SLOVENSKI STANDARD
SIST EN 3831:2004

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Aerospace series - Inserts, thickwall, self-locking, in heat resisting steel FE-PM3801 (17-4PH), MoS2 coated

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EUROPEAN STANDARD

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ICS 49.030.30

English version

Aerospace series - Inserts, thickwall, self-locking, in heat resisting steel FE-PM3801 (17-4PH), MoS2 coated

This European Standard was approved by CEN on 2 June 2002.

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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.

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

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Contents

page

Foreword

This document (EN 3831:2003) has been prepared by the European Association of Aerospace Manufacturers – Standardization (AECMA-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 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of an identical text or by endorsement, at the latest by July 2003, and conflicting national standards shall be withdrawn at the latest by July 2003.

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

0 Introduction

For design and installation procedures see EN 4014 and EN 4015.

1 Scope

This standard specifies the characteristics of self-locking, thickwall inserts, in FE-PM3801, MoS_2 coated, for aerospace applications.

Maximum test temperature: 350 °C

2 Normative references

ISO 5855-2 Aerospace - MJ threads - Part 2 : Limit dimensions for bolts and nuts

EN 2424 Aerospace series - Marking of aerospace products

EN 2491 Aerospace series - Molybdenum disulphide dry lubricants - Coating methods

EN 3899 Aerospace series – Inserts, thickwall, self-locking, MJ threads, in heat resisting steel FE-PM3801 (17-4PH) – Technical spécification [1)]

EN 3906 Aerospace series – Martensitic corrosion resisting steel FE-PM3801 – Air melted – Solution treated – Bar – D ≤ 50 mm – For the manufacture of fasteners – 1100 MPa ≤ R_m ≤ 1300 MPa [1)]

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

EN 4014 Aerospace series - Inserts, thickwall, self-locking - Design standard [1)]

EN 4015 Aerospace series - Inserts, thickwall, self-locking - Installation and removal procedure [1)]

TR 3198 Aerospace series – Manufacturers' identification monograms and marks for EN aerospace products [2)]

3 Required characteristics

3.1 Configuration – Dimensions- Tolerances – Masses

See figure 1 and tables 1 and 2. Dimensions and tolerances are in millimetres. They apply before MoS_2 coating.

