SENSOR NEWS

MARCH 2021

Welcome to the March 2021 issue of H2scan Sensor News. In this issue we present:

- Why H2scan Solid State Hydrogen Sensors Beat the Competition
- H2scan Names New International Accounts Sales Director for Transformers
- A Closer Look at GRIDSCAN 5000™ Hydrogen Sensor
- Interview with H2scan Technical Director of the Sensors Group
- Hydrogen economy news bytes

Thanks for taking a look. Please reach out with any questions.

Why H2scan Solid State Hydrogen Sensors Beat the Competition

H2scan solid state hydrogen sensors for transformer DGA monitoring have many benefits over competing technologies, offering long term stability, reliability, lower installation costs, lower maintenance costs, field longevity and significant lower per sensor cost. Key benefits include:

No re-calibration required - H2scan's sensor is the only hydrogen sensor on the market that measures hydrogen directly in oil that does not require field re-calibration over its life expectancy. In fact, since 2012, when the transformer product was released, H2scan has never had a transformer sensor returned for re-calibration.

Wide measurement range - H2scan sensors include a wide measurement range (top range of 5,000 ppm) and practically no cross-sensitivity (< 1%) to other gases such as CO, CO_2, C_2H_2, C_2H_4, H_2O in transformer oil.

No need to separate hydrogen - Unlike other hydrogen sensors, H2scan does not require the use of membranes, molecular sieves or any other techniques to separate hydrogen from the oil in order to measure the H2 concentration present in the oil. This allows the

H2scan sensor to be designed in applications that can withstand vacuum and high pressure with no adverse consequences.

Does not consume hydrogen - The proprietary palladium-nickel sensor does not consume hydrogen like other sensors, which is particularly important when measuring small amounts of hydrogen. This allows the H2scan sensor to be designed into applications that do not require continuously moving the oil depending on their target transformer, voltage regulator or OIP Bushing application.

For more information, visit www.h2scan.com.

H2scan Names New International Accounts Sales Director for Transformers

Bill Whitehead has joined H2scan as its new International Accounts Sales Director for Transformers. Bill has nearly three decades of experience in the electrical power industry, working at companies such as Siemens Energy, Camlin Power, Inc., Fuji Electric, ABB, General Electric and Danaher Power Solutions. He also served in the United States Army Reserve.

At H2scan, Bill will be responsible for international sales of H2scan's hydrogen monitoring products, working with global OEMs to utilize H2scan sensors to develop and enhance their hydrogen monitoring solutions for the electrical power industry.

You can read the full press release here.

A Closer Look at GRIDSCAN 5000™ Hydrogen Sensor

This month we're giving you a closer look at the GRIDSCAN 5000, measuring less than 151 mm long. H2scan's GRIDSCAN pairs a high performance ASIC with H2scan's field-proven solid-state hydrogen sensor to provide precision hydrogen measurement. No re-calibrations or

maintenance is needed for up to 10 years, and the GRIDSCAN 5000 is lower in cost by thousands of dollars to any other available hydrogen DGA system. For more information, visit our website, or click here to download an order form.

Interview with Dylan Thomas, H2scan Technical Director of the Sensors Group

What is a typical day like for you?
I've been spending a lot of time on one of our new patents which I'm very excited about. I've also been heavily focused on some prototypes for process and safety monitors. My background is in signal processing so I'm always working on ways to improve the performance of the sensor, be it by finding ways to make existing models better or by working on models for new applications. In the mornings, I usually start analyzing data from tests that ran overnight, which can take a long time. These new algorithms need to be well tested and robust, so looking at every edge case and tuning for the best performance in each application can be a daunting task. The rest of the day I may be collaborating with team members, maybe checking my math, setting up new tests, or working on whatever is hot.

What are your predictions for 2021?
We've been working on a lot of new things over the past few years that are just coming to fruition, and could open us up to a lot of new applications. I foresee a very busy year for us, and that's a good thing! Lots of orders have been rolling in and our production team has been cranking away. In short, I see lots of sales and lots of new applications.

What excites you about the future of H2scan and or the hydrogen economy?
As a signal processing guy, I'm most excited to see our next generation of algorithms making their way into brand new products. After many years of work we have our first prototypes going out now and they could open up a lot of doors.

Regarding our future, we've known for a long time that hydrogen is an important part of the future (thus our slogan) and I get a feeling of vindication of sorts when I see all the buzz about the rapidly growing hydrogen economy. We're in a great spot and have a solid

technology, and now we basically have the dream team in marketing and sales. We're going up, it's only a matter of how fast.

Thanks Dylan!

Hydrogen Economy News Bytes

Siemens Energy Gets in on Green Hydrogen Opportunity
As part of a U.S. Energy Department grant-funded project, Siemens Energy will study how its Silyzer electrolyzers can play a role in helping to meet the hydrogen goals of the Intermountain Power Project. The coal-fired power plant in Utah aims to convert to turbines that will eventually use 100 percent hydrogen. Learn more.

Major Oil Company Sees Hydrogen Potential
For Saudi Aramco, which has billions of barrels of oil and natural gas reserves, hydrogen fuel is set to make an impact in the future and its CEO expects hydrogen fuel cells to compete with electric vehicles. Keep reading.

Air Liquide Japan and Itochu Corp. Team up for Hydrogen Retail:
The two companies are working together to accelerate the development of hydrogen retail infrastructure in Japan. The effort will be focused on providing competitive hydrogen supply in support of both passenger and commercial vehicles. Learn more.

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