®POLARCHEM

SAVING ENERGY AND PROTECTING THE ENVIRONMENT

MUNICIPAL AND CLINICAL WASTE INCINERATORS

WHAT IS POLARCHEM?

- Polarchem products oxidise and neutralise residues formed in the combustion process. This results in reduced fouling and reduced emissions
- Polarchem also protects against corrosion by the lowering of the acid dew point. Acid gases are converted into inert chloride and sulphate salts. These salts report to both the fly ash and bottom ash streams.
- All Polarchem applications are carried out during normal operation
- Qualified technical staff are available to ensure that products and applications are used for the maximum benefit of our customers

A SUMMARY OF WHAT TO EXPECT FROM THE USE OF POLARCHEM

- Removal and prevention of deposits during operation
- Fewer unscheduled shutdowns for cleaning and subsequently greater availability
- Reduced cleaning and maintenance costs
- Reduced corrosion by control of the acid dew point and the conversion of damaging chlorides into inert sulphates
- Better heat transfer
- Increased throughput
- No damage to boiler tubes or refractory during continuous cleaning process

A POST COMBUSTION PROCESS

With minimum investment and on-line installation, Polarchem will improve the efficiency from day one.

The injection of Polarchem products is made through lances fitted with atomising nozzles that are cooled by air or water. Installation is normally facilitated through existing openings or inspection doors thereby avoiding costly and complicated changes in the plant.

The Polarchem system can be adapted to cope with changes in the combustion properties of the waste. It is therefore important to study current operating conditions and to analyse the deposits before, during and at the end of operating periods in order to establish the most economical product quantity, its degree of dilution and the positioning of the injection lances.

Polarchem provides additional protection with special treatment programmes during the start up and shutdown phases in order to mitigate against corrosion during these sensitive phases.

The neutralisation of the active chlorine in the flue gases through the addition of Polarchem, will also result in an overall reduction of dioxins and furans.

HOW THE EFFECTIVENESS OF POLARCHEM IS GUARANTEED

Analysis of the deposits before during and after the Polarchem application provide the operator with the clear proof of the benefits of Polarchem.

Fig 1.

Deposits from the third pass at 14.5m before Polarchem treatment

Fig 2.

The same deposit after 6 months of Polarchem Treatment

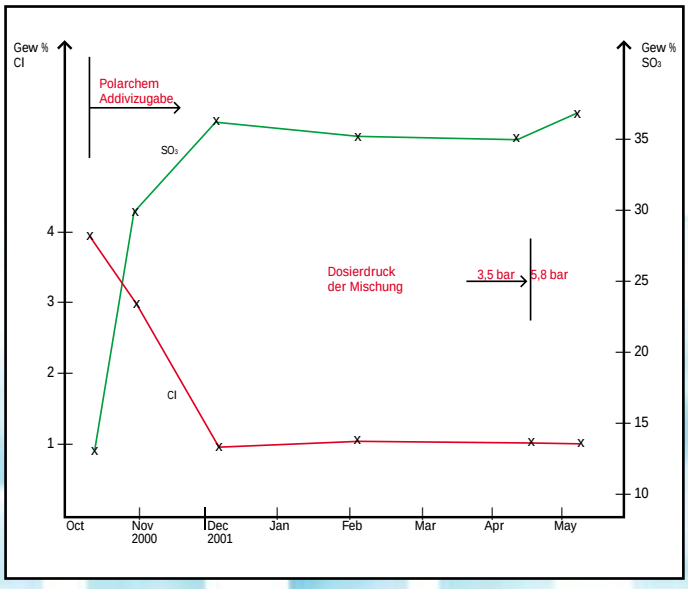

Fig 3.

Change in combustion of deposits in relation to Cl (red) and SO_3 (green) in the second and third passes of unit 3 at MHKW, Kassel, Germany

Fig 4.

Injection equipment installation

A POLARCHEM TREATMENT IS SIMPLE AND FLEXIBLE

Installation and operation can start at any time without taking the plant out of service and it does not matter whether the plant is in a clean or fouled condition. The following treatment systems are available:

- Continuous
- During start-up and shutdown of plant (24-48 hours)

THE POLARCHEM SERVICE

Our technicians will advise the best product, quantity and injection system to meet your requirements. They will supervise the installation and assist your operators with the help of flue gas analysers and dewpoint meters to ensure optimum benefit to the customer.

THE BENEFITS OF POLARCHEM

- Improved efficiency
- Less fouling
- Extension of operating periods with reduced maintenance costs
- Conversion of the damaging chlorides found in deposits formed in the path of the flue gas into inert sulphates
- Reduction of the acid dew point
- Less corrosion

THE ECONOMICS OF POLARCHEM

The Polarchem representative will assist you in calculating the cost benefits.

POLARCHEM SAFETY DATA SHEETS

These are supplied for each product separately and will indicate details of packaging, handling, transportation and storage as required.

CONTACT DETAILS