SLOVENSKI STANDARD
SIST EN 2542:2009

01-februar-2009

Aeronavtika - Jeklo FE-PL1502 (25CrMo4) - Ţarjeno - Palice in ģice - De Ò40 mm - Za pritrditvene matice

Aerospace series - Steel FE-PL1502 (25CrMo4) - Annealed - Bar and wire - De Ò40 mm - For prevailing torque nuts

Luft- und Raumfahrt - Stahl FE-PL1502 (25CrMo4) - Gegl¿ht - Stangen und Drª hte - De Ò40 mm - F¿r klemmende Sicherungsmuttern

S®rie a®rospatiale - Acier FE-PL1502 (25CrMo4) - Recuit - Barres et fils - De Ò40 mm - Pour ®crous ¨ freinage interne par d®formation

Ta slovenski standard je istoveten z: **EN 2542:2008**

ICS:

49.025.10	Jekla	Steels

SIST EN 2542:2009 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 2542

November 2008

ICS 49.025.10

English Version

Aerospace series - Steel FE-PL1502 (25CrMo4) - Annealed - Bar and wire - De ≤ 40 mm - For prevailing torque nuts

Série aérospatiale - Acier FE-PL1502 (25CrMo4) - Recuit - Barres et fils - De ≤ 40 mm - Pour écrous à freinage interne par déformation

Luft- und Raumfahrt - Stahl FE-PL1502 (25CrMo4) - Geglüht - Stangen und Drähte - De ≤ 40 mm - Für klemmende Sicherungsmuttern

This European Standard was approved by CEN on 24 August 2008.

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.

CEN members are the national standards bodies of 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 United Kingdom.

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

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

Foreword

This document (EN 2542:2008) 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 May 2009, and conflicting national standards shall be withdrawn at the latest by May 2009.

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.

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-PL1502 (25CrMo4)
Annealed
Bar and wire
$D_e \leq 40$ mm
For prevailing torque nuts

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 2600, *Aerospace series — Designation of metallic semi-finished products — Rules.* [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 4700-2, *Aerospace series — Steel and heat resisting alloys — Wrought products — Technical specification — Part 2: Bar and section.* [1)]

EN 9133, *Aerospace series — Quality management systems — Qualification procedure for aerospace standard parts.*

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

1	Material designation		Steel FE-PL1502 (25CrMo4)								
2	Chemical composition %	Element	C	Si	Mn	P	S	Cr	Mo	Ni	Fe
		min.	0,22	0,10	0,50	–	–	0,90	0,15	–	Base
		max.	0,29	0,35	0,80	0,020	0,015	1,20	0,25	0,30	
3	Method of melting		Air melted								
4.1	Form		Bar and wire								
4.2	Method of production		–								
4.3	Limit dimension(s)	mm	$D_e \leq 40$								
5	Technical specification		EN 4700-2								

6.1	Delivery condition		Annealed
	Heat treatment		–
6.2	Delivery condition code		A
7	Use condition		Delivery condition
	Heat treatment		–

				Characteristics	
8.1	Test sample(s)			–	
8.2	Test piece(s)			–	
8.3	Heat treatment			Annealed	Reference on a washer $a \leq 2$ mm (see line 29)
9	Dimensions concerned		mm	≤ 40	–
10	Thickness of cladding on each face		%	–	
11	Direction of test piece			–	
12	T	Temperature	θ °C	Ambient	
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			HRB ≤ 82	40 ≤ HRC ≤ 43 390 ≤ HV5 ≤ 430
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)			–	

29	–	–	Step quenched in a salt bath + 850 °C ≤ θ ≤ 860 °C [a] salt bath quenched θ ≥ 365°C / AC or other equivalent heat treatment
97	Designation	–	The rules governing the designation of semi-finished products are indicated in standard EN 2600. When the codified designation is used, the identification code shall be as follows: **EN2542 U XX --------** Material standard number Letter code (see 6.2) Appropriate dimensional standard code (see 5.3) Data concerning dimension (see EN 2600)
98	Notes	–	* 1 MPa = 1 N/mm^2. a Depth of decarburization admissible e ≤ 0,2 mm. Carburization or total decarburization is not permitted.
99	Typical use	–	Low alloy steel for nuts

100	–	Product qualification	–	See EN 9133.
				Qualification programme to be agreed between manufacturer and purchaser.