

Job Title:	CAD Electrical Design Engineer
Location:	Glasgow (requirement to visit other locations, including Customers sites)
Responsible To:	Engineering Manager – Hydrogen and Clean Energy Division
Direct Reports:	None
Review Date & Rev No	17 Jan 24 r2

Purpose of Job:	<p>The function of the CAD Electrical Designer is to support the design and development of new electrical systems across projects, products and proposals, producing electrical drawings and documentation.</p> <p>Key Duties:</p> <ul style="list-style-type: none"> • Carry out electrical engineering review of customer specifications. • Work within the Hydrasun engineering team to compile detailed electrical engineering solutions in line with customer requirements. • Prepare electrical schematic diagrams, single line diagrams, cable schedules and MTO. • Work with the tendering team to compile Electrical costings in line with customer RFQ's • Compile complete electrical system layouts and drawings using CAD. • Liaise with the workshop engineers throughout the build of projects to oversee all electrical aspects of the project. • Liaise with customers to establish and develop electrical system specifications to meet the project needs. <p>Ensure that the electrical input to all projects and products is delivered technically fit for purpose and compliant with relevant legislation, standards and industry guidelines.</p> <p>This role may require intermittent travel to project sites for occasional meetings and surveys. The EDE must be organized, a multitasker and able to work effectively in a fast-paced environment.</p>
Key Areas of Responsibility:	<p><u>Technical Duties</u></p> <ul style="list-style-type: none"> • Implement project/client requirements into electrical design. • Prepare electrical load list, schematic diagrams, single line diagrams, cable schedules and MTO. • Perform calculations for equipment sizing, UPS, cable sizing, lighting, grounding and heat tracing. • Prepare specifications, data sheets, cable schedules and interface schedules. • Produce material take-off and material requisition. • Review and input to Bids and Technical Evaluation. • Design and checking of single lines, schematics and wiring diagrams, area classification, grounding, panel/cable schedules, equipment layout, cable layout, tray layout, lighting and installation details.

	<ul style="list-style-type: none"> • Review and coordinate electrical models with the other disciplines. • Design, implement, review and coordinate electrical 2D CAD drawings. • Review vendor drawings. • Visit construction/plant sites and fabrication/manufacturing facilities during design phase on as required basis. • Attend Factory Acceptance Tests (FAT's) and Sites Acceptance Tests (SAT's) for equipment on assigned projects. • Provide construction support and assist with pre-commissioning, commissioning and start-up activities for electrical systems when required. • Coordinate the efforts of Electrical Sub-Contractor(s), ensuring that the Contractor meets expectation in terms of time, cost, quality & HSE. • Supports the Construction Department in the preparation and review of Construction Contracts, selection of bidders, evaluation of tenders and the attending of site meetings as may be required. • Provide information where necessary to estimate the cost of contract changes on assigned projects. Alert the Project Engineer / Project Manager to circumstances considered to be subject to contract change. • Advise the Engineering Manager of any slippages / deviations and their causes and proposed corrective action and of any technical problems and unresolved differences with other groups. • Liaise with Customer Focal points to ensure the pro-active management and delivery of the Services, in line with client contracts and individual project/work scopes. • Liaise direct with clients to inform them of Hydrasun Services and where these services can provide added value. • Identify and supply pro-active asset management proposals to customers in order that we are adding value to our existing services. • Present work scope and asset presentations and deliver to customers. • Liaise with other departments to ensure clarity of understanding of all customer/project requirements. • Ensure knowledge of industry developments is kept up to date. • Ensure development and improvement of existing products and services. • Ensure activities within the electrical discipline meet agreed target completion dates. • Provision of accurate and detailed reports encompassing all aspects of Key Areas of Responsibility. <p><u>Continuous Improvement / Personal Development</u></p> <ul style="list-style-type: none"> • Responsibility for understanding and working towards company targets and objectives. • Responsibility for understanding, agreeing and achieving personal objectives set by Line Manager. • To adhere to the procedures as detailed in the HSE Management System and Quality Management System. • To adhere to company procedures as laid down by the Human Resource Management System and to take an active part in the Performance Management Process and the Competence and Training Programme. • To adhere to any duty rota which may be in force. (Weekend/evening on call, etc.). • To complete timesheets, where required, on a timely basis. • To put forward any suggestions for improvements. • To attend formal Team Briefings when requested in your own time. • To be a team member and actively promote communication and information sharing.
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Interfaces:	<p>Internal: Project Engineering Team, Customer Services, Key Account Management, Hydrasun Management, Sales Department, Stores, HR, QA, Safety, IT</p> <p>External: Customers, Suppliers, Specialists, Industry bodies, Auditors</p>	
Qualifications:	Essential	Desirable
	<ul style="list-style-type: none"> Degree in Electrical Engineering. 	<ul style="list-style-type: none"> Working towards or achieved Chartered Status.
Experience Required:	Essential	Desirable
	<ul style="list-style-type: none"> Significant and demonstrable experience in detailed engineering and design of electrical works. Relevant, previous experience of working in a design engineering environment. Experience of carrying out engineering design, development and manufacture of electrical power and control systems. Proficient in the design of electrical power and control systems, that integrate with hydraulic systems. General knowledge of other related disciplines. Must be self-motivated, results oriented, and be flexible to work well under tight schedules in a fast paced multi-disciplinary team environment. Fully familiar with international codes, standards and recommended practices standards e.g. ANSI, IEEE, IEC, NEC, ISA, NEMA, CSA, UL, API as well as hazardous area classifications and equipment. Proficient in design and calculation software. 	<ul style="list-style-type: none"> Experience working in an Oil and Gas Service Company environment. Experience of integrating electrical systems with hydraulic systems. Active participation in engineering reviews and/or investigations with customers. PED/ATEX. AutoCAD or similar. Experience in a 'new energies' business (renewables, hydrogen, wind, wave, solar).
Skills/Training/Competences:	Essential	Desirable
	<ul style="list-style-type: none"> MS Excel, Word, PowerPoint and Project experience. CAD systems. Effective oral and written communications and excellent interpersonal skills with the ability to deal effectively with the design team in the resolution of project related issues. Good organisational and administration skills. Ability to maintain a professional and focused approach at all times, particularly when customer facing 	<ul style="list-style-type: none"> Knowledge of materials and processes used within Offshore/Onshore oil and gas and Marine operations. Training and competency in renewable technologies.



JOB DESCRIPTION

Please note that you may be requested to undertake other duties from time to time and it is possible that your duties may change over time. You will be expected to co-operate with all reasonable requests. If the changes are deemed to be longer term then this job description will be revised.

Signature of Job Holder: _____
Name in Capitals ()

Date: _____

Signature of Manager: _____
Name in Capitals ()

Date: _____