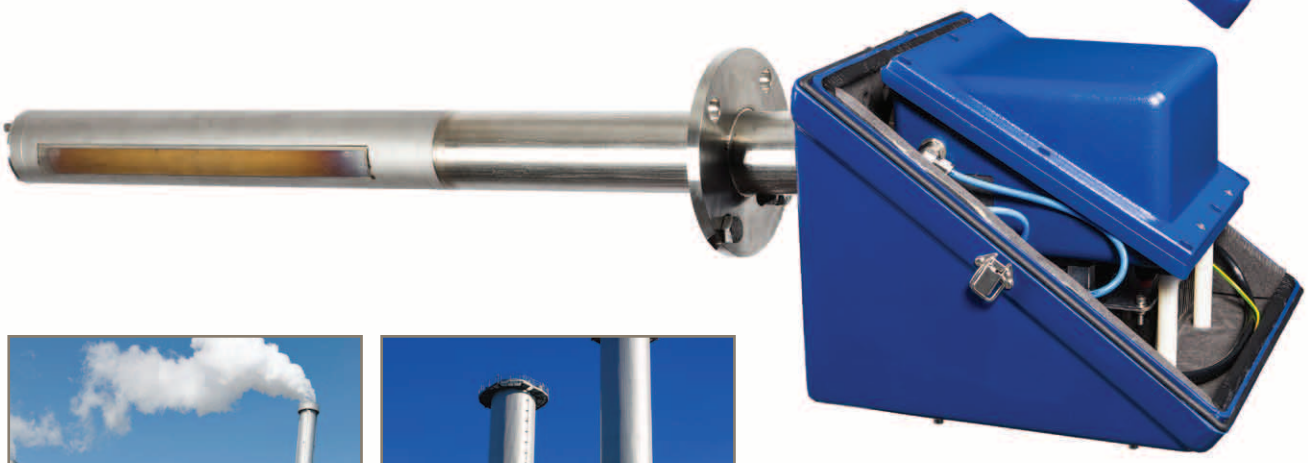
aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

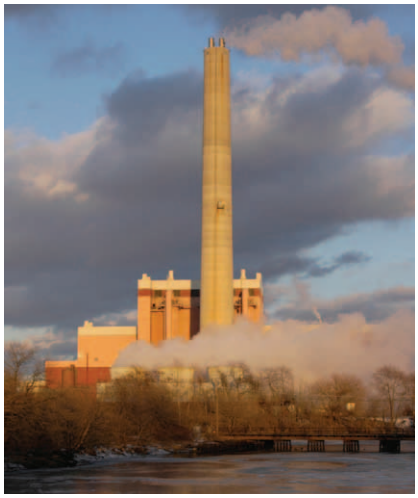


# Emissions Monitoring in the Incineration Industries

Parker

PROCAL

# Incineration Emissions Monitoring



Monitoring of emissions from incinerators is a demanding application for Continuous Emission Monitoring Systems. Their emissions are highly corrosive, some of the gases are soluble and, because the waste being burnt is constantly changing, the resulting stack gas temperature varies widely. There are several types of Incinerators and Thermal Oxidisers used in a variety of industries and Procal have a wealth of experience in both monitoring emissions and controlling Flue Gas Scrubbing systems, including:

- Large Garbage / Waste Incinerators
- Waste to Energy Projects
- Biohazard and chemical Incinerators
- Thermal Oxidisers in the Automotive Industry
- Marine Incinerations
- Chemical Industry Incineration
- Pulp Mill Incinerators
- Crematoria and Animal Incinerators
- Chemical & Biological Weapon Destruction

# Our Solution

## Continuous Emission Monitoring

The Procal 2000 IR analyser resists corrosion from the acidic gases by keeping the sample gas above the dew point. With integral automatic zero and calibration capability, this instrument presents low installation and maintenance costs. In addition to monitoring the pollutant emissions, the system can be expanded to incorporate Oxygen, Particulate / Opacity and Velocity measurement. This integrated approach to CEMs enables, when required, the concentrations to be normalised, reported on a dry basis and is mass measurements.

**Typical Ranges:**

| | |
|---|---|
| $H_2O$ | 0-20% |
| $CO_2$ | 0-20% |
| HF | 0-200 mg/Nm$^3$ |
| HCl | 0-1500 mg/Nm$^3$ |
| CO | 0-250 mg/Nm$^3$ |
| $SO_2$ | 0-600 mg/Nm$^3$ |
| NO | 0-400 mg/Nm$^3$ |
| $NO_x$ | 0-400 mg/Nm$^3$ |

## Scrubber Control

For control of Incinerator flue gas scrubbing systems, Procal 2000 produces very stable HCl measurements in the presence of high levels of water vapour and its rapid response time makes it an ideal instrument for scrubber control. The analyser, works well in the high dust applications of cement plants, and incineration applications. Procal 2000 provides measurements for analysing gases associated with Oxides of Nitrogen removal by Ammonia injection. This de-NOx process, if carried out alongside scrubber measurements using a second analyser, can exploit the multianalyser control capability of the Procal 1000 controller.

**Typical Ranges:**

| | |
|---|---|
| $H_2O$ | 0-25% |
| $CO_2$ | 0-20% |
| HCl | 0-400 mg/Nm$^3$ |
| $SO_2$ | 0-400 mg/Nm$^3$ |
| CO | 0-300 mg/Nm$^3$ |
| $NH_3$ | 0-250 mg/Nm$^3$ |
| $N_2O$ | 0-600 mg/Nm$^3$ |

**References:** Mittal Steel, BHP, Esfahan Steel, TZ Steel, Corus, Tata Steel, Svoboda, Bethlehem Steel, Unist, OKD



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