# Feature news - chemical plant

#### Price reduction for reengineered dryers

Local customers will benefit from a price reduction that has followed the re-engineering of a local range of industrial compressed air and gas dryers. The dryers have been simplified and improved by manufacturer Tegnon to enable them to compete internationally.

Dryers are essential in factories which use compressed air for process control and instrumentation, removing water from the compressed air to prevent the jamming of valves, clamps and other pneumatic controls.

The decision to re-engineer the dryers was taken after examination of pricing structures in the European market. Tegnon has recently formed an association with an Italian concern for export marketing of the improved dryer range.

According to sales manager Kevin Botes, "When we looked at pricing abroad, it became obvious that we would have to modernise our range in such a way that we would be able to cut manufacturing costs."

Methods of assembly were simplified and many of the joins in the old design have been done away with, reducing costs while at the same time improving product reliability.

Tegnon has met its targets for cost reduction, and the reduced prices will be passed on to customers throughout southern Africa.

Enquiry No: 19

# Conlog/Honeywell SMS sign fail-safe control (FSC) agreement

A three-year agreement maintaining the status of electronic control technology specialist Conlog as the sole South African system integrator of Fail-Safe Control (FSC) systems, has been signed with Honeywell Safety Management Systems (SMS).

The agreement follows Honeywell's purchase of the Pepperl & Fuchs Systems division with manufacturing centres in Holland, Germany and Singapore.

Within the agreement Honeywell SA has the right to bid where end-users require an integrated DCS (distributed control system) and FSC solution. This arrangement allows the expertise of both companies to be combined for the benefit of customers.

Conlog has supplied 25 FSC systems to South African petrochemical plants since the introduction of the product in 1989. Approved by the German TUV authority, FSC systems are used in safety-critical emergency shutdown applications in petrochemical, chemical and power generation plants. FSC, a relatively new plant safety technology, was first applied in South Africa by Conlog in an emergency shutdown system at the Caltex Oil Refinery at Milnerton, Cape Town.

Orders for a further eight FSC systems, totalling more than R3 million, have been received from Sasol and Caltex.

FSC systems perform all of the functions of programmable logic controllers (PLCs) typically used in conventional plant ESD systems but they have the added major benefit of being fail-safe.

The technology allows the functionality of the system to be fully checked every second so that faults are detected within the process safety time. This capability is significant in that it maximises system reliability, enabling plant safety and availability to be maintained at the highest possible level.

Enquiry No: 20

## Fluidised boiler combustion technology

Scientific Design has entered into an agreement with Indian based company, Thermax, to develop the first commercially available fluidised bed combustion boilers for the South African market.

Thermax, which has over 600 fluidised bed combustion boilers in the Indo-Asian market, also specialises in a wide range of energy based equipment including vapour absorption chilling systems and thermal oil heating systems.

Scientific Design is in the process of concluding the first contract for the manufacture, supply and installation of a combustion boiler as well as investigating the use of this technology to solve combustion problems at a wide range of boiler installations.

The benefits of the fluidised bed combustion system are numerous. A wide range of coals is tolerated with no pretreatment necessary and the combustion efficiency achieved is close to 90%.

Scientific Design believes that fluidised bed combustion boiler technology will pave the way to efficient and environmentally-friendly energy supplies.

Enquiry No: 21

## Karbochem cuts steam usage by 25%

Karbochem, a division of Sentrachem in Sasolburg, has experienced a 25% reduction in steam usage since installing Maxiflo steam traps in various plants at its Sasolburg factory. In the two years since the new-technology steam traps were installed, not one replacement or spare part has been supplied to the company.

The successful operation of the steam traps, supplied by Industrial Steam Products, resulted in their being specified for the R22 million expansion of Karbochem's Mancozeb fungicide plant. They have also been fitted in the industrial outlet and mining plants, replacing the conventional steam traps that were in operation.

Few problems have been experienced by Karbochem with the changeover.

Corrosion and blockages in the old plants can be a problem but this is solved by merely flushing the steam trap periodically using a built-in 'blow-down' valve. It has also been found that particular care needs to be paid to sizing in the rotary vacuum dryer in order to ensure the proper operating capacities are met.

Unlike conventional steam traps which are offered in standard sizes, Maxiflo steam traps can be supplied to exact specifications to ensure fault-free and effective operation. They are manufactured from stainless steel offering up to 20 years of low maintenance operation.

The simplicity of the steam trap design ensures that the only maintenance required is a simple periodic blowdown of the filter element which is as easy as opening and closing a ball valve. Hot condensate can be recycled back into the system to offer further energy saving.

Enquiry No: 22

