

JAMES T. NELSON

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Minneapolis, Minnesota 55406
(612) 722-4274

Automation Systems Engineer

HIGHLIGHTS OF QUALIFICATIONS

- * Experienced in the design and implementation of Electromechanical Automation Systems utilizing Programmable Logic Controllers, Computer Numerical Controls, Personal Computers, and Robotic Systems.
- * Exceptional mechanical aptitude.
- * Proficient in the full development of a project from conception through start-up and documentation.
- * Ability to generate ideas for both new systems and retrofits.
- * Excellent communication and presentation skills.
- * Able to work independently and as part of a team.

RELEVANT EXPERIENCE

System Design / Engineering

- + Extensive control experience in the following areas:
 - * Linear & Rotary Motor Servo Drives, Hydraulic Servo Drives, AC Frequency & DC Drives, Hydraulic & Pneumatic Actuators.
 - * CNC Motion Controls, Robotic Materials Handling Systems, Automated Storage / Retrieval Crane Systems.
 - * Process Control - Refrigeration, Dairy, CIP, Gas Soldering Systems, Air Compressor Systems, Analog & PID Controls.
 - * SCADA / HMI software application.
 - * Sensors - Lasers, Photoelectrics, Bar Code Readers, Encoders, Resolvers, Pressure, Ultrasonic, Proximity, Temperature, Current.
- + Designed systems conforming to customer specifications including those of the automotive industry and overseas corporations.
- + Proficient in the use of Personal Computers and Communications Programs.
- + Developed innovative PLC, CNC, PC, and Robot Software Programs.
- + Research & Development project design.
- + National & International field service experience.

Industrial Systems Used

- + Programmable Logic Controllers:
 - Allen Bradley - ControlLogix/5000, CompactLogix/5000, SLC/500, PLC/5, PLC/2.
 - Modicon - 884/584/484/185/M84. TI - 5TI/535/435. GE - 9030/Series 1 Plus.
 - Also AutomationDirect, Siemens, Telemecanique, Square D, & Reliance.
- + Computer Numerical Controls:
 - Allen Bradley - 8600 / 8400 Mill Controls, Beckhoff CNC Controls
- + Robot Systems:
 - Motoman - 6 Axes / 4 Axes MRC and ERC Yasnac Controls
- + SCADA / HMI Systems:
 - Rockwell - RSView32, Intellution - Fix32,
 - Custom C-Sharp-DotNet and Visual-Basic Interfaces.

Technical Writing / Drafting

- + Developed extensive system operation manuals and maintenance manuals.
- + Performed individual machine and plant-wide system audits.
- + Drafted electrical drawings, electronic schematics, piping and panel layouts, and mechanical drawings. Experienced in AutoCad.

Personal Computer Software Design

- + C-Sharp-DotNet, Visual-Basic, OPC Client-Server, DDE, HTML, Winsock, ActiveX, QBasic, DOS, CNC G-Code.

EDUCATION

1976 A.A. Electronic Technology - Northwestern Electronics Institute

WORK HISTORY

1990-2011 FREELINE CONTROLS - President
1988-1990 JET EDGE / POSSIS CORPORATION - Electrical Engineer
1983-1987 BOUSTEAD ELECTRIC & MFG. CO. - Electrical Engineer
1978-1982 WYARD INDUSTRIES - Electrical Engineer
1977-1978 PROGRAMS INC. - Electronic Technician
1976-1977 DIGITAL CONTROLS INC. - Electronic Technician

REFERENCES

Richard Nargess - Technology Specialist
Werner Electric Supply Company
7450 95th St S - Cottage Grove Mn 55016 - (612-676-2800)

Dave LaFavor - Chief Engineer
Jet Edge Inc.
12070 43rd St NE - St Michael Mn 55376 - (763-497-8700)

Bert Olson - Electrical Engineer
Jet Edge Inc.
12070 43rd St NE - St Michael Mn 55376 - (763-497-8700)

John Jensen - PLC/HMI Product Manager
United Electric Company
601 Lakeview Point Drive - New Brighton Mn 55112 - (651-582-3906)

Brad Minion - Sales
United Electric Company
601 Lakeview Point Drive - New Brighton Mn 55112 - (651-582-3900)

Randy Erickson - Electrical Manager
Electrolux (Frigidaire) Home Products
701 33rd Ave North - St Cloud Mn 56303 - (320-240-3465)

MACHINES AND SYSTEMS LISTING

Materials Handling:

Palletizers - Full Layer Case, Discrete Case, Bulk Can Magnetic Head.
De-Palletizers - Full Layer Case, Bulk Bottle, Bulk Can, Bulk Can Magnetic Head.
Pallet Systems - Stackers, Dispensers, De-Strappers, Conveyors.
Pallet Topframe and Slipsheet Dunnage Systems.
Semi-Trailer Pallet Receiving Systems - Transfer Cars, Conveyors.
Material Elevators.
Storage and Retrieval Systems - Radio Operated 8-Story Cranes, Conveyors.
Water Utility Lime Receiving System.
Automotive Radiator Gas Soldering Systems.
Injection Molding Presses.

Packaging:

Case Erectors.
Case Delivery Conveyor Systems.
Hot Glue Case Closure Systems.
Pick And Place Case Packers.
Label Applicators.
Inkjet Printers.
Shrink Wrap Application and Packing.
Food Depositors.
Oven Unloader System.
Cassette Tape Winder Feed System.
Continuous Web Feed Bag Maker Systems.
Web Feed Pouch Packager Systems.

Process Controls:

Two Stage Ammonia Plant-Wide Refrigeration Systems.
Bulk Milk Delivery And CIP System.
Bulk Flour Receiving and Delivery System.
Dairy Industry CIP Systems.
Air Compressor Engine Room Control Systems.
Water-Jet Intensifier Controls.
Pump Control Systems.
Gas-Fired Industrial Bakery Ovens.
Environmental Groundwater Pump and Treat System.
Aqua Ammonia Storage, Blending, And Distribution System.

Computer Numerical Controls:

Nine Axes CNC Refrigeration Tube Benders.
Linear Motor Gantry Water-Jet Cutting Table. (R&D)
Three Axes Mill Control Water-Jet Cutting Tables.
Five Axes Mill Control Water-Jet Cutting Tables.
Three Axes Turbine-Engine Blade Cutter Cell With Laser Feedback. (R&D)
Horizontal Mill DC Drive Retrofits.

Robotics:

Pick And Place Case Packers.
Palletizers - Discrete Case, Cathode Ray Tubes, Bar Code Directed.
De-Palletizers - Cathode Ray Tubes.
Regional Library Book Return System, Bar Code Directed. (R&D)