EAC

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LOCATION OF THRESHOLD

1 General

1.1 The threshold is normally located at the extremity of a runway, if there are no obstacles penetrating above the approach surface. In some cases, however, due to local conditions it may be desirable to displace the threshold permanently (see below). When studying the location of a threshold, consideration should also be given to the height of the ILS reference datum and/or MLS approach reference datum and the determination of the obstacle clearance limits. (Specifications concerning the height of the ILS reference datum and MLS approach reference datum are given in ECAR Part 171).

1.2 In determining that no obstacle penetrate above the approach surface, account should be taken of mobile objects (vehicles on roads, trains, etc.) at least within that portion of the approach area within 1 200 m longitudinally from the threshold and of an over-all width of not less than 150 m.

2 Displaced threshold

2.1 If an object extends above the approach surface and the object cannot be removed, consideration should be given to displacing the threshold permanently.

2.2 To meet the obstacle limitation objectives of Subpart G of ECAR Part 139, the threshold should ideally be displaced down the runway for the distance necessary to provide that the approach surface is cleared of obstacles.

2.3 However, displacement of the threshold from the runway extremity will inevitably cause reduction of the landing distance available, and this may be of greater oper-ational significance than penetration of the approach surface by marked and lighted obstacles. A decision to displace the threshold, and the extent of such displacement, should therefore have regard to an optimum balance between the considerations of clear approach surfaces and adequate landing distance. In deciding this question, account will need to be taken of the types of aeroplanes which the runway is intended to serve, the limiting visibility and cloud base conditions under which the runway will be used, the position of the obstacles in relation to the threshold and extended centre line and, in the case of a precision approach runway, the significance of the obstacles to the determination of the obstacle clearance limit.

2.4 Notwithstanding the consideration of landing distance available, the selected position for the threshold should not be such that the obstacle-free surface to the thresh-old is steeper than 3.3 per cent where the code number is 4 or steeper than 5 per cent where the code number is 3.

2.5 In the event of a threshold being located according to the criteria for obstacle-free surfaces in the preceding paragraph, the obstacle marking requirements of Subpart I of ECAR Part 139 should continue to be met in relation to the displaced threshold.

2.6 Depending on the length of the displacement, the RVR at the threshold could differ from that at the beginning of the runway for take-offs. The use of red runway edge lights with photometric intensities lower than the nominal value of 10 000 cd for white lights increases that phenomenon. The impact of a displaced threshold on take-off minima should be assessed by the aerodrome operator.

2.7 Provisions in ECAR 139, regarding marking and lighting of displaced thresholds and some operational recommendations can be found in paragraphs 139.321.(d).9 and 10, 139.323.(e).5, 139.323.(h).1, 139.323.(i).7, 139.323.(j).3 and 7, and 139.323.(l).6.