



CASE STUDY

Optimizing Steam Flow Efficiency
Eco-Zinder's New Steam Flow Meter Installation



ECO-ZINDER

CUSTOMER BACKGROUND

The customer produces chemicals, including copper and zinc concentrates, which are produced in large quantities. Eco-Zinder specializes in providing sustainable environmental solutions across various industries.

They use steam for drying chemicals. They use three steam generators that generate about 10,000 kg/h of steam. Eletta's steam meter is used to control the amount of steam they apply to the chemicals. This case study outlines the challenges, implementation process, and significant improvements realized through this upgrade.



CHALLENGE

Eco-Zinder identified that their existing steam flow management system was too large and complicated, leading to increased operational costs. They required an updated solution to easily and accurately monitor and control their process steam flow.

Project Goals

- Achieve precise steam flow measurement
- Enhance energy efficiency
- Reduce operational costs
- Improve overall system reliability
- Solution

Challenges to Overcome

Integration with the existing system without causing significant downtime.

Ensuring accurate calibration of the ELETTA STEAM system.

Mitigation Strategies

Scheduled installation during low-usage periods to minimize impact.

Eletta factory training to ensure precise calibration and seamless integration and operation.



SOLUTION

Implementation-Process

Planning and Design:

Conducted a thorough assessment of the existing system and designed a tailored installation plan.

Procurement:

Acquired the necessary equipment and materials.

Installation:

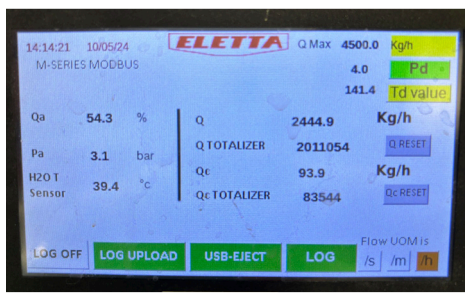
Installed the new steam flow meter with minimal disruption to operations.

Testing and Calibration:

Conducted rigorous testing and calibration to ensure optimal performance.

Training:

Provided comprehensive training to Eco-Zinder's staff on the operation and maintenance of the new system.



RESULTS

Accuracy Improvement:

Achieved a 15% increase in measurement accuracy.

Energy Savings:

Reduced energy consumption by 10% within the first three months.

Cost Savings:

Realized a 12% reduction in operational costs annually.

Customer Feedback:

"The new steam flow meter system has significantly improved our operational efficiency with its accurate measurements and ease of operation thus providing precise control over our steam usage." – , Operations Manager at Eco-Zinder. The customer is very satisfied with the ELETTA STEAM solution. They find it small, easy to install, and accurate. The customer uses the User Interface only for visualizing values. They use just the 4-20mA signal from the M-series (Control Unit) to the control/measurement they have. They have Profibus as communication to the measurement system.



SUMMARY

Comparison with Previous State

Before:

Large and bulky Steam Instruments that were very complicated to operate leading to down time.

After:

Accurate measurements, reduced size and easy to operate and maintain.

Key Takeaways:

Investing in advanced steam flow measurement technology yields substantial efficiency and cost benefits.

Proper planning and expert installation are critical to the success of such upgrades.

Eco-Zinder's installation of a the ELETTA STEAM flow meter system has successfully addressed their operational and installation challenges, leading to improved efficiency, energy savings, and cost reductions.

The customer asked for 4 more ELETTA STEAM units.

May 10, 2024

