

## Case study: Emerson

# 100 percent reliable when the heat is on



Emerson provides real-time, wireless corrosion monitoring for inaccessible pipelines in extreme environments. Oil industry super-majors across the world depend on Emerson for responsive, reliable and robust provision of safety-critical data.

### Challenge

Continuity in oil and gas exploration and production is critical to financial success. Interrupted production costs serious money, but is it possible to reconcile productivity with safety? Together Emerson and Custom Power are committed to making safety commercially sound.

Corrosion in refinery pipelines left unchecked can result in catastrophic failures where the human and financial costs are immeasurable. However, traditional manual measurement of corrosion is not only hazardous (refinery pipelines are notoriously dangerous and inhospitable – temperatures routinely reach 600°C) but inherently inaccurate. Traditional methods are also disruptive, demanding facilities are regularly shut down to allow access.

There had to be an alternative and Emerson has led the development of remote, battery-enabled, wireless sensors that relay live pipework corrosion data for central processing and analysis. They have worked hard to design the most efficient measurement technology and minimize battery load for maximum operational lifespan but the fact remains that working conditions are far from ideal for long battery life. In addition, Emerson's global reach has taken their products to Alaska and extremes of cold with operating temperatures as low as -40°C.

But the challenges extend beyond extremes of immediate environment and geography. Operational pressures on clients dictate that when sensors are commissioned and deployed there is a limited window of opportunity, Emerson and Custom Power must respond rapidly without compromising reliability.

**Custom Power has worked to uphold Emerson's reputation for responsiveness and reliability...**

**Custom Power wants to work with its customers, and not hold them at arm's length.**

**Philip Pakianathan**  
Production and Design Manager

Sometimes you need more than the latest technology. When something doesn't work, experience matters. If you need a problem-solving approach you can rely on our 30 years at the heart of the battery business.

Confidence in your suppliers and confidence in your products is empowering. With confidence you can take control of your brand and build value in your business. We are here to help, throughout your product's development.





## Solution

Emerson appointed Custom Power to design and build its battery packs having seen commitment to reliability from senior management that extends throughout the business. Always ready for a challenge, Custom Power has worked hard to source exactly the right battery chemistries; delivering uninterrupted power and meeting the demands of sensor reliability, lifespan and hostile working environment.

From the start, Custom Power has worked to uphold Emerson's reputation for responsiveness and reliability; prototypes are developed quickly and turned around - fully tested. Final products are also manufactured and delivered to tight time frames with buffer stock held to accommodate extreme client requests and protect the Emerson brand.

**Emerson corrosion monitors function in extreme environments from 600°C in the heart of refineries across the world to -40°C in Alaska.**

## Result

Ultimately, sensor battery lifespan depends entirely on frequency of data collection and transmission - in normal use batteries are warranted for 5 years. The resulting financial benefits are colossal, production can run uninterrupted and the operators' exposure to risk of catastrophic failure through corrosion is mitigated. In addition there is no need for routine intervention removing the risk to personnel.

Custom Power and Emerson continue to work closely having built a relationship on integrity and transparency. Philip Pakianathan - Production and Design Manager concludes: "Custom Power want to work with their customers, they don't hold them at arm's length. They understand our requirements and respond with a working product. At Emerson we are a focused, highly talented team committed to delivering exceptional customer service; together, we can actually deliver when much bigger players would still be going through processes".

Custom Power's battery packs have proven 100 percent reliable when the heat is on, not to mention surviving Alaskan extremes of -40°C.

**Interested in batteries that will help build your reputation for reliability or respond to demanding clients and conditions? Call us on 01460 980100**



# If you are looking for the right balance of experience and expertise and above all the knowledge to power your product to success we are here to help...

Your business has a responsibility to many stakeholders.

And many of our clients operate in areas where lives as well as money are at stake.

Your product is in safe hands.

## Improving performance and increasing reliability

Growing businesses need confidence inspiring products. None more so than the manufacturer of a portable medical diagnostic instrument which enables people to journey far from the reach of medical professionals. Having reviewed the product's performance we worked carefully on its battery integration to deliver even better performance and increased reliability.

## Developing relationships as well as new products

Production and development of oceanographic survey and positioning equipment presents unique challenges due to extreme operating environments. We've combined battery knowledge and production expertise to make the overall manufacturing process even more efficient. Together we are helping to build a strong brand based on high integrity products.

## Exactly what you need exactly when you need it

The manufacture of powered personal protection equipment for use in extreme conditions carries high responsibility. People's lives depend on it. Initially we were pleased to provide fast, flexible cell supply, enabling efficient production and cost control. But as a trusted partner we are now proud to provide expert advice on battery system design and integration.

Challenge us to help you deliver a reliable commercial battery pack, call 01460 980100 or visit [custompower.co.uk](http://custompower.co.uk)

