

Integrated manufacturing of REciclable multi-material COmposites for the TRANSport sector

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[RECOTRANS PROJECT]



RECOTRANS 18Months Meeting

The fourth consortium meeting of the RECOTRANS Project was held in coincidence with its 18 months of life. The meeting, hosted by both Istanbul Technical University and Mercedes Benz Turkey, took place in Istanbul during 3rd and 4th of April 2019.

The first day, at Istanbul Technical University, partners could present and discuss about already finished Work Packages and the progress of the ongoing ones.

Work package 1 was ended up in M18, therefore the final demonstrator designs were already completed.

In the work package 2 new experiments were carried out in order to define the most suitable procedure for the laser assisted metal-polymer joining by Tecnoclad. The adhesion between the metal part and composite samples manufactured with different resins developed by ARKEMA were assessed. Besides, an extensive information provided by the computational modelling carried out by ITÜ of the novel thermoplastic resin and the long fibre reinforced composite provided a better approach of the raw material behaviour.

During the work package 3 and 4 explanation, Fraunhofer ICT showed the evaluation of the numerical simulation of microwave (MW) field inside the mould for the RTM and pultrusion process. This is a key aspect in order to define the curing parameters with the MW where Synthesites and INEA will monitor the curing cycle. Additionally, the mould design for the three demonstrators started to be analysed (MBT-Far-UK, Gestamp and STAV-Polymec).

In parallel, CTAG defined the relevant information for the LCA study and its economic analysis. Results from this assessment will show the economic costs of the new process compared with the conventional processes.

The second day, at Mercedes Benz Turkey, partners had time for working in groups for the Automotive, Truck and Train demonstrators and, additionally, an exploitation workshop was held.

In the forthcoming months, the manufacturing of moulds for the RTM and pultrusion processes will start alongside the integration of the MW. The next consortium meeting will take place on October 2019 at the Fraunhofer ICT facilities.

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RECOTRANS at JEC World Paris 2019

RECOTRANS was present at JEC World Paris 2019 by AIMPLAS. Our partner was an exhibitor at the fair and explained the Project to interested visitors.

We had the opportunity to show the objectives of the project and how they will contribute to the composite industry mainly in the transport sector.

Moreover, RECOTRANS's partners AIMPLAS, SYNTHESIS and POLYMEC met and exchanged the last progress of the project regarding the train demonstrator.

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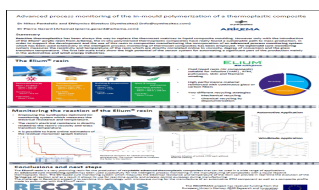
RECOTRANS at Jornada Composites 360

RECOTRANS rollup was shown at Jornada Composites 360 hosted by AIMPLAS.

AIMPLAS held the Composite 360 Congress on the 14th February 2019. The agenda was focused on the last and novel developments of the Composite Industry: efficient manufacturing, sustainable raw materials, recycling, etc.

RECOTRANS project was shown as an example of the Factories of the Future and how the multimaterials, microwave (MW) manufacturing process and laser joining can meet the objectives of the Commission's low emission mobility strategy.

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International Conference & Exhibition on Thermoplastic Composites

Abstract, full paper and poster by ARKEMA and SYNTHESITES related to RECOTRANS project were accepted for International Conference & Exhibition on Thermoplastic Composites in Germany.

As partners within the RECOTRANS project, ARKEMA develops a thermoplastic resin suitable for the microwave (MW) radiation whereas SYNTHESITES is in charge of the monitoring of the curing process of the resin. Both collaborations bring a great expertise to the project and will allow to achieve the objectives successfully: reductions at the manufacturing process.

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Meet ARKEMA



Originally part of Total Chemicals, the **Arkema Group** was established as a separate entity in 2006 as a global manufacturer of speciality chemicals and advanced materials. Their focus is on biosourced, lightweight materials, electronic solutions, chemicals, coatings and various other industrial specialities. The Group employ more than 20,500 employees and have a business presence in close to 55 countries in Europe, North America and Asia.

High performance materials, industrial specialities and coating solutions are the Group's main business segments, with the majority of the work in these segments corresponding to speciality chemicals for various applications. The majority of their work is conducted in Europe, however the Group is seeing the most growth in their business activities in North America and Asia/Australasia. They are the world leader in speciality polyamides, photocure resins and thiochemicals and place between 1st and 3rd position globally for 90% of their entire portfolio.

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Meet INEA



INEA was established in 1987 by the Jozef Stefan Institute in order to better apply the institute's research results to the industrial process control and energy management sectors.

Currently, the company has solutions implemented five continents and is the leading Slovenian company in industrial automation, process control, manufacturing intelligence, also offering industrial energy management solutions. INEA has offices in Croatia, Slovenia, Serbia and the United Kingdom, and their experts are currently conducting research related to smart grid solutions, advanced control technologies and fuel cell/hydrogen technologies.

They emphasise their customer-centric approach and their ability to adapt to individual customer needs, resulting from over 900 successful projects in the last 30 years in the above-mentioned fields.

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