# Emissions Monitoring in the Incineration Industries

**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.**

## Incineration Emissions Monitoring

There are several types of Incinerators and Thermal Oxidisers used in a variety of industries and Protea 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

## Our Solution

### Continuous Emission Monitoring

The P2000 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.

### Scrubber Control

For control of Incinerator flue gas scrubbing systems, P2000 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. Protea ed 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 P1000 controller.

| 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$^3$ |

| 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

This Datasheet is a guide to the product and Protea Ltd reserve the right to modify the product without notification.