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Press Release

New Consortium HAICoPAS targets innovative solutions

for carbon thermoplastic composite structures.



Hexcel, Arkema and their partners are pleased to announce that their joint collaborative project "HAICoPAS" has received approval from Bpifrance and the support (grant of 6 million euros) of France's Investissements d'Avenir program.

HAICoPAS project is a collaborative project with a total amount of 13.5 million euros lead by Hexcel and Arkema and their industrial partners (Ingecal, Coriolis Composites, Pinette Emidecau Industries (PEI) et l'Institut de Soudure), and academia lead by CNRS (PIMM (CNRS - Arts et Métiers ParisTech - le Cnam), LTEN (CNRS - Université de Nantes). This project follows last year's announcement of the strategic partnership between Hexcel and Arkema to develop high performance PEKK/carbon fiber UD tapes targeting composite parts for primary aerospace structures.

The HAICoPAS (Highly Automatized Integrated Composites for Performing Adaptable Structures) project aims at optimizing UD tape design and its manufacturing process in view of its use in highly productive, cost competitive, composite part production. The HAICoPAS project also targets the development of a highly productive UD tape placement technology and a new system providing the ability to assemble final parts by welding with in line quality control.

The main market objective is lightweighting at competitive costs for such applications as primary aerospace structures, high volume automotive structural parts, and oil and gas pipes. The recyclability and environmental benefits of the thermoplastic materials and technologies developed within the project will be fully demonstrated and quantified.

The HAiCoPAS project brings together a consortium of complementary, high-level competencies from Hexcel (carbon fiber), Arkema (high-performance polymers) and a number of highly skilled small and medium enterprises (Institut de Soudure, Ingecal, Coriolis Composites, PEI) -- all widely recognized

for their expertise in composites production equipment and processes. The project also benefits from the scientific support of two laboratories: PIMM (CNRS - Arts et Métiers ParisTech - le Cnam) and LTEN (CNRS - Université de Nantes) which will develop the basic understanding for the optimization of the materials, their processing and long-term behavior in service conditions.

The HAICoPAS project aims to generate a complete supply chain able to:

Supply carbon/thermoplastic UD tapes produced by Hexcel or Arkema.

Provide the associated composite part manufacturing and assembling lines (SME Partners).

This new « material and process» supply chain will thus offer complete light-weighting solutions for the downstream aerospace, automotive and oil and gas industries.

Key figures of the HAICoPAS project:

Amount of the project: 13.5 million euros
Duration: 48 months
Grant: 6 million euros

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About Hexcel: <u>Hexcel Corporation</u> is a leading advanced composites company. It develops, manufactures and markets lightweight, high-performance structural materials including carbon fibers, specialty reinforcements, prepregs and other fiber-reinforced matrix materials, honeycomb, adhesives, engineered core and composite structures for use in commercial aerospace, space and defense and industrial applications.