

**Job Description for Chief Engineer - PEMD (108795)**

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|------------|-----------------------|
| Job Title  | Chief Engineer - PEMD |
| Department | WMG / PEMD            |
| Grade      | 9                     |

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| Job purpose (a brief summary of the role) | <p>A recognised leader and expert in the design, manufacture, and application of advanced electrical machines and manufacturing developments that will improve total cost, performance, and efficiency.</p> <p>The Chief Engineer will be responsible for the development of the department staff and facilities. They will formulate new partnerships with academia, industry, and internal stakeholders such as business development, academics, and facilities.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Duties and responsibilities               | <ol style="list-style-type: none"> <li>1. To provide leadership for the PEMD team and WMG Winding Centre of Excellence. This includes effective leadership of strategy &amp; planning, resources, insights and technical publications and results of project targets and quality expectations.</li> <li>2. To represent WMG as an expert in electrical machine development, manufacturing, and testing. To work with WMG colleagues to identify the challenges and needs faced by industry to identify, pursue and successfully secure funding. To develop collaborative research activities with partner organisations.</li> <li>3. To broaden the research and development network in areas related to design, manufacturing, and testing of electrical machines by seeking new industrial and academic partners.</li> <li>4. To manage and prioritise projects to ensure timely delivery of the research programmes and to benefit WMG and stakeholders.</li> <li>5. Hold responsibility for the departmental application and development of engineering tools and methods, from finite element analysis to data signature analysis, to physical assets.</li> <li>6. Provide expertise and guidance to department colleagues to ensure that a coherent approach is made with respect to engineering standards, processes, results, and reports.</li> <li>7. To be the senior responsible person for facilities and workshops associated with the power electronics and electric machines research group, taking charge of health, safety, and environmental requirements.</li> <li>8. Dissemination of research results and publishing technical papers, insights, and other publications</li> <li>9. Working with industrial and university partners to exploit the Winding Centre of Excellence facilities and technology, setting out the facility development plan.</li> </ol> |

**Person Specification**

The Person Specification focuses on the essential and desirable knowledge, skills, experience and qualifications required to undertake the role effectively. This is measured by (a) Application Form, (b) Test/Exercise, (c) Interview, (d) Presentation.

| <b>Essential Criterion No.</b> | <b>Essential Criterion Description</b>                                                                                                                                                                    | <b>Measured by</b> |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| E1                             | A higher degree in a relevant engineering / scientific discipline or equivalent experience.                                                                                                               | A                  |
| E2                             | Relevant experience in electrical machine design, application engineering, manufacturing and testing.                                                                                                     | A & C              |
| E3                             | Extensive knowledge of production or mechanical engineering and manufacturing of complex assemblies in a production line environment.                                                                     | A,C & D            |
| E4                             | Ability to provide expertise and technical leadership to a multi-disciplinary team of engineers and researchers.                                                                                          | A,C & D            |
| E5                             | Experience of executing tendering and selection processes for capital equipment and subsequent installation and commissioning.                                                                            | A & C              |
| E6                             | Ability to influence and negotiate in a professional manner, with excellent communication skills, (written and verbal) to interface appropriately with students, academics, and industrial collaborators. | A & C              |
| E7                             | The ability to formulate, analyse and solve complex problems with multiple stakeholders.                                                                                                                  | A & C              |
| E8                             | Experience of setting and executing strategic direction, including business reviews, project reviews and workforce capacity and capability planning.                                                      | A,C & D            |
| E9                             | Proven ability to correctly prioritise a broad range of requests from many customers, both internal and external, and ensure safe operation.                                                              | A,C & D            |
| E10                            | Knowledge of financial investment business cases, value propositions and production line investments.                                                                                                     | A,C & D            |
| E11                            | IP generation, innovation management and exploitation.                                                                                                                                                    | A,C & D            |

| <b>Desirable Criterion No.</b> | <b>Desirable Criterion Description</b>                              | <b>Measured by</b> |
|--------------------------------|---------------------------------------------------------------------|--------------------|
| D1                             | Active Membership of an appropriate institution, eg IET, IMechE etc | A                  |