Proposed Special Condition on Emergency Evacuation CS 25.803, 25.807, 25.809, 25.810, 25.811, 25.812 and 25.813 at Amendment 15.

Applicable to Airbus A330-700L "Beluga XL"

Introductory note:

The hereby presented Special Condition has been classified as an important Special Condition and as such 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

The Airbus A330-700L "Beluga XL" will be certified as a derivative cargo aircraft of the A330-300 aeroplane for the special purpose of transporting outsized cargo items, mainly aircraft components and subassemblies between the Airbus sites of its manufacturing / production locations. These outsized cargo items are intended to be carried on dedicated TCUs (Transport Cargo Units) in the Main Deck Cargo Compartment (MDCC), which has a large volume and height and is not pressurized.

The aircraft is designed with a lowered cockpit when compared with that of the baseline aircraft A330-300. This lowered cockpit has a maximum occupancy of three persons (pilot, co-pilot and observer) and is extended by an adjacent courier area that can accommodate up to four additional special category allowed occupants (additional flight crew members; Authority inspectors; persons necessary for the safety of the flight; persons to conduct tasks related with cargo operation; etc) who must be knowledgeable about the aircraft's evacuation features and physically able to accomplish the associated emergency procedures.

As per design restrictions for such specific purpose cargo aircraft, the only emergency exits available are the two cockpit sliding windows (CSW), as no passenger door from the A330-300 baseline aircraft and suitable to be used as emergency exit under all foreseeable conditions could be retained.

This Special Condition sets the EASA certification requirements applicable to the emergency evacuation provisions available in the cockpit area of the all-cargo derivative aircraft A330-700L Beluga, particularly for the emergency evacuation exits available to all aircraft occupants (no passengers) and the access to these exits

Proposed Special Condition D-03-700L – Emergency Evacuation
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References made to CS-25 content applies to Amendment 15, unless otherwise specified.

1. The maximum number of aircraft total allowed occupants is 7 persons: 3 in the cockpit plus 4 in the courier area adjacent to the cockpit.

2. No passenger can be carried on board. The allowed categories of occupants in A330-700L aircraft's courier area are those defined in EASA Special Condition D-02-700L CRI "*Courier Area: Allowed occupants*".

3. Paragraph CS 25.803 "Emergency evacuation" requirements applies to the A330-700L aircraft, including the subparagraph c).

4. Except for CS 25.807(j), the content of paragraph CS 25.807 "Emergency Exits" is replaced by the following:

   The aircraft emergency exits must meet the following requirements in order to be usable by the occupants allowed in the courier area:
   a. Type and number required. For an occupant (non-passenger) seating configuration in the courier area up to 4 seats, at least one emergency exit must be provided on each side of the aeroplane. These emergency exits can be those already provided to comply with subparagraph 25.807(j) "flight crew emergency exits". Each of those exits must encompass an unobstructed rectangular opening of at least 48.3 cm by 50.8 cm (19 by 20 inches).
   b. Size: minor deviations less than 5% compared to the dimensions of the rectangle specified in subparagraph 4.a may be submitted to EASA for review and acceptance provided that:
      i. The deviation, if impacting both dimensions of the rectangle, is located and limited to one corner of the rectangle, and
      ii. The total emergency exit unobstructed area is higher than the one resulting from the dimensions of a rectangular opening with the minimum dimensions as specified in subparagraph 4a, and
      iii. Satisfactorily exit utility can be demonstrated by any allowed aircraft occupant.
   c. Asymmetry: the two cockpit exits need to be diametrically opposite each other, have the same geometry and size and the same opening means.
   d. Location: Each of the exits as required by subparagraph 4a of this special condition must be accessible to all the occupants in the courier area and located and arranged in a way that will afford an effective means of evacuation for all aircraft occupants.
   e. Ditching emergency exits: whether or not ditching certification is requested, the emergency exits required by paragraph 4 must be qualified as ditching emergency exits by ensuring they stay above the waterline for the most unfavourable expected combination of aircraft weight and centre of gravity.

5. The content of paragraph CS 25.809 "Emergency Exit Arrangement" is replaced by the following:

   The emergency exit arrangement must meet the following requirements (see CS 25 AMC 25.809(a)):
   a. The CS 25.809(a)(1) applies.
   b. The CS 25.809(a)(3) content is replaced by:

      The flight deck sliding emergency exits as conventionally configured in open condition, used in conjunction with a suitable accessible and powerful portable illumination device must permit an adequate viewing of the likely areas of evacuee ground contact with the landing

gears extended or in any condition of landing gear collapse, during all ambient lighting conditions.

c. The CS 25.809(b) content applies. In addition the flight deck sliding emergency exits are required to be openable also from the outside.
d. The CS 25.809(c) content is replaced by:

   The means of opening the flight deck sliding emergency exits must be simple and obvious and may not require exceptional effort; and must be arranged and be identifiable so that it can be readily located and operated, even in darkness, by the flight crew members and by the allowed aircraft occupants who are knowledgeable on their use and operation.

e. The CS 25.809(d) applies
f. The CS 25.809(e) applies.
g. The CS 25.809(g) applies.
h. The CS 25.809(i) applies.

6. The paragraph CS 25.810 "Emergency egress assisting means and escape routes" is replaced by the following content:

   The emergency egress assisting means for the flight deck emergency sliding exits must meet the following requirements:

   a. Each flight deck sliding emergency exit must have an approved mean to assist the occupants in descending to the ground, if the exit is located more than 1.8 m (6 feet) from the ground with the aeroplane on the ground and the landing gear extended.
   b. The assisting means for the flight deck sliding emergency exits may be a rope or any other means demonstrated to be suitable for the purpose. If the assisting means is a rope, it must be:
      i. Attached to the fuselage structure at or above the top of the emergency exit opening, or at another approved location if the stowed device, or its attachments, would reduce the pilot's view visibility in flight, and
      ii. Able (with its attachment) to withstand a 1779 N (400-lbf) static load.

7. The content of paragraphs CS 25.811 "Emergency exit marking" and CS 25.812 "Emergency lighting" requirements in the cockpit area, is replaced by the following:

   a. The Aeroplane Flight Manual will contain a normal procedure for the flight crew to ensure that courier area illumination will be dimmed during taxi, take-off, approach and landing phases.
   b. The Aeroplane Flight Manual will contain a normal procedure for the flight crew to ensure that if there is at least one occupant in the courier area:
      i. The curtain separating the cockpit from the courier area may be opened or closed during taxi, take-off, approach and landing phases in the following conditions: Low visibility take-off (LVTO), CAT II or CAT III approaches.
      ii. If the conditions of 7.b.(i) are not met, the curtain will remain open during taxi, take-off, approach and landing phases.

      For emergency procedures associated with forced landings or unplanned ditching, the AFM content must ensure that the curtain will remain open.
      Compatibility of the design solution and the AFM procedure with the CS/JAR 25.773(a)(2) requirements (pilot compartment must be free of glare and reflection) will need to be substantiated.
   c. Both sliding emergency exits and their external opening means must satisfy the outside marking requirements as laid down in CS 25.811(f).

8. Paragraph CS 25.813 “Emergency exit access and ease of operation” detailing the requirements in the cockpit area, is amended as follows:

   No door may be installed between any courier area seat that is occupiable for take-off and landing and any aircraft emergency exit, such that the door crosses any egress path (including aisles, cross-aisles and passageways).