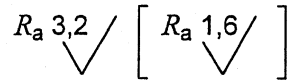
3.2 Material

EN 3906

3.3 Surface treatment

EN 2491

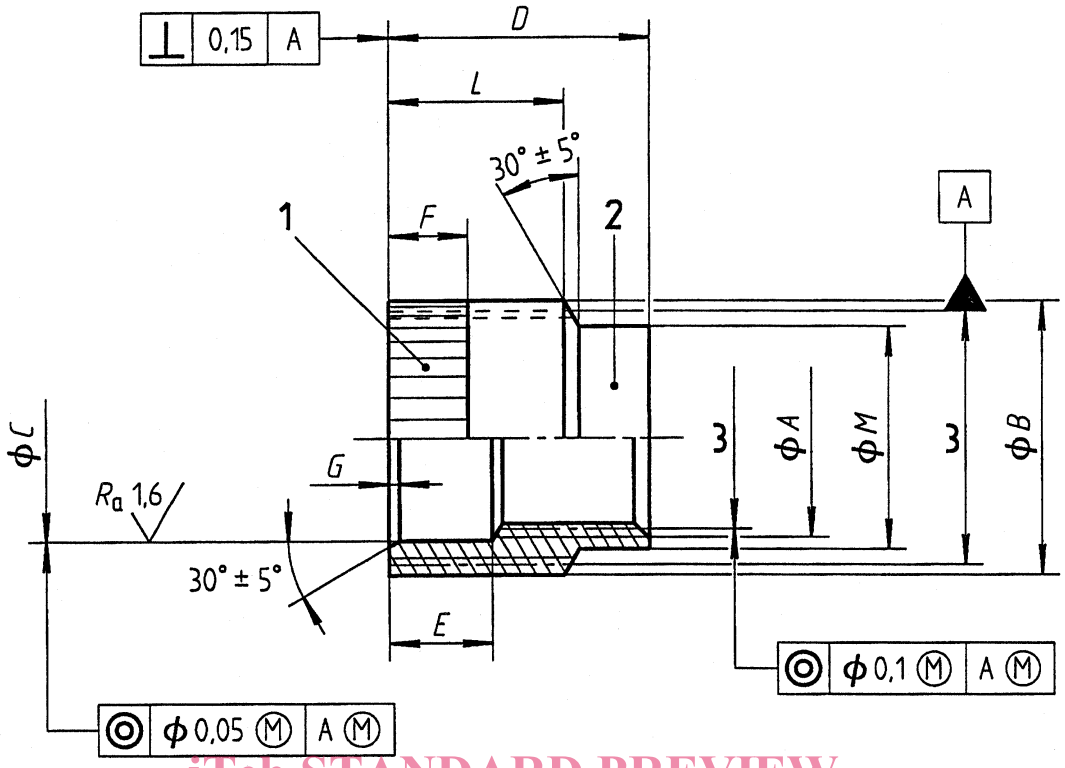
4 Insert definition



Values apply before MOS_2 coating.

Remove sharp edges 0, 1 to 0,4.

2) Published as AECMA Technical Report at the date of publication of this standard



Key

1 Knurl across thread to produce *J* number of serration

2 Form out-of-round in this area to achieve the self-locking requirement

3 Pitch diameter

Details of form not stated are left to the manufacturer's discretion.

Figure 1

4.1 Nominal size insert

See table 1.

Table 1

A Internal thread [a] Code	*A* Internal thread [a] Designation	*B* External thread [a] Designation	*C* +0,2 0	*D* ± 0,3	*E* ± 0,2	*F* ± 0,3	*G* max.	*J*	*L* min.	*M* [b] max.	Mass Kg/1000 parts ≈
050-0	MJ5x0,8-4H6H	MJ8x1-4h6h	6	7,6	3	2,3	0,3	24	5,1	6,5	0,9
060-0	MJ6x1-4H5H	MJ9x1-4h6h	7	8,9	3,2	2,4		27	5,8	7,5	1,4
070-0	MJ7x1-4H5H	MJ10x1-4h6h	8	10,9	3,6	2,7		28	7,3	8,5	2
080-0	MJ8x1-4H5H	MJ11x1-4h6h	9	12,9	4	2,9		32	9	9,5	2,6
100-0	MJ10x1,25-4H5H	MJS13x1-4h6h	11	16,2	4,7	3,3		37	11,5	11,5	4,5

[a] In accordance with ISO 5855-2

[b] After deformation

4.2 Repair size insert

See table 2.

Table 2

A Internal thread [a] Code	*A* Internal thread [a] Designation	*B* External thread [a] Designation	*C* +0,2 0	*D* ± 0,3	*E* ± 0,2	*F* ± 0,3	*G* max.	*J*	*L* min.	*M* [b] max.	Mass Kg/1000 parts ≈
050-1	MJ5x0,8-4H6H	MJ9x1-4h6h	7	7,6	3,2	2,4	0,3	27	4,8	6,5	1,5
060-1	MJ6x1-4H5H	MJ10x1-4h6h	8	8,9	3,6	2,7		28	5,5	7,5	2
070-1	MJ7x1-4H5H	MJ11x1-4h6h	9	10,9	4	2,9		32	7	8,5	3
080-1	MJ8x1-4H5H	MJ121-4h6h	10	12,9	4,7	3,3		33	8,6	9,5	3,8
100-1	MJ10x1,25-4H5H	MJ141-4h6h	12	16,2	5,2	3,5		40	11,1	11,5	6,3

[a] In accordance with ISO 5855-2

[b] After deformation

5 Designation

EXAMPLE :

Description block	Identity block
INSERT THICKWALL	EN3831-050-1

Number of this standard

Thread code (see tables 1 and 2)

NOTE If necessary, the code I9005 (Cage code allocated to AECMA) shall be placed between the description block and the identity block.