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THE STRENGTH ANALYSIS OF SPAR I BEAM PROFILE MADE OF COMPO-SITE MATERIAL USING THREE POINT BEND TESTING

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ABSTRACT

In this work, the strength of the spar I beam profile of the UAV wing structure were analyzed by using three point bend testing. The three point bend testing were conducted by using controlled load cell of Newton NT-502A series with maximum capacity of 2000 kg. The spar I beam profilewere made from composite material of carbon fiber prepreg. The thickness of the component were about 0.25 mm and 0.5 mm. The maximum load of the three point bend testing of the spar I beam profile gives value of 11 kN. It was shown that the strength of the spar I beam profile gives good efficiencies compared to the weight itself.

KEYWORDS: *Composite, Three Point Bend Testing, Spar, I Beam Profile, UAV*

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