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French research group Technocampus EMC2, working with EADS and Coriolis, has developed a fiber placement system for the manufacture of a demonstration composite panel for the fuselage on a next-generation A320.

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A report on French website *Air & Cosmos* reports that Technocampus IMC2 (Nantes, France) inaugurated on Feb. 4 a new technology called Flash TP, a €1.5 million automated placement machine for thermoplastic composites.

It resides at Technocampus EMC2, a research and technology (R&T) center focused on new composite materials implementation funded by EADS (Leiden, The Netherlands), Airbus (Toulouse, France), Astrium (Paris, France) and corporate R&T unit Innovation Works (IW, Paris, France and Munich, Germany). **Coriolis Composites** (Queven, France) developed the machine, mounting a laser heating head designed by Irepa Laser (Illkirch, France), modified to make the thermoplastic tapes flexible for precision application via a silicone roller, onto a

The system uses a KUKA Robotics (Toronto, Ontario, Canada) arm, which moves longitudinally on fixed rails. EADS cites economy as a driver, including elimination of frozen storage and autoclave processing currently required for thermoset prepregs, as well as increased productivity. Because TPC prepreg is not tacky, it leaves no residue to clog tools or machinery, so that it has not been necessary to stop the machine for maintenance during the past six months of trial service.

Flash TP's first objective is an A30X (next-generation A320) double-curvature lower fuselage skin measuring 5m/16 ft long by 1.6m to 2m (5.3 to 6.6 ft) in radius, made from 20 plies of high-strength carbon and PEEK or PPS matrix with a typical thickness of 3 mm/0.12 inch, to be completed by June. A320 final assembly occurs in Toulouse (France), Hamburg (Germany) and Tianjin (China), and many sources cite Hamburg as the choice for A30X final assembly, so this A30X thermoplastic lower fuselage skin for Asia is quite intriguing. Technocampus EMC2 has also announced installation of the world's most advanced Laser UT system for the inspection of composites.

To view images of the system, click [here](#).

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