**Job Description**

**Job Title:** Manufacturing Engineer – Project Engineer

**Career Level: 4**

**Department or Business Sector: HTRC**

**Location**: Coventry

**Reporting to (manager’s job title): Manufacturing Engineering Manager**

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| **Heading:** | **Description** |
| 1. **Job Purpose** | As a Manufacturing Engineer based at the 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 Project Engineering tasks**  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. |
| 1. **Communication** | You will maintain regular communication across the internal team within the department and engage key customers outside the centre to understand requirements.  You will be able to communicate and exchange ideas effectively and concisely both verbally and in writing. You will be collaborating with colleagues both internally and externally (Operations, Designers, Researchers and Project Teams) to achieve goals and objectives and seeks and acts on feedback from colleagues. |
| 1. **Innovation** | The HTRC has innovation at its heart, as a manufacturing engineer you will be part of a team leading activities to:   * Developing 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 |
| 1. **Knowledge** | You will be:  Degree qualified or demonstrate equivalent technical capability based on practical knowledge and experience  Have sound understanding of manufacturing engineering and component engineering principles  Ideally demonstrate technical knowledge of turbine components and/or process knowledge associated with investment casting and/or machining of turbine components  Be equipped with a strong functional skill set (problem solving, programme management, change control, risk management and budgetary control)  Candidates with experience in some of the following will be strongly positioned to perform this role:   * Experience working in research environments * Worked with customers to optimise the design of products (Design for Manufacture - DfM) to ensure an optimum manufacturing method can be generated. * Defined tooling, jigs and fixtures including experience with CAD software packages * Experience in CAM activities * Created and managed experiments to understand and develop manufacturing and component capability * Created and managed methods of manufacture and technical packages allowing component manufacture and delivery. * Knowledge of inspection requirements and experience developing inspection capabilities * Resolved non-conformance to ensure an in-spec product is delivered to the customer. * Acted to continuously improve current and developed novel manufacturing capability for turbine component manufacture * Influenced the creation and deployment of future manufacturing capability roadmaps to ensure world class processes are operated. * Understood equipment requirements, developed equipment capability * Ensured stability and reliability of process equipment and process methods * Developed and coached Technicians in manufacturing processes. * Benchmarked external capability |
| 1. **Person Specification** | All aspects of the role are to be carried out as an exemplar within the business in adhering to the MTC RIGHT way:   * Acting responsibly, putting MTC’s interests ahead of personal ambition; * Providing inspirational leadership to all who come in contact with you; * Delivering in the broadest sense a great working environment; * Leading with humility, honesty and integrity in all that you do; * Promoting teamwork, supporting through difficult times and collectively celebrating our successes.   In addition:   * Recognised as a self-driven, proactive team player with strong communication skills. |