



CSE - *W.Arthur Fisher*



Automation, Telemetry & SCADA | Asset Condition Monitoring & Protection | Sensors | Instrumentation
Valves & Pumps | Motors, Soft Starters, VSDs | Substation Automation Systems | Our Capabilities

Customer Satisfaction, **Everytime**



www.cse-waf.co.nz

A member of **CSE** *global*

About Us

We have been operating in New Zealand for over 80 years as a supplier and systems integrator of **Instrumentation and Control systems**. Our extensive portfolio of world-class products and services include many well-known brands, all of which are supported by our Engineering, Service, Sales and Administration teams in both the North and South Islands.

Our factory trained **Product Managers** deal with customer specific applications and offer products and solutions matching the needs of our clients at a cost effective price to maximise their returns.

Our **Systems Engineering Team** is based in Auckland yet reaches out to customers from the far north of New Zealand to the deep south. Whether it is a new design or a system expansion, our Engineers will provide an upfront review, recommendation, installation, commissioning and ongoing support services for the life cycle of our products and projects.

Our **Service Engineers** are not only factory trained, they also have extensive experience in manufacturing and servicing our products. This comprehensive engineering support provides our customers with a wide range of services from calibration and repair services for gauges and transmitters to overhauling and restroking control valves. We also manufacture Sanitary and Service control valves, process seals and special process connections, which allows us to maintain a first-class instrument workshop.

In January 2009, **W. Arthur Fisher Limited** amalgamated with **CSE Uniserve NZ Ltd** and the new entity was renamed **CSE – W. Arthur Fisher Limited** now a part of the **CSE Global group** which spans the globe employing over 1500 people, with over 85 percent representing its design, engineering and project management capability and experience.



Automation, Telemetry & SCADA



Modicon PLCs:

The entire family of Modicon PLCs offers ingenuity, flexibility and openness for increased productivity of machines & process.

The range includes:

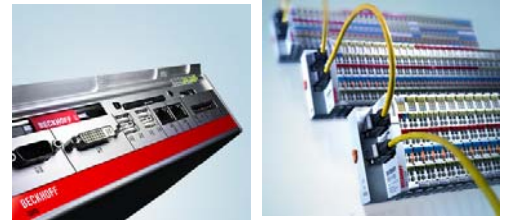
- Twido, TSX Micro & Micro M340
- Premium, Quantum & Momentum
- PC Based Atrium
- Unity software



BECKHOFF

PC Automation:

- PC Control systems
- Operator interfaces
- I/O Modules
- Bus products



SEMAPHORE

Telemetry:

The only RTU line that features an embedded programming environment that is compliant with both IEC 61131-3 and 61499 as well as extended memory and power that go beyond the power of a PLC.

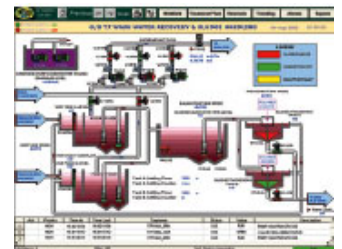
- Kingfisher & T-Box
- Powerful Communications
- Web Server
- Cyber Security



SCADA

We can engineer an HMI & SCADA of your choice with our Control System, Telemetry, Protection and Instrumentation products.

We also offer comprehensive SCADA Security (Defence-in-Depth & Unified Threat Management) from Industrial Defender.



HMI Operator Interface, Panel meters, Monitors and Control Solutions

- HMI operator interfaces
- Panel meters
- Data Acquisition
- Protocol converters
- Signal conditioners
- Sensors for linear and rotary measurement



Asset Condition Monitoring & Protection



GE Multilin Protection and Power Analysis:

- Generator, Transformer, Bus, Transmission line, Feeder, Capacitor bank, Motor, Network management relays
- N60 – Network management system
- C90^{Plus} – Substation Controller
- IEC61850 Station Bus
- IEC61850 Process Bus
- Special Function relays
- Power Analysis and Monitoring
- EnerVista Monitoring Software



Kelman Transformer Oil (DGA) Monitoring:

- Critical asset protection and performance
- No calibration needed
- Portable or permanently installed (single or multiple transformers)
- Early fault detection & life extension of Transformers
- Photo-Acoustic Spectroscopy (PAS)
- 8 Gases + Moisture analysis



Plant Optimisation & Control

Bently Nevada™ Asset Condition Monitoring

- Vibration & machinery protection solutions
- Asset Condition Monitoring
- Control Solutions
- Oilfield Technology
- Optimisation & Diagnostics software



