# **AQUIP**

# AQUIP SYSTEMS PTY LTD



www.aquip.com.au



# SOLUTIONS YOU CAN COUNT ON



MARKET LEADING PRODUCTS



**24 HOUR SUPPORT** 



ENGINEERING SERVICE & SUPPORT



**TRAINING** 



HIRE

# WHAT WE DO

Aquip specialises in delivering market leading industrial technology, complete with comprehensive lifetime technical support.

Since 1991, Aquip has supplied the highest quality measurement and data collection systems to the Oil & Gas, Mining, Marine, HVAC, Water and Chemical industries.

Our team of experts are dedicated to helping our clients realise their targeted reliability and productivity goals through ensuring accuracy in data collection to support asset management and maintenance initiatives.

#### **AREAS OF EXPERTISE:**

**Laser Alignment Systems** 

**Condition Monitoring** 

**Clamp-on Ultrasonic Flow Metering** 

**Thermal Energy Metering** 

ClampOn Sand, PIG and Leak Detection

**ClampOn Corrosion & Erosion Monitoring** 

Fire, Flame & Gas Detection

Flare Gas Metering

In Line Flow Metering

Sampling and Blending

**Infrastructure Monitoring** 

With offices located around Australia, our comprehensive range of products and services are accessible and supported coast to coast.



# WE ARE SPECIALISTS IN



# **Laser Shaft Alignment**





Laser Shaft Alignment ensures rotating equipment is set up to run within the manufacturer specifications. The consequences of misaligned shafts in rotating machinery can be severe and include expensive unscheduled downtime, loss of production, increased energy consumption, overheating, vibration, premature wear and tear and increased maintenance or replacement costs.

# **Condition Monitoring**



A successful Condition Monitoring program ensures early detection of deterioration in machinery. This allows machine operators and Asset Managers to step in before the machine reaches critical stage.

#### **Features and Benefits**

- Single laser technology
- Multi coupling systems
- Positional displacement measurement
- Thermal growth offsets
- Soft foot analysis & correction
- Cloud based software

#### **Applications**

- Pump-motors
- Cardan shafts
- Gear boxes
- Complex multi machine trains
- Conveyor drives
- Compressors
- · Gas turbines
- Training
- Maintenance assessment

#### **Features and Benefits**

- · Route-based data collection
- Vibration analysis
- · One and two plane field balancing
- Acceptance measurements using machine templates
- Troubleshooting using FFT analysis
- Visual inspection
- 12, 16 or 20 analogue channels for vibration monitoring, signal processing and data logging
- Time signal, characteristic value, FFT spectrum, kinetic wave path (orbits)
- Smart and easy IoT solution for predictive maintenance
- Advanced alarm handling tools are available for monitoring specific machine failures

- Gas turbines
- Wind turbines
- Compressors
- Motors
- Generators
- Pumps
- Factory acceptance tests





# **Clamp-on Flow Meters**



Clamp-on flow meters are suitable for use in liquid, gas, water, compressed air and thermal energy applications.

The non-intrusive nature of this technology ensures no contact is made between the device and the flow medium.

Transducers are installed in situ with no need to modify pipework or stop the flow.

### **Features and Benefits**

- Non-invasive
- Able to measure pipe sizes between 10 6500mm
- Meters available for use in hazardous areas
- No drift over time
- No requirement to shut down the process

#### **Applications**

- Water
- Oil
- Gas
- Chemical
- Compressed air
- Thermal energy
- Waste water
- Mining
- Pharmaceutical
- Slurries

# **Portable Doppler Meters**



Doppler ultrasonic flow meters provide an accurate and easy-to-use measuring system for high-solid fluid flow through pipes 0.50 inch to 999 inches (inside diameter). The Doppler flow meter is well suited for flow measurement applications such as sludges, slurries, aerated liquids, sewage, dredges, pulp, plastics, and activated sludges. It measures flow velocity by sensing signals from reflective materials within a liquid flowing in the pipe.

#### **Features and Benefits**

- No pipe section or spool piece is required to install the meter
- The meter is not affected by changes in temperature, viscosity, specific gravity, or the speed of sound within the liquid
- AC or DC operation, solar or battery power
- Non- invasive, submersible, clamp-on transducers
- Wide pipe diameter range 13mm (0.50 inches) –
  9999 mm (999 inches)
- Most pipe materials PVC, HDPE, Plastic, Steel, Rubber, Concrete, Copper, etc

- Slurries
- Waste water





# **Thermal Energy Meters**





Thermal energy metering is becoming increasingly required for applications like chiller balancing, cost allocation and billing. Regardless of your application we have a solution that will suit your new or existing pipework.

