Job Title	Senior Control and Instrumentation Engineer
Location	We're operating a **hybrid work model** where the role permits. Our labs are in Hanger Lane, but we offer the flexibility of **Home Office (80%) / West London (20%)**
Type	Full-time
Salary	**Salary plus Shares** We want our team to be invested in the business, rewarded through the creation of value. For this reason, we have a shareplan.
Holiday	25 days

About Supercritical:

Supercritical is developing the world's first high pressure, ultra-efficient water electrolyser for green hydrogen production. The system will be capable of overcoming many of the limitations experienced by today's incumbent electrolysis technologies. By harnessing the benefits of heat and pressure, Supercritical's proprietary design enables us to operate in the region of the highest electrical efficiencies seen commercially today, whilst delivering hydrogen at high pressure which is perfect for storage. The resultant green hydrogen and oxygen products that we produce can be used to decarbonise heavy industry, chemicals, transport and more. We have recently closed a £2.6million funding round and have announced two incredible projects - WhiskHy and GreeNH3

Globally 'Top 50 to watch for climate action' - CleanTech Group
Top5 Zero Emission Solution to watch in 2022 (StartUS Insights)
Runner-up and People's Choice in 'Shell's 2021 New Energy Challenge'
Finalist 'Hydrogen Hypothesis' - OZ Minerals
'Most Promising CleanTech Solutions in 2023' - CEMEX Ventures
'100 Most Promising Global Energy Start-ups of 2023' - Start Up Energy Transition

The opportunity:

Supercritical is looking for an experienced Senior Control and Instrumentation Engineer to join the product team. The successful candidate will help take Supercritical's novel electrolyser to market by using their experience to optimise the control system of our test rigs, select instrumentation and engage with vendors regarding the design and implementation of control systems and data logging.

The Senior Control and Instrumentation Engineer, with experience in system design and control and familiarity with British and International standards, will work closely with the wider engineering team, vendors and external stakeholders to drive the system towards certification. They will use their experience and knowledge in electrical equipment to support electrical design around the balance of

plant around the electrolyser and work with the technology team to design the electrical connections in the electrolyser at cell level.

With multiple projects now secured and technology demonstrators in the works, we need a bright, passionate and driven person to join the team to help us fulfil our mission to pioneer hydrogen technology that enables industry to transition beyond fossil fuels.

We're really excited about expanding and diversifying our team. Coming from a diverse background ourselves, we do not discriminate regardless of disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race (including ethnic or national origins, colour and nationality), religion or belief (including lack of belief), sex, sexual orientation or any other characteristic. We can't wait to have you on board!

Accountabilities:

You will

- Develop and use a broad understanding of the system to balance challenges among multidisciplinary teams and help them optimise the whole rather than the part.
- Develop concepts and perform feasibility analyses given an incomplete problem definition.
- Lead control system design internally and with third party design partners, developing the internal control philosophy, development roadmap and data architecture.
- Identify and spec suitably-ranged instrumentation and manage its implementation with appropriate software.
- Gather and articulate needs and constraints from stakeholders, colleagues, vendors, to enable full coordination and agreement across stakeholders (subsystems, vendors, or clients) on common interfaces.
- Ensure all applicable national and international codes of practice, legislation and company/client standards and procedures are complied with.
- Offer expert insight in system design reviews and in safety reviews such as HAZOPs and FMEAs.
- Support product design from a systems perspective, working closely with the technology, process, safety and mechanical teams.
- Seek out standards and track compliance with safety regulations, processes, and/or best practice.
- Create and maintain system documentation such as Interface Control Documents, System Descriptions, Requirements, etc.
- Develop and execute integration & test plans focused on requirements verification within programmatic constraints.
- Support engagements through stakeholder engagement, data analysis, and techno-economic modelling.
- Support in a wider range of activities that are crucial to enabling Supercritical's success.

Direct applicants only - no agencies.
Supercritical are not currently in a position to sponsor overseas applications.

About you

You will

- Thrive in a startup environment as a self starter and proactively identify problems and pursue solutions. Flexibility and responsiveness in a fast-paced, dynamic, small team environment
- Be passionate about a net zero environment, excited by innovation and proactive in your pursuit of it.
- Be Degree qualified (or equivalent) in relevant engineering discipline (e.g. Electrical / Instrumentation & Control / Process Engineering)
- Have 6+ years of professional experience in relevant engineering design roles.
- Have good working knowledge of design practices and installation requirements of the discipline across a range of industries with extensive UK legislation and standards and HSE requirements
- Experience with IEC regulations & all relevant UK standards and specifications.
- Experience on testing, checking and commissioning of systems, wiring diagrams, specifically onto the control side, design of control panel/ software for automation
- Knowledge of HV isolations, energisation and commissioning requirements.
- Experience in the requirements for CE marking of plant and equipment, including ATEX, PED, Low Voltage Directive, Machinery Directive and EMC Compliance
- Have strong organisational skills, attention to detail and enjoy working in a team environment.
- Be able to manage multiple projects simultaneously without losing sight of the long term goal.
- Demonstrated experience in life-cycle development of hardware for a safety-critical system or product
- Strong focus on clear definition of the need before selecting a solution
- Solid simulation, analysis, and/or data interpretation skills
- Experience in Python, MATLAB, LabVIEW, SolidWorks CAD
- Ability to write and speak clearly about a technical subject matter

Desirable

- CEng certification.
- Knowledge of the hydrogen industry, electrolysers and/or fuel cell technologies is an advantage.
- Experience in renewable power equipment development would also be an advantage.
- Have worked in early stage product development and delivering a pathway to commercialisation.

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