



Job Title	Senior Process 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 Equity 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.

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

The opportunity:

Supercritical is looking for an experienced and dynamic Senior Process Engineer to join our product development 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 which focus on electrolytic testing at larger and larger scales within our test environments and partner sites. By working within our technical team and with our respected partners and subcontractors, the process engineer will pioneer the equipment configuration for safe electrolysis under supercritical water conditions.

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:

- Execute and lead process engineering design activities in a timely and cost-effective manner.
- Collaborate with our subcontractors and vendors to enable our goals of reaching a demonstrator scale plant by 2023, and a pilot by 2024.
- Flowsheet development (PFDs), detailed calculations and mass and energy balance ownership.
- Process control and system design (P&IDs).
- Calculation development for design and sizing of equipment and instrumentation.
- Creating equipment and instrument specifications, and supporting the procurement process.
- Hazard identification and risk management.
- To work with Supercritical's technology team, to support our lab-scale testing and scale-up, working to minimise hazard and risk.
- Contribute to writing bids: both grant application and customer proposals.
- Customer-facing project development and negotiations for product integration.
- Partner and vendor liaison and negotiation.

About you:

You will:

- Be passionate about a net-zero environment, excited by innovation and proactive in its pursuit.
- Have a master's degree or above in Chemical / Process Engineering.
- Hold a senior or equivalent status as a process engineer in a relevant industry.
- Have demonstrated significant experience of working with high pressure/high-temperature systems and flammable gases.
- Be adept in process engineering design from first principles.
- Have demonstrable professional experience throughout the project development lifecycle, feasibility through to delivery.
- Be a proficient user of process modelling software such as Aspen, HYSYS, PRO II or Unisim.
- Worth within our team to collectively ask "How can we do this safely?", and contribute to an empowering culture around safety in our team.
- 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. Be committed to inherent safe design and to the minimisation of risk.

Desirable:

- Electrochemical experience: electrolysis or fuel cells.
- Design experience in hydrogen and oxygen.
- Design experience in supercritical water.
- Thermal design using HTRI.
- Experience in scaling up designs.
 - Chartered engineer status.
 - CFD/modelling experience.