**SELWOOD LTD**

**POSITION DESCRIPTION: Mechanical Design Engineer**

**BUSINESS UNIT:** Selwood: Pump Sales and Manufacturing

**LOCATION:** Chandler’s Ford

**POSITION PURPOSE:** To produce design and detail drawings, together with written specifications, to enable manufacture of Company products, prototype components and test fixtures.

**RESPONSIBLE TO:** Engineering Manager

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| **REGULAR CONTACTS:** | **External**  | Contractors & Suppliers |
| **Internal** | Operational DirectorSales Managers and Sales TeamsAll Departmental ManagersOperational ManagersQuality & Production DepartmentSupply Chain Department |

**MAIN RESPONSIBILITIES:**

**Design Function**

* Design and detail of mechanical assemblies for electrical and diesel driven pumps, based on customer or business requirements.
* Design and detail of castings & machined components of Positive Displacement and Centrifugal pumps.
* Design & Detail of structural components including safety critical lifting equipment in accordance with Regulatory requirements.
* Make use of all latest manufacturing techniques, including the use of latest British Standard, Euro Normalised or ISO Standards.
* To produce accurate design, bill of materials, detailed drawings in accordance with international standards and company procedures, proposing timescales for completion to the Engineering Manager.
* To ensure designs are functional, safe, and cost effective, while maintaining the highest quality and Health & Safety standards.
* To produce concise written specifications which give all information necessary for procurement of required proprietary parts.
* Ensure technical files assessments for new installation are complete in accordance with CE & UKCA Marking Directives.

**Project Function**

* To be responsible for small and medium size (up to 3 months) engineering projects with minimal supervision and regular consultation.
* To progress larger size projects with other members of the Engineering team.
* To contribute with N.P.I. (New Product Introduction) projects, from concept to production handover.

**Support Function**

* Implement changes to improve productivity, quality, and cost.
* To work closely with production engineering and ensure day-to-day issues are resolved.
* To ensure all deviation requests (concessions) are dealt with promptly.
* To assist with queries from the different departments within the organisation and sub-contract suppliers.
* To liaise with suppliers to ensure ‘best available practice’ is maintained through the manufacturing process.
* To maintain Design Office records in accordance with Company procedures.

The main responsibilities are outlined above. This is not a definitive list, and other tasks/activities may be necessary as the Company’s commercial activities require.

**QUALIFICATIONS & EXPERIENCE:**

**Essential:**

* Minimum – Degree or HND/HNC in a relevant discipline (e.g. mechanical engineering).
* Proven experience of designing products from concept stage to manufacturing, in a Mechanical Design Engineering role.
* Previous experience of designing products in a manufacturing environment.
* Proven experience working on aluminium and iron castings, sheet metal, close tolerance machining.
* Proven experience designing using 3D CAD software (preferably Solidworks), including use of PDM systems (preferably Solidworks PDM Professional).
* Technical knowledge of Finite Element Analysis (FEA), stress calculation and bearing system design.
* Good reporting and communication skills with project members & directors, with the ability to present designs to a wide audience and take notes/actions from relevant meetings.
* Ability to collaborate within the business, to develop innovative solutions and processes, with the ability to think outside the box as well as take ideas from external sources.
* Ability to be critical thinking, adapt to customer requirements, and define a solution with flexibility of constraints.
* Ability to act proactively / be forward thinking whilst maintaining a methodical, attention to detail approach.
* Strong attention to detail, able to read and review design drawings, to notice potential errors and put forward alternative solutions.
* Excellent technical, analytical, and problem-solving skills for diverse and complex issues in high-pressure manufacturing environments.
* Ability to meet product development deadlines and quality parameter targets.

**Preferred:**

* Knowledge of diesel engine 12/24VDC systems.
* Chartered Engineering Qualification.
* Some experience of heavy machinery, construction & water industry.
* Experience on diesel engine & electric motor installations.
* Fluid dynamic and centrifugal pump design experience.
* Experience in plastic mouldings (rotational, injection & vacuum forming).

**Statutory requirement:** Each employee must ensure that all tasks are carried out within the company health and safety policy, and any relevant codes or practise, including COSHH sheets and other instructions, to minimise risk to themselves and other personnel and that good housekeeping applies at all times.