DocumentID 241273

Vortragstitel Cabin Design for Minimum Boarding Time

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Preisträger

Vortragssprache englisch

Seiten 10

Veranstaltung Deutscher Luft- und Raumfahrtkongress 2011

Veranstaltungsort Bremen

Veröffentlicht in Deutscher Luft- und Raumfahrtkongress, Tagungsband - Manuskripte, 2011;

Seite 681 - 691; DGLR e.V.; Bonn; 2011

Stichwörter Kabine

Flugzeugentwurf

Abstract Single aisle aircraft with capacities ranging from 140 to 240 seats dominate the

current short range air transport. These efficient aircraft are prone to lengthy boarding times, increasing turn-around times. Repeatedly the question is raised whether a small twin aisle might be a viable future replacement for parts of the current single aisle fleet, especially as average seat number is expected to increase further. As first part of a research into this topic this paper discusses the passenger boarding and de-boarding times of different cabin layouts. The objective is to establish a threshold for number of seats at which a twin aisle is in advantage. Current and alternative single aisles are compared to 6-, 7- and 8-abreast twin aisles. Twin aisles are found to be generally beneficial for all seat counts. The effect of a wider aisle is limited, but changed cabin layout can achieve a meaningful

reduction in boarding time for single aisles.