

## CAREER OPPORTUNITIES

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### **Electrical / Instrumentation Engineer**

Qualified candidate will have ability to take lead electrical engineering position on medium to large multi-discipline projects and lead I&C engineering on small to large projects, prepare plans and specifications, calculate voltage drop and short circuits, and be NEC knowledgeable. Position requires a BS in Electrical Engineering and PE Registration desired. Minimum 8-10 years of design experience with minimum 6 years consulting experience is a requirement.

### **Mechanical Engineer**

This position would be the engineering lead/design manager on various projects and would be responsible for project coordination as well as engineering services. Required to work on multiple projects concurrently. Process Ventilation and piping experience strongly desired. Strong communication and computer skills required. CADD skills preferred. BS degree in Mechanical Engineering and PE Registration preferred.

### **Process Engineer**

Ideal candidate will have 10 plus years of forest products industry experience to fill project process leader positions. A mixture of operating, consulting engineering and construction experience is preferred.

Specific technical experience should include one of the following areas:

- Wood Yard, Fiber/Water Reclaim, Tissue Machines, Biomass

Job responsibilities as project process leader will include:

- Heat and Material balances (CADSIM Experience Desired)
- P&IDs
- General arrangements
- Equipment specifications

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## Process Engineers

We require an individual with heavy industrial background and experience for our current process industry project activity in the following areas.

- P&ID Development
- Loop Diagrams / Loop Narratives
- Instrument Selection / Spec Sheets
- Valve Sizing and Selection
- Price and injuries and Comparison of Tenders
- DCS / PLC Architecture Layout
- DCS PLC Mapping, Configuration and Graphics
- PLC Logic and Programming
- Installation and Support
- Commissioning and Start Up

In addition, experience in the following areas would be an asset:

- Stock Prep Control
- Boiler Control
- Paper Machine Control
- Food and Beverage Plants
- High Technology Analyzers
- Communication Networks
- System Integration
- Plant Wide Control / SCADA
- Must have good commercial sense
- Ability and Experience in successfully negotiating with clients
- Excellent Communication skills, both verbal and written
- Experience in consulting firms
- Professional registration is Desired

## Piping Designer

An experienced piping designer with strong CAD (MicroStation) skills are required to support current and planned project activity for the pulp and paper and related industries. Individuals with 3D piping design experience and good communication skills will be given particular consideration.

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## Structural Engineer

### *Major Responsibilities:*

- Site-work demolition, cut & fill, drainage, roads, railroads, storage dikes, and finish grading
- Reinforced concrete design-equipment foundations, machine foundations, concrete structures, containment systems, and plant buildings
- Structural steel design-process structures, rail & truck loading structures, pipe & cable tray racks, and equipment structures

### *Software Applied:*

- STAAD. Pro and/or visual analysis (general analysis and finite element), descon (structural steel connection design), excel, MathCAD, frameworks (3D modeling), MicroStation (2D drawing).

Most of the engineers design work in the process/industrial markets-75% to 85% on a typical project, is structural in nature. The engineer is usually referred to as a Civil/Structural Engineer. The Civil/Structural Engineer works closely with the piping design, mechanical, vessel and electrical groups to design the necessary foundations, structures and pipe racks required to support process equipment, process piping, instrumentation and power cable trays, and electrical equipment. Forest products structures are typically open with grating or plat floors and no walls or roof. Chemical plant structures are usually enclosed. The Civil/Structural Engineer may also design the structural systems for plant warehouses, control rooms, electrical equipment shelters and other plant buildings

- The Civil/Structural Engineer will employ static analysis for most equipment foundations and process structures. Dynamic analysis is used for vibrating machine foundations, blast resistant structures where required for seismic resisting structural systems.
- Civil design tasks may include plant drainage systems, sanitary sewers, paving, plant roads, railroads, site preparation, settling ponds, marine docks, and tank and spill containment systems.
- Civil/Structural Engineers have to design to national codes and standards such as IBC, ASEC-7, ACI, AISC, OSHA and ASTM. Understanding, interpreting and correctly applying these codes and standards are paramount to a safe design.
- The Engineering graduate employed in the process industry will have the opportunity to quickly gain the experience necessary to pursue professional licensing.

### *Training and Experience:*

- 2 years of experience required, BS or MS in an engineering discipline, Desire to obtain PE, registration is required.

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### Structural Designer

#### *Primary Job Responsibilities:*

- Function as a structural designer by working closely with a lead engineer or in a small team designing large and medium sized projects or on multiple small projects. Design Draft new, existing, modifications, buildings and other structures for industrial manufacturing facilities. Work primarily involves but is not limited to steel framing, concrete structures, foundations and retrofit of any type of structural element. Person will be a member of a structural team in the production of deliverables for the above items and will prepare plan and detail drawings of structures. Perform other duties related to project deliverables as directed by supervisor.