#### **Features and Benefits**

- EN1434, Class 2 certified
- Modular system
- Flexible communications options

- Commercial buildings
- Residential buildings
- Stadiums and sporting facilities
- Shopping centres
- HVAC







### Flare Gas Meters





Monitoring flare gas is a critical aspect of managing safety and profitability within the Oil and Gas industry as well as providing the basis by which oil companies pay certain taxes and report environmental issues.

Using the latest ultrasonic sensing technology, Fluenta offers the most accurate means by which to monitor the flow of gas. Extending its monitoring and measurement capabilities to the chemical, security and medical markets, Fluenta's collective experience spans hundreds of years in sensing, measurement and control with the accurate measurement of flow assisting in making informed business decisions.

#### **Features and Benefits**

- Non-invasive
- 0.75% accuracy
- Flush to wall pipe design
- Simple and inexpensive to install
- Compliant to industry requirement ATEX/IECEx
- Prevents signal loss at low and high velocities

- Measurement of flare gas
- Monitoring flow of gas
- Environmental and regulatory compliance
- Retrofit to existing systems may be possible



## **Data Loggers**



I2O provides a suite of smart network solutions to help water utilities respond to the challenges created by an increasing and urbanising population, more extreme weather events, ageing infrastructure, more demanding customers and constraints on expenditure. More than 100 utilities in over 35 countries around the world have installed i2O solutions since the company was founded in 2005; reducing leaks, bursts, energy and operating costs, extending asset life, improving customer service, and achieving return on investment within 12 months.

# **Infrastructure Monitoring**



Orbis's range of patented sensors and IoT technologies are leading the field in live data acquisition and predictive assessments of pipeline infrastructure.

Real-time monitoring capabilities help building owners and operators to make data-driven decisions, providing them with alerts and recommendations prior to the onset of critical events. These next-generation devices are non-invasive, simple and inexpensive to install, and offer true turn-key solutions to pipeline asset owners and facility managers.

#### **Features and Benefits**

- Swiss made transducers better than +/- 0.1% FS precision
- Better than +/- 0.2% FS drift, no need for recalibration
- High performance internal antenna, convertible in the field to external to aid poor mobile network reception
- Up to 3 pressure measurements and 2 flow channels within a single IP 68 housing
- More than 5 years battery life from internal battery or use external battery pack or DC power source
- Pressure and flow combined into a single logger with no additional cabling or external device required
- Timely data transmission ensuring no loss of data ever

#### **Applications**

- Measurement of DMA (District Metered Areas)
- Monitoring pressure fluctuations in water network
- · Reduction in pressure preventing leaks and bursts

#### **Features and Benefits**

- Non-invasive
- Simple and inexpensive to install
- Wireless internet connectivity
- Predictive, real-time asset monitoring
- · Prevent costly property damage and work disruptions
- Ensure water management program compliance

- HVAC
- Fire hydrant monitoring
- Waste / drain in commercial and industrial buildings
- System anomaly detection
- Predictive maintenance alerts
- Flow events and alerts





# **In-line Flow Meters**



Precision and accuracy are paramount when measuring liquids, particularly in custody transfer and chemical dosing or batching applications.

We offer the highest quality local and international brands for in-line positive displacement, mechanical and ultrasonic flowmeters, suitable for fuel, chemical, water, and thermal energy applications.

Our team can also assist with recommendations specific to your application and provide in-situ flow meter validation services.

#### **Features and Benefits**

- High accuracy and repeatability
- Can be used for highly viscous fluids
- Intrinsically safe versions available
- Available with a range of displays and all outputs
- An ideal solution for all fuel types

#### **Applications**

- Custody transfer
- Oil
- Viscous liquids
- Food & Beverage
- Pharmaceutical
- Water
- Chemical

# **Custody Transfer Meters**



Caldon ultrasonic flowmeters provide the industry with durable, stable, and low-cost-of-ownership ultrasonic measurement options. Sensia is constantly developing cutting-edge ultrasonic technology to better meet industry demands for custody transfer. These multipath inline ultrasonic flowmeters are backed by more than 50 years of experience and a history of technological firsts for their use.

#### **Features and Benefits**

- Improved meter reliability over a wide range of application conditions
- Improved safety for technicians when replacing transducers
- Simplified installation, reduced meter footprint, and overall metering section weight
- Reduced maintenance.

- Liquid hydrocarbon
- High viscosity, low flow
- LNG
- Gas hydrocarbon





# **Sampling & Blending**



Jiskoot manufacture a range of fully engineered systems and products for various sampling applications. All products comply with the standards when installed and operated in accordance with the standards. All systems are supplied with a performance warranty that guarantees compliance with the sampling standards even if proved by water injection. Jiskoot sampling systems and products are designed and manufactured by drawing on years of experience in liquid and gas hydrocarbon sampling.

