

Review, Analysis and Simulation of Advanced Technology Solutions of Selected Components in Power Electronics Systems (PES) of More Electric Aircraft

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Abstract : The subject of this paper is to review, comparative analysis and simulation of selected components of power electronic systems (PES), consistent with the concept of a more electric aircraft (MEA). Comparative analysis and simulation in software environment MATLAB / Simulink were carried out based on a group of representatives of civil aircraft (B-787, A-380) and military (F-22 Raptor, F-35) in the context of multi-pulse converters used in them (6- and 12-pulse, and 18- and 24-pulse), which are key components of high-tech electronics on-board power systems of autonomous power systems (ASE) of modern aircraft (airplanes of the future).

Keywords : converters, electric machines, MEA (more electric aircraft), PES (power electronics systems)

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