Job Description – Primary Electrical Design Engineer

Based in our design office in Sheffield, South Yorkshire – will include some travel across the UK / ROI

Negotiable dependent on candidate and relevant experience

Reporting to the senior design manager

Mon to Thurs 08:30 to 17:00 and Fri 08:30 to 16:00 – with half an hour for lunch.

WHO WE ARE

Smith Brothers Ltd is a large, turnkey electrical contractor with 20 years' experience. Since our inception in 1999, we've worked on a vast portfolio of projects throughout the UK and overseas, both as an ICP and EPC contractor on projects up to 132kV.

Whether we're working on a high or low voltage distribution system, a simple assignment or a complex turnkey project, we have varied and in-depth expertise at our fingertips. Our team is made up of highly-trained electrical engineers, jointers, wiremen and fitters – not to mention back-office staff including estimators and project coordinators.

We're now looking to bolster our in-house expertise with the appointment of a **primary electrical design engineer.**

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ROLE INFORMATION

The primary electrical design engineer has a pivotal role to play in the development of our projects, undertaking the design of power cable systems, overhead structures, substation plant and layout design up to and including 400kV for independent / private network connections (IDNO/ICP), balance of plant contracts and connections to the UK DNO's including UKPN, WPD, NPG, SSEN and SPEN.

The day-to-day role will include:

- Coordinating project requirements at design stage with our civil, electrical, protection and control designers, producing layouts which set the necessary electrical safety clearances and provide the most economic cable routes
- Undertaking detailed design work for HV and EHV cable route layouts (predominantly 11kV to 132kV) producing:
    - Overall cable route layouts
    - trench section drawings
    - joint bay design
    - cable thermal rating calculations
    - cable pulling tension calculations
    - Bonding diagrams
    - working with specialist cable designers where necessary on complex EHV cable system designs.
- Producing substation electrical plant layouts for both indoor and outdoor AIS / GIS substations up to 400kV
- Designing substation earthing layouts up to and including 400kV taking account of the respective national standards and client standards and earthing designs
- Overseeing transformer bund oil containment calculations
- Developing multicore cable layouts and cable containment designs

- Managing the design of electrical bus bars and electrical plant support structures including the calculation of static and dynamic loading forces on plant and equipment and the specification of bus bars and clamps, liaising with manufacturers of plant and support structures as necessary

- Contributing towards the production of electrical plant specifications

- Heating, lighting, and ventilation design to switch rooms and control rooms plus the ability to undertake calculations to prove the requirements from first principles

- Designing cable management systems within switchrooms, control rooms, basements, and trenches

- Planning of lighting systems using Dialux or similar software

- Reviewing layouts for balance of plant projects including gas peaking and battery storage

- Ensuring the law is always complied with, including Health & Safety at Work Act, Electricity at Work, ESQCR and CDM Regulations

- Having an excellent working knowledge of the plant and systems utilised on electrical infrastructure projects covering substations (secondary distribution up to 132kV), underground cable installations up to and including 132kV and overhead lines up to and including 132kV

- Understanding the standards and specifications used within the industry.

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QUALIFICATIONS, SKILLS AND ATTRIBUTES

- Relevant, demonstrable industry experience and track record is essential

- Degree / HNC / HND or equivalent in a relevant discipline plus IOSH Managing Safely in Construction is desirable

- Working knowledge of the plant and systems utilised on electrical infrastructure projects covering substations (secondary distribution up to 132kV), underground cable installations and overhead lines up to and including 132kV.

In addition to:

- A detailed understating of substation plant and equipment up to 132kV

- Awareness of power cable construction and installation methodologies, alongside substation plant

- Experience of design and construction methodologies for wood pole overhead lines up to 132kV and 66kV / 132kV steel lattice towers

- Working knowledge of the CDM Regulations 2015, in relation to the role of the designer

- Existing primary electrical design experience networks operating up to 132kV – ideally gained from working in a DNO or ICP/IDNO environment.

- Demonstrable ability to quickly acquire technical knowledge for changing technological advancements in energy service provisions

- Understanding of appropriate UK legislation and standards

- The ability to take on an outline project scope document, review and translate into detailed design requirements
- Proficient in the use of Microsoft Office applications and AutoCAD, 3D CAD abilities or previous lower level BIM experience may be desirable.
- Capable of prioritising workloads in line with business and client expectations
- Flexible and adaptable when it comes to problem-solving – particularly if faced with unexpected challenges
- The ability to build and maintain strong external relationships
- Excellent time-management and interpersonal skills.

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IN RETURN

As well as a competitive salary, we offer the following additional benefits:

- Ongoing professional development and training
- Pension contribution
- Life insurance
- Private health insurance
- 25 days annual leave – plus bank holidays

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HOW TO APPLY

If you think you have what it takes to join our dynamic team, please send your CV to richard.furniss@smithbrothersltd.co.uk. No agencies please.