Ogauge®

IIoT based Remote Monitoring of Cryogenic Tanks

Ogauge for cryogenic tanks

Overview:

Cryogenic tanks are increasingly being used for bulk delivery of cryogenic liquid gas, as it eliminates the need for costly cylinders. Industrial gas companies use tankers to deliver cryogenic liquid gas to customer tanks, and efficient tank monitoring is crucial for customer operational status and sustainability. However, the current manual tank monitoring process is not consistently followed, leading to emergency calls and potential damage to the customer's business.

Manual records are insufficient, as they may not be maintained on a timely basis. This can result in inability to analyze leakage or gas levels below critical points. This is where Ogauge comes in the picture. It has features of a digital pressure gauge, pressure switch, pressure transmitter, and datalogger that offers a cloud-based dashboard for remote monitoring of gas tank pressure and liquid levels. With a wifi connection, telemetry data is transmitted to a host server. Ogauge simplifies tank management by providing access to readings from anywhere, and storing liquid/gas pressure and level readings on the cloud. Real-time alerts based on relay outputs reduce emergency calls and help manage disruptions effectively.

Challenges faced with the traditional method:

- Human Resources needed for costly and inefficient manual data collection. Highly probable that the process for periodic daily reading is not followed consistently.

- Major training and supervision required to manage manual data collection process and records.

- Human error in reading and writing data and typical issues with number transposition errors.

- Accuracy of maintaining timely manual records hinders in analyzing data or its effective use.

- Leads to potential out of stock issues and ordering on an emergency basis. High delivery cost and business sustainability is at stake.

- Ability to produce and deliver gas to meet emergent requirements cost effectively, and downtime may result in irreparable damage.

- Underutilized production and storage assets due to inefficient and inaccurate monitoring methods currently in use.

- Time inefficiencies and misunderstanding of verbal delivery requests.

- Tank asset management, audit, and periodic gas inventory is time consuming and difficult.

The solution with Ogauge:

- With Ogauge you can not only monitor the pressure and level of the fluid in the cryogenic tank but also control it and set interlocks/alarms/alerts based on the relay outputs.

- Four hard relays make it very easy to set alarms/alerts as the level and pressure of the fluid in the tank varies.

- Storage of liquid/ gas pressure and level readings on the cloud automatically protects against data loss and allows for limitless information storage.

- You can view, manage, and optimize multiple assets (cryogenic tanks in the field) and access their data from one single dashboard.

- Ogauge is a stand alone solution for control and monitoring of your cryogenic tanks in the field.

Key Features of Ogauge

A digital OLED display
Makes it possible to view the readings from a significant distance

IP66 certified
Protects the gauge from harsh industrial environments including dust, fumes and water, etc.

4 relay outputs
Control the fluid pressure and level; and send alerts based on the variation of the level (through the web-based dashboard)

Two configurable analogue outputs
One current and one voltage outputs can be used to link the Ogauge with the existing SCADA system

Inbuilt data logger
Log process data up to 8 years approx.

A mobile application
Makes the Ogauge easy to use and install

Access from anywhere
24/7 online access to critical tank level information through our web based dashboard allows users to control and monitor the Ogauge remotely

Geolocation
The exact location (w/latitude and longitude) of the Ogauge can be viewed on the dashboard

Predictive analysis
Optimise maintenance calls and delivery by managing cryogenic tank locations and quantities through a dashboard

Actionable Data and Accurate Decisions
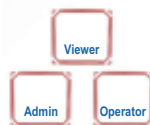Online timely data gives you the power to make data driven decisions to improve customer relationships

Automated Alerts in real-time
Email alerts notify users of increased or decreased usage, reducing emergency calls and disruptions
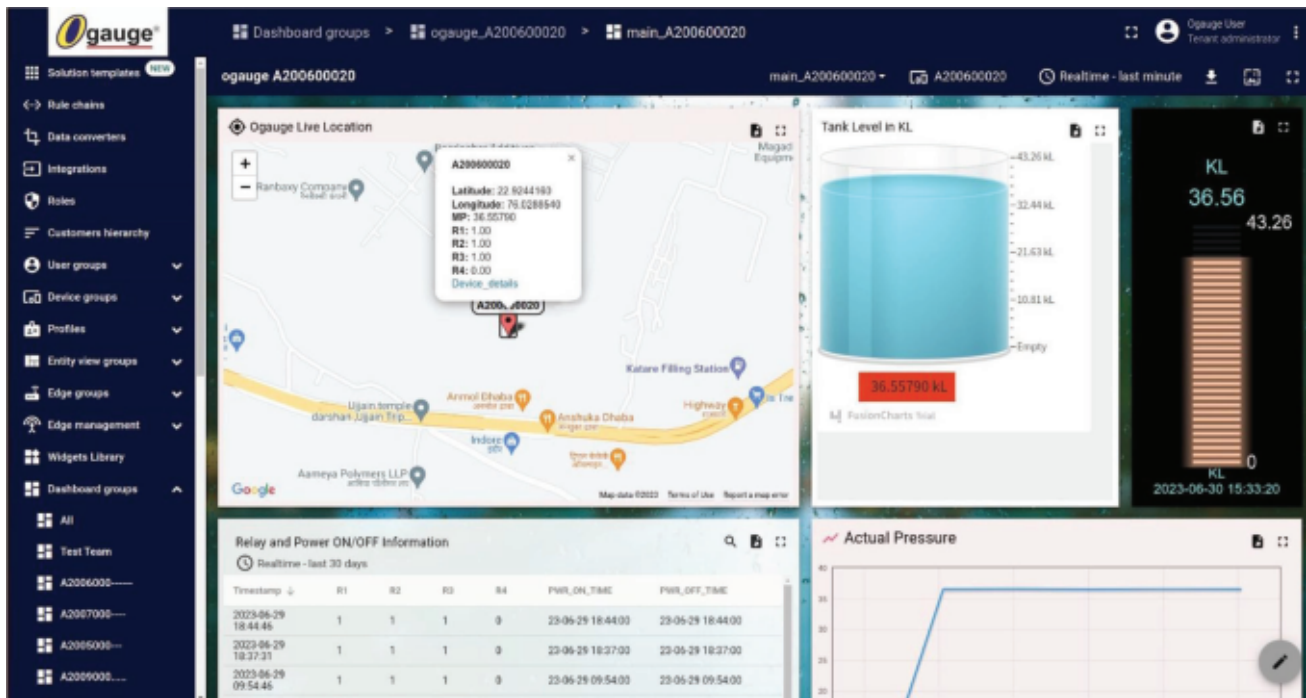
Maximum Data Protection
Ogauge securely stores data on the cloud, ensuring limitles storage capacity and easy access to the telemetary and event data

Role based access
A password protected access makes the Ogauge potentially tamper roof. You can set alpha-numeric passwords for maximum security

Dashboard with geolocation

With the web-based dashboard of the Ogauge you can remotely access the instrument.

Following things can be done on the dashboard:

• Monitor and control multiple Ogauges from a single dashboard

• Geolocation of a particular Ogauge with exact latitude and longitude

• Process pressure/ level in real time

• Line graph of the actual pressure

• Status of relays

• Email alerts in real time

• Access historical data and download it

• Trend analysis based on historical data which can help in predictive maintenance/ failure prediction.

• Calibration reminders for the Ogauge

• Automate service calls/ billing

Note : As efforts are made constantly to improve both design and method of manufacture, the apparatus supplied may differ in detail from illustration and data printed. Please check the specifications while ordering