

Water Recovery Case History: Nitroglycerine Destruction: Closed Loop Plant



Background

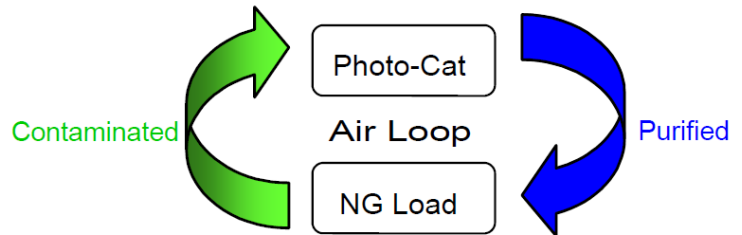
A US Naval facility anneals 24,000 lb/day of Nitroglycerine (NG) based solid rocket propellant, resulting in NG VOC Air Emissions of 10,000 cfm with 5 lb/hr of NG. A solution needs to prevent health & explosions hazards. The US Navy had already exhausted a \$5,000,000 R&D budget with no solution prior to contacting Purifics.

Solution

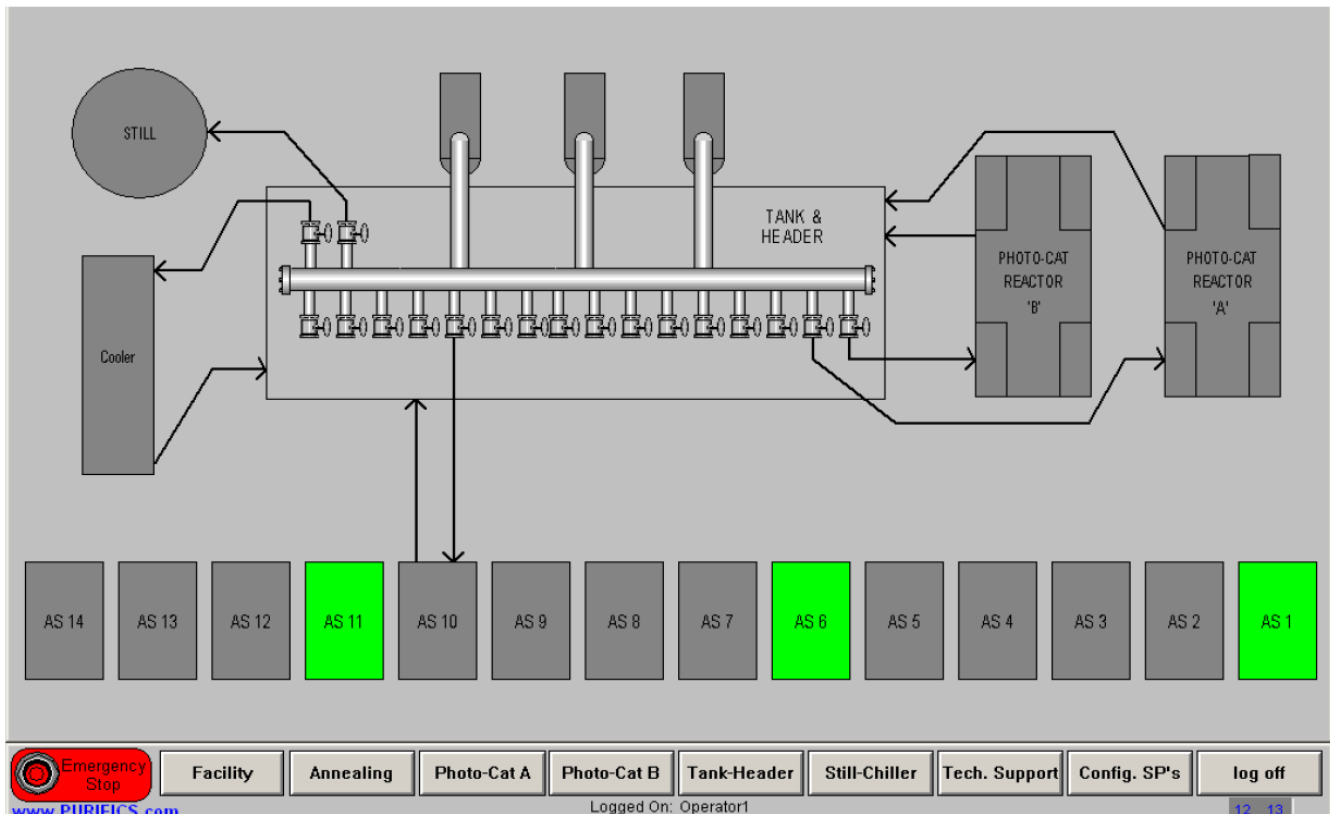
Water and air are working fluids. The solution was to purify, recover and recycle 100% of both in a closed loop process. Purifics process has no air or water emissions, no disposal costs, no liability, no permitting requirement and no compliance monitoring.

In total, the process consists of:
 2 x 50kW Photo-Cat Systems
 14 Annealing Stations
 53 m³ Water Holding Tank
 4,000 l/min Pump & Distribution Manifold
 Energy Management System
 Remote Control and Auto QA/QC
 Installed 2002 on time and budget

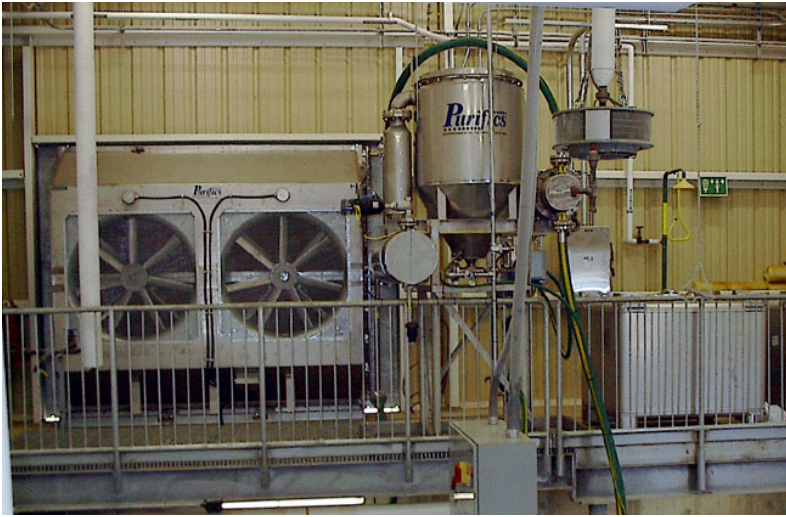
Closed Loop Process:



Process Flow



Benefits



Pollution Free Facility; Closed Loop
Plug & Play Installation
Provided Equipment, Controls & Design Engineering
Photo-Cat is Best Available Technology
Air & Water Permits Eliminated
Full Product Recovery as Acid – No Waste Generated



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