

<b>Job Title</b>	Materials Engineer	<b>Department</b>	C6390
<b>Reports To</b>	R&D and Manufacturing Engineering Manager	<b>No Direct Reports</b>	None
<p><b>Job Purpose</b>          This Materials Engineer position utilises good knowledge of materials science and engineering principles and practices to identify and advance material solutions to achieve application, design, analysis, manufacturing and quality requirements. The position works cross-functionally on projects that require material science guidance on topics such as material and process selection, failure analysis, material characterisation, and material and process expertise on questions pertaining to manufacturing and quality problems within the operation or in direct support of the supply chain or with our customers.</p>			
<p><b>Key Responsibilities</b></p> <ul style="list-style-type: none"> <li>Investigate material and material processing problems, understand the root cause, and recommend appropriate action.</li> <li>Apply processes such as material selection, material processing validation, structured problem solving and utilise the tools and techniques available for material characterisation and material testing.</li> <li>Understand and apply material specifications and standards to ensure conformance to capability and quality needs.</li> <li>Make recommendations for improvements to these specifications and standards.</li> <li>Produce high quality technical reports to all key business stakeholders.</li> <li>Provide support and guidance to influence technical direction within a project team.</li> </ul> <p><b>Knowledge</b></p> <ul style="list-style-type: none"> <li>Knowledge of material standards in particular stainless steels and bearing steels.</li> <li>Knowledge of special processes including heat treatment of steels, chemical processing, and coatings.</li> </ul>	<p><b>Knowledge (cont/d . . .)</b></p> <ul style="list-style-type: none"> <li>Knowledge and experience of using materials characterisation equipment, such as metallographic preparation, optical microscopy, scanning electron microscopy, EDX, NDT techniques practices and principles, FTIR and any other related technology or practice required to support the operation.</li> <li>Knowledge of and experience of using Microsoft Office tools is required.</li> </ul> <p><b>Competencies</b></p> <ul style="list-style-type: none"> <li><b>Material Characterisation</b> - Interpret mechanical, chemical, micro/macrostructure and physical properties using laboratory equipment to confirm compliance to known standards and correlate these properties with field or component test results to determine robustness; define appropriate material characterisation using suitable laboratory equipment to ensure requirements are met.</li> <li><b>Failure analysis</b> – Analyse component physical and chemical properties using applicable laboratory equipment to identify failure mode in line with established manufacturing processes and operational history. Recommend corrective actions considering material limitations and manufacturing constraints to protect the business and our customer to prevent reoccurrence.</li> </ul>	<p><b>Competencies (cont/d . . .)</b></p> <ul style="list-style-type: none"> <li><b>Component material and process selection</b> - Evaluate component requirements regarding fitness for purpose, form, and function to identify base material and processing options; select manufacturing route and select material and processes based on best-fit option(s) aligned to requirements; validate selected material and process by defining necessary test plan to prove capability to requirements.</li> <li><b>Technical documentation</b> - Document information based on knowledge gained as part of technical function activities; communicate to stakeholders with the goal of enabling improved technical productivity and effective knowledge transfer to others who were not originally part of the initial learning.</li> <li><b>Communicate effectively</b> at all levels.</li> <li><b>Collaborate</b> - building partnerships and working collaboratively with others to meet shared objectives, including group colleagues globally.</li> <li><b>Builds network</b> - effectively building formal and informal relationship networks inside and outside the organisation.</li> <li><b>Effective decision quality</b> - Making good and timely decisions that keep the organisation moving forward.</li> </ul>	

**Qualifications/Experience/Skills**

- Candidates will preferably have a degree in Materials Science/Engineering/Metallurgy or a related discipline.
- Experience in an Aerospace or Automotive environment would be an advantage.
- Several years of metallurgical experience predominantly with steels.
- Good communication skills.
- Ability to 'think outside the box'.

We will provide the necessary product knowledge on-the-job training.