3500 Series Machinery Protection System

Bently Nevada™ Asset Condition Monitoring



Vibration monitoring instruments and protection sensors to measure and monitor machine condition, providing early warning of potential machinery failure:

- Vibration sensors
- Seismic sensors
- Vibration signal conditioners



Sensors

TURCK

Industrial
Automation

Leading manufacturer of sensors and automation products:

- Inductive sensors
- Capacitive sensors
- Ultrasonic sensors
- Flow and Pressure sensors
- IS Barriers and Signal conditioners
- Fieldbus I/O
- RFID sensors and controllers
- Cordsets and connectors



Innovative Sensors from a Leading Manufacturer:

- Photoelectric sensors
- Ultrasonic sensors
- Vision sensors
- Wireless networks
- Safety Products



Pressure and Level Sensors

- Liquid level sensors
- Pressure sensors
- Float Switches
- Flow switches



A complete line of pressure regulators in four main groups:

- Pneumatic pressure regulators
- Volume boosters
- Pneumatic relays
- Electro-pneumatic transducers for I to P and P to I applications



Sensors



EUCHNER

Safety switches and Safety relays:

- Non-contact safety systems
- Safety switches in metal and plastic housings
- Enabling switches
- Safety relays
- Safety products with Integrated Bus interface



A world leader in level, positioning and flow measurement to the mining/mineral, water and waste water, bulk material handling and chemical industries.



INOR

- Process input isolators
- Signal conditioners
- Configurable isolation transmitters
- RTD/Thermocouple, Process and Potentiometer inputs
- Single & Dual channel
- Unipolar and Bi-polar inputs/outputs



Full range of process, industrial and flameproof pressure switches:

- Flameproof pressure switches with IECEx and Baseefa approvals



Instrumentation

invenis
Foxboro

Foxboro Measurement and Instruments:

- Pressure, Temperature, Flow, Level, Valve, Humidity, Positioners Analytical
- Recorders, Controllers
- Density \ Interface



 **TELEDYNE
TECHNOLOGIES**
INCORPORATED

Process Gas and Liquid Analysers:

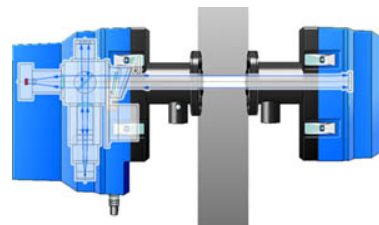
- NIR & UV Analysers
- Flame Ionisation Detection (FID)
- Stack emission & combustion efficiency
- Moisture & O₂ analysis



DURAG

Combustion Instrumentation and Environment Control:

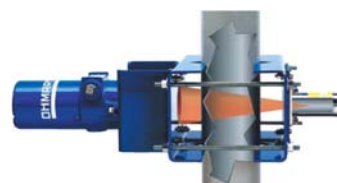
- Combustion control
- Environment Monitoring
- Pilot burners and associated products



 **OHMART
VEGA**

Nuclear based products:

- Non Contact measurement of Level, Weight and Density with Real time measurements
- Proven, Low maintenance & Reliable technology



MoistTech.com

On-Line N I R & RF Moisture & Constituent Sensors for Process Measurement & Control:

- Non-contact, reliable and accurate
- Low installation cost and quick payback
- World leaders in IR & RF Technology



Applications: Food, Minerals, Pulp & Paper, Pharmaceutical, Wood



Flow Computers for transfer measurement of hydrocarbons:

- Flow Computers – 32bit panel or field mount multi-run
- Gas chromatograph
- Reports & Archiving
- All gas and liquid applications



dataTaker®

Data Loggers and Data Recording:

- Data Logging and storing
- Geotechnical data logging
- Drivers for most of the main HMIs
- Expandable to 800 Inputs
- User friendly configuration



IN-LINE

In-Line Volume Correctors:

- Gas Transmission & distribution metering
- Battery or external power
- Password security & Alarm Phone home
- Economical & Wide Range
- 5 Years Warranty





CSE-WAF General Service & Sanitary Control valves are proudly made in New Zealand by CSE - W. Arthur Fisher Limited:

- All stainless steel construction
- Sealed with food grade compounds
- Screwed body General Service valves for 15mm to 50mm diameter
- Sanitary Control valves from 25mm to 80mm



**Heavy Duty Valves:
World leader in innovative safety valves for Pulp & Paper, Process Industry, Water & Waste Water:**

- Plug valves
- Knife gate valves
- Bare shaft or complete with Actuators
- Pulp Consistency Transmitters
- Globe & Rotary Control valves



Birkett Safety Relief Valves

- API/ASME pilot operated
- Spring loaded safety relief valves
- Thermal relief valves - protects pressurised systems from the effects of exceeding design pressure limits.



