

Internal /External advertisement

DIVISION: Nuclear Operations and Advanced Manufacturing
DEPARTMENT: Engineering Services
VACANCY: **Plant Control and Instrumentation Engineer (Re -advertisement)**
SALARY BAND: Hay 14/C3
REFERENCE NO: **ENGINEER08**

NECSA is a State-Owned Company (SOC) in terms of the Companies Act and derives its mandate from the Nuclear Energy Act of 1999 responsible for undertaking and promoting research and development in the field of nuclear energy and radiation sciences and for the commercial exploitation of nuclear technology. NECSA engages in commercial business mainly through its two 100% owned commercial subsidiaries NTP Radioisotopes (Pty) Ltd. and Pelchem (Pty) Ltd. NTP is responsible for a range of radiation-based products and services for health care, life sciences and industry, whilst Pelchem supplies fluorine and fluorine-based products. Further information on NECSA can be obtained from the website www.necsa.co.za

Job Profile:

Serve as the primary interface between Operations, Maintenance, Facilities, and Engineering to ensure that critical and high priority assets are designed, operated, installed, and maintained in a way that meets all applicable codes and standards to ensure maximum reliability, equipment availability, and minimal life cycle cost.

Key Performance Areas:

- Provide Control and Instrumentation engineering support to achieve production goals and objectives.
- Maintain advanced process control strategies to optimize plant operations, improve process safety, and enhance product quality.
- Collaborate with operations, instrumentation, maintenance and process engineering teams to identify opportunities for process and system optimization.
- Collaborates with other engineers to develop accurate, efficient equipment and instrumentation in accordance with safety and usability standards and client expectations.
- Oversees the implementation of new measuring devices and control systems, ensuring devices are correctly installed and properly tested.
- Optimise and oversee the efficiency, reliability, and safety of the plant's operational processes.
- Implement, and maintain advanced process control strategies for various process units to improve operational efficiency.
- Ensure process control systems are compliant with industry standards and company guidelines.
- Analyse plant data to determine control performance, identify issues, and recommend solutions.

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- Drafts and presents formal technical documents, reports, and testing results to manager for approval.
- Drafts technical manuals for instrumentation.
- Manage and coordinate process improvement activities to achieve production, safety and efficiency goals.
- Prepare and submit regulatory reports as required.
- Identify and analyse equipment or machinery failures and takes corrective actions.
- Design and implement equipment modifications to help improve safety and reliability.
- Outage Scope Verification and Aging Analysis.
- Manage and execute assigned projects in accordance with policies and performance targets.
- Participate and lead multidisciplinary teams in support of site initiatives.
- Manage implementation of assigned projects to successfully meet scope, schedule and cost.
- Deliver engineering solutions to operations that improve yield, cost and productivity.
- Incorporate the approved design processes and safety, licensing and SHEQ-INS requirements into products/output to ensure compliance with the design control plan and applicable regulations and stakeholder requirements.
- Contribute to Design Reviews and update design accordingly.
- Contribute to Hazard and Operability Studies and update design accordingly.
- Undertake problem solving and optimisation across Necsa and subsidiaries relating to chemical/process engineering aspects in process plants, (e.g. product purity, equipment malfunctioning, etc.) on an ad-hoc basis/ as requested with limited specialized guidance
- Perform and document economic and technical feasibility studies for process improvements.
- Conduct research and analysis to ensure recommendation of optimal and effective solutions to control and instrumentation engineering problems.
- Coordinates work performed by outside contractors, vendors, and engineering consultants.
- Provides training related to devices to employees and/or customers.
- Develop Work methods & techniques.
- Develop Policies & Procedures.
- Introduce innovative approaches, systems and processes within the Engineering Framework.

JOB REQUIREMENTS **KEY KNOWLEDGE & SKILLS**

- Sound knowledge of the systems acquisition process, from plant design to commissioning.

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- Knowledge of process engineering and ability to perform control and instrumentation engineering design calculations (mass and energy balance, unit operations sizing, pressure drop calculations, etc.) and specifications.
- Sound knowledge of chemical unit operations and design of units and SSCs.
- General knowledge of all other engineering disciplines.
- Ability to apply recommended Engineering Standards for specific applications.
- Ability to perform work of medium to complex nature accurately and promptly, without supervision.
- Computer literacy and ability to learn to use new advanced engineering software as required.
- Self-training to attain new skills and knowledge when required.
- Be physically and mentally fit to work in nuclear and processing facilities (e.g. be registered as radiation and chemical workers when required).

COMPETENCIES

- Analytical Thinking & Attention to Detail
- Problem Solving
- Creativity / Innovation
- Time & Self-Management
- Drive (Results Orientation)
- Relationship Building
- Customer Service Orientation
- Effective communication
- Efficient and concise writing skills
- Ability to identify scope of work and deliver focused output to address the scope and solve the essence of problems
- Ability to solve problems
- Safety Orientations
- Technical / Professional Competence
- Knowledge Sharing
- Teamwork

Qualifications and Experience:

Education:

- Bachelor's degree (B.Eng/ BSc.Eng) in Electrical and Electronic Engineering.

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Experience:

- 1 years' experience in a process engineering environment or completed GIT program.

Closing date: **24 November 2025.**

CONTACT PERSON

Ms. Ofhani Tshila

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Important: Necsa Group is committed to Employment Equity when recruiting. Therefore, priority will be given to African Females, African Males, and people with disabilities, in support of achieving our Employment Equity targets.

GENERAL:

Should you not hear from us within 30 days of the closing date, please consider your application unsuccessful.