Proposed Deviation for Distance between emergency exits

Applicable to Large Aircraft Transport category – VIP cabin configuration

Introductory note:

The hereby presented Deviation to the EASA Certification Basis shall be subject to public consultation, in accordance with EASA Management Board decision 12/2007 dated 11 September 2007, 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 as 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."

Statement of issue

JAR 25.807(d)(7) – Change 15 - states:

"*For an aeroplane that is required to have more than one passenger emergency exit for each side of the fuselage, no passenger emergency exit shall be more than 60 feet (18,228 m) from any adjacent passenger emergency exit on the same side of the same deck of the fuselage, as measured parallel to the aeroplane's longitudinal axis between the nearest exit edges.*"

Evacuation demonstrations do not address the potential concerns arising from excessive distance between exits. The criticality of issues such as disruption of interior features, debris in the aisle, or failure of another exit, increases with the distance between exits, since the farther the exits are from each other, the higher is the probability that an individual will not be able to get from one exit area to another in actual accident.

An applicant is proposing an interior installation which does not comply with 25.807(d)(7) since one exit (LH Door 3) will be deactivated in order to accommodate the installation of a VIP area.

Large Aircraft Transport category – VIP cabin configuration – Deviation D-13

- Distance between emergency exits -

EASA considers that an acceptable level of safety for non-commercial use aeroplanes, could be established by allowing a distance greater than 18,3 m (60 feet) between exits, provided that:

1. A distance greater than 60 feet between adjacent passenger emergency exits on the same side of the same deck of the fuselage, as measured parallel to the airplane's longitudinal axis between the nearest exit edges, is allowed only once on each side of the fuselage.
2. When a distance greater than 60 feet between exits exists on each side of the fuselage, each passenger seat occupancy during taxi, take-off & landing must be located within 30 feet from the nearest exit on each side of the fuselage, measured parallel to the airplane's longitudinal axis, between the nearest exit edge and the front of the seat bottom cushion.
3. When a distance greater than 60 feet between exits exists on only one side of the fuselage, each passenger seat occupancy during taxi, take-off & landing must be located within 60 feet from the nearest exit on that side of the fuselage, and within 30 feet on the opposite side,

measured parallel to the airplane’s longitudinal axis, between the nearest exit edge and the front of the seat bottom cushion.

4. The number of passenger seats allowed between two adjacent pairs of emergency exits is limited to 50% of the combined rated capacity of the two pairs of emergency exits.
5. For zone between a pair of emergency exits and a bulkhead (dead-end zone), the number of passenger seats is limited to 40% of the rated capacity of the pair of emergency exits.
6. The aeroplane's total seating capacity is reduced to one-third of the theoretical maximum allowed by JAR 25.807. The expression ''maximum approved passenger seating capacity (or configuration)'' is not used in case of emergency exits deactivation because the resultant exit configuration is not likely to have been formally approved to the theoretically allowed maximum. For example, on an aeroplane with four pairs of Type C exits, the type-certificated passenger seating capacity will normally be 220. Assuming the number 3 exits are deactivated, leaving three active pairs of Type C exits, the theoretical maximum currently allowed by JAR 25.807 would be 165. Nonetheless, the maximum capacity would be limited to 55.