

## An Innovation and Development System for a New Hybrid Composite Technology in Aerospace Industry

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**Abstract :** Present and future lightweight design represents an important key to successful implementation of energy-saving, fuel-efficient and environmentally friendly means of transport in the aerospace and automotive industry. In this context the use of carbon fibre reinforced plastics (CFRP) which are distinguished by their outstanding mechanical properties at relatively low weight, promise significant improvements. Due to the reduction of the total mass, with the resulting lowered fuel or energy consumption and CO<sub>2</sub> emissions during the operational phase, commercial aircraft and future vehicles will increasingly be made of CFRP. An auspicious technology for the efficient and economic production of high performance thermoset composites and hybrid structures for future lightweight applications is the combination of carbon fibre sheet moulding compound (SMC), tailored continuous carbon fibre reinforcements and metallic components in a one-shot pressing and curing process. This paper deals with a new hybrid composite technology for aerospace industries, which was developed with the help of a universal innovation and development system. This system supports the management of idea generation, the methodical development of innovative technologies and the achievement of the industrial readiness of these technologies.

**Keywords :** development system, hybrid composite, innovation system, prepreg, sheet moulding compound

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