

Solvay, Premium AEROTEC, Faurecia and ENGEL open platform for thermoplastic composites research with ITA-Augsburg as part of IRG CosiMo

Alpharetta, GA September 28 2018 --- IRG CosiMo new facilities and first piece of equipment were unveiled by State Minister Franz-Josef Pschierer from the Bavarian ministry of economics, energy and technology during an Opening Ceremony on Friday 28 September 2018.

These new infrastructures were set up less than two months after Faurecia Clean Mobility, Premium AEROTEC, Solvay and ENGEL started IRG CosiMo (Industry Research Group: Composites for Sustainable Mobility), the industry's first private consortium focusing on the development of thermoplastic materials and process technologies in aerospace and automotive.

The first piece of equipment is a 1000 t press with tool handling system complemented by different equipment for thermoplastic processing. This press will be part of a full production line financed by the consortium. This is already complemented by a small scale blank heating and overmolding system which will be substituted by a full scale equipment later on in the project.

Global transportation market trends such as rapidly increasing volumes, high cost pressure in the global competition, a need for lightweight yet competitive designs and digitalization bring the need for new materials and processing technologies. Dr. Thomas Ehm, CEO of Premium Aerotec stated: *"This project is key for the next technological step in designing and producing modern fuselages. We will not only research the application of this material but also investigate how a modern digitalized factory will look like."*

"Thermoplastic composites offer distinct advantages around forming, joining, design, functionality and economics. Success factors such as cost reduction, scalability to high volume and production of larger parts still need to reach industrial scale. IRG CosiMo was setup to address these" said Fabrizio Ponte, Vice President of Strategy, Business Development and Communication for Solvay Composite Materials global business unit.

IRG CosiMo is unique as it combines companies along the whole thermoplastic composites process chain, from the materials and semi-finished products (Solvay) followed by specially adapted processing machinery (ENGEL) to applications in automotive (Faurecia) and aerospace (Premium Aerotec). Agile project organization realized by ITA Augsburg will enable a compact project structure leading to timely realization. *"We are proud to have helped to organize the project and expect major effects of synergies between automotive and aerospace for new products like drones or air taxis in high volume applications"* said Prof. Dr. Stefan Schlichter, Managing Director of ITA Augsburg.

IRG CosiMo is open to integrating new partner companies and to collaborating with institutes of the research campus Augsburg (Augsburg university (MRM, ISSE), DLR-ZLP, Fraunhofer IGCV) to jointly develop critical complementary aspects such as digitalization, material research and parts functional design.

In the technology center Augsburg (TZA) the consortium has found a place where joint research can be conducted and where the machines for the technology platform can be installed. *"In order to cover the demand in lightweight technology of both, the automotive industry as well as the aviation industry, we need to consider modular concepts for the processing, where also sophisticated data handling is managed"* emphasized Dr. Norbert Müller, head of the ENGEL's center for lightweight composite technologies.

Premium AEROTEC, Faurecia and ITA Augsburg are also part of a large project consortium which is funded in frame of the Campus Carbon 4.0 program of the Free State of Bavaria. This project called CC4.0 CosiMo aims for developing new materials and processes using in-situ polymerization of Polyamide 6 from Caprolactam for high volume applications in the automotive sector. Hassine Sioud, General Manager Business Unit Ultra lightweight structures and Battery powercase Systems at Faurecia Clean Mobility - Zero Emission Division, said: *“IRG CosiMo confirms Faurecia’s determination to shape the future of mobility. We believe thermoplastic composites are key to answering the latest regulations on vehicle weight as the environmental impact of automobiles can be significantly reduced through the use of innovative materials, enhancing function integration while helping to meet customers’ needs with optimized solutions and design freedom.”*



On the Picture (ITA Augsburg) from left to right:

