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CAREER SUMMARY

Experienced Electrical Engineer specialized in Control Systems in the field of Oil and Gas Drilling, Manufacturing, and Mini Grid Systems.

Key Career Competencies

- Proficient in AutoCAD and Bentley Promis.e (MicroStation based) Electrical Design Software.
- PLC programming: Siemens Step 7 (using Simatic Manager), Allen Bradley (using Studio 5000), Panasonic (using FPLWinPro), and Schneider PLC (using SoMachine and EcoStruxure).
- Knowledge in Australian Electrical Design Standards (AS3000 and AS3008).
- Siemens (Simatic Touch) and Allen Bradley (Panel View) HMI programming.
- Programming, testing and commissioning of power electronic devices, namely, Variable Speed Drive (AC motor control), SCR Drive (DC motor control) and Inverter (mini-grid applications).
- Start-up and commissioning of generator controls, switchboards, motor control centre (MCC) and protection relays.
- Set-up and programming of Industrial Communication Networks (Ethernet I/P, PROFINET, CANOpen, PROFIBUS and Modbus RTU/TCP).
- Strong problem-solving skills combined with the ability to read complex control schematics and PLC programs.
- Knowledge in Wonderware InTouch and Citect SCADA software.
- Knowledge in Pneumatics and Hydraulics control.
- Familiarity with the Safety practices in an industrial environment (including working on heights).
- Knowledge in Microsoft Excel VBA to automate worksheets for standardization and engineering use.

PROFESSIONAL EXPERIENCE

Company Name: JDN Monocrane Pty Ltd
- a leading crane designer and manufacturer in Australia
Position: Electrical Engineer
Duration: 01 Mar 2018 – present

Responsibilities

- Design of overhead gantry and portal cranes (1 tonne to 80 tonne Hoisting Capacity) Electrical/Control System using Bentley Promis.e design software.
- Programming and testing of SEW and Nord Variable Speed Drives for Crane and Material Handling Application.
- Programming of Panasonic FP2SH PLC, Schneider M251/M241, and Allen Bradley CompactLogix PLC for motion and positioning control.
- Design of Modbus, CANopen, Profibus and Ethernet IP communication networks (comprised of PLC, VSD, absolute encoders, bar code scanners and laser distance sensors) for applications requiring automatic positioning.
- Configure absolute encoders, bar code scanners, laser distance sensors, proximity sensors, load cell transmitters and displays.
- Perform calculations for absolute positioning to define slow down areas, end limits, home position, and no-go zones.
- Perform calculations to define operating limits of Hoist and Travel Motors and implement them in VSD and PLC programs.
- Design upgrade kits to upgrade older control systems (relay logic) to VSD and PLC control.
- Support commissioning and service calls attended by Service technicians and ensure that they were given timely technical support.

- Perform research and development functions thru continuous research, collaboration with suppliers and documenting issues during equipment testing.
- Interactively clarify complex functional scope and engineering parameters of power electronic devices and field devices with various product suppliers.
- Use Microsoft Excel VBA to automate worksheets for standardization and engineering use.
- Travel to workshops and sites, as required.
- Support employer's everyday business requirements.

Achievements

- Completed numerous hoists/cranes that were deployed in different parts of Australia and New Zealand.
- Completed various projects that require complex positioning controls.

Company Name: **Power Technology Engineered Solutions Pty Ltd**
 - system integrator, control solution supplier and engineering service provider in distributed & hybrid power generation, grid energy storage, and renewable energy grid integration.

Position: Power Electronics, Control and Communications Field Engineer

Duration: 01 Sept 2016 – 26 Feb 2018

Responsibilities

- Programming, parameterisation and testing of Inverter (Vacon NXP and ABB PCS100) for mini-grid applications.
- Design of Modbus communication interface (Modbus) of Battery Management Unit, Vacon and ABB Inverters, SEL Protection Relays and PILZ Safety PLC.
- Logic programming of PILZ Safety PLC.
- Logic formulation and programming of SEL 700GT+ and SEL 751A protection relays.
- Logic and sequence design for embedded control systems.
- Interactively clarify complex functional scope and engineering parameters of power electronic devices and field devices with various product suppliers.
- Contribute to power system modelling and control system design.
- Documentation of system requirements and functionality.
- Travel to workshops and sites, as required.

Achievements

- Completed AusNet mini-grid project in Hull Road Mooroolbark, Victoria.
- Completed South Australia Power Network (SAPN) mini-grid project in Cape Jervis, SA.

Company Name: **Cameron Singapore Pte Ltd**
 -a company that delivers drilling equipment and control systems to the international energy industry.

Position: Senior Field Service Specialist (Control Systems)

Duration: 23 Sept 2011 – 29 Feb 2016

Responsibilities

- Start-up and Commissioning of PLC-based Drilling Equipment Control Systems on newly built or upgraded Jack-Up or Semi-Submersible Drilling Rigs.
- IAT (Internal Acceptance Test) and FAT (Factory Acceptance Test) of stand-alone Control Systems.
- Programming of Allen Bradley (SLC500) and Siemens (Simatic S7) PLC.
- Programming of Siemens HMI using WinCC and Wonderware HMI using InTouch.
- Configuration and Commissioning of communication networks (Industrial Ethernet, Modbus, PROFIBUS, and PROFINET).
- Configuration, Start-up and Commissioning of Variable Speed Drives (for AC Motors) and SCR Drives (for DC Motors).
- Attend to service calls overseas to rectify issues and implement upgrades on PLC based Control Systems.
- Update technical manuals, drawings, PLC programs, and single line diagrams after commissioning completion.

