

Rolls-Royce

Materials Engineer - CTAL

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Description

We are currently recruiting for a Materials Engineer - Composites to join the Materials team within the CTAL group.

This is an exciting opportunity to be part of the industrialisation team that will set up CTAL's composite pre-production and production facilities within the Bristol site.

CTAL is at the forefront of advanced carbon fibre design and automated manufacturing, developing the next generation of Rolls-Royce fan blades and casings for future large and medium sized civil engines. These high technology lightweight components have the potential to significantly improve Rolls-Royce's competitiveness through reduced engine fuel consumption and improved environmental emissions.

CTAL is a wholly owned subsidiary of Rolls-Royce, currently based on the Isle of Wight. CTAL is a pre-production facility, created to deliver the composite fan system (blades and containment case) capability upon which future civil gas turbine products will depend. Between 2017 and 2019 there will be a phased relocation from the current IoW facility to the Bristol Rolls-Royce campus, where CTAL will grow to become the Rolls-Royce composite centre of competence.

This role will be based in Bristol but will require travel to the CTAL facility in East Cowes, Isle of Wight as and when appropriate.

Key Accountabilities:

- Lead materials development programs involving the testing of non-standard test coupons and the effects of manufacturing processes on the material performance.
- Work with an integrated product team of design, materials and manufacturing engineers to introduce and standardise composite components and manufacturing processes.
- Identify insertion technologies, executing test plans (screening and qualification), coordinate suppliers, developing, writing and maintaining materials and process specifications.
- Work directly with test houses to create and execute projects to the required standard.
- Identify process parameter relationships (KMPV's/KPV's).

Qualifications

- Background in fibre reinforced organic matrix composites in an aerospace or related technical field.
- Strong technical knowledge of the composite material systems: understanding of their limitations in both the design and processing of composites.
- Understand the mechanical, physical and chemical properties required to assess the material.
- Experience in relating process and environment to structural property knockdown factors.
- Experience in analysing data, characterising materials and writing associated technical reports, in line with aerospace industry standards such as CMH-17.
- Knowledge of composite processing methods that can be applied to component manufacture (prepreg composite layup, adhesive application, surface preparation and protection, machining, NDE, chemical processing and cleaning).
- Good understanding of composite design and stress methods.
- Ability to be a technical leader within a manufacturing / materials engineering role.
- Experience in, and / or ability to work with external companies, universities and government agencies.
- Able to plan and execute technical projects.

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