#### *Training and Experience:*

- As a minimum, applicants must have an Associate's Degree in CAD design/drafting curriculum or similar architectural/engineering program or equivalent. Applicant must have a minimum of 3 years' experience in CAD design/drafting of structures using MicroStation. This includes using and manipulating reference files. Experience with 3-D software such as frameworks or Revit is a plus. Similar experience performing architectural design may be acceptable.. Person must have a general knowledge of Civil and Structural design concepts and vocabulary. Must be able to follow and adhere to CAD standards, which can vary from project to project. Experience in industrial / chemical / food / manufacturing and / or forest projects is preferred, but not required. Position requires ability to receive guidance and assignments from lead engineers or lead designers.

#### *Other Essential Functions*

- Requires interaction and coordination with other design disciplines to complete design tasks. Must occasionally travel to client sites for gathering information and measurements of existing facilities. Must be able to trouble-shoot computer software problems when they arise. The above description shall not be construed as a complete listing of all miscellaneous, incidental or similar duties which may be required from day to day.

#### *Other Requirements:*

- Although the work is performed within an office environment, there are occasional site visits that require ladder, stair and scaffold climbing in manufacturing and/or process structures. Must be able to respond to both audible and visible plant alarms. Must be able to tolerate seasonal extremes in temperature or humidity on site visits. May occasionally require working near hazardous equipment and machinery and exposure to noise, dust, gas or fumes during site visits; must wear PPE, including fall protection harness at times. Routine safety training will be provided.

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## **Mechanical/Project Engineer**

### *Primary Job Responsibilities:*

- Senior engineer; independently applies advanced engineering techniques and analysis within the discipline.
- Develops designs that require innovation and ingenuity.
- Work performed with minimal supervision; has considerable latitude in determining objectives and approaches to assignments.
- Researches, develops, designs, and tests a variety of equipment, facilities, components, products, and systems for commercial and industrial purposes.
- Performs calculations and evaluations in the design of equipment and systems for industrial and commercial applications: Participates in planning, cost development and management, and scheduling for assigned projects: Directs activities to ensure that construction, installation, and operational testing conform to functional specifications, recognized codes and standards, and customer requirements: May direct and coordinate operation, maintenance, and repair of equipment and systems in field installations:

### *Training and Experience:*

- Process Modeling (CADSIM) desired
- 7-10 years of related experience required
- BS or MS in an engineering discipline
- PE registration desired

## **Technician/CAD**

General responsibilities include preparing clear, complete and accurate working plans and detail drawings from sketches or notes for design effort.

In addition, experience in the following would be given special consideration;

Drafting experience of CSA, Mechanical and E&I disciplines

Has considerable knowledge of the job. Has good understanding of the general and detailed aspects of the job and their practical applications to problems and situations ordinarily encountered. Works under limited supervision; work is reviewed for adequacy on completion. Interacts with internal and external personnel on matters of moderate importance. Designs components or portions of systems, and modifies existing designs to develop or improve them. Uses computer-aided design applications and/or graphic tools: Gathers information, makes studies, performs basic calculations, and prepares original rough layouts and sketches to present design proposal: Coordinates design criteria with engineering and planning group in accordance with project specifications. 6-10 years of experience required, Drafting/design and related MicroStation experience and prior experience with PFD's, P&ID's and CAD component libraries required.

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## Electrical Engineer

General responsibilities include analysis of system requirements, specification and procurement equipment, development of construction documents, and providing assistance during construction, commissioning, and startup. More specific responsibilities consist of:

- Discipline lead role on project teams
- Analysis and design of electrical systems
- Generation of design basis documents
- Development of electrical system studies and reports (short circuit, load flow, Arc-Flash, motor starting)
- Generation of one-line diagrams
- ETAP or SKM experience Desired
- Development of comprehensive electrical drawing packages from bid phase through construction
- Provide technical guidance to design staff
- Sizing, specification and selection of electrical equipment
- Performing relay coordination studies
- Development of cost estimates
- Participation in safety reviews and hazard analyses
- Coordination of engineering and design activities with other project disciplines
- Providing final check and approval of all design deliverables associated with electrical
- Coordination systems of vendor acceptance testing, collection of vendor data, and development of project data books
- Support of construction, commissioning, and start-up of new facilities
- Providing instruction, mentoring, and training to less experienced members of the department

### *Training and Experience:*

- BS or MS in Electrical Engineering
- 10+ years' experience in the design, engineering, and implementation of power generation and distribution systems for industrial production and processing facilities
- Must possess thorough knowledge of electrical codes, industrial electric power, grounding, and lighting and communication systems
- Ability to apply sound and diversified knowledge of discipline principles and practices in broad areas of assignments and related fields
- Ability to use advanced techniques and the modification and extension of the theories, concepts, and practices his/her field
- Makes decisions independently on engineering problems and methods
- Ability to work independently and in a team environment
- Possess excellent organizational, communication and interpersonal skills
- PE registration highly desired