Liquid Ring Vacuum Pumps & Engineered Solutions:

Gardner Denver Nash has over 100 years experience in liquid ring vacuum products to meet your vacuum and compressed gas needs.

- Liquid Ring Vacuum pumps & Compressors
- Steam Jet Ejectors
- Design, fabrication, commissioning & ongoing maintenance support



Motors, Soft Starters, VSDs



Medium Voltage Motors:

- 3.3kV, 6.6kV, 11kV
- Squirrel Cage Induction Motors
 - TEWAC – Totally Enclosed Water to Air Cooled
 - TEAAC – Totally Enclosed Air to Air Cooled
- Slipring Induction Motors
 - TEWAC – Totally Enclosed Water to Air Cooled
 - TEAAC – Totally Enclosed Air to Air Cooled
- Cost effective replacement of Siemens old motors
- Special designs to suit specific applications, including:
 - Filter & Heat exchanger in the slipring chamber
 - Water leak detector



Low & Medium Voltage Softstarters:

- 400V, 690V, 1000V, 3.3kV, 6.6kV, 11kV & 15kV
- Up to 26,000kW
- Low Voltage test
- Pump & Special load control
- Direct Power factor connection
- Comprehensive Motor protection
- Multi-motor starting
- Synchronous motor starting



Fuji Variable Speed Drives for Optimum Motor control under any operating conditions:

- Available in 400V, 3.3kV, 6.6kV
- Ideal combination of power and multi function.
- Dynamic Torque - Vector control.
- High starting torque.
- Multiple motors controlled with single drive.
- On-line tuning



Low & Medium VSDs & LRS:

- 400V, 3.3kV (24 Pulse), 6.6kV (36 Pulse) & 11kV (54Pulse)
- 280kW to 8000kW
- Cell cascaded Multi PWM
- Low dV/dT for voltage & no cable length restriction
- By-pass function for mission critical applications
- Fiber optic interface top power cells
- > 96% efficient & >0.95 PF at full load
- IGBTs to provide smooth current & voltage wave forms
- Fixed Speed and Variable Speed LRS

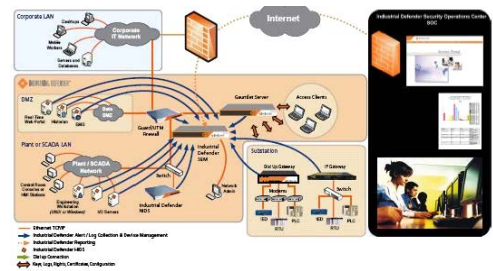


Substation Automation Systems



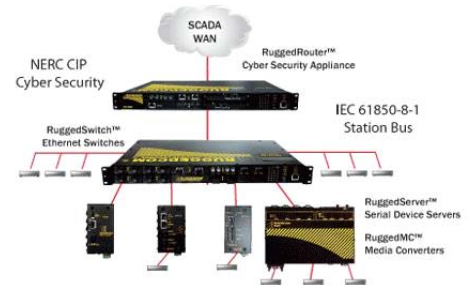
Cyber Security:

- SCADA & Controls security
- NIDs, HIDs & Agents
- NERC-CIP compliance
- Review, Gap analysis & Implementation



Substation Hardened Ethernet IP equipment:

- Substation Hardened Routers, Ethernet Switches, Serial Servers, Media Converters
- RX1100 Router – Cyber Security enabled
- KEMA certified
- IEC61850 compliant and Smart Grid enabled
- 5 year warranty



D400 & D400-S Substation Data Manager

GE Energy and SUBNET Solutions Inc. have teamed up to create one of the most advanced substation communication servers available today. SUBNET's powerful SubstationSERVER.NET™ software, coupled with GE's industry proven hardware platform has created the D400-S. This robust and flexible server is feature rich and is making substations smarter.

- Easy Drag and Drop configuration
- Seamless Protocol Translation
- Unprecedented SEL® Relay Connectivity
- Automated Event File Collection
- IEC®-61131 PLC Logic Support
- OPC Client and Server Interfaces
- Expandable and Upgradeable
- Robust, Substation hardened hardware with hot swappable communications cards
- Support for NERC® CIP compliance and configurable user security access
- Dual hot swappable power supplies



OUR CAPABILITIES

Our CSE–W. Arthur Fisher Engineering Team is based in Auckland yet reaches out to customers from Whangarei (Golden Bay Cement) to Bluff (NZ Aluminium Smelters) and the processing industry, Water\Waste Water & Power Utilities in-between. Whether it is a new design or a system expansion, our customers rely on us to offer them correct solutions to their problems. To achieve their key project outcomes, our highly experienced and specialised engineering team apply world leading technologies and deliver complete engineered project solutions.

