

IDEATION

REINVENTING ABNORMAL CONDITION DETECTION
DIGITIZING VALVES AND MECHANICAL EQUIPMENT

24/7 TOTAL VALVE INTEGRITY & MAINTENANCE CONTROL
DIGITIZATION AND SUSTAINABILITY ALIGNED

TOWARDS ZERO ROUTINE FLARING by 2030

YOUR ACD SYSTEM FOR DETECTION OF SAFE ACTIVATION OF SHUTDOWN VALVES AND BLOWDOWN VALVES



A ground-breaking Abnormal Condition Detection solution that is transforming the way industries worldwide maintain their focus on **SAFETY FIRST** and **LOW CARBON** while maximizing **VALUE** implementing a **COST EFFICIENT** system developed for a **SUSTAINABLE FUTURE**.

“Valves and connectors account for over 90% of emissions from leaking equipment according to the Environmental Protection Agency (EPA)”

(Valve World Americas Publisher, June 1, 2023)

HIGHLIGHTS

ESD/PSD/BD VALVE ACTIVATION DETECTION:

WIRELESS, independent detection of pneumatic ESD/PSD/BD valve activation without interfering/degrading the safety integrity of the valve control system. Feedback of all solenoid valve activations and movement are monitored to confirm correct or incorrect activation and the existence of any Dangerous Undetected (DU) failure in the safety system.

ESD/PSD/BD VALVE LEAK QUANTIFICATION:

WIRELESS, independent nonintrusive detection of internal leaks in shutoff valves after closing the valve. Leak rates may be identifying in three intervals such as: NO LEAK (leak less than 0,1 kg/sec), SMALL LEAK (leak exceeding 0,1 kg/sec) and LARGE LEAK (leak greatly exceeding 0,1 kg/sec).

DETECTION OF POSITION, STICTION AND FRICTION IN VALVES:

Independent detection of wear and tear on ESD/PSD/BD valve by monitoring and storing internally on the valve the change of movement, stiction and friction of the valve body over time. Identified thresholds are transmitted wireless to a CMMS.

ADVANTAGES FOR YOUR INDUSTRIES:

ENHANCED SAFETY

MINIMIZED DOWNTIME

PREVENTION OF HAZARDOUS EVENTS

ENVIRONMENTAL COMPLIANCE

COST SAVINGS

DATA-DRIVEN DECISION MAKING

REMOTE MONITORING AND CONTROL

REGULATORY COMPLIANCE

DATA ANALYSIS AND PREDICTIVE
MAINTENANCE

IMPROVED REPORTING AND
DOCUMENTATION

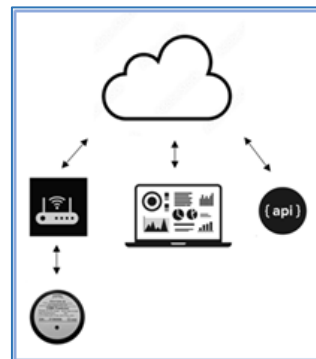
The CBM Predictor and Solutions

Abnormal Condition Detection

Detection of safe activation of shutdown valves and blowdown valves

Predictor Information Manager (PIM)

Intelligent CloudLink



CBM Predictor – Technical:

Vibrations applications with internal sensors including Pop and Leak
ESDV/PSDV valve leak
Pipe vibrations 2Hz – 500 Hz
Temperature measurements with external sensors
Heat Trace temperature measurements
Process medium temperature measurements
Pressure measurements with external sensors

Wireless connects to wireless routers with Bluetooth Low Energy wireless technology
Ultra-low power consumption
Secure field programmable
Self-Calibrating
Operating temperature: Minus 20 to plus 70
Intrinsically safe Lithium-Thionyl Chloride battery, 8-12 years battery life
Device to be attached directly on the equipment to be monitored or thermowell depending on the design
Stainless hose clamp type to fit any diameter valve body (for PSV and SDV)
Ex II2G Ex ia IIC T4 certified
Full integration with business systems Certificate DNV Presafe 20 ATEX 403841
IECEX DNV 21.0105



Intelligent CloudLink – Technical:

The Intelligent CloudLink is an integrated hardware and software solution providing a robust and reliable IoT sensor solution able to connect multiple BLE5 capable sensors and actuators.

Long Range Bluetooth 5
LTE-M/NB-IoT
GPS
ESIM/SIM
MQTT support (TLS)
Firmware Over The Air Update
Built in Security (Certificates)
IoT protocol based on MsgPack
Power management support

The CloudLink can handle several predictors, and the dashboard (PIM) gives you a full overview.

VALVE TECHNOLOGY FOR A SUSTAINABLE FUTURE

CONTACT US:

Ideation AS
Tangen 12, 4070 Randaberg
Norway
info@ideationcbm.no

www.ideationcbm.no