

30 years
1982-2012

Case Study: 15 Years and Still Going Strong

Since our founding over 30 years ago, Colt's customers have experienced outstanding service life and continuous reliable performance from our MAXIM family of industrial air pollution control technologies.

A case in point is Colt's 30,000 scfm MAXIM RTO system operating on a solvent recycling facility in Illinois. The RTO system has been operating reliably for over 15 years on an extremely corrosive and high concentration environment. This MAXIM RTO oxidizes the by-products of recycled solvents for dry cleaning, automotive, and aircraft maintenance facilities.

The majority of chemicals the MAXIM RTO must handle are chlorinated compounds. The process chlorine compounds produce Hydrogen Chloride gas as a by-product of their high temperature thermal oxidation. Because HCL is a hazardous material, these gases must be neutralized before they can be emitted to the atmosphere. To handle this neutralization, Colt provided a counter-flow packed bed scrubber utilizing Sodium Hydroxide as the neutralizing agent to remove the HCL prior to exhausting to atmosphere. The scrubber and RTO work in tandem to ensure that the plant complies with their operating permit.

Automated PLC based controls ensure that each system is maintained at optimum efficiency for the 24/7 operating schedule.

This application presented significant design challenges.

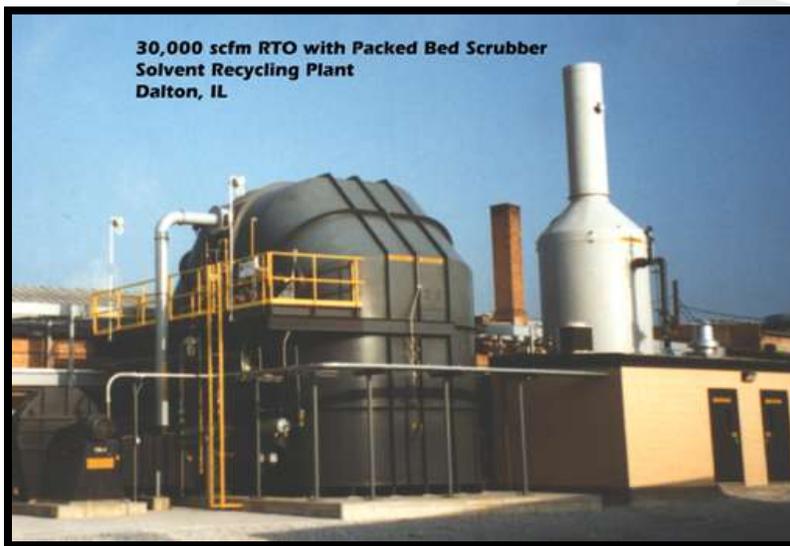


Figure - Severe Duty Application: High Concentrations of Methylene Chloride, Methyl Ethyl Ketone, and Perchloroethylene.

With such a corrosive environment, the MAXIM RTO had to be designed with tough alloy metals that could withstand long term exposure to hot and wet HCL gases, as well as extremely high swings in inlet concentrations. Stainless steels, it had been shown, would not last three months.

Ultimately, the unit was fabricated from 1/4" mild steel utilizing a proprietary Colt internal coating system that protects the internal surfaces of the housing from HCL corrosive attack. Where components could not be coated, a variety of high Nickel alloys were utilized. The RTO system has been inspected every year since startup with ultrasonic NDT,

and in 15 years no measurable corrosion of the housing has been detected. A testimony to the internal coating system and metallurgies we chose.

Today, the MAXIM RTO continues to provide the high performance demanded by the application, and the peace of mind gained from years of trouble free service.

For additional information on any of Colt's quality products and services, please contact us, at 972-385-7770. We can assist you with identifying the best emission control technology for your application and can coordinate your project requirements with our experienced engineering, design and field services staff.