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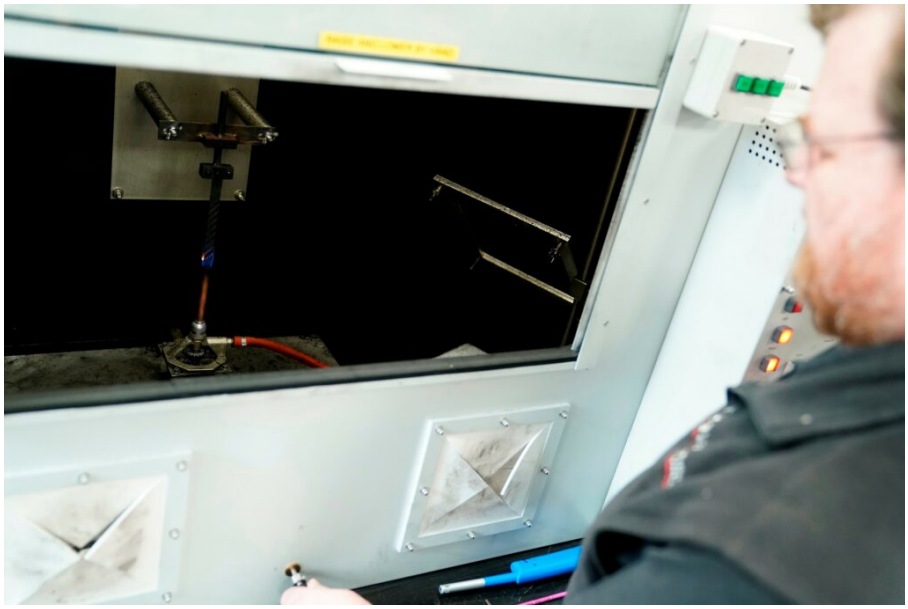
# TRB partners with the University of Bristol to broaden its PFA offering

4 years ago



TRB Lightweight Structures – a leading provider of lightweight, energy efficient solutions for transport applications – has entered into a Knowledge Transfer Partnership (KTP) focusing on resin chemistry development with the University of Bristol.

The 24-month project, commencing in December 2022, will specifically target poly(furfuryl alcohol) (PFA) resin systems, aiming to develop improved formulations for composite applications.

Environmentally aware manufacturers, including TRB, are moving towards 'greener' materials – such as PFA produced from biomass waste – whenever possible. PFA offers excellent fire, smoke, and toxicity (FST) behaviour, and can operate effectively at elevated temperatures, making it broadly comparable to the more commonly used petrochemical-based phenolic resins.

The KTP will build on TRB's expertise in the use of PFA in composite components, and the University of Bristol's strong resin chemistry development knowledge – through the involvement of Professor Ian Hamerton and Dr Ram Ramakrishnan – to develop the next generation of PFA resin systems. Jointly funded by TRB and Innovate UK, the UK's innovation agency, the project will be led by KTP Associate Dr Usman Sikander, a materials engineer specialising in composite materials and manufacturing, who will work predominantly at TRB. His initial focus will be on resin-based formulation trials, before progressing to composite prepreg manufacturing in house at TRB, as well as laminate production and testing.

Dr Sikander commented: "Sustainability is one of the key drivers for innovation in the next generation of composite materials. I am very excited to be a part of the KTP project, where I will be developing novel and sustainable materials for a range of products in the industrial landscape. PFA resins have a promising

future and offer solutions that are in line with reaching the net zero goal in the longer run. I look forward to working with TRB and the University of Bristol to expand the market share of these products."

Francis Arthur, Engineering Manager at TRB, added: "We are delighted to be embarking on a KTP with the University of Bristol to develop next generation PFA materials and overcome the current shortcomings of this resin system. Applications with stringent FST requirements – such as underground rail, aerospace, and electric vehicles – are set to benefit from a broader PFA offering that aligns closely with our vision for more environmentally sustainable transport. We expect the KTP to be the start of an innovative and fruitful relationship."

Jody Chatterjee, Knowledge Transfer Adviser, Innovate UK KTN, stated: "KTPs have been successfully supporting company and academic partnerships for over 47 years across a range of industries and sectors throughout the UK. In recent years, there have been between 700 and 900 such partnerships, with around 200 projects ending and a similar number replacing them. From next year onwards, we are expecting that the KTP programme will support nearly 1,000 such partnerships. Around 94 % of these partnerships achieve or over-achieve their objectives, and c.65 % of the Associates, who act as the conduits of knowledge transfer from the academic teams to the companies, remain with their host companies. I am truly excited to have the partnership between TRB Lightweight Structures and the University of Bristol join our KTP family."