



Job Title	Senior Process Safety Engineer
Location	We're operating a hybrid work model where the role permits. Our labs are in Hanger Lane, but we also operate a home office. Home Office (80%) / West London (20%)
Type	Full time
Salary	Up to £50,000 / annum Experience dependent
Equity	We want our team to be invested in the business, rewarded through the creation of value. For this reason all new full time employees will be invited to join our share scheme .
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.

Globally 'Top 50 to watch for climate action' - CleanTech Group
Runner-up and People's Choice in 'Shell's 2021 New Energy Challenge' - Shell
Finalist 'Hydrogen Hypothesis' - OZ Minerals

The opportunity:

Minimising harm to personnel and the environment is central to Supercriticals' ethos as we move through product testing and certification to build electrolysers at increasing scales. Supercritical is looking for an experienced Process Safety Engineer to join our Product team, who will focus on bringing our proprietary reactor design and associated balance of plant through increasing scales, from demonstrator to pilot to commercial size. You will also support our Technology team who focus on electrolytic testing at larger and larger scales within our test environments and partner sites.

The Process Safety Engineer will drive our safety analysis, conduct risk, hazard and safety assessments and develop mitigation strategies and safety processes. By working within our technical team and with our respected partners and subcontractors, the new role will help to pioneer safe electrolysis under supercritical water conditions. We are asking for someone to



ask “How can we do this safely?”, and build an empowering culture around safety in our team.

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:

- To be a key member within Supercritical's Product team (product development). To ensure that our designs for scaled up technology have an acceptable level of risk at every scale.
- To work with Supercritical's technology team, evaluating our lab scale testing, and work to minimise hazard and risk. You will have an important role in decisions, enabling a safe experimental set up through our expansion to larger test facilities.
- Lead team workshops and define safety-related documentation including safety basis, control of hazardous substances (COSHH), Failure Mode and Effects Analysis (FMEA) Risk Assessments (RA)s and Standard Operating Procedures (SOPs).
- Zoning hazardous areas for explosive atmospheres (ATEX / DSEAR).
- Responsible for ensuring readiness for HAZOP, HAZID, and risk management.
- Safety and environmental impact assessments.
- Ensure all safety-related requirements are defined, completed and traceable through to verification and validation.
- Write equipment specifications and preliminary instrument specifications where applicable.
- Project manage the implementation of safety work packages.

About you

You will

- Be passionate about a net zero environment, excited by innovation and proactive in your pursuit of it.
- Have a masters degree or above in Chemical / Process Engineering.
- Have 6+ years of relevant experience within the Gas, Refining, Petrochemicals, Chemical, Nuclear, Space or related industries in process safety, loss prevention, or plant operations.
- Have demonstrated significant experience of working with high pressure/high temperature systems and flammable gases.
- Experience of dispersion & blast safety spec calculations.
- Be experienced in safety monitoring equipment, instrumentation, process control, and HVAC.
- Be committed to inherent safe design and to the minimisation of risk.
- Thrive in a startup environment as a self-starter and proactively identify problems and pursue solutions.
- Have strong communication and organisational skills, attention to detail and enjoy working in a team environment.

Direct applicants only - no agencies.

Supercritical are not currently in a position to sponsor overseas applications.



Desirable

- Knowledge of water electrolysis, hydrogen, its applications and its uses.
- Chartered engineer status.
- Experience of Layers Of Protection Analysis (LOPA).
- Environmental Impact Assessment reporting.
- Experience of design simulation tools such as Aspen Plus, Hysys or Unisim.

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