Press release:

RTS Africa Technologies principal H2Scan opens new Environmental Conditioning Laboratory to further 'refine' hydrogen detection in gas process streams

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Hydrocarbon fuels are essential for our daily existence. However, extracting usable fuels from crude oil is a complex process in which hydrogen plays a cardinal role, as the correct levels of hydrogen in a refinery process stream largely determine the quality of the final product.

“At RTS Africa Technologies, we have been distributing H2Scan hydrogen detection and analysis products for the past decade. In particular, H2Scan’s Hy-Optima range of products have numerous applications in South Africa’s oil refineries,” says Ian Fraser, MD of RTS Africa Group, a Tshwane-based company specialising in innovative technologies which provide solutions to industrial challenges. Among other things, the company has been involved in supplying hydrogen production and analysis equipment for many years.

To ensure correct and accurate functioning, the sensors in the Hy-Optima instruments need to be conditioned. Until now, H2Scan has been using the services of a remote laboratory which could only condition H2Scan’s standardised products. Now, H2Scan has opened a new expanded Environmental Conditioning Laboratory for its Hy-Optima hydrogen analyser products.

“This gives H2Scan the capability to expand its production and deliver customised products to refineries and petrochemical facilities,” continues Fraser. “In an oil refinery, they are as many as 23 points where the level of hydrogen needs to be very accurately monitored and where H2Scan new conditioned instruments can play a key role."

Hy-Optima products are used in process applications to ensure production optimisation of oil and petrochemical products. Each Hy-Optima sensor is rated for background monitoring of hydrogen in the presence of gases such as hydrogen sulphide and carbon monoxide at predetermined concentrations with no interference with the H2 reading. "The laboratory will be used to ensure that the sensors are conditioned to provide accurate hydrogen indication in the presence, or absence, of these gases," he adds.

“This laboratory gives us the flexibility to develop products that are unmatched in the industry currently,” he continues. “The ability to certify hydrogen sensing in the presence of 50% carbon monoxide and 5% hydrogen sulphide is unheard of in the industry and this offers new alternatives to our refinery and petrochemical customers,” Fraser asserts.

The new laboratory now conditions Hy-Optima products which have been marketed for more than 10 years and can currently measure hydrogen concentrations from 0.5% to 100%, in the presence of carbon dioxide of up to 20% concentration and in the presence of hydrogen sulphide at up to 3% concentration.

The Hy-Optima 2700, for example, is fitted with a solid-state, non-consumable sensor that is configured to operate in process gas streams. The Hy-Optima 2700's thin film technology ensures that instrument is not in any way affected, or cross-sensitive, to other gases in the process stream. The 2700 has been designed to continuously measure only hydrogen - which it does with great accuracy and reliability," Fraser continues. In addition, the Hy-Optima 2700 is rated explosion-proof and conforms to the requirements for Class I, Division 1 or 2 locations. Should hydrogen get into the instrument and ignite, the 2700's robust, cast-iron casing will safely contain the event. With Hy-Optima 2700, the need for calibration is greatly reduced. "In most cases, an annual calibration using standard calibration gases is all that is needed," he explains.

H2Scan was founded in 2002 and has its headquarters in Valencia, California. The company provides the most accurate, tolerant and affordable hydrogen leak detection and process gas monitoring solutions for industrial markets. The company's customer base includes some of the largest manufacturing enterprises in the world including General Electric, DOD, ABB, Siemens, ExxonMobil, Shell, Chevron, NASA, Procter & Gamble and more. H2Scan designed and built its new laboratory to its own specifications in a secured facility adjacent to its corporate offices.

An H2Scan spokesman explains that the expanded laboratory has already paid dividends in increasing production and streamlining the company's product delivery process. "This has allowed us to cut our backlog and shorten delivery times," says Mike Nofal, H2Scan Vice President of Sales and Business Development. "With this resource, H2Scan becomes one of the most agile players in this market and we have the room to expand as the economy grows," Nofal adds.

"From an RTS Africa Technologies' perspective, thanks to the establishment of the new laboratory, we are pleased to be able to offer H2Scan's enhanced range of instruments which will have the potential to improve the output of Africa's many oil refineries," concludes Fraser.

Ends

(749 words)

Note to Editors

RTS Africa Group is a specialised, Tshwane-based company offering innovative technologies for - and solutions to - industrial challenges.

Led by Managing Director Ian Fraser since its inception in the early 1990's, the company offers globally-sourced, quality products via two operational divisions, namely RTS Africa Engineering (supplying inertial spin filters and hydrogen technology solutions); and RTS Africa Technologies (supplying all instrumentation-related solutions such as boiler tube leak detection, laser-based gas detection devices for hot or corrosive areas).

Product delivery and technical consultation by highly trained staff is offered throughout Southern Africa to a range of clients in industry sectors such as mining, power generation, petrochemicals, glass, steel and energy.

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