

CRD - NPA 11/2004

Comment

Response

I-B.

Paragraph CS 25.302

Cmt. 3 / F. Fagegaltier

The proposed text refers to appendix K. This appendix defines factors of safety (figure 1, figure 2, etc).

Does this means that these factors of safety are in "addition" to those specified in 25.303 ?
Or do they replace them ?

This should be clarified in 25.302.

May be, the last sentence of 25.302 could be changed to read as follows :
Appendix K of CS-25 must be used to evaluate the structural performance of aeroplanes equipped with these systems, the factors of safety specified therein replacing those of CS 25.303.

:

Appendix K defines indeed a.o. factors of safety.

CS 25.303 refers not only to the normal case of a factor of safety of 1.5 to be applied to the prescribed limit load, but also to the other cases by the use of the words " unless otherwise specified". Therefore CS 25.303 is generally applicable. Hence there is no need to add the wording as proposed by the commenter. Consequently the comment is not accepted.

Comment**Response***I-B.***Paragraph** *CS 25.629***Cmt.** *4 / F. Fagegaltier*

The words 'found necessary by the Agency' in CS 25.629 (a) and the words 'if approved by the Agency' CS 25.613 (f) should be deleted. What criteria make things 'necessary'? What criteria define things which may be approved and things which may not be approved ?

Similar wording may be found in AMC 25.613 : may be acceptable to the Agency (in § 4.2, second ainea), "other national standards acceptable to the Agency" (in §4.2 (l)), "the Agency may approve the use" (at end of §4.2).

The use of the above noted wording means that the certification specifications are not defined and left to the discretion of the Agency. This is not consistent with Part 21. The certification specifications should be understandable by the applicant who is responsible for the showing of compliance (21A.20 (a)). Furthermore, the Agency is not supposed to interfere with the process : any data submitted by the DOA holder shall be accepted without verification (21A.263 (b)).

All such wording should be reviewed and likely be eliminated. This might induce a need for further change to the certification specifications.

The applicant for an approval must agree with the Agency the specific means of compliance with all applicable paragraphs of CS 25. There are many paragraphs in CS 25 where the acceptability of this specific means of compliance depends on many aspects and requires judgement of the Agency for its acceptability. The data submitted to the Agency by a DOA holder shall be accepted without verification (21A.263(b)), but the Agency can still review reports and make inspections and tests necessary to check the validity of the compliance statements (21A.257(b)). Which data is required is established by the Agency in concept with the applicant.

Hence the comment is not accepted.

Comment**Response**

II-B.

Paragraph 1. (CS 25.251)

Cmt. 8 / CAA, UK

Proposal 1, CS 25.251: The title should read "Vibration and buffeting", not "Vibrating and buffeting".

The comment is agreed and the heading is corrected to "Vibration and buffeting" accordingly.

Comment**Response****II-B.****Paragraph** 5. (AMC 25.629)**Cmt.** 6 / F. Fagegaltier

1 - The sentence "Many of the conditions contained in this AMC pertain only to the current version of CS 25" should be explained and clarified. The current version is the one existing before incorporation of this NPA. Does this mean that, as soon as this NPA is incorporated, this AMC is no longer valid ? Or that there are other changes to CS-25 which would make it invalid ? Such sentence is quite unusual. May be the sentence should be deleted.

2 - The sentence "Type design changes to aeroplanes certified to an earlier CS 25 change must meet the certification basis established for the modified aeroplane" seems to be conflicting with 21A.101 ("CPR" rule) or is a totally obvious statement, depending on the way it is interpreted. This sentence should be deleted. Furthermore, "earlier CS-25 change" would have been understandable for JAR-25 but with a totally new code as CS-25 it is no longer adequate. May be this sentence should be deleted.

The sentence "Many of the conditions contained in this AMC pertain only to the current version of CS 25" must be read in conjunction with the sentence thereafter "Type design changes to aeroplanes certified to an earlier CS 25 change must meet the certification basis established for the modified aeroplane."

Since the former sentence is included in the AMC itself and not in the explanatory material, it is evident that the word "current" applies to the AMC 25.629 as included in the NPA.

Finally, the word "earlier" in the latter sentence should be read in conjunction with the word "current" in the former sentence. In the case the aeroplane has been deemed to be approved in accordance with article 2 of Regulation 1702/2003, and no earlier CS 25 change is referenced in the type certificate, CS 21.101 is fully applicable in case a major change to the type design must be approved. Hence there can be no confusion from the use of the word "earlier".

