OMICRON Workshop on Time Optimized Transformer Testing

February 25, 2019
Ministry of Electricity & Water, Baghdad, Iraq
Condition based maintenance has widely been accepted as the most effective maintenance strategy for HV substation equipment. Through accurate knowledge of the state of condition and corresponding maintenance action, the lifetime of assets is extended while ensuring a more reliable and safe operation at the same time.

The disadvantage of such a strategy are the costs due to the power outages that are required in order to perform the diagnostic measurements.

At OMICRON we counter this disadvantage. We develop solutions that combine high portability, effort minimizing connection concepts and intelligent automated testing routines. This enables faster and easier testing and condition assessment than ever before without compromising on the scope of results.

With diagnostic concepts that involve simultaneous time optimized testing on various HV assets the overall outage time for diagnostic measurements is greatly reduced to only a few hours.

Learn more about this topic, experience what OMICRON has to offer and get an idea of just about how much this can improve your process.
Agenda Overview

Time Schedule for Workshop

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>09:00</td>
<td>Welcome &amp; Introduction</td>
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<tr>
<td>10:30 – 10:45</td>
<td>Coffee Break</td>
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<tr>
<td>12:15 – 13:30</td>
<td>Lunch Break</td>
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<tr>
<td>15:00</td>
<td>Closing</td>
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</tbody>
</table>

Topics - Day One, 25th February

Power Transformer Testing

- Introduction
- Transformer design
- High Voltage bushings
- Tap change design
- Theory Vector Group
- Conventional measurements
- Hardware TESTRANO600
- Hardware CPC100, Hardware CP TD1, Hardware CP SB1
- Software Handling (PTM)
- Performing conventional tests

Interactive sessions

- Sharing Experience
- Sharing the knowledge and common doubts

Anas Abdulkhader began working with OMICRON electronics Middle East in 2017 as Technical Support and Applications Engineer providing support to customers in Middle East and South Asia.

In addition he has given formal training via OMICRON Academy courses in OMICRON’s training centers and also at customers’ premises. Anas graduated in 2013 with a Degree in Electricals and Electronics Engineering from the Toch Institute of Science and Technology in Kerala, India.

Prior to joining OMICRON he worked for Hyosung Corporation as Field Service Engineer.
Agenda Overview

Topics - Day Two, 26th February

Power Transformer Testing (continued..)

- Capacitance and loss factor measurement
- Performing test capacitance & loss factor
- Software Handling 3 (PTM)
- Assessment Bushing
- Assessment on Tap changer testing

Power Transformer Testing with FRANEO 800

- Introduction
- Theory
- Methods of measurement
- Standards and References

Interactive sessions

- Sharing Experience
- Sharing the knowledge and common doubts
Agenda Overview

Topics - Day Three, 27th February

Power Transformer Testing with FRANEO 800 (continued..)
- Hardware
- Software handling (PTM)
- Performing tests
- Assessment

Power Transformer Testing with DIRANA
- Introduction
- Water in Oil-Paper-Insulation
- Dielectric Response Measurement Methods on Transformers
- Measurements on Bushings
- How to perform DIRANA Measurement
- Hardware
- Software
- Moisture Assessment using DIRANA

Interactive sessions
- Sharing Experience
- Sharing the knowledge and common doubts
- Feedback and Registration
- Final closing of workshop

The intuitive side panel and color coded cables of TESTRANO 600 make it easy to connect the test set for safe and reliable measurements.

*Exception Tan Delta test
Registration

Please complete and submit the below registration form on or before February 23, 2019 to Mr. Harith Alsheikh, via email at harith@alqundustrading.com
Please complete separate registration form for each participant.

Registration Form


First Name ____________________________ Last Name ____________________________

Organisation / Company ____________________________

Department ____________________________ Position ____________________________

Address ____________________________

City / Zip Code ____________________________ Country ____________________________

Phone ____________________________ Fax ____________________________

E-mail ____________________________ Signature ____________________________