Process Control Specialist

DEFINITION

Positions in this class perform a wide range of functions in support of diverse and complex industrial process control systems. Activities include research and analysis of requirements, design and development and installation of appropriate hardware and software support systems, training of systems users, troubleshooting and repair of hardware and software and maintenance management of the overall process control systems environment.

Incumbents in this class typically work as a technical support specialist within an engineering support team. Process control systems are implemented and maintained to meet regulatory, production/performance efficiency, and related strategic and business objectives. Employees in this class perform working activities independently and results are evaluated in relation to project objectives, production schedules, conformance to regulatory specifications, and other similar criteria. Current systems are evaluated against new hardware and software technologies to determine when enhancements and upgrades are feasible and cost effective. Positions in this classification provide a high level of technical expertise during conceptual design, implementation and maintenance phases of projects.

The nature of work performed in this class requires that incumbents deal directly with engineering, technical support specialists, operations personnel, outside contractors and vendors, and senior managers. System infrastructure is evaluated against standards of process control quality assurance, systems security considerations, accomplishment of business goals, cost effectiveness and related parameters. Incumbents in this classification maintain an ongoing awareness of new developments in hardware and software technologies and provide technical expertise during the planning and development phases of industrial process projects.

Work in this class is differentiated from other levels of engineering support work by virtue of the control systems hardware (computing systems, instrumentation, etc.), software programming, and level of technical solutions devised to meet current and future requirements of process control performance standards. This class is distinguished from that of Systems Analyst by the industrial versus business setting and specialization of process control hardware and software systems.

TYPICAL DUTIES *

Performs complex and specialized software development, maintenance and technological support activities in support of complex industrial process control systems, including software programming, testing and debugging software code, documentation, etc.

Participates in the design and development of process control systems architecture, including the testing and implementation of modifications to enhance overall performance,

Provides process control operators, managers, and other users with data, reports, software tools and related system monitoring outputs.

Designs and implements appropriate system security measures to ensure control system integrity.

Evaluates and recommends systems upgrades, software tools and related processes including estimates of time, costs, manpower, etc.

Compiles and maintains training and reference documentation on process control systems and procedures and assists with the training and evaluation of new systems users.

Provides technical expertise and advice to engineers, operations personnel, laboratory staff, external consultants, managers and others concerning the design and operation and management of process control systems.

Participates in the testing and evaluation of new process control hardware and software technologies, providing suitable isolated environments within the plant setting as required.

Performs quality control assurance, systems integrity and related tasks and ensures that system control documentation is current and meets the needs of the facility.

Performs related duties as required.

KNOWLEDGE, ABILITIES AND SKILLS

Extensive knowledge of process control hardware, software and associated computer system and communications infrastructure.

Knowledge of technical and engineering principles related to the working environment and the operation of instrumentation and equipment related to the application of process control.

Ability to devise, implement and maintain effective control systems and associated monitoring and data interpretation support to meet the needs of the area.

Ability to troubleshoot and repair control system malfunctions via software, hardware and related instrumentation.

Ability to communicate effectively with technical, support, and other personnel and to deliver technical presentations when required.

Skilled in the application of hardware/software solutions in an industrial process control environment.

TRAINING AND EXPERIENCE REQUIREMENTS

Diploma in Instrumentation Engineering Technology, Electronics Engineering Technology or equivalent supplemented by coursework in distributed control systems, PLC networks, and relational databases. Designation as a Certified Engineering Technologist (CET), Registered Engineering Technologist (RET) with the Alberta Society of Engineering Technologists (ASET) or equivalent.

A minimum of 5 years of industrial plant experience in process control design and support, systems configuration and troubleshooting, programmable logic control and digital automation support and process automation with Human Machine Interface is required.

*   *This is a class specification and not an individualized job description. A class specification represents and defines the general character, scope of duties and responsibilities of all positions within a specific job classification. It is not intended to describe nor does it necessarily list the essential job functions for a specific position in a classification. Positions may perform some of the duties listed above but this does not necessarily qualify for placement into this classification.*

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Grade	039		039	

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