Newly crowned Northwest speciality bio-polymer business teams up with a global leader in the composites sector

Chemical Processing Services Ltd (CPS) was recently awarded the prestigious King's Awards for Enterprise in the innovation category. This was for the development of innovative bio-based polymers derived from a waste biomass that fit within their already extensive portfolio. CPS has a range of disruptive Bio-based polymers and some of these are now being tested in road, rail, and aircraft applications. CPS tend to align themselves with market leaders and they have recently teamed up with the composites engineering giant Röchling Industrial.

Röchling Industrial turnover in excess of €1 Billion and occupy 40 locations, they have more than 11,000 employees, and they are a world-leading composites manufacturer. CPS speciality matrix polymers are complementing the Röchling Industrial drive to lead the way in generating sustainable high performance structural components with reduced weight. Weight reduction is recognised as an essential part of extending vehicle performance and reducing emissions.

Electrification in the transportation sector is recognised as an essential part of decarbonisation. However, Electric vehicles require batteries, and the introduction of the battery units brings about several new considerations which includes a significant increase in weight. Additional weight is counter-productive to the economics of these changes and is not conducive to maximising sustainable performance. Certainly, in the case of Electric and Hybrid cars there remains a range of concerns, especially with the limited electrical charge station infrastructure. Of course, adding further batteries provides a means of attaining greater distance but again greater weight and the cyclic argument continues.

This creates a challenge, but with every challenge comes opportunity and the recently Patented CPS Bio-Benzoxazines, specialist reinforcements, and Röchling Industrial expertise appears to be providing a sustainable solution. CPS systems are forming the resin matrices that bind, protect, and provide load distribution across the various fibre reinforcements that are being used in these new lightweight bio-composite units.

The technology partnership has brought about a means of not only offsetting this supplementary weight, but providing lightweight composite parts that are corrosion free, offer fire protection, maintain their mechanical integrity, and reduced emissions, all of this with sustainable biogenic materials at the heart of the design.

Paul H. Jones Managing Director of CPS stated, "I am delighted that we have been presented with a Kings Award for Enterprise in the innovation category. We believe that the Scientific community will provide the solutions to meet our environmental and humanitarian obligations and these specialist products have been designed, scaled, and commercialised in order for us to make our contribution to society. We continue to develop disruptive technology and use our innovative products to try and address the problems of today, for the benefit of tomorrow. Our partnership with Röchling Industrial is a perfect fit and an excellent collaboration opportunity. They recognise the need for innovative biomaterials, they are at the forefront of sustainable solutions, and they lead the way in their markets."

The collaboration has resulted in the generation of some new pre-preg and laminates that comply with a variety of industry standards and allow a move away from petrochemical reliance. The CPS Bio-Benzoxazines, Poly-furfuryl alcohol [PFA], and bio-epoxide polymers are just some of the matrices being used with Glass, Carbon, and Natural reinforcements to satisfy a myriad of market needs and aiding organisations meet their own CSR policies.

Some of the products have been tested by the Fraunhofer Institute for Manufacturing Technology and Advanced Materials [IFAM] and Paul sits in the FOREST consortium with IFAM members working on the decarbonisation of the transport sector in the EU. It is expected that some of the findings from the Röchling Industrial collaboration will assist and aid the progression of the FOREST objectives.

Röchling Industrial launched their Bio-Benzoxazine Durastone Green Range at the K-Fair in 2022, and CPS recently exhibited some honeycomb sandwich structure light weight flooring panels generated from Bio-Benzoxazines matrix systems at the JEC World 2023 in Paris.

For further details visit CPS Consultancy
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