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| **Job Description**  The Job Description Form should be used for all roles within The Manufacturing Technology Centre (MTC). This form should be completed by Head of the Department or Human Resources. A Recruitment Authorisation Form must also be attached. | |  |
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| **Job Title:** | Manufacturing Engineer (Additive) | |
| **Grade:** | **4** | |
| **Department/Theme:** | HTRC | |
| **Location:** | The Manufacturing Technology Centre Ltd., Ansty Park, Coventry, CV7 9JU. | |
| **Reporting To:** | Manufacturing Engineering Manager | |
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| **Job Purpose:** | As a Manufacturing Engineer based at our High Temperature Research Centre (HTRC) in Ansty, you will conduct research and improvement activities related to the design and manufacture of turbine components. The HTRC is a collaboration between the University of Birmingham and Rolls-Royce and is equipped with state-of-the-art equipment for investment casting, machining and advanced metrology of single crystal components.  The Centre has three key aims:   1. Design & make of turbine components for engine development projects 2. Develop novel design and manufacturing techniques to enable future design styles and manufacturing technologies 3. Accelerate cost reduction and casting/machining yield improvement activities for Turbine components.   You will work within our co-located design and manufacturing engineering teams within the HTRC and in close collaboration with a wide range of researchers from the relevant academic fields.  Manufacturing engineers are responsible for the method of manufacture that delivers component requirements and support both process engineering and project delivery tasks. Whilst an engineer may have a particular process or project focus they will be able to support both functions. **This role has a focus on Ceramic and Wax Additive Manufacturing Capability for use in Investment Casting.**  Process engineers are primarily accountable for the equipment and process methods used within the HTRC, they drive best practice and continuous improvement into their process area whilst acting as a central point for knowledge management and communication across the HTRC and externally with suppliers, customers and partners. They also play a key role in supporting and liaising with the operational teams ensuring safe and reliable equipment and processes.  Project Engineers understand customer requirements and translate them through consultation into a method of manufacture managing the associated technical package. They create, manage, and deliver the project using planning, risk management and cost tools whilst effectively managing key stakeholder expectations. They also act to ensure validation and substantiation of the component and manage any arising non-conformance or quality concerns to ensure compliance to specifications and a safe method of manufacture. | |
| **Duties & Responsibilities:** | Responsible for :-  Understanding customer requirements  Working with the customer to optimise the design of products (DfM) to ensure an optimum manufacturing method can be generated.  Defining project plans and associated costs and lead times  Manage project risk and delivery  Supporting the defining tooling, jigs and fixtures  Creating and managing experiments to understand and develop manufacturing and component capability,  Creating and managing methods of manufacture and technical package allowing component manufacture and delivery.  Understand inspection requirements and develop inspection capabilities  Resolving non-conformance to ensure an in spec product is delivered to the customer.  Continuously improve current and develop novel manufacturing capability for turbine component manufacture  Influencing the creation and deployment of future manufacturing capability roadmap to ensure world class processes are operated.  Understand equipment requirements, develop equipment capability  Ensure stability and reliability of process equipment and process methods  Continuously improve equipment and process methods  Develop and coach Technicians in manufacturing processes.  Documenting and sharing lessons learned and best practices  Benchmarking external capability | |
| **Candidate Specification:** | The candidate will be required to :-  Influence in a positive way following the MTC “Right Way”.  Be degree qualified or demonstrate equivalent technical capability based on practical knowledge and experience  Have sound understanding of manufacturing engineering and component engineering principles  Demonstrate technical knowledge of turbine components and/or process knowledge associated with investment casting and/or machining of turbine components. **This role requires an understanding of ceramic and wax additive manufacturing capability**  Be equipped with a strong functional skill set (problem solving, programme management, change control, risk management and budgetary control)  Recognised as a self-driven, proactive team player with strong communication skills. | |
| **Key Deliverables:** | Develop proof of concept solutions  Impact partner profitability  Generate world leading research and innovation  Develop expertise in single crystal casting and machining technology for Turbine components | |