

# pH Neutralization Systems

Sustainable Solutions for Industry





Our pH Neutralization System is designed to meet pH, heavy metals, solids, and other discharge limits.

Beta's process combines the best in environmental technology with the best return on investment. Sustainable solutions for both environmental and financial goals.

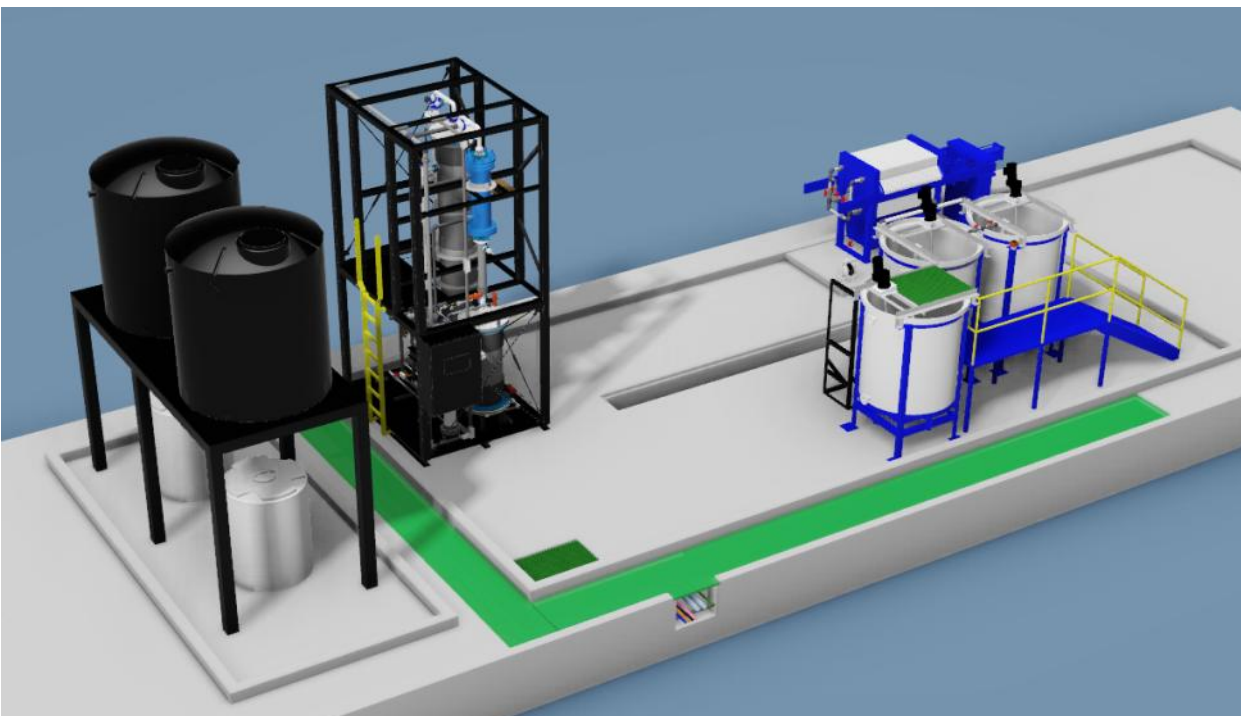
## Cost benefits

- Quick return on investment, long life expectancy
- Reduces chemical consumption
- Compact design integrates into existing facilities
- Unique design reduces energy consumed



## Enhanced Process Control

- Meets pH, heavy metals, solids, and discharge limits
- Microprocessor control minimizes operator time
- HMI tracks operations & compiles operating history



