

DESIGN OF COMPOSITE LANDING GEAR FOR LSA AIRPLANE

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Abstract. This paper deals with a design of composite landing gear for an airplane of LSA category (up to 600kg m_{TOW}). Firstly, the air worthiness requirements on landing gear are presented and discussed. Next section of the design process is focused on geometry description and mechanical properties. From these inputs is going to be calculated deformed shape and strain-stress condition. Special attention is paid to the hinged area, where multi-axis stress state must be investigated further. Last section presents the software tool created for the purpose of landing gear design.

Keywords. Beam Element, LSA, Composite, Landing Gear.