SLOVENSKI STANDARD
SIST EN 4408-003:2005

01-september-2005

Aeronavtika – Tehniške risbe – Prikaz delov, izdelanih iz kompozitov – 3. del: Deli iz glavnih materialov

Aerospace series - Technical drawings - Representation of parts made of composite materials - Part 3: Parts including core materials

Luft- und Raumfahrt - Technische Zeichnungen - Darstellung von Teilen aus Verbundwerkstoffen - Teil 3: Teile mit Kernwerkstoffen

Série aérospatiale - Dessins techniques - Représentation des articles en matériaux composites - Partie 3 : Articles intégrant des matériaux d'âme

Ta slovenski standard je istoveten z: **EN 4408-003:2005**

ICS:

01.100.99	Drugi standardi v zvezi s tehniļnim risanjem	Other standards related to technical drawings
49.020	Letala in vesoljska vozila na splošno	Aircraft and space vehicles in general

SIST EN 4408-003:2005 **en**

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Foreword

This document (EN 4408-003:2005) 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of an identical text or by endorsement, at the latest by November 2005, and conflicting national standards shall be withdrawn at the latest by November 2005.

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1 Scope

This standard specifies the rules for the representation of parts including core materials as well as the information to be indicated in technical drawings.

It applies to aerospace structures using core materials.

It shall be used together with EN 4408-001.

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 4408-001, *Aerospace series – Technical drawings – Representation of parts made of composite materials – Part 1: General rules.*

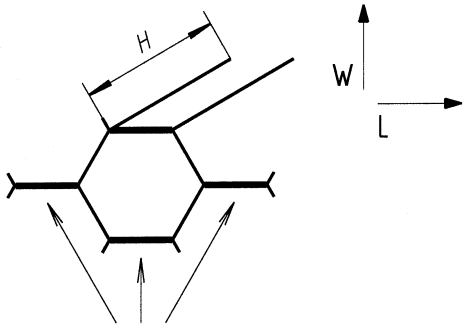
EN 4408-002, *Aerospace series – Technical drawings – Representation of parts made of composite materials – Part 2: Laminated parts.*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 4408-001 and the following apply.

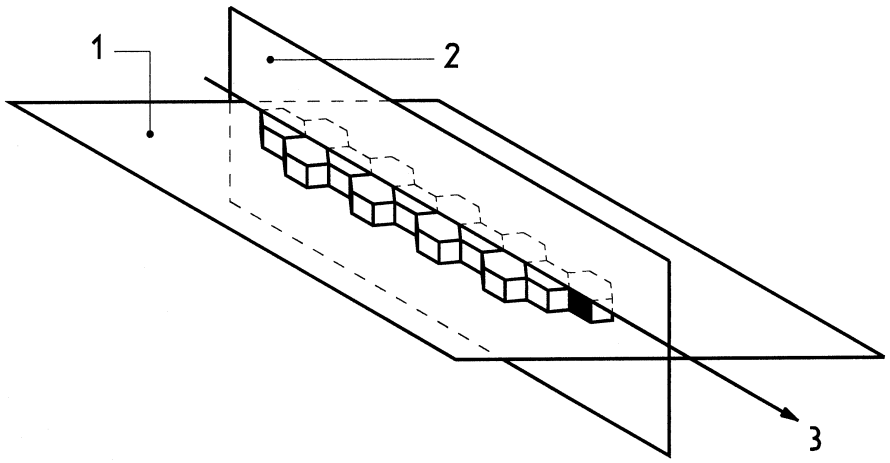
3.1
alveolar material
semi-finished product made of partly bonded or welded ribbons (before or after forming) to form geometrically identical patterns (see Figure 1 and Figure 2)

3.2
cell
basic closed unit of an alveolar, made of two successive tapes after forming ribbons (see Figure 1 and Figure 2)



NOTE A set of cells makes up the alveolar material

Figure 1



Key

1 Alveolar material side
2 Tape joining plane
3 Direction *L* (of tapes)

Figure 2

3.3
core material structure
result of the indivisible assembly of two coatings or fine skins on a core which keeps them separate

NOTE This structure is also designated by the term sandwich.