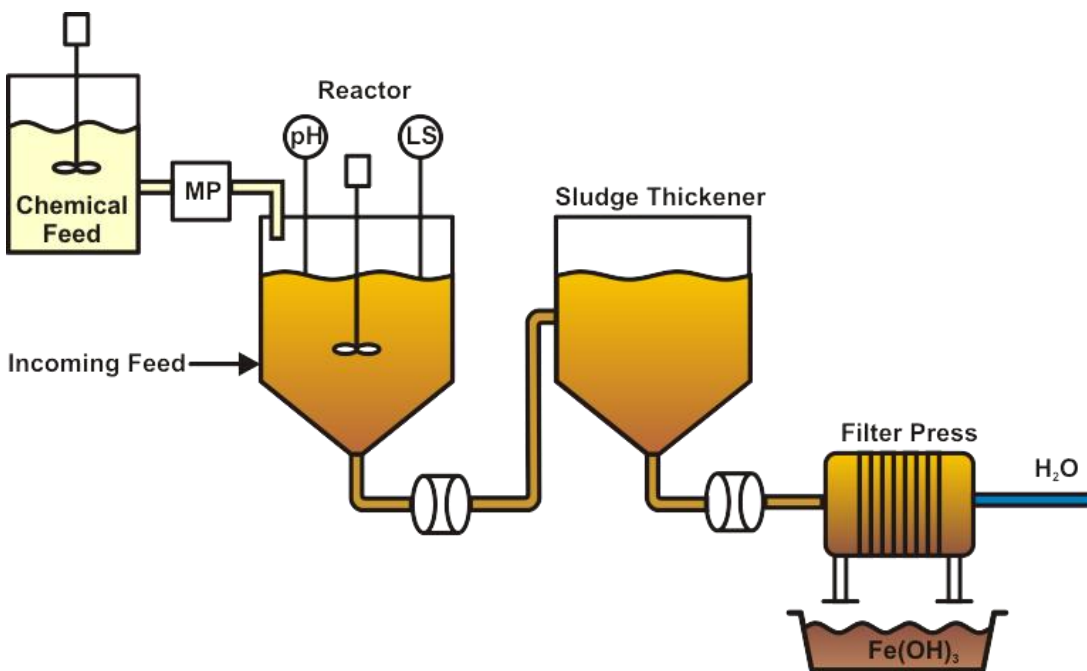
## Operation

Concentrated rinse or  $\text{FeCl}_2$  is pumped or drained to the Reactor tank for pH control. The mixer and ozone generator are continuously operated to insure proper oxidation levels and homogenous mixtures of iron hydroxides and water. Sodium Hydroxide ( $\text{NaOH}$ ) is metered into the In-ground Reactor to adjust the pH. Ozone is continuously added for oxidation to  $\text{Fe}(\text{OH})_3$ .

From the bottom of the Reactor, sludge is pumped to the Sludge Thickener for solids separation. The thickened solids are then pumped through the Filter Press where the sludge cake is dumped into the collection hopper and the filtrate is returned to the Reactor. Clarified solution from the Sludge Thickener returns to the Reactor tank.

This batch process is simple and easy to operate. A control panel is supplied to provide motor control, pH control, and chemical feeding as well as pump operation control. pH and ORP displays and alarms are visible to the operator.

The system is designed to remove the iron from solution and meet any pH limits that might be required by a monitoring agency. The system is shipped as modular components for assembly at your plant.





## Sustainable solutions

Beta designs, manufactures, installs, and supports its own resource recovery equipment. We provide cost effective, robustly engineered systems that recover your assets and help you attain your company's environmental and financial goals.

U.S.A. (headquarters)  
6950 SW 111th Ave, Beaverton, OR 97008  
phone: 503-646-3399, fax: 503-627-0888  
Email: [contact@betacontrol.com](mailto:contact@betacontrol.com)

BRAZIL, Beta Systems Brazil  
Mr. Rodrigo Frigo, Phone: 55-(44) 3028-3335  
[rodrigof@betacontrol.com](mailto:rodrigof@betacontrol.com)

CHINA, Beta Systems China  
Ms. Smile Lee, Phone: 86-411-859-12755  
[smile.lee@westechchina.com](mailto:smile.lee@westechchina.com)

INDIA, Leak-Proof Steel Plant Equipment  
Mr. Arvind Joshi, Phone: 91 22 2636 1737  
[speqindia@yahoo.com](mailto:speqindia@yahoo.com)

MALAYSIA, East West Wire Technologies  
Mr. Lim Tee Hooi, Phone: 603-5162 3846  
[eastwestwire@yahoo.com.my](mailto:eastwestwire@yahoo.com.my)

MEXICO, Sidermetal, SA de CV  
Mr. Luis Pietra Santa  
Phone: 52-(55) 1107-7582 / 83  
[lps@tecnometalweb.com](mailto:lps@tecnometalweb.com)

REPUBLIC OF S. AFRICA, VJL Technologies  
Ms. Marinda J van Rensburg  
Phone: 27(0)12 345 2215  
[marindaj@vjl.co.za](mailto:marindaj@vjl.co.za)

TAIWAN, Yongsun Corporation  
Mr. Frank Shy, Phone: 886-2-2881-7288  
[frankshy@ms24.hinet.net](mailto:frankshy@ms24.hinet.net)

TURKEY, ANI Zinc Oxide & Metal Ltd.  
Mr. Isik Sapci, Phone: 90 312 2875510  
[isik@animetal.com.tr](mailto:isik@animetal.com.tr)

UNITED KINGDOM, Chem Resist Groupe  
Phone: 44-1924-499466  
[enquiry@chemresist.com](mailto:enquiry@chemresist.com)

