SLOVENSKI STANDARD
SIST EN 3943:2001

01-junij-2001

Aerospace series - Nickel base alloy NI-B41204 (NiCr13Fe4Si4B3) - Filler metal for brazing - Powder or paste

Aerospace series - Nickel base alloy NI-B41204 (NiCr13Fe4Si4B3) - Filler metal for brazing - Powder or paste

Luft- und Raumfahrt - Nickelbasislegierung NI-B41204 (NiCr13FE4Si4B3) - Hartlot in Form von Pulver oder Paste

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Série aérospatiale - Alliage base nickel NI-B41204 (NiCr13Fe4Si4B3) - Métal d'apport de brasage - Poudre ou pâte

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Ta slovenski standard je istoveten z: EN 3943:2001

ICS:

49.025.15	Neželezove zlitine na splošno	Non-ferrous alloys in general

SIST EN 3943:2001 **en**

2003-01.Slovenski inštitut za standardizacijo. Razmnoževanje celote ali delov tega standarda ni dovoljeno.

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 3943

February 2001

ICS 49.025.15

English version

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

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Foreword

This European Standard has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After inquiries 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 AECMA, 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of an identical text or by endorsement, at the latest by August 2001, and conflicting national standards shall be withdrawn at the latest by August 2001.

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0 Introduction

This standard is part of the series of EN metallic material standards for aerospace applications. The general organisation of this series is described in EN 4258.

This standard has been prepared in accordance with EN 4500-6.

1 Scope

This standard specifies the requirements relating to:

Nickel base alloy NI-B41204 (NiCr13Fe4Si4B3)
Filler metal for brazing
Powder or paste

for aerospace applications.

2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

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EN 2043 Aerospace series - Metallic materials - General requirements for semi-finished product qualification (excluding forgings and castings) [1)]

EN 3875 Aerospace series - Metallic materials - Filler metal for brazing - Technical specification [1)]

EN 4258 Aerospace series - Metallic materials - General organization of standardization - Links between types of EN standards and their use

EN 4500-6 Aerospace series - Metallic materials - Rules for drafting and presentation of material standards - Part 6: Specific rules for filler metals for brazing [1)]

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

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1	Material designation		Nickel base braze alloy NI-B41204 (NiCr13Fe4Si4B3)													
2	Chemical composition [a] %	Element	C	Si	P	S	B	Cr	Fe	Al	Co	Se	Ti	Zr	Others Total	Ni
		min.	–	3,50	–	–	2,50	12,0	3,0	–	–	–	–	–	–	Base
		max.	0,03	4,50	0,02	0,02	3,25	14,0	5,0	0,05	0,10	50 *)	0,05	0,05	0,05	
3	Method of melting		Air or inert gas or vacuum melted													
4.1	Form		Powder									Paste				
4.2	Method of production		Water or inert gas atomised and sieved									Water or inert gas atomised and sieved and mixed with a binder				
4.3	Limit dimension(s)	mm	–									–				
5	Technical specification		EN 3875													

6.1	Delivery condition	As manufactured	As manufactured
	Heat treatment	–	–
6.2	Delivery condition code	U	U
7	Use condition	Delivery condition or mixed with a binder	Delivery condition
	Heat treatment	–	–

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					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]

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44	External defects	–	Powder	Paste
			See EN 3875	–
53	Thermal analysis (Differential thermal analysis)	–	See EN 3875	
		7	Liquidus: 1 125 °C Solidus: 960 °C	
76	Wettability (Fusion test)	–	See EN 3875	
78	Metallic alloy content	–	See EN 3875	
		7	Powder	Paste
			–	84 % ≤ metallic alloy content ≤ 90 %
82	Batch uniformity (Material verification)	–	See EN 3875	
83	Particle size (Sieve analysis)	–	See EN 3875	
95	Marking inspection	–	See EN 3875	
96	Dimensional inspection	–	See EN 3875	
98	Notes	–	*) p.p.m. [a] The chemical composition refers to the metallic alloy content.	
99	Typical use	–	Joining nickel and cobalt base heat resisting alloys.	

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

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