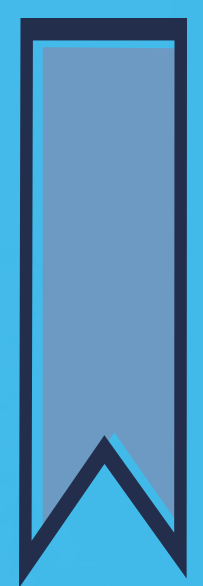


ROI FEATURE

Voltea's CapDI[®]



Supplier for Major Auto Manufacturer Saves Thousands of Dollars with Disruptive Water Purification Technology



KALIDA MANUFACTURING

Kalida, OH U.S.A

**ROI PAYBACK: \$37,000 ANNUALLY
IN REPLACEMENT PARTS**

As with most process water applications, high electrical conductivity (EC) can be a common issue that causes significant damage to equipment.

Kalida Manufacturing, located in Kalida, Ohio, has been supplying high-quality parts for a major North American auto manufacturer for over two decades. The facility, however, was losing money to components damaged by high EC levels in their water, which contributed to downtime, increased maintenance and added operational costs.

The manufacturer opted to rely on a non-traditional water purification technology to tunably remove the EC - a solution it had long needed but was unaware of its efficacy.

● THE ● CHALLENGE:

DAMAGED EQUIPMENT LEADS TO HIGH COSTS

The feed water running through both of Kalida Manufacturing's cooling loops had high electrical conductivity levels which were causing primary side components to leak current through water, generating heat and damaging equipment. This was not only decreasing efficiencies for Kalida, but increasing maintenance and causing annual operational and equipment costs to escalate.

Feed water EC in both cooling loops would range anywhere from 1669 to 1844 μ S, which was simply too high, as the maximum suggested level of EC is 1100 μ S. The facility couldn't afford to continue operating with those EC levels as it was costing an average of \$37,000 annually to replace damaged parts.

Without any kind of water filtration system present, the equipment was burning out and the manufacturer needed to find a solution fast.





● THE ● SOLUTION:

CONTROL OF CONDUCTIVITY WITH INNOVATIVE WATER PURIFICATION TECHNOLOGY

To gain control of conductivity levels in the weld equipment, Kalida leveraged Voltea's Membrane Capacitive Deionization (CapDI®), a salt-free water purification technology that removes salt ions and total dissolved solids (TDS), or EC, via an electrical current.

Kalida installed an Industrial Series 2 (IS-2) System at the facility to produce controlled, high-quality water with low EC levels that helped to maintain equipment quality standards and significantly reduce downtime.

What sets Voltea's technology apart from other traditional water treatment technologies is its ability to tunably remove electrical conductivity. The system can be adjusted to select the desired level of EC removal in order to ensure a consistent quality output. Real-time monitoring and control capability also significantly reduces the need for maintenance. The technology can simply be turned on or off to produce high-quality water as needed.

● THE ● RESULTS:

MONEY SAVED, REDUCED MAINTENANCE

Kalida Manufacturing installed the CapDI IS-2 System in October 2017 and have since witnessed notable results including:

- An average of \$37,000 in annual savings
- Reduced damaged to components
- Reduced downtime
- Decreased maintenance

Voltea's CapDI technology covered Kalida's two cooling loops and had an immediate effect on conductivity levels, dropping them well below the maximum recommended EC level and consistently holding them there.

"With CapDI, our equipment has been running more smoothly while the water in the cooling loops has not exceeded the conductivity limit," said a Kalida Manufacturing maintenance manager. "We've had zero equipment failures due to EC issues in the water, which has not only saved us thousands of dollars, but has also significantly reduced downtime and overall maintenance. The technology has really impressed us." The maintenance manager added, "We want to share this innovative technology with everyone who can benefit from tunable water purification for their industrial processes."

Lower conductivity levels helped to prevent side reactions from occurring, which would have otherwise caused damage to Kalida's equipment. More importantly, the manufacturing facility now operates much more efficiently and cost-effectively with CapDI installed.



Voltea's Industrial Series 2 (IS-2) CapDI System on-site at Kalida Manufacturing

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