



Mechanical Engineer – PE Refrigeration

Overview

- As a senior engineer, you will deal directly with customers, suppliers, and our company project teams. You will have local support for designers and have a role in project leadership.
- Design custom industrial refrigeration systems within industry regulations and building code requirements. Refrigerants include freon, ammonia, and CO2. You will be the EOR and stamp drawings as required.
- You will apply refrigeration principles, research industry data, and perform engineering calculations to ensure designs meet customer requirements and Permacold's high standard of quality. This will include the development of equipment RFPs and component specifications.
- You will develop new design schematics, budget estimates, component specifications, and system performance data.
- You will oversee the project from beginning to end and attend on site meetings, while providing expert solutions as problems arise.
- Supporting "Our Planet, Our Responsibility," you will have exciting opportunities to develop advanced environmentally innovative solutions that will benefit generations to come.
- Immediate supervisor is in Portland, we have a team environment, we use a project management system
- Training for maintaining PE will be provided
- Engineering tools include Excel, DraftSight, SolidWorks, CFD, and custom calculators

Functional Role

- To assist the Engineering Manager in planning, and design to maximize the profitability of the company by completing projects on time, and to provide the necessary planning, organization, direction, coordination, and control to meet the established goals of the company.
- Provide ongoing support and engineering expertise to all designers and CAD operators.
- To research and develop the product design and technology development, and product introduction of new equipment and components.

Reporting Relationships

The Professional Engineer reports directly to the Engineering Manager for engineering projects.

At times the Professional Engineer will be personally assigned CADD Designers for completion of some projects.

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Requirements

Education:

Required: BSME.

Preferred: Same as above, and extensive knowledge in design and drafting with AutoCAD or similar.

Experience:

- A minimum of 5 years' experience in a mechanical engineering field, plus experience in ammonia refrigeration systems.
- Three years AutoCAD design and 3D modeling experience.

Skills, Knowledge and Abilities:

- Skilled in the principles, theories, techniques and practices of refrigeration pipeline engineering and operating practices & practice.
- Knowledgeable in refrigeration pipeline integrity management, repair, design, and implementation,
- Knowledgeable in project economics, and risk analysis.
- Strong understanding of technical and regulatory requirements for design, construction and operation of high-pressure ammonia refrigeration facilities, including health, safety and environmental matters.
- Good audience-sensitive verbal and writing communication skills.
- Must have forward thinking ability in the development of new design and processes.
- Ability to respond to common inquires or complaints from customers or regulatory agencies.
- Ability to handle multiple tasks and projects simultaneously.
- Skills in Word, Outlook, file drop boxes, PowerPoint

License/Certification:

- P.E. license or E.I.T. Ability to obtain PE within 6 months of hire in Oregon in addition to various States and Provinces.
- Must have a valid driver's license and be insurable under the Company's insurance carrier.

Physical:

- Sitting for an extended period time using a computer.
- Climb up and down stairs.

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- Able to climb ladders and walk long distances for jobsites

Mental:

- Must be able to translate abstract thoughts and concepts into practical applications that can be easily understood by a variety of personnel.
- Use of higher mathematics involved in the application of engineering principles and the performance of related practical operations, together with a comprehensive knowledge of theories and practices of mechanical engineering field.
- Apply principles of logical or scientific thinking to a wide range of intellectual and practical problems.
- Requires excellent writing skills with the ability to problem solve on a daily basis.
- Ability to multi-task, coordinate numerous activities at the same time.
- This position must also have a strong ability to comprehend engineering drawings.
- Requires statistical and analytical knowledge using business math.
- Must have the ability to read and comprehend plans and drawings.
- Language requirements are reading, writing, spelling and the ability to communicate clearly on all business levels.

Working Conditions

Office and demanding engineering environment.

Authority

Modify and submit to the clients or agencies changes deemed necessary for quality completion of a project, whenever the scope of work has changed beyond the original documents.

Provide engineering expertise, guidance, and direction to less experienced personnel.

Responsibilities and Duties

- Conduct analytical studies on ammonia cooling systems and designs or modifies cooling systems.
- Analyze research data and prepared project specifications to determine feasibility of product proposals.
- To confer with CADD Operators and other Engineers to clarify or resolve systems with engineering designs.
- Prepares or directs preparation of system layout and detailed drawings and schematics.
- To provide input to manufacturing or building of refrigeration systems.

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- Assisting in the maintaining and developing new product standards and engineering documentation practices, as appropriate.
- Develop/design refrigeration systems for large industrial applications using array of principles.
- Select and size all equipment and materials for assigned project. Coordinate the purchases of all materials needed with the Purchasing & Logistics Coordinator.
- To work with the Field Supervisor, Fab Foreman, and General Contractors to schedule installation.
- To interfaces as necessary other design professionals in-house and out, and local officials.
- Solve all schedule design and code issues.
- Oversee the Risk Management Program (RMP) complying with EPA.
- To transition projects over to the operations and service departments.
- Be alert to opportunities to change equipment, methods, processes, and procedures that can benefit the company, and research and develop these ideas as appropriate.
- Establishing and maintaining a communicative, coordinated, and cooperative relationship with all other functions within the organization.
- Enhancing the image and reputation of PermaCold Engineering, Inc. through technical presentations, providing consultative services to customers and exercising sound and ethical business practices in all relations with customers, employees, suppliers and other third parties.
- Ensure that the quality of design is within specifications, tolerance, and code for the appropriate piece of equipment.
- Be involved in the regular scheduled meetings to ensure a free flow of information and a close coordination of effort.
- Make routine inspections in fab/production to ensure the product is in line with the design specifications.
- Ensure that all paperwork relating to engineering is accurately completed, collected, for job costing and pricing.
- To maintain all drawing, specifications, data, charts, etc. in an up-to-date manner.
- Perform other duties as requested by the Engineering Manager.

Measurements of Performance

- Degree of support provided to other engineers and CADD operators when requested.
- Engineering documentation continually exceeds company standards for accuracy and completeness and continues to adhere to company standards.
- Applicable documentation continually meets or exceeds company standards for accuracy and completeness and continues to adhere to quality standards.
- The department's practices and procedures have been continually reviewed and modified, as appropriate.
- A sense of cooperation and teamwork within the manufacturing department and with other departments throughout the company.

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- Scheduled completion dates for all projects are met.
- Design and Product development is maintained at the highest possible level.
- Initiative is shown in taking on additional duties and responsibilities.

Full Time

Location - 2945 N.E. Argyle Street in Portland, Oregon

Hours – M-F, 8am to 4:30 pm, in office only

Travel – 10 to 20% mostly local

Communications and Dress Code

- Professional and strong communication skills are required due to customer interactions
- Business casual with jeans allowed in office. Durable clothing and safety PPE for construction sites.

Full Time Benefits

- Holidays, vacation, sick leave
- Full medical, dental, vision packages
- 401k matching
- Education reimbursement
- Potential for annual bonus