



Maintaining your Regenerative Thermal Oxidizer (RTO)

Manufacturers need to meet strict environmental regulations and an effective air pollution control system is vital to ongoing plant operation. The Regenerative Thermal Oxidizer (RTO) is one of the most popular and cost-effective systems for emissions control.

Learn how to use Predictive Analysis along with regular visual inspections to properly maintain this critical piece of equipment.

The Importance of RTO Maintenance

Due to high operating temperature and exposure to corrosive chemicals, minor issues in an RTO can manifest into major problems that could bring the entire manufacturing plant to a halt if they are not discovered and dealt with in a timely manner.

Benefits of a Consistent Maintenance Plan:

- ◆ Ensures components are functioning optimally
- ◆ Prevents buildup of particulate matter, impacting air flow
- ◆ Prevents unplanned downtime and lost production time
- ◆ Simple repairs now could avoid more costly repairs later

The CMM Group offers fast response for conducting a system inspection. Our multi-disciplined technicians can perform an inspection of your oxidizer of any type, checking for insulation damage, valve and burner systems, fans and motors performance.



Visit www.thecmmgroup.com to read about our solutions for VOC control, custom process equipment, and aftermarket services

Oxidizers/
Air Pollution Control Systems

Custom Process Equipment:

- ◆ Ovens & Dryers
- ◆ Cheese Melters
- ◆ Coaters & Web Handling
- ◆ Energy Management Systems
- ◆ Ancillary Systems

Aftermarket:

- ◆ Rebuilds/Upgrades
- ◆ Preventive Maintenance
- ◆ Spare & Replacement Parts

Services:

- ◆ Consulting Services
- ◆ Site Engineering
- ◆ Product Engineering
- ◆ Inspection Services
- ◆ Turnkey Installation

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The CMM Group can provide system and component upgrades, rebuilds, and retrofits, spare parts, catalyst cleaning, ceramic media and media replacement, insulation repair, and other aftermarket services.

Common Issues and Points of Failure:

- ◆ **Media failure:** if the burner is out of adjustment, the flame can come into contact with the media and cause damage. In addition, silicon compounds can turn into silicon dioxide in the combustion chamber and cause plugging.
- ◆ **Insulation failure:** Areas around the burner are common points of insulation failure. In extreme cases, heat can burn a hole through the shell and cause a catastrophic failure.
- ◆ **Cold face support failure:** the cold face support system needs to hold up thousands of pounds of delicate ceramic media while tolerating high temperatures and various chemicals emitted in the process.
- ◆ **Switching valve failure:** Switching valves are the primary components that contribute to an RTO's destruction rate efficiency. Such a failure can impact the destruction rate and affect compliance with environmental regulations.

Key Activities to Cover in an RTO Maintenance Inspection:

- ◆ Look for gaps between the structured blocks and insulation which can allow the extreme heat to reach the cold face support and cause excessive heat damage.
- ◆ Collect data across the emissions control process and use predictive analysis to measure media bed pressure drops and temperature profiles to identify areas that require attention.
- ◆ Inspect the cold face support for signs of structural deterioration, condensation buildup and media plugging.
- ◆ Conduct weekly inspections of the RTO exterior. Heat marks, warped steel, damaged fasteners and discolorations could be signs of insulation failure.
- ◆ Look for warped or torn metals and plugging in the cold face support, which could be signs of severe cold support failures.
- ◆ Conduct regular visual inspections of switching valves for excessive wear and tear or alignment issues.

**For Service and Parts,
Call +1 (920) 336-9800**

**For more information on Preventative
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