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Top Skills

LNG Production

Power Generation Equipment

Critical Infrastructure

Certifications

Process Engineering Fundamentals

Professional Member of Australian Computer Society

Honors-Awards

Outstanding Academic Achievement for B.IT 2010

Department of Defence Merit Award

National Employee of the Month

"Conoco's Got Talent" Innovation Award

Publications

Submission to "Strengthening the national security of Australia's critical infrastructure" discussion paper

Geoff Cruickshank

Energy production technologist and critical infrastructure security specialist

Greater Darwin Area

Summary

LNG Production and Power Generation professional with additional critical infrastructure physical and cybersecurity protection skills.

Experience

Industrial Automation and Security

Security Consultant and Operations Technologist

September 2012 - Present (12 years 9 months)

Darwin, Northern Territory, Australia

Industrial Automation and Security is the trading name of my consultancy business. As a permanent N.T.-based Security Zone Consultant, I designed electronic security systems using advanced components and ensured quality control of their installation and commissioning. After Site Acceptance Testing of specific security systems I provided the Certificate of Compliance on behalf of the Commonwealth upon acceptance and turnover to client agency. The Endorsement is the Australian equivalent of the U.S. Federal Law Enforcement Training Centre (FLETC) Physical Security Course. Submitted consultation in 2017 for the Security Legislation Amendment (Critical Infrastructure Protection) Bill 2022, including recommendations for the enhanced cyber security obligations for Systems of National Significance. Provided cyber security briefing for ADF NORFORCE members in January 2020.

Designed, installed and commissioned the first facility security system for United States Marine Corps at Robertson Barracks, Darwin in 2018.

Participated in the Defence Science & Technology Group / CSIRO D.Start Ignite program in January 2022 to investigate the use of LNG as a liquid fuel by the ADF.

Professional Member of Australian Computer Society, and the Institute of Electrical and Electronic Engineers and Scientific Coalition for UAP research.

Santos Ltd

5 years 7 months

LNG Production and Operations Technician

October 2019 - April 2025 (5 years 7 months)

Darwin, Northern Territory, Australia

Liquefaction and compression via 6x 30MW General Electric LM-2500 turbines and Mark 6e control system, On-Site Power and Steam Generation via Solar gas turbines, Fire Team Lead, MOME trained and Permit Authority (ISSOW and eSWWP permit to work systems) competencies.

Day to day duties include area reads and rounds, allocation of Isolation Forward Planning tasks to shift members, permit sign-on and supervision of work groups in assigned area of plant, development and execution of isolations / de-isolations in the field, equipment purging for isolation and return to service, laboratory analysis of produced natural gas liquids for on-spec RVP values when Laboratory staff unavailable, extract scheduling plans from SAP-Hana to integrate with operations 7 day plan and organize with maintenance coordinators, review and approve permits and isolation scheme scopes as fit-for-purpose, develop excavation plans including ground penetrating radar and underground service detection maps, develop ventilation and rescue plans for Confined Space Entry works, conduct in-field first issue of high risk permit work including gas testing for entry, Category A hot work and live electrical testing. As Emergency Response Team Lead / On-Scene Coordinator I develop and execute training exercises for the shift, field coordinate with the Emergency Commander and I am the Communications Officer in the Command Center when in the Permit Authority role. As Fire Team Lead I am also required to inspect and rehearse rescue plans for CSE works at permit first sign-on, as well as conduct weekly preventative maintenance tasks on emergency response equipment to maintain equipment familiarity and prove operational effectiveness of firefighting appliances.

Ongoing involvement with Santos Energy Solutions group to develop Technical Reviews and analysis of carbon capture technologies from vendors such as Exxon-Mobil, CarbonPoint Solutions (Caterpillar) and Optimal group.