The comments are not accepted.

Comment**Response****III-B.****Paragraph 1. (CS 25.613)****Cmt. 4 / F. Fagegaltier**

The words "found necessary by the Agency" in CS 25.629 (a) and the words "if approved by the Agency" in CS 25.613 (f) should be deleted. What criteria make things "necessary" ? What criteria define things which may be approved and things which may not be approved ?

Similar wording may be found in AMC 25.613 : "may be acceptable to the Agency" (in § 4.2, second alinea), "other national standards acceptable to the Agency" (in §4.2 (i)), "the Agency may approve the use" (at end of §4.2).

The use of the above noted wording means that the certification specifications are not defined and left to the discretion of the Agency. This is not consistent with Part 21. The certification specifications should be understandable by the applicant who is responsible for the showing of compliance (21A.20 (a)). Furthermore, the Agency is not supposed to interfere with the process : any data submitted by the DOA holder shall be accepted without verification (21A.263 (b)).

All such wording should be reviewed and likely be eliminated. This might induce a need for further change to the certification specifications.

The applicant for an approval must agree with the Agency the specific means of compliance with all applicable paragraphs of CS 25. There are many paragraphs in CS 25 where the acceptability of this specific means of compliance depends on many aspects and requires judgement of the Agency for its acceptability. The data submitted to the Agency by a DOA holder shall be accepted without verification (21A.263(b)), but the Agency can still review reports and make inspections and tests necessary to check the validity of the compliance statements (21A.257(b)). Which data is required is established by the Agency in concept with the applicant.

Hence the comment is not accepted.

Comment	Response
III-B.	
Paragraph 2. (AMC 25.613)	
Cmt. 1 / FAA, USA	
<p>AMC 25.613 Paragraphs 4.2, 4.2(ii), and 4.5</p> <p>In paragraph 4.2 replace "MIL-HDBK-5" with "The Metallic Materials Properties Development and Standardization (MMPDS) handbook"</p> <p>In paragraphs 4.2(ii) and 4.5 replace "MIL-HDBK-5" with "MMPDS"</p>	<p>Comment accepted.</p> <p>"MIL-HDBK-5" will be replaced with "MMPDS" in paragraphs 4.2, 4.2(ii) and 4.5.</p>
Cmt. 2 / F. Fagegaltier	
<p>The paragraph 4.6 should be entirely deleted because it is not consistent with Part 21. Materials and associated processes are part of the type design (21A.31) and the type design, which includes production specifications and processes, is not "accepted by the Agency". The choice of materials results from a decision by the applicant on its own.</p> <p>This would represent a significant change compared to existing practice. The type design is defined by the applicant and it is registered in the type certificate data sheet at the end of the certification process, provided it complies with the certification basis. The authority normally does not interfere with the applicant's choice.</p>	<p>In accordance with 21A.31 Type design, the type design shall consist of "....2. Information on materials and processes and on methods of manufacture and assembly of the product necessary to ensure the conformity of the product....."</p> <p>Indeed, materials and associated processes are part of the type design, and information thereon is provided for ensuring conformity of individual products produced by the production organisation in accordance with the applicable design data.. The type design on its turn is included in the Type Certificate (21A.41) issued by the Agency and for which the Agency has recorded compliance with the applicable type-certification basis and environmental protection requirements. CS 25.613 is part of the type-certification basis. Under this paragraph the applicant must show the acceptability of the selected material design values chosen by the applicant. This includes the repeatability of the selected material design values, hence paragraph 4.6 of AMC 25.613.</p> <p>Comment not accepted.</p>
Cmt. 4 / F. Fagegaltier	
<p>The words "found necessary by the Agency" in CS 25.629 (a) and the words "if approved by the Agency" in CS 25.613 (f) should be deleted. What criteria make things "necessary" ? What criteria define things which may be approved and things which may not be approved ?</p> <p>Similar wording may be found in AMC 25.613 : "may be acceptable to the Agency" (in § 4.2, second alinea), "other national standards acceptable to the Agency" (in §4.2 (i)), "the Agency may approve the use" (at end of §4.2).</p> <p>The use of the above noted wording means that the certification specifications are not defined and left to the discretion of the Agency. This is not consistent with Part 21. The certification specifications should be understandable by the applicant who is responsible for the showing of compliance (21A.20 (a)). Furthermore, the Agency is not supposed to interfere with the process : any data submitted by the DOA holder shall be accepted without verification (21A.263 (b)).</p> <p>All such wording should be reviewed and likely be eliminated. This might induce a need for further change to the certification specifications.</p>	<p>The applicant for an approval must agree with the Agency the specific means of compliance with all applicable paragraphs of CS 25. There are many paragraphs in CS 25 where the acceptability of this specific means of compliance depends on many aspects and requires judgement of the Agency for its acceptability.</p> <p>The data submitted to the Agency by a DOA holder shall be accepted without verification (21A.263(b)), but the Agency can still review reports and make inspections and tests necessary to check the validity of the compliance statements (21A.257(b)). Which data is required is established by the Agency in concept with the applicant.</p> <p>Hence the comment is not accepted.</p>
Cmt. 9 / CAA, UK	
<p>All references to "MIL-HDBK-5" in the revised AMC 25.613 should be amended to read : - "Metallic Material Properties Development and Standardisation (MMPDS) previously known as MIL-HDBK-5".</p>	<p>Comment accepted.</p> <p>"MIL-HDBK-5" will be replaced with "MMPDS" in paragraphs 4.2, 4.2(ii) and 4.5.</p>
Cmt. 13 / Boeing	
<p>The reference to MIL-HDBK-5 should be changed to Metallic Material Properties Development and Standardization (MMPDS).</p>	<p>Comment accepted.</p> <p>"MIL-HDBK-5" will be replaced with "MMPDS" in paragraphs 4.2, 4.2(ii) and 4.5.</p>

