
Simon Philip Bromiley – March 2020

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SENIOR PROCESS AND CONTROL SYSTEMS DEVELOPMENT AND COMMISSIONING ENGINEER

Focused control systems engineer and PLC specialist with 43+ years of experience in delivering solutions for companies and clients. Well-rounded background in food and beverage as well as mining and meatworks, developing a wealth of knowledge that can be applied in multiple areas. Global industry experience includes dairy, water, butter, ice cream, yoghurt, margarine, brewing, mining, materials handling, juice, meat and bakery.

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|---------------------------------|-------------------------------------|------------------------|
| ▪ Automation Expertise | ▪ Controls System Instrumentation | ▪ Process Control |
| ▪ Strategic Analysis & Planning | ▪ Electrical/Electronic Engineering | ▪ PLC and SCADA |
| ▪ Troubleshooting | ▪ Collaborative Teamwork | ▪ Food & Beverage |
| ▪ Process Improvements | ▪ Training & Development | ▪ Communication Skills |

Professional Experience

December19 to Date
Resting

March19 to December19

PLC programmer on contract to Rail Technologies International in Lynbrook, SE Melbourne. Developing a consistent functionality of code across rail flaw detection vehicles. The present code is flawed, over complicated and vulnerable to failure. The objective is to standardise on a simple, robust and repeatable structure for future vehicles and upgrades of legacy vehicles. Code is using CODESYS and all IFM mobile equipment hardware.

Nov18 to Dec 18

Design PLC program (Control Logix) and touch screen control panel (PanelView+) for a 22 conveyor string and routing in Prydes Confectionary, Ferntree Gully

Aug 18 to Oct 18

Design PLC program (IFM with CODESYS), ASI network (IFM) and touch screen control panel for a reuse CIP set in Organic Foods Geelong

May18 to July 18

Short term contract with TetraPak Australia commissioning 200 ThinkTopBasic valves plus ancillary instrumentation.

All 2017 in China for SPX

Some recent experience has been an in-depth involvement of the commissioning of two green field site dairy product manufacturing facilities in China. At the time of writing some product trials had been made successfully but the client had insufficient markets to produce in bulk. The equipment I was directly involved in were as follows.

- 1) 4X6line30 destination CIP units with flow rates up to 40m³/h
- 2) 4X1 Tanker raw milk reception and tanker cleaning including inline cooling and reverse osmosis
- 3) 2Xrawmilk pasteurisers with Bactofuge, deodorisation and cream separation
- 4) 1 re-blending plant for standardisation of retail milk product
- 5) 2 fermented milk pasteurisers for yogurt drinks including culture addition and incubation.
- 6) 1 Pasilac Direct-infusion UHT plant with aseptic homogeniser
- 7) 1 Pasilac Indirect UHT plant with aseptic homogeniser
- 8) 4 Pasilac Flexmix units plus ingredient control
- 9) 1 Microparticulation plant
- 10) 1 scraped surface pasteuriser for fruit ingredients
- 11) Routing and blending of final ingredients
- 12) Aseptic integrity control
- 13) Control manifolds for roughly 40X20m³ aseptic or sanitary finishing vessels pre-filling

NOTE - I did not write the code or develop the SCADA for any of this but was very directly involved in getting it to work, correcting many design and drawing flaws both mechanically and electrically and inappropriate code from vendors.

SPX Flow - CONTROL SYSTEMS Commissioning

2017 - 2018

Control Systems Commissioning Engineer

Providing commissioning support for SPX clients in China. Diagnosing and implementing changes and corrections to finalise the process control system to the contractual obligation. Making improvements to meet performance specifications.

MILMEQ(NZ) - CONTROL SYSTEMS ENGINEERING

2015 - 2017

Control Systems Engineer

Providing post commissioning support for Milmeq (meat deep and rapid freezing) clients in Australia. Diagnosing and implementing changes and corrections to finalise the PLC and SCADA installation to the clients expectations. Making improvements to meet performance specifications.

