

<b>STN</b>	<b>Letectvo a kozmonautika. Oceľ X4CrNiMo16-5-1 (1.4418). Tavenie na vzduchu a elektrotroskové pretavovanie (ESR). Kalená a popúšťaná tyč De ≤ 200 mm, 900 MPa ≤ Rm ≤ 1 050 MPa.</b>	<b>STN EN 4721</b>  31 2840
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Aerospace series - Steel X4CrNiMo16-5-1 (1.4418) - Air melted and electroslag remelted (ESR) - Hardened and tempered - Bar - De = 200 mm - 900 MPa = Rm = 1 050 MPa

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/15

Obsahuje: EN 4721:2014

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Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, odbor SÚTN, 2015  
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 4721**

October 2014

ICS 49.025.10

English Version

**Aerospace series - Steel X4CrNiMo16-5-1 (1.4418) - Air melted  
and electroslag remelted (ESR) - Hardened and tempered - Bar -  
 $D \leq 200 \text{ mm} - 900 \text{ MPa} \leq R_m \leq 1\,050 \text{ MPa}$**

Série aérospatiale - Acier X4CrNiMo16-5-1 (1.4418) -  
Élaboré à l'air - Trempé et revenu - Barres -  $D \leq 200 \text{ mm} -$   
 $900 \text{ MPa} \leq R_m \leq 1\,050 \text{ MPa}$

Luft- und Raumfahrt - Stahl X4CrNiMo16-5-1 (1.4418) -  
Lufterschmolzen - Gehärtet- und angelassen - Stangen -  $D \leq 200 \text{ mm} -$   
 $900 \text{ MPa} \leq R_m \leq 1\,050 \text{ MPa}$

This European Standard was approved by CEN on 4 January 2014.

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-CENELEC 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-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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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## Foreword

This document (EN 4721:2014) 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 April 2015, and conflicting national standards shall be withdrawn at the latest by April 2015.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey 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 4500-005.

## 1 Scope

This European Standard specifies the requirements relating to:

Steel X4CrNiMo16-5-1 (1.4418)  
Air melted and electroslag remelted (ESR)  
Hardened and tempered  
Bar  
 $D_e \leq 200 \text{ mm}$   
 $900 \text{ MPa} \leq R_m \leq 1\,050 \text{ MPa}$

for aerospace applications.

NOTE Other common designation:  
AIR: Z 8 CND 17-04.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2043, *Aerospace series — Metallic materials — General requirements for semi-finished product qualification (excluding forgings and castings)*

EN 2951, *Aerospace series — Metallic materials — Test method — Micrographic determination of content of non-metallic inclusions* <sup>1)</sup>

EN 4050-4, *Aerospace series — Test method for metallic materials — Ultrasonic inspection of bars, plates, forging stock and forgings — Part 4: Acceptance criteria*

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

EN 4500-005, *Aerospace series — Metallic materials — Rules for drafting and presentation of material standards — Part 005: Specific rules for steels*

EN 4700-002, *Aerospace series — Steel and heat resisting alloys — Wrought products — Technical specification — Part 002: Bar and section*

EN ISO 643, *Steels — Micrographic determination of the apparent grain size (ISO 643:2003)*

AMS 2315, *Determination of delta ferrite content* <sup>2)</sup>

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**

<sup>1)</sup> Published as ASD-STAN Prestandard at the date of publication of this standard ([www.asd-stan.org](http://www.asd-stan.org)).

<sup>2)</sup> Published as SAE National (US) Society of Automotive Engineers (<http://www.sae.org/>).