

Automation team slashes DO maintenance costs with Rosemount Analytical sensor solution

RESULTS

- Extended maintenance interval from every batch to twenty fermentation batches
- Extended sensor life by 50%
- Decreased maintenance costs by \$150,000
- Reduced product rework and scrapped batches with more reliable DO control



APPLICATION

Pharmaceutical Dissolved Oxygen monitoring batch fermentation

CUSTOMER

Major multinational pharmaceutical company

CHALLENGE

The customer wanted to improve reliability and performance for the dissolved oxygen readings in their fermentors. They determined high failure rates across many vessels in two manufacturing locations. They also determined the costs maintaining and repairing dissolved oxygen sensors were higher than many analytical devices, since DO membranes were being replaced after each fermentation campaign. Dissolved oxygen is a critical control point for their fermentation process.

SOLUTION

Emerson Process Management determined that DO measurements could be improved by using AMS™ Suite, Intelligent Device Manager. The improved maintenance strategy included nA raw current sensor measurement to determine sensor health as well as improving dissolved oxygen calibrations. Built-in temperature compensation improved DO sensor accuracy and further tightened calibration procedures.

Emerson's recommendations allowed the customer to extend the maintenance intervals when DO membranes had to be replaced. The more robust sensor configuration lasted twice as long as the previous sensor. AMS™ Suite allowed the customer to extend the interval of performing calibration checks by having critical sensor information available at the operation station. Tighter dissolved oxygen measurements allowed for better batch control, significantly cutting product rework and scrap.

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