CSE–W. Arthur Fisher will engineer complete turn-key solutions around our core technologies and will manage all stages of the project to completion.



Our key skills and capabilities include design, integration, commissioning and training of:

- Telemetry, RTU and Radios, PLC and SCADA solutions
- SQL Database and reporting.
- Defence in Depth Cyber Security for SCADA & Control to comply with NERC – CIP standards.
- Sensors, Instrumentation and Flow Control.
- Power protection relay selection and application support around IEC61850 Station & Process bus technologies.
- Ethernet network equipment selection and application/implementation support, including Serial Servers, Ethernet Layer 2 & 3 Switches, Routers and SDH multiplexers.
- Complete ‘packaged’ solutions including motors, motor protection, advice on motor starting and harmonic solutions using:
 - LV & MV Softstarters and VSDs.
 - Slip Energy Recovery technology and Liquid Resistance starters for starting and speed control of a slipping motor.



PRODUCT LINES	
Brand Name	Equipment Type
AMAL	Flame arresters
AUMA	Electric Actuators
BANNER	Machinery Guards, Photoelectric Sensing, Safety Products, Wireless I/O Systems
BECKHOFF	Bus Products, I/O Modules, Operator Interfaces, Industrial PC's
BEI	Rotary Encoders
BINDER	Cordsets, Connectors
BIRKETT	Safety relief valves
BLUE-WHITE	Rotameters, Flowmeters and Dosing Pumps
CHINO	Humidity indicators & controllers, temperature: measurement, controllers, sensors, recorders
COPE-S-VULCAN	Desuperheaters
CORVAL (T3)	Valves
CSE-WAF	Control valves, Temperature & Level probes, Process Seals
DATA-LINC	Ethernet Radios
DATATAKER	Datalogging Hardware & Software
DeZURIK	Valves: Control, Butterfly, Plug, Knife, Gate
DURAG	Environmental monitors and monitoring systems
EGE	Flow & Level controllers
ERO	Digital indicators, instrument calibrators, voltage calibrators
EUCHNER	Safety switches, Limit switches, Pendant controllers
FAIRCHILD	Air pressure regulators, Air volume boosters, I to P transducers, Pressure Sensors
FOXBORO	Control systems, Process control instruments
FUJI	Variable speed drives
GEMS	Level & Flow Indicators & Switches, Pressure Transmitters & Switches
GE MULTILIN	Protection relays
GROVELEY	Gas Detectors
HAWK	Ultrasonic, Microwave & Submersible Pressure Level Transmitters
HEGWEIN	Burner Igniters
In-LINE	Volume correctors
INDUSTRIAL DEFENDER	Cyber Security, Defence inDepth
INOR	Signal conditioners, Temperature transmitters
JORDAN	Control valves, Steam traps
KELMAN	Transformer DGA (Dissolved Gases Analysis)
KEP	Flow computers
KINGFISHER	Telemetry equipment
KURZ	Thermal Mass Flowmeters
MARIMEX	Viscometers
MERIAM	Flow measurement instruments, Level gauges, Manometers, Meters, Pressure gauges
METRITAPE	Level measurement systems
METRIX	Vibration Monitoring instruments
MODICON	Programmable controllers
MOIST TECH	Moisture measurement - NIR
MONITOR	Weather stations - automatic
NASH	Vacuum pumps, Compressors
OHMART	Nuclear density measurement, nuclear level measurement, nuclear weighing
OMNI	Flow computers
ORION	Flameproof pressure switches
POLYJET	Control valves
Q-PUMPS	Centrifugal and Sanitary pumps
RED LION	Indicators, Timers, Counters, Controllers, Operator Interfaces
ROBERT JAMES	Tube fittings, Sanitary Products & Valves
RUBBERFAB	Sanitary gaskets
RUGGEDCOM	Ethernet switches, routers, servers
SOLCON MV	Soft-starters
SPONSLER	Turbine flowmeters
TELEDYNE	Process gas analysers, Emissions Monitoring
THERMOKON	Controls: Air conditioning, Alarm, Exit door, Fire door, Humidity, Heating, Thermostatic, Timing, Wireless Building Management systems
TURCK	Proximity sensors, Speed monitors & Monitoring systems, Speed Rotational monitors & monitoring systems, Distance Measuring equipment, Ultrasonic level sensors, Flow sensors
W + S MEASURING	Rotary Encoders

Our Offices

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www.cse-waf.co.nz

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SERVICE

Service Manager – David Pipes
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