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Irish Standard
I.S. EN 3389:2009

Aerospace series - Fasteners, externally threaded, in heat resisting nickel base alloy NI-PH1302 (Waspaloy) -
Classification: 1 210 MPa/730 °C -
Manufacturing method optional -
Technical specification

I.S. EN 3389:2009

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English Version

**Aerospace series - Fasteners, externally threaded, in heat
resisting nickel base alloy NI-PH1302 (Waspaloy) -
Classification: 1 210 MPa/730 °C - Manufacturing method
optional - Technical specification**

Série aérospatiale - Éléments de fixation, filetés, en alliage
base nickel résistant à chaud NI-PH1302 (Waspaloy) -
Classification: 1 210 MPa/730 °C - Mode de fabrication non
imposé - Spécification technique

Luft- und Raumfahrt - Verbindungselemente mit
Außengewinde aus hochwarmfester Nickelbasislegierung
NI-PH1302 (Waspaloy) - Klasse: 1 210 MPa/730 °C -
Herstellverfahren nach Wahl - Technische
Lieferbedingungen

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Foreword

This document (EN 3389:2009) 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of an identical text or by endorsement, at the latest by August 2009, and conflicting national standards shall be withdrawn at the latest by August 2009.

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1 Scope

This standard specifies the technical and quality assurance requirements for externally threaded fasteners in material NI-PH1302 (Waspaloy) of tensile strength class 1 210 MPa at room temperature, maximum test temperature of material 730 °C.

The externally threaded fasteners specified herein may be manufactured by machining from bar or by forging at the manufacturers option, if forged there is no requirement for control of grainflow.

Primarily for Aerospace applications, it is applicable to such externally threaded fasteners when referenced on the product standard or drawing.

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 2959, *Aerospace series — Heat resisting alloy NI-PH1302 (NiCr20Co13Mo4Ti3Al) — Solution treated and cold worked — Bar for forged fasteners — $3 \text{ mm} \leq D \leq 30 \text{ mm}$* ¹

EN 2960, *Aerospace series — Heat resisting alloy NI-P101HT — Cold worked and solution treated — Bar for machining for fasteners $3 \leq D \leq 50 \text{ mm}$* ¹

EN 3220, *Aerospace series — Heat resisting nickel base alloy (Ni-P101HT) — Cold worked and softened — Bar and wire for continuous forging or extrusion for fasteners — $3 \leq D \leq 30 \text{ mm}$* ¹

EN 9100, *Aerospace series — Quality management systems — Requirements (based on ISO 9001:2000) and Quality systems — Model for quality assurance in design, development, production, installation and servicing (based on ISO 9001:1994)*

ISO 2859-1, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

ISO 3452-1, *Non-destructive testing — Penetrant inspection — Part 1: General principles*

ISO 3453, *Non destructive testing — Liquid penetrant inspection — Means of verification*

ISO 3534, *Statistics — Vocabulary and symbols*

ISO 4288, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Rules and procedures for the assessment of surface texture*

ISO 6508-1, *Metallic materials — Rockwell hardness test — Part 1: Test method (scales A, B, C, D, E, F, G, H, K, N, T)*

ISO 7961, *Aerospace — Bolts — Test methods*

ISO 9000, *Quality management systems — Fundamentals and vocabulary*

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

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