**Job Description**

Job Title: **Manufacturing Engineer - Metrology**

Career Level: **4**

Department or Business Sector: **Workshop**

Location: **Ansty**

Reporting to: **Manufacturing Engineering Manager**

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| **Heading:** | **Description** |
| 1. **Job Purpose** | The Manufacturing Engineer – Metrology role is to turn a customer demand (a specification) into a method of manufacture that can then be executed to meet the customer demand within the required lead-time and cost. Based within the MTC’s Workshop organisation the role:   * Works with design teams to execute effective design for manufacture/inspection to meet project milestones. * Develops and validates manufacturing processes working alongside engineering teams and external project partners/customers. * Capture customer requirements and provide estimates for cost and lead time. * Creates process documentation such as inspection plans, production method and sequence, PFMEAs, process flow charts and control plans. * Has responsibility to continuously improve manufacturing methods in order to reduce lead-time, reduce cost and minimise the chance of non-conformance. * As a highly skilled practitioner is expected to be involved in the operation of the manufacturing processes to deliver the final product. * Manage non-conformance, to create methods to bring non-conforming product back within specification. * Leads the improvement of manufacturing processes considering safety, quality, cost, efficiency and process flow. * Works with the research themes using their practical insight to influence technology roadmaps to ensure that future manufacturing capability is developed and deployed into the Workshop to further optimise our manufacturing methods. |
| 1. **Communication** | Good oral communication skills and confidence in dealing with a range of people, including operators, clients, contractors, designers, and directors.  Precise and concise written communication skills  Data competent and able to manipulate data to explain a point of action. |
| 1. **Innovation** | Work as part of a team to introduce new manufacturing capabilities.  Have a focus and passion for continuous improvement.  Creative and out the box ability and thinking  Comfortable working in a rapidly changing environment, developing and adopting new processes and practices quickly.  Create and lead improvement projects including developing roadmaps to expand capability within the metrology lab. |
| 1. **Knowledge** | Significant, proven experience and technical expertise in metrology and inspection.  Degree qualified in an Engineering, Industrial or Manufacturing discipline or equivalent experience and qualifications.  Highly competent in understanding and interpreting BS:8888 into methods of inspection and influence design for inspection across the design teams in a variety of engineering sectors.  Experience of using or a good understanding of the capabilities of non-contact and traditional Metrology Equipment and able to apply this to practical problems.  Advanced CMM programming experience and a willingness to learn and adopt new software packages such as Quindos, Modus, and Polyworks.  Ensure measurement of Components are completed in a timely and accurate manner and carrying out inspection tasks where required.  Desirable:  Ability to program using Quindos or Modus is a distinct advantage.  Polyworks Capability  Understanding of 3D-Surface finish (Alicona, Sensofar) and 3D XCT.  Experience of using or working with GOM systems and/or Leica Laser Tracker  Knowledge of Leica Laser Tracker and SA  Used a Variety of Non-Contact Measurement Systems |
| 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:  Customer and quality focused  Ability to work independently and as part of a team.  Excellent problem solving and root cause analysis skills and enjoys solving complex manufacturing problems.  Capable of influencing a team to deliver customer requirements  Think strategically about the future manufacturing capabilities. |