Temporary secondment to Offshore Drilling, Process and Production platform

December 2020 - June 2021 (7 months)

Bayu Undan platform, Timor Sea

Secondment position to assist Bayu-Undan Drilling & Production Platform operations during the Covid-19 pandemic. Duties included Outside Operation of first and second stage production separators, glycol dehydrators, cold process trains (for recovery of liquids from the feed gas), LPG Splitting (which produces propane as the top product and butane as the bottom product), Propane Desulphurisation via molecular sieve, Condensate Stabilization / De-ethanization, turbo-expanders and Solar Mars gas turbine driven flash

gas compressors, 20MW Rolls Royce RB211 gas turbine driven re-injection / export compressors and Solar Taurus 60 4MW powergen gas turbines. Emergency Response Team member for Drilling & Production Platform and Helipad operations.

LNG Operations Technician

May 2020 - December 2020 (8 months)

Darwin, Northern Territory, Australia

DLNG ownership transferred from ConocoPhillips to Santos Ltd in 2020. No change to employment role.

ConocoPhillips

LNG Production & Operations Technician

March 2014 - May 2020 (6 years 3 months)

Darwin, Australia

Operator 2014 - 2015 under the DOCTA 6 programme. Commenced employment with ConocoPhillips March 2015. LNG Operations and Production Technician at the Darwin Liquefied Natural Gas (DLNG) facility. Certificate III in Hydrocarbon Process Plant Operations PMA 30113. Responsible Operator for 25 MW of onsite gas turbine power generation, 180MW of aero-derivative gas turbines for compressors and liquefaction, acid gas removal units and water operations. On Scene Coordinator / Fire Team Lead for ERT and On Scene First Aid provider. Caterpillar Solar Gas Turbine O&M training 2017. General Electric Gas Turbine distributed computing control training 2018. Regular exposure to turbine and critical balance of plant Operations Technology (OT). Advanced Boiler Operator Licence March 2018. OTSG system boiler tube replacement focal point for 2018 shutdown. DLNG Operations focal point September 2019 Half Rates maintenance campaign. Focal point for site wide analog to digital radio communications transition 2016 - 2018. Authorised Electrical competency.

Mentoring Indigenous male and female Operator trainees using the DEKRA Organisational Reliability Ltd.'s "Coaching for High Performance" method.

Travelled to ConocoPhillips' North Slope Oilfields in Alaska as WAVES Onshore Production Representative to examine the Behavior Based Safety System on behalf of ABU-West Steering Committee June 2019.

Winner of global "Conoco's Got Talent" for analytics and innovation contest for Mars mission rocket propellant (LNG/ LOX) and its Earth atmospheric carbon capture technology applications - Houston TX, October 2019.

Created a handheld scanner safety device in 2015 using Raspberry Pi CPU and Python code to scan process isolation tags to ensure isolation / de-

isolation sequence integrity. Submitted to ConocoPhillips Global Innovation site 2019. Senior Permit Authority ISSOW training May 2020.

Veolia Water

Combined Heat and Power Generation Technical Specialist

June 2013 - March 2014 (10 months)

Darwin, Australia

Combined Heat and Power (CHP) co-generation plant for the Brine Concentrator water purification project at ERA Ranger Uranium Mine, NT. Site Acceptance Testing and Turn Over phase October 2013, worked closely with EPC contractor (Hatch Associates) and project owner (Rio Tinto). Designed additional spinning reserve DCS philosophy after troubleshooting Honeywell Experion DCS Operational Technology network system using Wireshark. Transition to operation and maintenance phase November 2013. Steam, power generation and process plant consisting of:

Honeywell Experion Power Generation DCS terminal for OT network

4 x Caterpillar 2 MW / 11000v generators

8 x 500 kW Waste Heat Recovery Boilers

1 x 8MW diesel fired boiler (12 tonnes per hour steam production)

3 x 2.2MW Mechanical Vapor Re-compression units

3 x HPD falling film evaporators

Excitation control system (AVR)

Integrated Engine Control (Governing / Synchronization)

Caterpillar ECM / EMCP integrated with PLCs and site-wide SCADA system (peer to peer automation)

GE SecoGear metal clad 11kV / 3.3kV switchgear

GE Prolec 7.5 MVA 11kV / 3.3kV transformers

2014 - Devised simple solution for mitigating high voltage arc flash risk in generator enclosures for ERA / Rio Tinto operations at Ranger Mine. Recommended for safety improvement award.

