**Controls Engineer (DDC)** 

**Location: Minneapolis/St.Paul** 

COMPANY BACKGROUND

Our client is a recognized industry leader in process and facility infrastructure design and performance.

They serve clients in the United States, Canada and Central America and have capabilities not

commonly found in traditional engineering firms, including their commissioning work and their ability

to drive projects of all sizes.

They were established in the mid- 90s to make a difference in the way infrastructure and processing

projects are delivered. They employ a highly trained staff of engineers, technicians and managers who

execute projects with the same care and creativity they would expect if they were the client. They are

located in Minnesota, Wisconsin, Iowa, Arizona, Ohio, Kentucky, and North Dakota with a team of 200

professionals.

**POSITION OVERVIEW** 

The Controls Design Engineer plays a key role in the successful application of direct digital controls

(DDC) to a mechanical HVAC design. Reporting to the Controls Design Manager, this individual will

review and understand how HVAC equipment operates at both the individual unit level and in concert

with other equipment at the whole building level.

The successful candidate will prepare the control documents portion of the overall mechanical design,

which includes schematic drawings, point lists, sequences of operation, and specification sections. To

provide high quality control documents, she/he will be capable of implementing entire DDC control

systems, from initial hardware design to final system tuning, and ideally have past experience. As

required, she/he will provide field assistance to support DDC controls system project delivery. Field

assistance may include communicating design intent and details, answering technical questions, and

participating in any portion of the DDC control system project as required, seeing it to completion.

Regular collaboration is necessary within our controls and commissioning teams, and with others in the

industry to keep current. The successful incumbent will be constantly challenged to create better,

practical, and sustainable solutions.

#### **TYPICAL RESPONSIBILITIES**

# Specific responsibilities will include, but not be limited to, the following:

- Prepare control documents portion of the overall mechanical design: schematic drawings, point lists, sequences of operation, and specification sections.
- Stay current on control strategies and code changes. Participate in training, internal and external. Obtain and maintain technical certifications as needed.
- Stay current on Niagara and other DDC control systems programming and implementation practices.
- Construction administration efforts such as internal participation with other company groups. Project planning meetings, control submittal reviews, and other support as required.
- Project management. Since most any effort can be made more efficient with a good plan, the company expects good planning and execution practices. Tools, training and metrics are made available to ensure the success of our teams.
- Provide field assistance to support DDC controls system project delivery. Communicate design intent and details, answer technical questions, participate in any portion of the DDC control system project construction as required, seeing it to completion.
- Regular collaboration within our controls and commissioning team, and with others in the industry to keep current. Constantly challenge traditional practices to imagine better, practical, and sustainable solutions.
- Create control hardware design and installation drawings, including equipment selection to provide bill of materials.
- Master the use of Tridium, Niagara, wire sheet programming, PX graphic screen development, meta-data tagging, analytics and hierarchy navigation.
- Fine-tuning and troubleshooting of DDC control systems. Provide the control expertise as necessary to deliver high quality DDC control projects.

# Additionally, this position will likely work to assist in the delivery of other Performance Group projects. This work will require, but not be limited to, the following:

- Perform site visits to collect equipment information and assess system operations.
- Assist in performance of Test & Balance services.
- Analyze system operational performance and develop recommendations to improve operations and energy efficiency.
- Assist in utility analysis.
- Support other Commissioning and Recommissioning activities.

### **LEADERSHIP CHARACTERISTICS**

#### **Being Assertive**

• Is able to be fair, but firm at the appropriate time; can handle conflict, and is able to hold key stakeholders, such as Contractors, accountable for hitting milestones and key deliverables.

# **Getting Organized**

• Is well organized, resourceful, and planful; effective and efficient at marshalling multiple resources to get things done; lays out tasks in sufficient detail to mark the trail; is able to get things done with less and in less time; can work on multiple tasks at once without losing track; foresees and plans around obstacles.

## **Getting Work Done Through Others**

• Influences well; gets the most and best out of others; sets and communicates guiding goals; measures accomplishments, holds people accountable, and gives useful feedback; delegates; keeps people informed.

### **Focusing on Action and Outcomes**

• Attacks everything with drive and energy with an eye on the bottom line; not afraid to initiate action before all the facts are known; drives to finish everything he/she starts.

## **Communicating Effectively**

• Writes and presents effectively; adjusts to fit the audience and the message; strongly gets a message across.

#### **Builds Relationships**

• Treats people with respect; relates well to people regardless of their organization level, personality, or background. Encourages others to express their views, even contrary ones.

#### **EDUCATION**

Bachelors' degree in Mechanical or Electrical Engineering is ideal. However, company is open to hiring the right candidate who may not have a formal Engineering degree, but has done work that has required interaction with contractors on a frequent basis (i.e. someone who has worked in one of the construction trades), or has experience designing building automation systems.

### **COMPENSATION**

Recognizing the importance of this position to the company, a competitive salary and benefits package will be offered.

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### KNOWLEDGE, SKILLS AND ABILITIES REQUIRED

The successful candidate will have at least a basic understanding of HVAC systems and control strategies, as well as a basic understanding of DDC control systems. More importantly, the candidate must have the desire to learn and build on their skill sets. This person will also be self-directed but thrive in an environment where consultation and collaboration leads to superior outcomes. Finally, this person must also have the ability to quickly learn software applications relating to control systems.

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