



SLOVENSKI STANDARD
SIST EN 3882:2002
01-januar-2002

Aerospace series - Heat resisting alloy NI-WH1801 (NiCr20Co18Ti3Al2) - Filler metal for welding

Aerospace series - Heat resisting alloy NI-WH1801 (NiCr20Co18Ti3Al2) - Filler metal for welding

Luft- und Raumfahrt - Hochwarmfeste Legierung NI-WH1801 (NiCr20Co18Ti3Al2) - Schweißzusatz

Série aérospatiale - Alliage résistant a chaud NI-WH1801 (NiCr20Co18Ti3Al2) - Métal d'apport de soudage

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Ta slovenski standard je istoveten z: EN 3882:2001

ICS:

| | | |
|-----------|-------------------------------|-------------------------------|
| 49.025.15 | Neželezove zlitine na splošno | Non-ferrous alloys in general |
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 3882

June 2001

ICS 49.025.15

English version

**Aerospace series - Heat resisting alloy NI-WH1801
(NiCr20Co18Ti3Al2) - Filler metal for welding**

Série aérospatiale - Alliage résistant à chaud NI-WH1801
(NiCr20Co18Ti3Al2) - Métal d'apport de soudage

Luft- und Raumfahrt - Hochwarmfeste Legierung NI-
WH1801 (NiCr20Co18Ti3Al2) - Schweißzusatz

This European Standard was approved by CEN on 2 May 2001.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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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

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 December 2001, and conflicting national standards shall be withdrawn at the latest by December 2001.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

0 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 NI-WH1801 (NiCr20Co18Ti3Al2)
Filler metal for welding

for aerospace application.

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.

| | |
|-----------|--|
| EN 2043 | Aerospace series - Metallic materials - General requirements for semi-finished product qualification (excluding forgings and castings) ¹⁾ |
| EN 3879 | Aerospace series - Metallic materials - Filler metals 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 4500-3 | Aerospace series - Metallic materials - Rules for drafting and presentation of material standards - Part 3: Specific rules for heat resisting alloys ¹⁾ |

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

| | | | | | | | | | | | | | | | |
|-----|-------------------------|---------|--|-----|-----|-------|-----|------|------|-----|-------|-----|-----|------|------|
| 1 | Material designation | | Heat resisting alloy NI-WH1801 (NiCr20Co18Ti3Al2) | | | | | | | | | | | | |
| 2 | Chemical composition % | Element | C | Si | Mn | S | Al | Co | Cr | Ti | B | Cu | Fe | Zr | Ni |
| | | min. | – | – | – | – | 1,0 | 15,0 | 18,0 | 2,0 | – | – | – | – | Base |
| | | max. | 0,13 | 0,5 | 0,5 | 0,015 | 2,0 | 21,0 | 21,0 | 3,0 | 0,020 | 0,2 | 1,5 | 0,15 | |
| 3 | Method of melting | | Air melted and vacuum refined or consumable electrode remelted | | | | | | | | | | | | |
| 4.1 | Form | | Filler wire and 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 | | – | | | | | | | | | | | | |

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Characteristics

| | | | | | | | | | | | | | | | |
|-----|------------------------------------|------------|---|---|--|--|--|--|--|--|--|--|--|--|--|
| 8.1 | Test sample(s) | | SIST EN 3882:2002 – | | | | | | | | | | | | |
| 8.2 | Test piece(s) | | https://standards.itech.it/catalog/standards/sist/c2414c7b-aff-43f0-9355-fb4a3e643014/sist-en-3882-2002 | | | | | | | | | | | | |
| 8.3 | Heat treatment | | – | | | | | | | | | | | | |
| 9 | Dimensions concerned | mm | – | | | | | | | | | | | | |
| 10 | Thickness of cladding on each face | % | – | | | | | | | | | | | | |
| 11 | Direction of test piece | | – | | | | | | | | | | | | |
| 12 | Temperature | θ | °C | – | | | | | | | | | | | |
| 13 | Proof stress | $R_{p0,2}$ | MPa | – | | | | | | | | | | | |
| 14 | T Strength | R_m | MPa | – | | | | | | | | | | | |
| 15 | Elongation | A | % | – | | | | | | | | | | | |
| 16 | Reduction of area | Z | % | – | | | | | | | | | | | |
| 17 | Hardness | | – | | | | | | | | | | | | |
| 18 | Shear strength | R_c | MPa | – | | | | | | | | | | | |
| 19 | Bending | k | – | – | | | | | | | | | | | |
| 20 | Impact strength | | – | | | | | | | | | | | | |
| 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) | | – | | | | | | | | | | | | |

| | | | |
|---|---|---|-------------|
| 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 |
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| 95 | Marking inspection | – | See EN 3879 |
| 96 | Dimensional inspection | – | See EN 3879 |
| 98 | Notes | – | – |
| 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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