Boeing

Installation and Integration Coordinator

July 2009 - June 2013 (4 years)

Darwin / Canberra, Australia

Employed as Shift Operations Technician 2009 -2010 and then Mission

Support Specialist 2010 -2011 at a high security Defence facility in Darwin.

Relocated to Russell Offices Canberra in May 2011 as Installation and

Integration Coordinator for Defence high bandwidth security projects, including

software, hardware & networking infrastructure integration. Received Defence Merit Award for discovery of serious PLC coding error whilst a site was running on standby generators, averting high level mission capability loss. Examined stream processing systems for final year Bachelor of Information Technology degree project. Returned to Darwin June 2013 to pursue SCEC consultant opportunities.

Schneider Electric

Commissioning Technician

January 2005 - July 2009 (4 years 7 months)

Greenfield oil and gas project: Installed and commissioned HVAC control system / emergency building pressurisation safety systems during construction 2005 of Darwin LNG plant for lead project contractor Bechtel. This system is a Reactive Control that forms part of the DLNG Regulatory Safety Case for the License to Operate as a Major Hazard Facility. Compiled and executed punch list for turnover to client ConocoPhillips. Executed monthly HVAC control system O&M program at Darwin LNG 2006 -2009.

Defence and commercial clients : Programming, design, installation and commissioning of distributed control systems for building automation, SCADA and EACs for Department of Defence and commercial clients. Commissioning, O & M of NT/K garrison bases including NORTHROC site, Abrams tank and Tiger helicopter simulators.

Successfully project managed and installed several Cardax Type 1 Intruder Detection Systems and CCTV for Commonwealth Agencies in Darwin and Katherine.

National Award for Project Management of Commonwealth Agency fitout.

Perkins Shipping

Marine Technician

August 2000 - January 2005 (4 years 6 months)

Darwin Area, Australia and Dili, East Timor

Install, maintain and repair ship DCS and automation systems, power generation units, distribution systems and propulsion units for company shipping fleet of 11 international and littoral manoeuvre vessels.

Executed generator rebuilds whilst at sea to minimise vessel downtime. Major repairs and survey operations using company owned slipway, also serviced local commercial fishing fleet and Australian Navy vessels HMAS Adelaide, HMAS Gladstone and Australian Army landing craft.

Support to Military Operations (INTERFET) in East Timor 2000 -2004 on a month on / month off rotating basis at Port of Dili. Travelled to Pan United

Shipyards Bataam, Indonesia 2002 for 3000T vessel refit including overhaul of two Wartsila 6L20 main propulsion units for Lloyd's survey.
Support operations for remote indigenous coastal communities across the Top End. Obtained NT Restrictd Electrical Licence in 2000.

Henry Walker Eltin

Senior Technician

November 1998 - August 2000 (1 year 10 months)

Darwin

Carry out maintenance and repairs on full authority electronic engines for the Henry Walker group (later HWE) mining operations.

Cummins Inc.

Field Service Technician

November 1993 - November 1998 (5 years 1 month)

NSW / Northern Territory

Diesel power generation specialist for remote mining & utilities sector

NSW Roads and Traffic Authority

Plant Mechanic

November 1989 - November 1993 (4 years 1 month)

NSW

Completed trade certificate in Plant Mechanics 1992. Trade certificate in Heavy Vehicle Diesel Mechanics completed in 1993.

Education

Charles Darwin University

Bachelor, Information Technology · (2008 - 2011)

Australian Center for Energy and Process Training

PMA 30113 - Certificate III in Process Plant Operations

(Hydrocarbons), Liquified Natural Gas processing · (2014 - 2015)

Diverse Training Concepts

Certificate IV, Security and Risk Management · (2011 - 2012)

Wollongong TAFE

Certificate III in Diesel Mechanics (Trade) · (1992 - 1993)

Wetherill Park TAFE

Certificate III in Plant Mechanics (Trade) · (1989 - 1992)