

Senior Process Engineer – Direct Air Capture

At Carbon Engineering (CE), our vision is to lead the world in the large-scale removal of carbon dioxide from the atmosphere and advance our shift to a sustainable carbon-neutral society. Based in the outdoor recreation hub of Squamish, BC, this role will be a great fit for a technically apt, curious and hands-on individual who feels passionately about this vision and wants to be a part of a fast-paced culture.

Position Scope

This is a senior technical role for a Chemical or Process Engineer who understands industrial processes, operations, equipment and laboratory analytics. The ideal candidate will have experience developing, refining and optimizing chemical process plants with a focus on flue gas cleaning, pulp and paper or similar plant operations.

- Reporting to the Manager, Process Engineering (Operations).
- Drive process characterization and optimization.
- Mentor junior Process Engineers.

Responsibilities

- Identify process and equipment characterization opportunities across CO₂ capture, purification, compression and storage operations.
- Use targeted Design of Experiments to develop and execute test campaigns that deliver equipment and process cost/efficiency enhancements.
- Mentor junior Process Engineers in process optimization, experimental design, data analysis and plant performance improvement.
- Guide junior Process Engineers and Operators in the development and QC of test plans as well as protocols for test campaigns.
- Analyze test data, develop conclusions and communicate recommendations to the plant design team.
- Research process equipment and liaise with vendors to arrange on-site pilot testing.
- Identify CE's process Key Performance Indicators (KPIs) and develop an operating approach based on Statistical Process Control (SPC).
- Make use of appropriate Quality Management tools and techniques to ensure that all learning and development opportunities are identified and exploited.
- Write, maintain and update Standard Operating Procedures (SOPs).
- Collaborate with CE's plant engineering team to define future plant control narratives and philosophies.

Qualifications and Experience:

Education: MSc Chemical Engineering or Process Engineering.

Experience: 8+ years of experience developing, refining and optimizing chemical processes.

- Specific plant operations experience in flue gas cleaning, pulp and paper, or similar industry.
- Strong knowledge of gas-liquid mass transfer, reaction kinetics, and thermodynamics.
- Experience with mathematical modeling and simulation of chemical reactors.
- Experience specifically related to CO₂ absorption would be an asset.
- Background in industrial plant design and development is highly desirable.
- Hands on operational experience with chemical process equipment would be an asset.
- Lab experience as it relates to process control and monitoring.
- Experience and comfort working in an R&D environment.

In addition to technical skills, the right fit will:

- Be safety conscious, proactively identify risks, participate in safety audits and inspections, observe and execute safety practices and rules in the workplace.
- Be a self-starter with the ability to work independently towards multiple deadlines with minimum supervision in a fast-paced environment.
- Have a collaborative working style and value team performance above individual recognition.
- Thrive on doing things that have not been done before (explorer mindset).
- Have strong analytical, technical writing and problem-solving skills, as well as strong verbal communication skills.

If this seems like the dream job for you, send your resume to careers@carbonengineering.com and quote "Senior Process Engineer - DAC" in the subject line.

Carbon Engineering is committed to creating a diverse environment and is proud to be an equal opportunity employer. All qualified applicants are encouraged to apply and will receive equal consideration for employment regardless of race, colour, religion, gender, gender identity or expression, sexual orientation, national origin, disability, or age.