#### **Features and Benefits**

- Simple and reliable to use
- Easy to maintain
- Fully compliant with International best practice
- Irrefutable evidence to support your measurement system

- Crude Oil and Condensate Sampling
- Hydrocarbon Gas Sampling
- LNG & LPG Sampling







# **Ultrasonic Intelligent Sensors**



ClampOn is the market leader for acoustic, vibration and corrosion-erosion monitoring in subsea and topside pipelines.

Trusted by the major industry operators, ClampOn's range of Sand Monitoring Systems and PIG detectors have been installed at virtually every oil and gas facility worldwide.

Their innovative Corrosion-Erosion Monitoring and Corrosion-Under-Insulation Systems provide real-time data to ensure pipeline integrity and system safety is maintained, and operators can schedule maintenance activities to more accurately address and reduce risk.

#### **Features and Benefits**

- Non intrusive clamp-on technology
- Two way communication
- Full signal range resolution
- Subsea and topside solutions
- All sensor data can be transmitted
- No signal loss
- The ideal non-invasive measuring device
- A wide range of communications

#### **Products**

- Sand / Particle Monitor
- Well Collision Detector
- Corrosion Erosion Monitor
- Pig Detector
- Leak Monitor
- Vibration Monitor
- Condition Monitor



# Fire, Flame and Gas Detection Systems



Fire and Gas explosions are among the most serious hazards faced by the Marine Industry. Aquip represents the world-leading Autronica range of fire safety equipment, to support this industry as well as maritime operators the world over.

# **Liquid Analysis Systems**



Liquid analysis is carried out across a range of industries to ensure consistency in product quality, process optimisation, environmental compliance and safety management. Aquip supplies Turtle Tough's range of robust liquid analysis systems and sensors for the most aggressive of processes, including hydrometallurgical extraction, chemical manufacturing and waste water treatment.

#### **Features and Benefits**

- Simplified maintenance, commissioning and operation
- Easy to maintain, modify and scalable
- Certified SIL 2 solution
- Dual safety
- Integrated 3rd party interface
- Minimum downtime, maximum safety
- Self-Verify smart technology
- Broad range of communication options

# Applications

- Bulk Carriers
- Super Yachts
- Refineries

#### **Features and Benefits**

- Longest life in the industry
- Designed for extreme applications
- Lowest cost of ownership guaranteed
- Able to survive in high tempt and extremely dry conditions
- Break resistant glass

- Waste Water
- Slurry
- Zinc
- Nickel
- Gold
- Titanium Dioxide
- Solvent Extraction
- Copper
- Extraction Process





# SERVICES & SUPPORT



# We are available 24 hours a day to provide technical support to ensure successful use of our equipment.

#### **Services and Support**

We have a team of highly experienced Service Engineers available on short notice to mobilise to your facility to provide services in the following areas:

#### **Sand Detection Analysis**

- Sand Detection Services
- Support Contracts
- Support and Technical Advice
- Planning
- Commissioning
- Calibration
- Preventive Maintenance of Installations

#### **Laser Alignment**

- On Site Alignment Service
- Geometric Alignment Services
- Calibration Checks of PRÜFTECHNIK Equipment

### **Condition Monitoring**

- Data Collection and Analysis
- Factory Acceptance Testing
- Ongoing Analysis
- Balancing

#### Flare Gas Metering

- Flare Gas Measurement System Design & Installation
- Environmental and Regulatory Compliance Service Programs

#### Fire & Gas Detection Systems

- On Site Inspection, Diagnosis and Repair
- Design and Commission New Systems
- Program Autronica Safety Equipment
- Upgrade Old Systems
- Stock an Extensive Range of Spare Parts

#### Sampling & Blending

- Site Surveys
- Field Support, Pre-commissioning and Commissioning
- System Maintenance
- Water Injection Proving

#### Flow Metering

- Flow Measurement
- Check Metering
- Thermal Energy Audits
- · Pump Efficiency Audits
- Heat Exchanger Performance Testing
- Infrastructure Monitoring
- Pipe Deterioration and Internal Blockage Identification

#### **Pump Health Assessment Check**

Our Pump Assessment Program provides a complete picture of equipment's health, reliability and suitability for use and is focused on reducing cost of asset ownership. A full analysis is provided with suggestions and recommendations.

#### Hire

We maintain an inventory of specialised products for long and short term hire. We are available 24 hours a day to provide technical support to ensure successful use of our equipment.

Products available for hire include:

- Laser Alignment Equipment
- Condition Monitoring Equipment
- Portable Ultrasonic Clamp-on Flow Meters

#### **Training**

The proper use of equipment and utilising best practices is an excellent way of increasing productivity and profitability. We conduct formal training on:

- Laser Alignment of Rotating Machinery
- Condition Monitoring Fundamentals
- All Aspects of Flow Metering
- Sand Monitoring and Well Optimisation Techniques

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