

## POSITION DESCRIPTION

### Principal Controls Engineer

### Company Information:

Provecta Process Automation LLC is an electrical and controls engineering consultancy company specialising in highly advanced automation, protection and control solutions for fossil-fuel electricity power generation customers operating in the US and Europe. In response to the increasing demand placed on conventional thermal power plant as intermittent renewable generation grows, Provecta provides expert services to identify and implement controls-related improvements to plant operational flexibility and efficiencies.

Solutions are provided through control design enhancements, optimisation, event investigations, specification preparation and strategic consultancy. The company is also engaged in research and development of control enhancements beneficial to the industry, and consults to companies providing products and services to utilities, including boiler manufacturers, DCS vendors and EPC contractors.

Provecta LLC was established in January 2017 by Provecta Process Automation Pty Ltd (an Australian-based company) that has been providing international engineering consultancy services for 15 years.

Key capabilities of the company include:

- Modulating and sequence control design, enhancement, deployment and tuning for drum, once-through and combined-cycle power plant
- Owner's engineering services (project development, options studies, risk assessment, specification preparation, factory testing, etc.)
- Functional Safety system engineering and reviews
- Alarm system management
- Power Plant controls and operations training

A growing US client base has led to the creation of a new position of Principal Controls Engineer within the company. In addition to employment within the Provecta LLC engineering team, suitable candidates may be offered pathways to achieve part-ownership of the business.

### Key Role:

The Principal Controls Engineer is a high-impact role exercised with a high level of autonomy. The successful applicant will:

- Provide control system design, testing, commissioning, optimization, analysis, advice and training services to clients in the thermal (non-nuclear) power plant industry, as a recognized expert in the field.
- Apply a deep knowledge of modulating, sequence and protection control design philosophies, structures, solutions and applications, particularly related to DCS implementation, for enhancement of the operation of boiler, turbine and ancillary plant systems.
- Utilize a practical understanding of the physical principles and control dynamics of large fans, pumps, control valves and actuators, burners, attemperators, superheaters, pulverizers and heat exchangers to design and deploy customised control solutions for clients.
- Communicate effectively to clients verbally and with detailed reports, analyses, proposals, and cost estimates.
- Identify opportunities to expand services to existing and new clients.

### Essential Requirements:

- Bachelor's degree in Electrical, Controls or Chemical Engineering.
- Credentials and appropriate experience to qualify for evaluation leading to licensure as a Professional Engineer (PE)
- Minimum of 12 years of experience as a power plant DCS or control systems engineer working with electric utilities, control vendors or industry.
- Experience with utility-scale power plant control design and applications on a range of common DCS equipment such as supplied by Emerson, Siemens, ABB and others.

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- Extensive experience in tuning fossil fuel power generation plant modulating controls.
- Experience with working on complex projects either independently or as part of larger teams, including working independently at clients' industrial sites.
- Ability to analyse control system diagrams including piping and instrumentation diagrams, DCS control drawings, SAMA-style functional drawings, sequence flow and other logic charts.
- Holder of a full USA driver's licence
- Prepared to travel interstate and to work at client sites for short periods.

#### Desirable Requirements:

- Possession of excellent oral and written communication skills
- Experience in preparing engineering proposals and contract negotiations
- Experience in preparing technical specifications as owner's engineer
- Experience in the application of ISO 9001 quality system procedures and processes

#### Reporting Relationships:

This position reports to the Provecta LLC President.

The Principal Engineer is required to work to Provecta's standard employment conditions, and other approved policies and procedures.

#### Selection Criteria:

- Extent of relevant and specialized experience in each of the above Essential and Desirable Requirements. Relevant plant systems include drum and once-through boilers, HRSGs and combustion and steam turbines.
- Demonstrated ability to plan work activities to achieve an outcome within an agreed time frame and budget.
- Proven ability to work with attention to detail and to accurately document work activities undertaken.
- Effective oral and written communication skills in English.
- Demonstrated initiative and flexibility

#### Eligibility Requirements:

Legal authorization to work in the U.S. is required. We will not sponsor individuals for employment visas for this position.

Selected applications will be subject to a security review.

#### Job Information:

Salary Range: \$90k-110k plus benefits

Location: Evanston, IL

Position Title: Principal Controls Engineer

Company: Provecta Process Automation LLC. Provecta will not discriminate against employees based on race, color, religion, sex, national origin, age, disability or genetic information.