BATTERY HEALTH MONITORING SYSTEM

NI-CD 1.2V

REFINERY & PETROCHEMICALS

INTRODUCTION

Sosaley Technologies Private Limited is an Indian-based company focusing on manufacturing indigenous Battery Management systems for Lithium-ion, Lead-acid, and Ni-cad batteries. Sosaley Technologies Private Limited is expertise in BMS and helps its customers in improving their business efficiency, reducing their operating costs, optimizing their energy usage, and ultimately, increasing their profitability. Our Research & Development experience excels for more than a decade and readiness to embrace new challenges in the field of BMS.

INTRODUCTION - CLIENT

An eminent player in the refinery and petrochemicals sector, with notable names like BPCL, HPCL, MRPL, NRL, and IPCL within its purview, all under the diligent oversight of the Ministry of Petroleum & Natural Gas. This dynamic organization boasts a versatile design, encompassing intricate secondary processing units and exceptional adaptability to handle a diverse range of crude oils with varying APIs, resulting in the production of a wide array of top-quality products.

PROBLEM STATEMENT

1. **TEMPERATURE INSTABILITY:**
The industrial batteries used in our client's operations were prone to temperature fluctuations that posed a significant safety risk.

2. **INACCURATE MONITORING:**
The existing monitoring systems failed to provide real-time and accurate data regarding battery conditions.

3. **UNPREDICTABLE FAILURES:**
Battery failures were often unpredictable, leading to potential accidents and costly downtime.

4. **MANUAL INSPECTION:**
Regular manual inspection of batteries was resource-intensive and not foolproof.

5. **LACK OF ALERTS:**
The absence of proactive alerts made it challenging to address emerging battery issues promptly.

ROOT CAUSE

Sosaley Technologies conducted a comprehensive assessment of the refinery & petrochemical company's battery-related challenges and identified the following root causes:

- **INADEQUATE MONITORING TECHNOLOGY**
  The absence of a sophisticated battery monitoring system hindered the detection of temperature fluctuations.
- **DATA INCONSISTENCY**
  Existing data collection methods lacked accuracy, leading to unreliable insights.
- **LIMITED PREDICTIVE CAPABILITY**
  Without real-time data, it was impossible to predict and prevent potential battery failures.
- **DEPENDENCY ON MANUAL LABOR**
  Relying solely on manual inspections was inefficient and prone to human error.
- **LACK OF IMMEDIATE NOTIFICATIONS**
  A lack of automated alerts meant that critical issues often went unnoticed until it was too late.

SOLUTION

To address these challenges, Sosaley Technologies installed the 'Battery Health Monitoring System' into the Oil & Gas company's operations:

- **INTELLIGENT SENSORS**

  Sosaley Technologies deployed specialized sensors to monitor key battery parameters, including current, voltage, and temperature.

- **REAL-TIME DATA ACQUISITION**

  The system continuously collected real-time data and transmitted it to a centralized monitoring platform.

- **THRESHOLD ALERTS**

  Customized threshold alerts were configured to immediately notify relevant personnel when critical parameters exceeded safe limits.

- **PREDICTIVE ANALYTICS**

  Advanced algorithms were employed to predict potential battery issues, allowing for proactive maintenance.

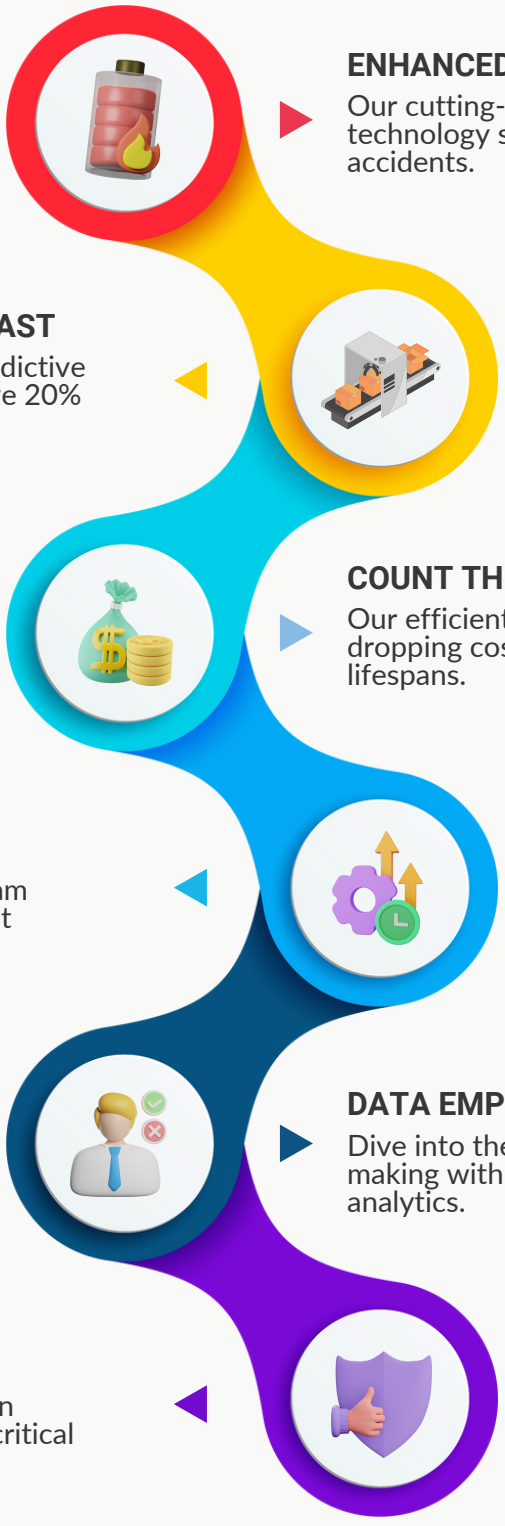
- **USER-FRIENDLY INTERFACE**

  The monitoring system featured an intuitive user interface for easy access to data and alerts.

INSTALLATION

OUTCOME

After the installation of 'Battery Health Monitoring System,' the Oil & Gas company experienced a multitude of benefits



ENHANCED SAFETY, REDUCED RISK

Our cutting-edge temperature monitoring technology slashes the risk of battery-related accidents.

DOWNTIME IS A THING OF THE PAST

Thanks to our proactive alerts and predictive analytics, we've achieved an impressive 20% reduction in unplanned downtime.

COUNT THE SAVINGS

Our efficient maintenance practices deliver jaw-dropping cost savings, extending battery lifespans.

SKYROCKET PRODUCTIVITY

With automation at the helm, your team can now focus on high-value tasks that drive growth.

DATA EMPOWERS DECISIONS

Dive into the world of data-driven decision-making with our real-time insights and historical analytics.

UNWAVERING RELIABILITY

Our state-of-the-art system ensures an uninterrupted power supply for your critical operations.