- Helge von Selasinky (ITA) - General Manager
- Dr. Norbert Müller (ENGEL) - head of center for lightweight composite technologies
- Dr. Thomas Ehm (Premium AEROTEC) - CEO
- Franz Josef Pschierer (Bavarian ministry of economics, energy and technology) – State Minister
- Prof. Dr.-Ing. Stefan Schlichter (ITA) – Managing Director
- Fabrizio Ponte (Solvay) - Vice President of Strategy, Business Development and Communication
- Hassine Sioud (Faurecia) - General Manager Business Unit Ultra lightweight structures and Battery powercase Systems
- Wolfgang Hehl (TZA) – CEO Augsburg Innovationspark



Press release

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About Solvay Composite Materials

Solvay's new Global Business Unit Composite Materials is a global provider of technologically advanced lightweighting material solutions that enable our customers in the aerospace, automotive and other demanding industries to design, develop and efficiently manufacture high-quality, high-performance and complex composite structures. Composite Materials has the most extensive product portfolio, including prepregs, resin systems, adhesives and surfacing films, carbon fiber, textiles, tooling and vacuum bagging consumables, thanks to its leadership in advanced materials science, chemistry and application engineering. Solvay Composite Materials combines the former Cytec Aerospace Materials and Industrial Materials businesses.

Solvay is an advanced materials and specialty chemicals company, committed to developing chemistry that addresses key societal challenges. Solvay innovates and partners with customers worldwide in many diverse end markets. Its products are used in planes, cars, batteries, smart and medical devices, as well as in mineral and oil and gas extraction, enhancing efficiency and sustainability. Its lightweighting materials promote cleaner mobility, its formulations optimize the use of resources and its performance chemicals improve air and water quality. Solvay is headquartered in Brussels with around 26,800 employees in 61 countries. Net sales were €10.1 billion in 2017, with 90% from activities where Solvay ranks among the world's top 3 leaders, resulting in an EBITDA margin of 22%. Solvay SA (**SOLB.BE**) is listed on Euronext Brussels and Paris (Bloomberg: **SOLB.BB** - Reuters: **SOLB.BR**) and in the United States its shares (**SOLVY**) are traded through a level-1 ADR program. *Financial figures take into account the announced divestment of Polyamides.*

About ITA Augsburg – Institut für Textiltechnik Augsburg

ITA Augsburg is an affiliated institute to Augsburg University and part of ITA Group (RWTH Aachen University). It focuses on processing of fibers to nonwoven web based composites, e. g. recycled carbon fibers. Furthermore processing of thermoplastic matrices in injection molding and in-situ polymerization based processes lie in the scope of ITA Augsburg.

About Faurecia

Faurecia has grown to become a major player in the global automotive industry. With 290 sites including 30 R&D centers and 109,000 employees in 35 countries, Faurecia is now a global leader in its three areas of business: automotive seating, interior systems and clean mobility. Faurecia has focused its technology strategy on providing solutions for smart life on board and sustainable mobility. In 2017, the Group posted value-added sales of €17.0 billion. Faurecia is listed on the Euronext Paris stock exchange. With clean mobility Faurecia is one of the premium partners in IRG CosiMo and represents all demands coming from the automotive and truck industry.

About Premium AEROTEC

Premium AEROTEC is a global player in the aerospace industry and generated revenues of 2 billion euros in 2017. The company's core business lies in the development and production of metal and carbon fiber composite aircraft structures. The company has sites in Augsburg, Bremen, Hamburg, Nordenham and Varel in Germany, as well as in Braşov in Romania.

About ENGEL

As a machine manufacturer with a high degree of automation and system solutions expertise, **ENGEL AUSTRIA**, headquartered in Schwertberg, Austria, understands the key success factors that support the cost-effective production of fibre-reinforced plastic composites in large quantities. Since 2012, ENGEL has bundled its expertise in lightweight composites in its own technology center. With nine production plants and 30 sales and service subsidiaries worldwide, the family-owned company founded in 1945 currently employs 6,600 people. In the 2017/18 financial year, ENGEL generated sales of 1.51 billion euros.