SLOVENSKI STANDARD
SIST EN 4683:2011

01-december-2011

Aeronavtika - Jeklo FE-WM 3504 (X4CrNiMo16-5-1) - Taljeno na zraku - Dodajni material za varjenje - Žica in palica

Aerospace series - Steel FE-WM 3504 (X4CrNiMo16-5-1) - Air melted - Fillller metal for welding - Wire and rod

Luft- und Raumfahrt - Stahl FE-WM 3504 (X4CrNiMo16-5-1) - Lufterschmolzene - Schweißzusatz - Draht und Stange

Série aérospatiale - Acier FE-WM 3504 (X4CrNiMo16-5-1) - Élaboré à l'air - Métal d'apport de soudage - Fils et baguettes

Ta slovenski standard je istoveten z: **EN 4683:2011**

ICS:

49.025.10	Jekla	Steels

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EUROPEAN STANDARD

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English Version

Aerospace series - Steel FE-WM 3504 (X4CrNiMo16-5-1) - Air melted - Filler metal for welding - Wire and rod

Série aérospatiale - Acier FE-WM 3504 (X4CrNiMo16-5-1) - Élaboré à l'air - Métal d'apport de soudage - Fils et baguettes

Luft- und Raumfahrt - Stahl FE-WM 3504 (X4CrNiMo16-5-1) - Lufterschmolzene - Schweißzusatz - Draht und Stange

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Foreword

This document (EN 4683:2011) 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of an identical text or by endorsement, at the latest by December 2011, and conflicting national standards shall be withdrawn at the latest by December 2011.

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Introduction

This European 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 European Standard specifies the requirements relating to:

Steel FE-WM 3504 (X4CrNiMo16-5-1)
Air melted
Filler metal for welding
Wire and rod

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 3879, *Aerospace series — Metallic materials — Filler Metal for welding technical specification*[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 steel* [1)]

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

1	Material designation		Steel FE-WM 3504 (X4CrNiMo16-5-1)									
2	Chemical composition %	Element	C	Si	Mn	P	S	Cr	Mo	Ni	N_2	Fe
		min.	–	–	–	–	–	15,00	0,80	4,00	0,02	Base
		max.	0,06	0,70	1,50	0,025	0,005	17,00	1,50	6,00	0,08	
3	Method of melting		Air melted + AOD [a] or + VOD [b] or equivalent process									
4.1	Form		Filler wire or filler rods									
4.2	Method of production		Cold drawn									
4.3	Limit dimension(s)	mm	–									
5	Technical specification		EN 3879									

6.1	Delivery condition	Cold drawn and annealed
	Heat treatment	–
6.2	Delivery condition code	U
7	Use condition	Delivery condition
	Heat treatment	–

Characteristics

8.1	Test sample(s)				–
8.2	Test piece(s)				–
8.3	Heat treatment				–
9	Dimensions concerned			mm	–
10	Thickness of cladding on each face			%	–
11	Direction of test piece				–
12	T	Temperature	θ	°C	–
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				–
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)				a, b

44	External defects	–	See EN 3879.
57	Residual stress	–	See EN 3879.
61	Internal defects	–	See EN 3879.
82	Batch uniformity (Material verification)	–	See EN 3879.
95	Marking inspection	–	See EN 3879.
96	Dimensional inspection	–	See EN 3879.
98	Notes	–	a AOD = “Argon Oxygen Decarbonization”. b VOD = “Vacuum Oxygen Decarbonization”.
99	Typical use	–	–