- Provide post-commissioning technical support to customers to ensure that issues discovered during drilling operations were addressed and resolved.

Achievements

- Completed several start-up and commissioning projects in South East Asia.
- Completed numerous field service calls, both onshore and offshore, to fix power and control system faults.
- Involved in control system upgrading projects from design to commissioning.

Company Name: **EPD Singapore Services Pte Ltd**

-a company that provides electrical control systems and field services to the marine, power generation, and oil and gas drilling industries.

Position: Senior Field Service Engineer

Duration: 03 Mar 2011 – 22 Sept 2011 (contract position)

Responsibilities

- Troubleshoot and resolve customer reports of technical problems with MCC's (Motor Control Center), SCR Drives, Variable Speed Drives, PLC, Generator Controls, Switchboards, and AC/DC Motors.
- Programming of Siemens (Simatic S7) PLC.
- Start-up and Commissioning Motor Control Centers, SCR Drives, and Generator Controls of Offshore Support Vessels (OSV's).
- Configuration and Commissioning of Siemens AC and DC Drives for OSV Thruster control.
- Work in shipyards or offshore on-board ships and rigs, for service calls in South East Asia and Africa.

Achievements

- Completed start-up and commissioning projects in South East Asia.
- Attended and completed several service calls, both onshore and offshore to fix power and control system issues.

Company Name: **LeTourneau Technologies (Singapore) Pte Ltd**

-a company that supplies drilling equipment, power systems, and control systems to the international energy industry. In 2011, the company was acquired by Cameron International and became part of Cameron Singapore.

Position: Senior Field Service Engineer

Duration: 01 Feb 2008 – 29 Oct 2010

Responsibilities

- Start-up and Commissioning of PLC based Drilling Equipment and Control Systems on newly built and upgraded Land, Jack-Up, Tender, and Semi-Submersible Drilling Rigs.
- Start and Commissioning of Generator Controls for Offshore/Onshore Drilling Rigs (PLC Controlled with Woodward and Basler components).
- Testing and Commissioning of Low and Medium Voltage Step-Down Transformer (6.6kV/690V, 690V/480V, 600V/480V).
- Start Up, Configuration and Commissioning of DC Drives on Offshore Drilling Rigs and Land Rigs.
- Start Up, Configuration and Commissioning of Variable Speed Drives (6 pulse/12 pulse using AC Bus or Common DC Bus Configuration) to control industrial AC Motors used for Drilling Equipments.
- Commissioning of Switchboards and Motor Control Centers (MCC).
- Modify HMI for Drilling Controls using in-house software and Siemens WinCC Flexible.
- Coordinate and work with relevant department for issues on control systems that were raised by the customer or discovered during product start-up.
- Update technical manuals, drawings, PLC programs, and Single Line diagrams after commissioning completion.

Achievements

- Completed several start-up and commissioning projects in South East Asia.
- Attended and completed several service calls to fix power and control system faults.
- Involved in control system upgrading projects from design to commissioning.

Company Name: **National Oilwell Varco (Singapore) Pte Ltd**
a company that supplies drilling equipment and control systems to the international energy industry.

Position: Service Engineer

Duration: 09 Dec 2004 – 15 Jan 2008

Responsibilities

- Start-up, Pre-commissioning and Commissioning of PLC based Drilling Equipment and Pipe Handling Equipment Control Systems.
- Upgrading of control system from conventional control to PLC based control.
- Integrate Control System with other vendors Control System.
- Programming of Allen Bradley HMI's using Panel View.
- Installation, Start Up, and Commissioning of Variable Speed Drives (VSD) and DC Drives to control AC and DC Drilling Motors.
- Update technical manuals, drawings, and PLC programs, after commissioning completion.
- Start Up and Commissioning of PLC based Auto Driller System.
- Provide technical support and attend to customer service calls on Drilling Rigs operating in South East Asia, Australia and Africa.

Achievements

- Completed several start-up and commissioning projects in South East Asia.
- Attended and completed several service calls, onshore and offshore, to fix power and control system faults.
- Received positive feedback from customers for good performance during service calls.
- Recommended some control system upgrades that were utilised t existing installations.

EDUCATIONAL QUALIFICATION

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

MAPUA INSTITUTE OF TECHNOLOGY – Intramuros Manila Philippines
June 1993-March 1998

Coding Bootcamp - (Full Stack Flex)

Monash University
November 2020 – May 2021 (ongoing remote learning)

Board Passer for Registered Electrical Engineer (Professional Regulation Commission of the Philippines)

REE License No. 0018912

PROFESSIONAL DEVELOPMENT

Citect Software in Supervisory Control and Data Acquisition Systems (SCADA)

RMIT University (Melbourne) - 2017

Shipyard Supervisor Safety Course

NTUC Learning Hub Singapore -2014

Work-at-Height Course for Supervisors

NTUC Learning Hub Singapore - 2013

Basic Offshore Safety Induction and Emergency Training Including Additional Norwegian Oil and Gas Modules and Travel Safely by Boat (OPITO Approved)

MSTS ASIA (Singapore) – 2015

Woodward EGCP-3 and 2301D Training

EPD China Ltd. (Yangzhou, China) – 2011

C++ Programming Course (Full Course)

GTEC Computer Education (Singapore) - 2011

EGCP-2 Power Management Training (Woodward)

PM Control Systems (Singapore) - 2009

MV3000 AC DRIVES Troubleshooting and Repair Training

LeTourneau Technologies (Houston, USA) - 2008

SIMATIC PROGRAMMING 2 (ST-STEP 2)

Siemens Singapore - 2007

ACS800 Multidrive Operation and Maintenance

ABB Singapore - 2006