3	Method of melting		Air melted								
4.1	Form		Forgings								
4.2	Method of production		Forged from forging stock EN xxxx ²⁾								
4.3	Limit dimension(s)	mm	$D_e \leq 100$								
5	Technical specification		EN 4700-006								

6.1	Delivery condition		Annealed				Hardened and tempered				
	Heat treatment		–				$860\text{ }^{\circ}\text{C} \leq \theta \leq 890\text{ }^{\circ}\text{C} / \text{AQ}$ $+ \theta \geq 560\text{ }^{\circ}\text{C}$				
6.2	Delivery condition code		A				U				
7	Use condition		Hardened and tempered				Delivery condition				
	Heat treatment		Delivery condition + $860\text{ }^{\circ}\text{C} \leq \theta \leq 890\text{ }^{\circ}\text{C} / \text{AQ}$ $+ \theta \geq 560\text{ }^{\circ}\text{C}$				–				

Characteristics

8.1	Test sample(s)			See EN 4700-006.	
8.2	Test piece(s)			See EN 4700-006.	
8.3	Heat treatment			Annealed	Hardened and tempered
9	Dimensions concerned	mm	$D_e \leq 100$		
10	Thickness of cladding on each face	%	-		
11	Direction of test piece		-		
12	Temperature	θ	°C	Ambient	
13	Proof stress	R _{p0,2}	MPa	-	≥ 900
14	Strength	R _m	MPa	-	1 100 ≤ R _m ≤ 1 300
15	Elongation	A	%	-	≥ 10
16	Reduction of area	Z	%	-	≥ 40
17	Hardness			HB ≤ 293 HV ≤ 309 ^a	331 ≤ HB ≤ 388 350 ≤ HV ≤ 410 ^a
18	Shear strength	R _c	MPa	-	
19	Bending	k	-	-	
20	Impact strength	KV	J	-	≥ 25
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	

2) In preparation at the date of publication of this standard.

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34	Grain size	–	See EN 4700-006.
		7	G ≥ 5
44	External defects	–	See EN 4700-006.
50	Cleanliness/inclusion content (micro-cleanness)	–	See EN 4700-006.
61	Internal defects	–	See EN 4700-006.
		1	EN 4050-4
		7	Class 2