

E-Cell* MK-7 retrofits competitor EDI systems

after poor performance from the competitor, E-Cell was chosen for the replacement project

Project summary

end-user Mining company
location Inner Mongolia, China
commissioned May 2020
application boiler feedwater
technologies electrodeionization (EDI)
capacity 115 m³/h (505 gpm)

Factors impacting technology selection:

previously installed electrodeionization systems;
 current installation not meeting performance requirements

Operational results:

16.9 MOhm-cm product water resistivity; 170V and 2A power requirement for 0.05 kWh/m³ energy consumption; 17 E-Cell MK-7 stacks installed in a single system for a stack flow rate of greater than 6.75 m³/h

Winning value proposition:

Low energy consumption while exceeding product water quality requirements; compatibility with original power supply

Keywords:

electrodeionization; EDI; E-Cell; MK-7; boiler feedwater; low energy; high performance; competitor retrofit



Figure 1: E-Cell MK-7 installation at customer site

challenge

A mining customer had four existing electrodeionization (EDI) systems on site for boiler feedwater treatment with a competitor's stacks installed. The customer was dissatisfied with the competitor's stacks because the flow rate had been unable to meet the design requirement. After several years of operation, the product water flow had been reduced to less than 70% of the designed flow rate, and the product water quality was also seriously reduced. The customer determined they had to retrofit the system and would consider other EDI technology suppliers.

solution

The customer chose E-Cell MK-7 stacks to retrofit one of the existing systems. In doing this, 115 m³/h of capacity was retrofitted by 17 E-Cell MK-7 stacks in this single system.

Find a contact near you by visiting www.suezwatertechnologies.com and clicking on "Contact Us."

*Trademark of SUEZ; may be registered in one or more countries.

©2020 SUEZ. All rights reserved.

The E-Cell MK-7 is designed for boiler feedwater and other similar applications with the high per stack flow rate also providing superior product water quality. The existing power supply from the competitor's system was compatible with the E-Cell MK-7 requirements, so the retrofit was able to be done with reduced expenses. The system was commissioned in May 2020.

results

For the system installed, the flow rate per stack was just above 6.75 m³/h. Most importantly to the customer and even at this high flow rate with easy competitor compatibility, the product water resistivity exceeded requirements at 16.9 MOhm-cm with the low power and energy requirement of 170V, 2A, and 0.05 kWh/m³. After this demonstrated performance, the customer has expressed their preference to retrofit the other three competitor systems with E-Cell MK-7.

contact us

If you would lo learn more about how SUEZ can provide solutions for your ultrapure water needs, please visit: www.suezwatertechnologies.com/contact-us.