RIO TINTO - CONTROL SYSTEMS AND ELECTRICAL ENGINEERING, Cape Lambert

2008 - 2015

Senior Control Systems Engineer

Maintained the control system used for port operations, working in collaboration with production and maintenance crews. Investigated process areas to be improved and developed targeted PLC and **SCADA solutions using Schneider Unity Pro, Wonderware, GE Fanuc and CITECT**. Analysed past events using a trend database to understand what might have led to a particular event and developed a solution. Attended meetings with site personnel to design long and short-term strategies for overcoming equipment failures or limitations.

- Instrumental role in the development of a control system change management procedure to minimise risk to personnel and equipment while permitting efficient implementation of change.
- Trained and mentored junior members in instrumentation, control and PLC/SCADA systems.
- Aided in the building of a dedicated training and development facility.

BROMILEY AUTOMATION SERVICES

1992/2019

Owner

Provided contract programming and commissioning services to global clients, with assignments in Australia, UK, Denmark, Greece, South Africa, Saudi Arabia, New Zealand, Papua New Guinea, Singapore, Indonesia, Philippines, Malaysia, Thailand, and China. Worked with a multitude of instruments for measuring flow, level, pressure, temperature, pH, brix, moisture content, and conductivity.

- Designed PLC code and HMI configuration for customer requirements, e.g. pasteuriser, homogeniser, clean in place, yeast extruder, postage stamp packaging, linoleum production, soft drink processing, and automatic greenhouse pesticide fogging.
- Delivered commissioning and PID loop optimisation services for processes, e.g. butter production, juice evaporation, spray drying, ice-cream production, brewing, bottling, canning, train unloading, bulk material handling, UHT, ultrafiltration, and reverse osmosis.

APV NEW ZEALAND

1990/1992

Contractor

Provided contract programming and commissioning services to APV in New Zealand

- Control system startup and commissioning for several contracts in the north island, mainly ice-cream.
- Designed PLC code and HMI configuration for TipTop ice-cream in Christchurch. Startup and commissioning of all electrical and instrumentation systems.
- Designed PLC code and HMI configuration for coal fired boiler and steam control system for NZCDC TeRapa including startup and commissioning.

APV UK

1986/1990

Employee

Provided programming and commissioning services to APV in UK

- Control system startup and commissioning for several contracts in the UK, mainly butter and milk.

PASILAC LTD, UK

1984/1986

Employee

Provided programming and commissioning services to PASILAC in UK

- Control system startup and commissioning for several contracts in the UK, mainly butter and milk.

ROYAL NAVY UK

1974/1984

Apprentice through to Chief Petty Officer

- Control Electrical Engineering apprenticeship.
- Service for one years training on guided missile destroyer HMS Antrim including a tour of duty in the Mediterranean and Indian Ocean.
- Served for three years on HMS submarine Conqueror as forward maintenance petty officer responsible for torpedo guidance systems and inertial navigation

Education & Training

Higher Certificate of Electrical and Electronic Engineering, Stow College of Technology, Glasgow

Control Systems and Electrical Artificer 1st Class, Royal Navy Artificer Apprenticeship

Studied mathematics, physics and electronics to degree level with Open University.

Presently studying for Masters in Information Technology with Charles Sturt University.

Member of the Institute of Engineering and Technology (UK)

HS&E Training: Electrical Workers Competency, Approved Isolation Officer, Arc Flash Awareness, Substation Risk Awareness, Low Voltage Rescue, First Aid, Fire Extinguisher Use

Equipment Knowledge: Variable Frequency Drives by Siemens, ABB, Allen Bradley, Danfoss, Protection Devices produced by Allen Bradley and Rockwell, Siemens, GE Fanuc, Modicon, Foxboro, Schneider products including Unity Pro, Wonderware and Citect SCADA

Proficy, Simatic, Step7, PCS7, Unity Pro., RS Logix, Control Logix, CODESYS

Ladder Logic, Function Block, Statement List, SFC

Networks and Telemetry

Other interests

Commercial pilots licence with experience in single engine and twin engine fixed wing, light helicopters and gliders.

Keenly studying physics of all genres using audio books. Avid listener of science podcasts. Five full bookcases of books technical and fiction.