

COMP4UAVs

Components for unmanned aerial vehicles (UAVs) produced by additive manufacturing

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Nowadays, conventional manufacturing techniques represent a real obstacle to the innovation, because some complex lightweight structures cannot be produced by them.

The additive manufacture shows to be a promising alternative, but the knowledge is still not fully consolidated to produce high performance thermoplastic matrix composites for the aeronautical sector. Therefore, the COMP4UAVs consortium intends to optimize the process parameters of the fused deposition modelling (FDM) technique in order to obtain

the structural efficiency of the CFRP composites. For the most efficient parameters, a complete characterization in terms of static properties, fatigue strength, impact strength, creep and stress relaxation will be performed. Additionally to the database that will be available to the scientific/industrial community, an UAV will be produced to consolidate the knowledge and to evidence the efficiency of the FDM technique in such composites.