

Vaisala MHT410 is an Innovative Solution for Online Monitoring of Power Transformers

Sharjah Electricity and Water Authority, looking for a way to move towards a condition-based system of maintenance for their transformer fleet online has trialed Vaisala's online Hydrogen, Moisture and Temperature Monitor MHT410, to identify a system that can withstand the harsh climate conditions while returning reliable continuous information on the health of their power transformers.



Sharjah Electricity & Water Authority (SEWA) is an independent utility catering to customers residing in Sharjah, UAE. The organisation also maintains a fleet of power transformers and is currently looking to move towards a programme of condition-based maintenance, which will improve their understanding of the health of their transformers, and facilitate better performance. To do this SEWA will monitor transformer health via online data feeds direct from their assets. While SEWA has piloted other online devices, previous experiments with online solutions identified reliability issues, and for such impractical solutions the harm to the monitoring and maintenance programme outweighed the benefits.

"We asked Vaisala to demonstrate the quality of their online monitoring solution in practice by installing an MHT410 transmitter in our 60 MVA transformer at SEWA substation" Shankar Narayanan, Engineer, Testing & Commissioning at SEWA, explained. "The MHT410 was easy to install, and demonstrated true reliability in tough conditions. We are extremely pleased with the results after this live trial period and plan to expand the utilization of MHT410 in our substations."



Recognition for the Results

The pilot programme with MHT410 online monitoring saw the SEWA HV maintenance team honoured by an initiative award from SEWA. The aware recognized that online



Challenge

- Extremely demanding climate conditions due high temperature, high humidity, sand storms and presence of corrosive chemicals
- Need to find a reliable online monitoring device that gives real-time information to the asset management team.

Solution

- Vaisala MHT410 single gas DGA online monitor
- Real time detection of Moisture in oil, Hydrogen and Oil temperature

Benefits

- Capable of handling all kinds of weather conditions
- Maintenance free device
- Five-year warranty

“We asked Vaisala to demonstrate the quality of their online monitoring solution in practice by installing an MHT410 transmitter in our 60 MVA transformer at SEWA substation” Shankar Narayanan, Engineer, Testing & Commissioning at SEWA, explained.

“The MHT410 was easy to install, and demonstrated true reliability in tough conditions. We are extremely pleased with the results after this live trial period and plan to expand the utilization of MHT410 in our substations.”

monitoring when performed correctly could provide valuable data and assistance for the maintenance team and therefore save time and money.

Assistance During Piloting

Vaisala assisted SEWA in installation of the device, and later on during the evaluation period, by providing analysis based on the online monitoring results, and comparing the online sampling data with manual oil sampling results. Vaisala was also able to help the maintenance team improve the execution of their overall maintenance activities.

Vaisala MHT410

The Vaisala Moisture, Hydrogen and Temperature Transmitter MHT410 for transformer oil directly and continuously measures dissolved gasses and moisture in a representative sample of transformer oil, providing both a reliable overview of the hydrogen trend and moisture data.

It is built to last. With no parts that will wear out, such as membranes, pumps, hoses or batteries, the MHT410 is built to last, and requires no supporting maintenance programme of its own.

Easy to install, the MHT410 is ready to use quickly. An in-situ



probe continuously monitors hydrogen and moisture levels within transformer oil, allowing the MHT410 to provide a continuous stream of health indicators in the transformer being monitored. By examining the indicators and analyzing the health trend of the transformer, it is possible to identify developing faults very early on, and develop operational and maintenance plans to prevent their development. In this way the MHT410 helps to extend asset lifespan, prevent revenue losses due to unexpected downtime, reduce the need for costly unplanned maintenance and lower the total cost of ownership. In this way, MHT410 represents offers a strong return on investment.

VAISALA

Please contact us at
www.vaisala.com/contactus



Scan the code for
more information

Ref. B211743EN-A ©Vaisala 2019

This material is subject to copyright protection, with all copyrights retained by Vaisala and its individual partners. All rights reserved. Any logos and/or product names are trademarks of Vaisala or its individual partners. The reproduction, transfer, distribution or storage of information contained in this brochure in any form without the prior written consent of Vaisala is strictly prohibited. All specifications — technical included — are subject to change without notice.

www.vaisala.com