3.4
drained alveolar material
wall of cells with notches to avoid possible retention of liquid (see Figure 3)

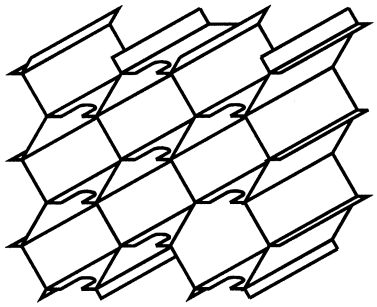


Figure 3

3.5
face
surface intended to be in contact with or parallel to the skin (see Figure 1 and Figure 2)

3.6
foam
approximately isotropic, flexible or rigid, alveolar material

3.7
honeycomb
alveolar material with hexagonal cells

3.8
L direction
direction of the tape also called tape direction (see Figure 1 and Figure 2)

3.9
perforated alveolar material
alveolar material with cell walls which are perforated to avoid overpressure or depression leading to mechanical stress within the part (see Figure 4)

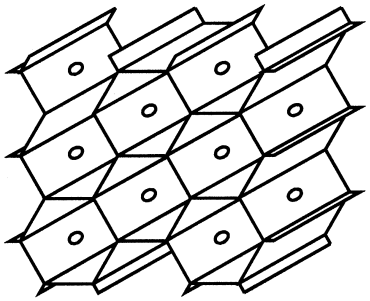


Figure 4

3.10
side of a cell (H)
the sides of cells are defined by their walls; the height of the sides corresponds to the width of the honeycomb material tape

3.11
tape
designates each ribbon which makes up the alveolar material

3.12
W direction
direction perpendicular to the direction of the tape *(L)* in the plane (or face) of the alveolar material

4 Drawings representation

The general rules for the representation of parts including core material are specified in EN 4408-001.

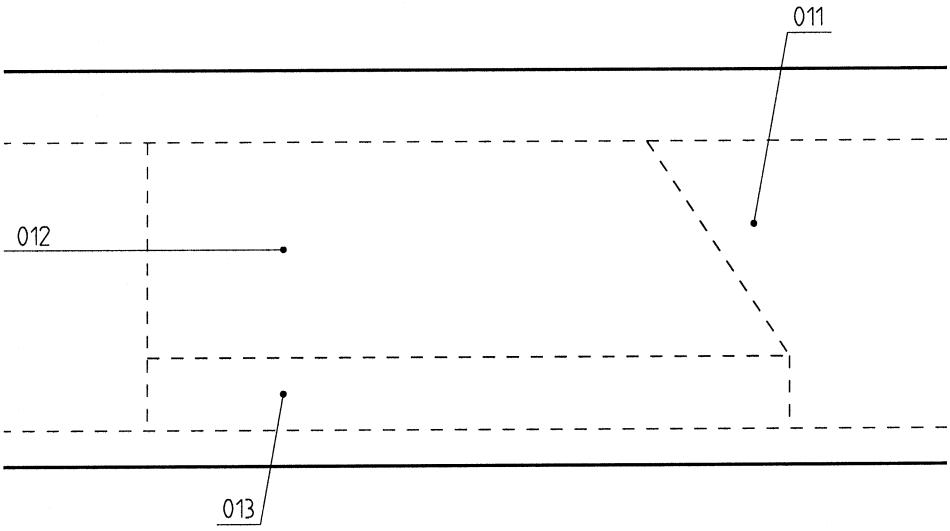
A general representation of parts including core material is given in 4.1. If the alveolar material is drained, perforated, contains filling areas or inserts, this general representation shall be completed by figures as specified in 4.2.

4.1 General representation

4.1.1 Identification of core material layers

Each honeycomb or foam layer shall be identified.

Example for the identification by a 3-figure number, beginning at 011 (see Figure 5)



Key

011 alveolar material 1/8
012 alveolar material 1/4
013 alveolar material 1/8

NOTE « 011 » and « 013 » are made of the same alveolar material but their contour is different.

Figure 5

4.1.2 Representation of core material layers

On the view projected perpendicularly on to the sandwich panel plane, the different areas of the material are limited by fine interrupted lines.

Alveolar material is represented by lines which are perpendicular to the panel plane (see Figure 6).

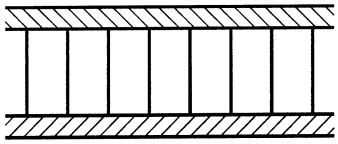


Figure 6 — Alveolar material, cross section

Foam is represented by circles (see Figure 7).

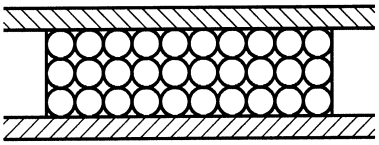


Figure 7 – Foam, cross section