

## INDUSTRIAL WASTEWATER

# Metals Recovery for Metals Industry

Industry:	Metals Reprocessing/Recycling
System:	100 gpm Metals Recovery Waste Water Treatment Plant
Location:	Northeast, USA
Goals:	Remove TSS < 50ppm, Elemental Metals < 1ppm

### Project Overview:

Our state-of-the-art Metals Recovery Waste Water Treatment Plant (WWTP) installed at a leading Metals Reprocessing & Recycling facility utilizes Solids Settling System, Elemental Metals Oxidation Reaction Tanks Unit (RTU), Inclined Plate Clarifier (IPC), Multimedia Filters (MMF) and Sludge Handling/Filter Press. The Metals Recovery WWTP is designed to recover valuable metals waste for further purification and treat highly complex & variable wastewater from multiple plant manufacturing areas in a Metals Reprocessing/Recycling industry.

### Critical Issues:

Highly explosive contaminants & varied flow  
Plant expansion w/ added wastewater load  
Fast-track project, concept to completion

Loss of valuable metals resources  
Stringent discharge limits  
Minimize operator attention

### Vision for Solution:

- Batch equalization & homogenization strategies to handle highly complex contaminants & varied flow, reduce chemical feed, reduce sludge waste, and handle added expansion load
- Bulk Solids Settling & Clarifier in lieu of only Clarifier to remove large settleable solids, recover valuable magnesium, reduce chemical feed, reduce sludge waste, one year payback
- Explosion proof design for elemental metals and proper materials for high temperature
- Utilize our standard products & pre-packaged system design for fast-track turnkey project delivery and performance guarantee
- PLC w/ Remote Telemetry for minimum onsite operator attention
- Modular design with expansion capability for future needs

### Project Scope:

Treatability Study	Detailed Design/Engineering
System Fabrication	Controls Integration
Field Construction	Commission/Startup

### Equipment Description:

Equalization Tanks	Influent Pumps
Chemical Feeds	Solids Settling System
Reaction Tanks Unit	Inclined Plate Clarifier
Multimedia Filters	Sludge Handling/Filter Press
PLC Controls/SCADA	Piping Racks, Stairs, Platforms



### Special Features:

- PLC controlled system enables supervisory control & data acquisition from a remote site
- Process monitoring include flow, level, pressure, temperature, pH, Lower Explosivity Limit, etc
- Prefabricated skids, piping racks & platforms for minimum on-site assembly & installation