Deviations requests for an ETSO approval for CS-ETSO
Applicable to a Cargo Container

Introductory note

The hereby presented Deviations request shall be subject to public consultation, in accordance with EASA Management Board Decision n°7-2004[1] products certification procedure dated 30 March 2004, Article 3 (2.) of which states:

"2. Deviations from the applicable airworthiness codes, environmental protection certification specifications and/or acceptable means of compliance with Part 21, as well important special conditions and equivalent safety findings, shall be submitted to the panel of experts and be subject to a public consultation of at least 3 weeks, except if they have been previously agreed and published in the Official Publication of the Agency. The final decision shall be published in the Official Publication of the Agency."

Identification of issue

PalNet GmbH submits to EASA a deviation request against CS-ETSO-90c for their Cargo Container P/N 27 M THB-(). The applicant has not received or is not currently seeking for the related FAA TSO approval.

ETSO-C90c is addressing cargo pallets, nets, and containers.

Deviations request dated 25-04-2007 – Cargo Container

Deviate from NAS 3610 paragraph 3.10.1 by reducing the ultimate static loads to be withstood by this specific Unit Load Device (ULD).

Industry:

0. Background

Various airlines need a type of Horse Container to transport horses by air. The horse container P/N 27 M THB-() is capable to transport 3 horses and has space for a human guide during the flight.
This Horse Container shall be transported as an ULD in Wide Body Aircraft such as B-747 and MD-11.

1. Requirements (see NAS 3610 para 3.10.1)

The Horse Container P/N 27 M THB-() (to be identified as NAS 3620-2M3C) should be substantiated to the Ultimate Loads from NAS3610 table II:

ultimate loads:		**[lb]**	**[daN]**
max. vertical load (Up):	P'v	38,000	16909
max. down load (Down):	P'd	76,500	34700
max. side load (Side)*:	P's	22,500	10206
max. rear load (Aft)*:	P'r	22,500	10206
max. fwd. load (Forward)*:	P'f	22,500	10206

* In combination with a down load equal to the forward load

[1] Cf. EASA Web: http://www.easa.europa.eu/doc/About_EASA/Manag_Board/2004/mb_decision_0704.pdf

Load condition	Nr.:	18	(see NAS 3610 Table II)
Restraint condition	Nr.:	7	(see NAS 3610 Table III)
max. height of centre of gravity:	48 in		

2. Deviations

Since the peculiar and specific destination of the ULD, PalNet would like to introduce the following deviations from paragraph. 3.10.1 of NAS 3610:

a) The ultimate loads to be sustained by the Horse Container will be reduced to:

ultimate loads:		**[lb]**	**[daN]**
max. vertical load (Up):	P'v	24463	10885
max. down load (Down):	P'd	48925	21770
max. side load (Side)*:	P's	14484	6445
max. rear load (Aft)*:	P'r	14484	6445
max. fwd. load (Forward)*:	P'f	14484	6445

* In combination with a down load equal to the forward load

b) The Centre of Gravity will be located in the centre of the individual panel.

3. Justification for an Equivalent Margin of Safety

i. The Centre of Gravity is calculated in the centre of the individual panel. This is the critical load case for these four side suspended panels under equal load.
ii. The reduced (proposed) ultimate loads are shown on the ETSO placard of the Horse Container.
iii. The Component Maintenance Manual describes the handling and the limitations of the Horse Container.

EASA:

We accept the position of the applicant because of the ULD peculiar mission; moreover placards and instructions on the CMM shall prevent from any misuse of this ULD. The NAS 3610 loads required for a 2M3 ULD are posing an undue burden when the payload is reduced by the nature of the cargo.