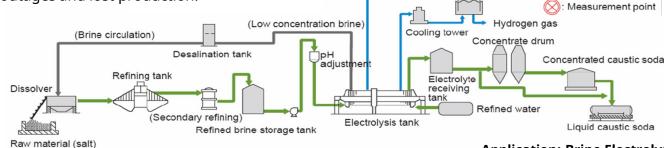
OpreX[™]Measurement

Pre-Engineered Solutions for Moisture in Chlorine Chemical Industry Solutions

Yokogawa has incorporated our leading-edge technology and extensive application know-how into pre-engineered solutions that enable the industry to overcome traditional application challenges, optimize production, and sustain value over an entire plant lifecycle.

Challenges with Traditional Measurement Technologies

- Hydrochloric acid (HCl) corrosion caused by moisture curtails equipment lifetime.
- Traditional sensors use consumable parts that require frequent maintenance and replacement.
- Long recovery times from large moisture concentration spikes lead to prolonged, unplanned outages and lost production.



Application: Brine Electrolysis

Exhaust Gas ppm Fractionation column H₂O CI2 ppm Chlorinator Separator Caustic Scrubber H₂O Dryer C2H4 To Therm Cracking Catoxid™ from Residual to Catoxid™ Storage Storage HCI recycle to Oxychlorinator Oxychlorination CatoxidTM Reactor Air EDC C2H4 Fractionation column Stripper **HCI** from stripper H₂O Measurement point VCM

Challenges with Traditional Measurement Technologies

98% sulfate

Drying tower

Wet chloride

Cooling tower

mag

H₂O

Dry chloride tower

Hydrogen gas tank

mag

H₂O

Liquefaction tank

Chloride gas

- Time and expense of custom designed and engineered solution
- Longer lag times due to distance from sample take-off

Pre-Engineered Benefits

- Minimized engineering and design costs
- Application expertise
- Quick response and recovery
- Reduced maintenance costs
- Increased measurement reliability and integrity
- Reduced sample lag time

Application: Vinyl Chloride Monomer Production

Specifications

Moisture in Chlorine Solution		TDLS8000	
Ambient Temperature	-13 to 140°F	Measurement	Tunable Diode Laser Spectroscopy
Process Supply Pressure	0 to 100 psig	System	
Process Supply Temperature	50 to 131°F	Analog Output	2 points; 4-20mA Output Range; 3.0 to 21.6mA DC
Process Return Pressure	0 – 80 psig	Analog Input	2 points, 4-20mA, Inputs; Process Temperature and Pressure
Sample Transport Bundles	By Yokogawa, By Others		
Sample Transport Tubing Material	Monel, Hastelloy C	Digital Output	2 points, Function: Warning/Validation/ Warm-up/Maintenance conditions Fault; Activated during fault conditions
Sample Handling System Materials	Monel, Hastelloy C		
Nitrogen Dryers	Single, Dual	Digital Input	2 points, Function; External Alarm/ Validation Start/Stream Switching
Communication	Ethernet, Fiber	Communication	HART, Ethernet, Modbus TCP
Hazardous Area Classification	Class 1, Division 2, Group BC&D, T3	Operation	CID2 Touchscreen LCD HMI

Proven Designs. Quick Installation. The Best Just Got Better.





OpreXTM Yokogawa achieves operational excellence by providing products, services, and solutions based on the OpreX comprehensive brand that cover everything from business management to operations.

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