

Chlorine Dioxide Services

Nouryon is the technology leader in chlorine dioxide generation; since the 1970's, Eka Engineering has designed, built and operated chlorine dioxide plants for pulp bleaching and other applications.

Eka Engineering is the engineering and contracting business within Nouryon.

We specialize in the design and supply of chlorine dioxide plants and equipment to the pulp and chemical industries and offer completely new turn-key plants, the upgrade and repair of existing plants and comprehensive services for large-scale production and application of chlorine dioxide; for both vacuum and atmospheric technology plants.

Nouryon is also the leading global supplier of bleaching chemicals and we deliver customized solutions for bleaching pulp to our customers. Our world class technology, application know-how, optimized supply chain and global logistic solutions provide customers with a significant advantage for their operations.

European, North and South American based engineers are ready to meet the needs of the global pulp industry. With the ever-increasing pressures on pulp mill operations to control cost and optimize systems we know that the safe and optimized use of chlorine dioxide during the production of bleached pulp is critical.

For more information please contact a Nouryon chlorine dioxide specialist.

E: bleaching_experts@nouryon.com



The chlorine dioxide generator at our Imperatriz production unit in Brazil

Operation Support

- DCS interlocks & control logic
- Advanced process control consultation
- Remote or on-site troubleshooting
- Applied Kepner-Tregoe methods
- Root cause analysis
- Maintenance planning assistance
- 24 - 7 availability

Optimization

- Reaction Chemistry efficiency
- Chlorine dioxide production capacity
- Saltcake removal & utilization
- Vent system emissions recovery
- Advanced process control implementation

Enhancement

- Equipment & instrumentation specification
- Process upgrades & modifications

Materials & Equipment

- Annual outage inspections & testing
- Preventive maintenance & planning
- Piping & mechanical specification
- Supply replacement equipment / spare parts

Process Safety Management (PSM)

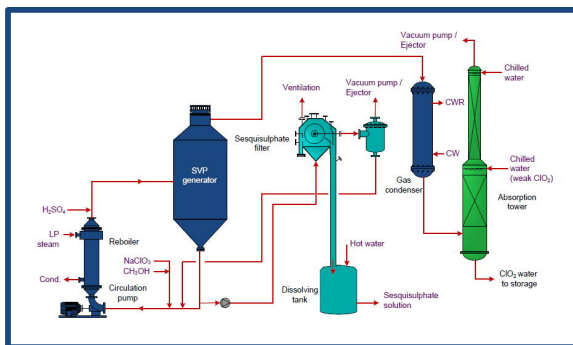
- Interlock PSM safety reviews
- Process Hazard Analysis (PHA) re-validation for methanol, chlorine dioxide, turpentine, ammonia and non-condensable gas (NCG) systems
- Supporting documentation / process safety information / Management of Change (MOC) process verification
- PHA Facilitation & OEM Process Expert

Site Customized Training

- Operator refresher training
- Hazardous chemical safety training
- Lab analytical procedures & techniques

Unloading, Storage and Handling

- Safety evaluations
- Sodium chlorate, chlorine dioxide, sulfuric acid, methanol & hydrogen peroxide systems consultation



SVP-Lite Chlorine Dioxide Generator Process Flow Diagram

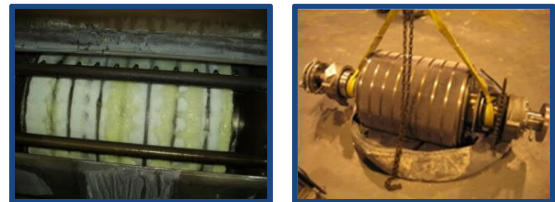
Equipment Inspection & Maintenance

Below - Internal view of saltcake dissolving tank and saltcake filter vacuum ejector nozzle



Saltcake Filter Operation & Maintenance

Below - Operating saltcake filter and spare rotating assembly



Heat Exchanger Inspection & Troubleshooting

Below - plugged generator reboiler tubes and fouled generator condenser shell side heat exchanger tubes



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Disclaimer

Information herein is given in good faith and is accurate to the best of our knowledge. Information and suggestions are made without warranty or guarantee of results. Before using, user should determine the suitability of the product for its intended use and user assumes the risk and liability in connection therewith. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. We do not suggest violation of any existing patents or give permission to practice any patented invention without a license.

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