Press release

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IRT Jules Verne unveils its new projects and innovative composite processes at JEC WORLD 2018, the world composites trade show

Paris Nord Villepinte - 6 to 8 March 2018
Hall 6 - stand R72

Alongside its partners in the Pays de la Loire regional pavilion at JEC 2018, IRT Jules Verne will be presenting its latest projects developed in collaboration with its industrial members and academic partners. Among the innovative projects on show this year, IRT Jules Verne will be presenting in particular a bobbin of inexpensive carbon fibre developed during the FORCE project, as well as first parts created during FORTAPE, the first European project conducted by IRT Jules Verne. JEC World 2018, an absolute reference in the composites sector, will provide IRT Jules Verne with the opportunity to usher visitors behind the scenes of its new workshop equipped with cutting-edge apparatus entirely dedicated to the development of new composite processes.

The IRT Jules Verne composite workshop: a new dimension in composite material processes

This 1300 m² area lying at the heart of the Composites Technocampus in Nantes-Bouguenais is an ideal venue for R&D projects designed to improve performance levels for thermoplastic and thermosetting processes requiring extensive experimental equipment. It hosts research projects conducted by IRT Jules Verne and its partners, as well as collaborative projects. IRT Jules Verne also provides services to companies seeking to develop their own innovative products or to improve their existing industrial processes. The workshop contains state-of-the-art equipment: a robotic injection press with a clamping force of 1300 tonnes, a compression press with a clamping force of 200 tonnes, both equipped with peripheral devices (IR oven, cutting table, etc.), as well as an injection machine for thermosetting resins specifically designed for large composite parts, such as the tidal-energy propeller presented at JEC World 2017. New equipment will be regularly added to the workshop, which will eventually be organised in four separate sections: forming technologies, injection of thermosetting resins, high-pressure processes for thermoplastic resins, shaping of large-size composite parts.

IRT Jules Verne presents innovative composite prototypes

IRT Jules Verne is involved in numerous R&D projects devoted to the development of composite manufacturing processes suited to manufacturers' needs and constraints. Certain of the most advanced manufacturing-ready projects will be presented at JEC 2018.

- **Fortape, a step towards optimisation of composite processes**

The Fortape project, launched in 2015, has just been completed. The aim was to optimise the performance of composite parts for the automobile and aeronautic sectors using the smallest possible quantities of composite materials. The first prototype parts created using the innovative process developed during the project will be on display at JEC 2018. Thanks to the conclusive results obtained, the Fortape project will rapidly give rise to an industrial solution and will be rolled out in factories beginning this year.
Fortape is a European project conducted as part of the European Commission's Eighth Framework Programme for Research and Technological Development, "Horizon 2020" with a budget of €79 billion over 7 years. Supported by a consortium of 10 partners, Fortape has been allocated funding of €5 M.
This project involved the following partners: IRT Jules Verne | CTAG (coordinator) | FORD | GRUPO ANTOLIN | OPTEL | CANOE | ARKEMA | AIRBUS | MATEX | FRAUNHOFER ICT

- **Bobine Force, aiming for inexpensive carbon fibre**

Elimination of mass through composite use is a key factor in reducing CO2 emissions in the transport sector. The performance level of composite parts is based partly on the use of reinforcements made of carbon fibre, but this material is still extremely expensive. The Force project steered by IRT Jules Verne aims to produce inexpensive carbon fibre, costing under €8/kg, with performance levels suited to industrial applications. This project brings together manufacturers - both composites users and producers - and academic players. A bobbin of fibre produced using this new process will be presented at the IRT Jules Verne stand.
This project involved the following partners: IRT Jules Verne | Arkema | Canoe | Chomarat | Decathlon | Faurecia | Mersen | Plastic Omnium | Group PSA | Renault | Stelia Composites | Tembec | Total. It also enjoyed the support of the French Automotive Industry Platform (PFA) and the French Chemical Industries Association (UIC).

- **Augmented reality takes a place on the IRT Jules Verne stand**

The future starts now! The Pays de Loire Pavilion will be providing a demonstration of an augmented reality application developed by IRT Jules Verne. Using a tablet, visitors can view the technical information for a composite tidal-energy propeller and this solution could for example be used in quality control outside the manufacturing line.

About IRT Jules Verne

Created in 2012 as part of the French *Investissement d'avenir* [Investing for the Future] programme, the Jules Verne Technology Research Institute is a mutualised industrial research centre dedicated to advanced manufacturing technologies. Focusing on the requirements of the strategic industrial sectors – aeronautics, automotive, energy and naval – the IRT team carries out collaborative research based on an alliance between the finest industrial and academic resources available in the manufacturing domain. Together, they work on the creation of innovative technologies that will be rolled out to factories in the short and medium terms in three major areas: Integrated product/process design | Innovative processes | Flexible and smart production systems. In order to provide global solutions up to and including the production of full-scale demonstration models, IRT Jules Verne utilises a wide array of exclusive equipment.

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