Comment	Response
<p>Cmt. 15 / Airbus, DE</p> <p>Replace "MIL-HDBK-5" by "MMPDS and add HSB" at chapter 4.2 and chapter 4.5 to read:</p> <p>4.2. Statistically Based Design Values. ...</p> <p>...</p> <p>The "A" and "B" properties published in MMPDS, ESDU 00932 or HSB are acceptable, as are the statistical methods specified in the applicable chapters/sections of these handbooks. ...</p> <p>...</p> <p>(ii) conform to those detailed in the applicable chapters/sections of MMPDS, MILHDBK-17, ESDU 00932, HSB or other accepted equivalent material data handbooks, or:</p> <p>...</p> <p>4.5. Other Material Design Values. Previously used material design values, with consideration of the source, service experience and application, may be approved by the Agency on a case by case basis (e.g. "S" values of MMPDS, ESDU 00932 or HSB)</p>	<p>Comment accepted.</p> <p>"MIL-HDBK-5" will be replaced with "MMPDS" in paragraphs 4.2, 4.2(ii) and 4.5.</p>

Comment**Response**

III-C.

Paragraph

1.

Cmt. 14 / Boeing

The reference to MIL-HDBK-5 should be changed to Metallic Material Properties Development and Standardization (MMPDS).

Comment accepted.

"MIL-HDBK-5" will be replaced with "MMPDS" in paragraphs 4.2, 4.2(ii) and 4.5.

Comment**Response**

IV-B.

Paragraph 1. (CS 25.307)

Cmt. 10 / DGAC, France

Replace the instruction in paragraph IV-B.1 of the NPA by 'To amend CS 25.307(a) as follows' and delete reference to sub-paragraphs (b), (c) and (d) in the proposal.

The comment is accepted.

Its consequences are purely editorial and are as follows:

- Replace in IV-B 1. The sentence "To amend CS 25.307 as follows:" by "To amend CS 25.307(a) as follows:".
- Delete in IV-B 1. references to sub-paragraphs (b),(c),and (d)

Comment**Response**

IV-B.

Paragraph 2. (AMC 25.307)

Cmt. 7 / F. Fagegaltier

In paragraph (1), the sentence "Other compliance methods may be used if approved by the Agency" should be deleted.

There is no value in publishing a means of compliance and at same time indicating that other means may be used. The status of AMCs is explained, for example, in paragraph I, item 4 of the explanatory note of CS-Definitions.

The commenter is correctly stating that the status of AMCs is explained in the explanatory note of CS-Definitions.

Comment agreed.

