

# INDUSTRIAL WASTEWATER & OPERATIONS

## WWTP for Metals Working Industry

Industry: Metals Working  
System: 100 gpm Waste Water Treatment Plant  
Location: Northeast, USA  
Goals: Remove Oil & Grease < 60ppm, TSS < 100ppm, Zinc < 1.5ppm, Chromium < 0.5 ppm, Phenol < 0.8

### Project Overview:

SAMCO's state-of-the-art Waste Water Treatment Plant (WWTP) installed at the largest manufacturing plant for a Fortune 100 confidential client utilizes Oil Water Separation (OWS), Reaction Tanks Unit (RTU), Dissolved Air Floatation (DAF), Inclined Plate Clarifier (IPC), Multimedia Filters (MMF), Activated Carbon Filters (ACF) and Filter Press. The WWTP is designed to treat highly complex and variable wastewater trucked in from multiple plant manufacturing areas in a Metals Working industry. The various wastewater streams include Press Pit Waste, Zyglo Dye Waste, Fume Exhaust Waste, High pH Etching Waste, etc. SAMCO has been contracted to design, build, own, operate & maintain (DBOOM) the WWTP since 1996.

### Critical Issues:

Highly complex contaminants & varied flow  
Plant expansion w/ added wastewater load

Stringent discharge limits  
Reduced O&M costs

### Vision for Solution:

- Source segregation strategies to reduce contaminant load on wastewater treatment plant, reduce chemical feed, reduce sludge waste, and handle added expansion load
- DAF in lieu of Clarifier to remove floatable suspended solids, reduce chemical feed, reduce sludge waste, less than one year payback, and handle added expansion load
- Utilize our standard products, existing equipment inventory & pre-packaged system design for fast-track turnkey project delivery and performance guarantee
- PLC controlled system for minimum operator attention
- Modular design with expansion capability for future needs

### Project Scope:

Treatability/Pilot Study	Detailed Design/Engineering
Fabrication/Integration	Field Installation
Commission/Startup	Ongoing O&M

### Equipment Description:

Equalization Tanks	Influent Pumps
Chemical Feeds	Reaction Tanks Unit
Oil Water Separator	Dissolved Air Floatation
Inclined Plate Clarifier	Sludge Handling/Filter Press
Multimedia Filters	Activated Carbon Filters
PLC Controls	Platforms/Stairs



### Special Features:

- PLC controlled system enables automation for minimal operator attention
- Process monitoring include flow, level, pressure, pH, etc