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ANALYSIS OF LOAD TRANSMISSION LINE ON THE FUSELAGE OF REUSABLE LAUNCH
VEHICLE

Abstract

In order to optimize the fuselage structure of reusable launch vehicle, the load transmission line was analyzed by FEM methods. The FEM model included propellant tanks, fuselage and the joint between them. The load transmission analysis was undertaken in different load cases. The results showed that the different joint structure induced different percentage of load that transmitted to the fuselage and the propellant tanks. Suggestions were proposed for designing the connected structure according to the results of the analysis.