Comment	Response
V-B.	
Paragraph 1. (CS 25.341)	
Cmt. 11 / DGAC, France	
<p>1 – CS 25.341. The conversion of units is apparently not consistent with EASA’s policy published in the explanatory note of CS-Definitions (item 13). For example, 60 000 ft is converted in the proposal into 18288 m. In CS-Definitions, under definition of “climates, standard” we see that 30 000 ft is converted into 10 000 m (and not 9144 m)</p> <p>The values in metric units should be rounded according to the established policy, as appropriate for the technical subject.</p> <p>2 – CS 25.341 (b)(2) There are non-SI units which are not converted at all.</p> <p>3 – AMC 25.341. Many non-SI units have not been converted.</p>	<p>1. CS 25.341. The conversion of non-SI units into SI-units in the NPA is consistent with EASA policy for conversion of imperial units into SI-units. The example in CS-Definitions, quoted in the comment, is not a converted unit but merely an indication of the altitude ranges of the diagrams to which the text refers.</p> <p>2. CS 25.341(b)(2). Application of this paragraph results in limit loads as a result of the dynamic response of the aeroplane to vertical and lateral continuous turbulence. The reference turbulence intensities have been converted, but not the model used for calculation of the limit loads. Consequently, the calculation of loads using this model must be in imperial units and then the results must be converted into S.I. units. This applies throughout CS 25 when the above mentioned model is used.</p> <p>3. AMC 25.341. Same comment and same response as under CS 25.341(b)(2).</p> <p>The comments are not accepted.</p>
Cmt. 16 / SAAB, Sweden	
<p>(c) Supplementary gust conditions for wing pylon mounted engines. For aeroplanes equipped with wing pylon mounted engines ...</p>	<p>A similar comment was received on the original JAA NPA and was disposed as follows: Quote The current wording of the NPA would provide for an equal treatment of all types of wing mounted engines. Although the conditions of the proposed JAR 25.341(c) may not be an issue for e.g. current turboprop installations, it is not possible to envision all possible (future) configurations, including those that may be affected by these conditions. So it would not be sensible to exclude certain aeroplane configurations from the start by only focusing on wing pylon mounted turbojet engines. Unquote Comment not accepted.</p>

Comment**Response**

V-B.

Paragraph 6. (CS 25.391)

Cmt. 12 / IVW, NL

To delete the words "and the ground gust conditions in CS 25.415" from CS 25.391 (NPA 25C-309).

The comment is accepted.
NPA 25C-284 (Ground Gust Conditions) as contained in the first issue of CS 25 correctly removed the reference to CS 25.415 from CS 25.391.
It was intended that JAA NPA 25C-309 would be published first, and JAA NPA 25C-284 thereafter, so that the reference to CS 25.415 would be removed as introduced by JAA NPA 25C-309. However the order of publication of both NPA's was reversed, requiring now the removal of the words "and the ground gust conditions in CS 25.415" from CS 25.391 as proposed in NPA 25C-309.

Comment	Response
<i>GENERAL COMMENT(S)</i>	
Paragraph -	
Cmt. 17 / ACG, Austria	
Accepts.	Noted
Cmt. 18 / SLV, Sweden	
Supports.	Noted

Comment**Response****II-D.****Paragraph**

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Cmt. 5 / F. Fagegaltier

NPA part II.D and III.D : disposition of comments on JAA NPA 25BCD-236 and JAA NPA 25D 286

1 – Response n°1 to 6th comment on JAA NPA 25BCD-236 indicates that rulemaking by advisory material (“ACJ goes further ... than the rule”) is acceptable. This policy was not acceptable in either FAA or JAA systems. Does the Agency agree with this new policy ? If not, 25.629 should be changed to match the intent.

2 – Last but one comment on JAA NPA 25BCD-236. What is the Agency’s position on this issue ? (use of American writing convention and difficulty in reading diagrams, knowing that the JAA group was reluctant in adopting it).

3 - The response to comment 009 on JAA NPA 25D-286 contains the following : “The use of the word “must” in an ACJ is acceptable when used to explain an acceptable means of compliance and/or to repeat rule text”. Does the Agency concur with this policy ?

1.The FAA has adopted already Advisory Circular AC 25.629-1A. The AMC 25.629 proposed in this NPA is aligning with this current FAA AC. Similarly adoption of this NPA will bring CS 25.629 closer to the current FAR 25.629. The Agency supports the position of the past JAA Structures Study Group.
Comment not accepted.

2. The Agency supports the position taken by the past JAA Structures Study Group to stay with the current diagrams for reasons of consistency with the FAA Advisory Circular and this has not led to compliance problems.
Comment not accepted

3. The word “must” is used once in AMC 25.613. It is used in relation to the optional “Premium selection” process thereby allowing the use of higher design values. In this context the use of the word “must”in AMC 25.613 is considered appropriate.
Comment not accepted.