Job Description

Job Title	Intermediate Engineer - Control and Instrumentation
Department	Research and Development (APC21)
Reports to	Senior Engineer
Responsible for	Control and Instrumentation

Job Purpose

The intermediate engineer's role is to perform activities within their engineering discipline and adhere to technical guidance on design and safety considerations.

They will execute complex tasks and projects within their discipline. They will also be involved in the design, testing and development of new products within the Bennamann range.

Duties and responsibilities

Leadership:

- Participate in the design of complex systems and products within discipline, with guidance from the senior and principal engineer.
- Work within the team in the safe and effective execution of tasks, co-ordinating tasks between multiple teams on a project with the aid of junior engineers and site supervisors.

Operational:

- Develop, build, and test prototype systems across the product range, with a focus on cryogenic methane systems
- Produce and manage detailed designs of products, liaise with manufacturers to ensure testing and quality checks are carried out.
- Prepare technical documentation to support product certification.
- Prepare technical documentation for sites and products.
- Organise and execute commissioning of prototype cryogenic methane fuel delivery and upgrading systems
- Submit technical content for patent claims and protection of IP
- Follow procedures to ensure compliance with company ISO standards, aligning with responsibility and accountability for actions as documented within HR-101a MyC RACI

Reporting and communication

- Report regularly to the senior engineer, raising any issues or concerns in a timely manner.
- Communicate with work teams and understand the requirements of individuals and groups as a whole.
- Share goals and deliverables clearly so that teams are fully aware of requirements, restrictions, interdependencies

H&S

- Apply risk assessment and reduction methods to projects and work packages through activities such as DFMEA, HAZOP, or design risk analysis.
- Provide technical guidance within projects when required to ensure tasks can be carried out safely and effectively.
- Adhere to site rules and safe systems of work both when on site and in the office. Encourage others to actively participate in working safely.

Role Competencies

Skillset	Desired Level*	Relevant Qualifications or experience
Technical reports and formal calculations	Skilled	Degree qualification, Previous experience of report writing in a professional setting.
Development of test procedures	Skilled	Degree qualification, Previous experience of developing and/or executing test procedures
Design risk analysis	Skilled	Participation in design studies such as: HAZOP, DFMEA, Bow Tie etc.
Technical Drawing preparation and interpretation	Qualified	Preparation or modification of circuit schematics, loop diagrams, PFD, P+ID, Single line diagrams etc.
Control of design	Skilled	Evidence of good record keeping, working within a highly process driven environment, familiarity with document control and sign off.
Electrical wiring regulations	Qualified	City and Guilds 2382-22 18th Edition Course or similar. Experience in design of electrical systems/networks
Physical computing	Skilled	Fluent in preparation of customised electronic circuits and accompanying microcontroller code for rapid prototyping
PCB Design	Skilled	Conversion of prototype circuit to printed circuit board and associated workflow using KiCAD or similar. Assembly & test
Hazardous Area design	Informed	CompEx Foundation or similar.
Atex Equipment Installation and maintenance	Informed	Familiarity with equipment certification meanings and interpretation of protection types.
Instrument wiring techniques	Skilled	Experience with range of instrumentation such as 4-20mA, RTD, ModBus, CANBus etc.
Process Connections	Skilled	Knowledgeable of the various process connections such as compression fittings, threaded connections, flanges, thermowells etc.
PLC programming (Ladder logic, functional blocks, etc.)	Informed	Familiar with industrial programming languages and PLC wiring architecture and programming.
Practical Skills in wiring	Skilled	Previous experience in glanding, termination, labelling etc. of instrumentation loops. Familiar with IP rating significance and techniques.

Practical Skills in Pipework connections	Skilled	Gas Safe certification Previous experience in making up process connections such as flanges, threaded connections, compression fittings, crimp fittings etc.
Qualities, knowledge & skills Personal skills, qualities, behavior, most of these will be essential as many of these cannot be trained	An empathy and affinity with the Bennamann company values: • Safety • Curiosity • Integrity • Passion • Respect and traits: Humility, Empathy, Creativity, Innovation, Open Minds, Transparency In addition: - Follows procedures to ensure compliance with company ISO standards - Adheres to process and policy, including PPE and uniform - Presentable, with the ability to be a positive representative for Bennamann in relationships with customers and suppliers, ranging from farmers to councillors and scientists - Excellent and proven organisation, planning and communication skills - Ability to lead and manage small and diverse teams in projects and key activities	
Additional factors Working conditions/hours, ability to drive, any special working conditions (eg gas handling	Must hold valid UK drivers license Expected to attend office and occasional site visits. Company vehicle provided for site work.	

***Unaware** – No knowledge of topic*
***Informed** – Familiar with topic but not experienced*
***Skilled** – Trained or experienced in parts but not all, can work under supervision on topic.*
***Qualified** – Formally trained and knowledgeable about topic, comfortable with all common issues*
***Expert** – Formally trained and highly experienced, comfortable with approach to wide range of issues beyond the typical norm.*