SLOVENSKI STANDARD
SIST EN 3380:2001

01-januar-2001

Aerospace series - Rings, retaining - Technical specification

Aerospace series - Rings, retaining - Technical specification

Luft- und Raumfahrt - Sicherungsringe - Technische Lieferbedingungen

Série aérospatiale - Anneaux d'arret - Spécification technique

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Ta slovenski standard je istoveten z: **EN 3380:1996**

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ICS:

49.030.99 Drugi vezni elementi Other fasteners

SIST EN 3380:2001 **en**

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

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EUROPEAN STANDARD **EN 3380**

NORME EUROPÉENNE

EUROPÄISCHE NORM January 1996

ICS 49.040.20

Descriptors: aircraft industry, snap ring, specification, test, acceptance testing, characteristic

English version

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart,36 B-1050 Brussels

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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 successively 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of an identical text or by endorsement, at the latest by July 1996, and conflicting national standards shall be withdrawn at the latest by July 1996.

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

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1 Scope

This standard specifies the requirements and test methods for axial and radial mounting retaining rings for aerospace applications.

It is applicable whenever referenced.

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.

ISO 2859-1	Sampling procedures for inspection by attributes - Part 1 : Sampling plans indexed by acceptable quality level (AQL) for lot-by-lot inspection
ISO 3534	Statistics - Vocabulary and symbols
ISO 6507-1	Metallic materials - Hardness test - Vickers test - Part 1 : HV 5 to HV 100
EN 3042	Aerospace series - Quality assurance - EN aerospace products - Qualification procedures
EN 3425	Aerospace series - Groove dimensions for axial mounting, internal type, retaining rings [1]
EN 3426	Aerospace series - Groove dimensions for axial mounting, external type, retaining rings [1]
EN 3427	Aerospace series - Groove dimensions for radial mounting retaining rings [1]

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3 Definitions

For the purposes of this standard, the following definitions apply :

3.1 Inspection batch

A quantity of rings of the same type, same dimensions, same material, same surface treatment, manufactured under identical conditions, and presented for inspection at the same time.

3.2 Simple random sampling

See ISO 3534.

3.3 Sampling plan

See ISO 3534.

3.4 Acceptable quality level (AQL)

See ISO 3534.

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

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4 Quality assurance

EN 3042

No defect permitted

5 Requirements and test methods

See table 1.

Inspection and testing shall be carried out on each inspection batch, by the manufacturer or under his responsibility.

Each ring may be submitted to several inspections or tests.

Inspection batches declared unacceptable after inspection and testing shall be submitted for re-inspection only after all defective parts have been removed and/or defects corrected.
In this case, twice the initial sample size shall be used for re-inspection or re-testing of the attributes which caused initial rejection ; the same inspection level shall be used.

If the reason for rejection results from the test procedure or test apparatus, the tests may be repeated after elimination of the cause. A note to this effect shall be added to the corresponding inspection documents.

Unless otherwise specified, the test temperature shall be 20 °C.

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Table 1

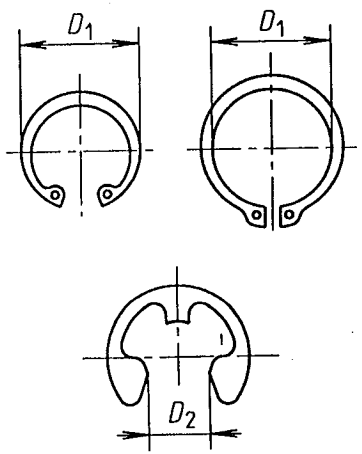
Subclause	Characteristics	Requirement	Test method	Qualification Batch size	Réception		
					Inspection level [1]	Sampling plan [1] [2]	AQL [1]
5.1	Material	In accordance with the product standard	—	—	—	—	—
5.2	Dimensions (Free ring)	In accordance with the product standard - Thickness, diameter D_1 for axial mounting rings, dimensions D_2 for radial mounting rings :  	Standard gauging	8	II	Simple random, for standard inspection	1 %
		- Other dimensions		8	II	Simple random, for standard inspection	2,5 %

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Table 1 (continued)

Subclause	Characteristics	Requirement	Test method	Qualification	Réception		
				Batch size	Inspection level 1)	Sampling plan 1) 2)	AQL 1)
5.3	Manufacturing						
5.3.1	Surface treatment	In accordance with the product standard	See surface treatment standard.	8	II	Simple random, for standard inspection	2,5 %
5.3.2	Surface appearance	No burrs, scales, cracks, scratches, laps, pittings, sharp edges, tooling marks, porosity, or other defects prejudicial to their use	Visual examination (magnification 10 times to 30 times)	8	II	Simple random, for standard inspection	0,4 %
5.4	Mechanical properties						
5.4.1	Elasticity	Axial mounting retaining rings Being placed in the test device, the ring shall not fall by its own mass (see figures 1 and 2).	**a) Tooling and test device** Internal type See figure 1. External type See figure 2. It is forbidden to use pliers. **b) Method** Internal type Place the ring in the cone and push it to put it in diameters *B* and *C*. External type Place the ring on the cone and push it to put it on diameters *D* and *E*.	4	S3	Simple random, for standard inspection	1 %

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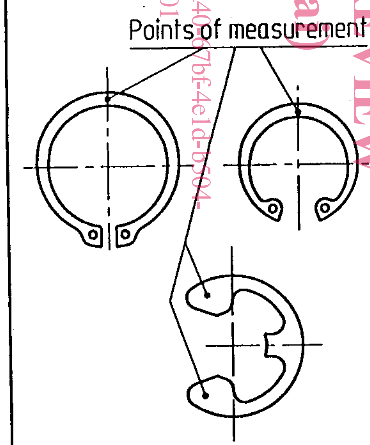
Table 1 (continued)

Subclause	Characteristics	Requirement	Test method	Qualification Batch size	Réception Inspection level 1)	Réception Sampling plan 1) 2)	Réception AQL 1)
5.4	Mechanical properties (continued)						
5.4.1	Elasticity (continued)	Radial mounting retaining rings No cracks shall be apparent after assembling and disassembling ten times. Effort of extraction > 15 N	Install the ring in a groove of maximum diameter (see EN 3427) and then remove it. Install the ring in a groove of minimum diameter (see EN 3427).	4	S3	Simple random, for standard inspection	1 %
5.4.2	Hardness	In accordance with the product standard	After removing any surface protection, measure in accordance with ISO 6507-1 : 	4	S3	Simple random, for standard inspection	1 %

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