

## ENERGY1 Asia - Virtual Series

Due to the recent developments with COVID-19 we have, for the health and safety of our speakers and attendees, our selected multi-day courses will be delivered live online led by experience practitioners. This will enable you to experience a similar engagement experience to our successful traditional classroom setting which includes exercises, answering your question and provide feedback – all without having to travel anywhere!

# 12 Series of Partial Discharge Assessment Challenges

The 12 challenges series waste no time but focus on directly tackling targeted issues engineer face during PD measurements and data interpretation. (Cables, Switchgear, Transformer and Rotating Machines)

Every Wednesday of the week starting 7<sup>th</sup> April 2021 | 13:30 – 15:30 (GMT+8) | Virtual Series



In collaboration:

# 12 Series of Partial Discharge Assessment Challenges

The **12 series of discussion sessions** have been developed to expose the pitfalls of Partial Discharge assessment and challenges faced by Electrical engineer when performing, collecting, interpreting Partial Discharge for each individual asset (from cables, switchgear, Transformer, and rotating machines). Each 2-hour session is devoted to one specific challenge, related case study, techniques, and recommendations for better managing Partial Discharge Assessment.

The instructor will further provide tips and tricks for properly perform Partial Discharge testing from data collection to data interpretation. Each challenge will be supported with real case study (pictures) and graphs to improve the learning process. Each challenge will be focused on how to do it from the practical point of view (industry point of view) not academic point of view.

**The 12 challenges series waste no time but focus on directly tackling targeted issues engineer face during PD measurements and data interpretation.** At the end of the 12 challenges series, the attendees will be able to select the right PD measurement setup, Data collection and analysis, PD pre-localization, electrical assets PD assessment and PD repair

## **Consultant point of view: (Applicable to all PD brand equipment)**

These 12 series challenges will be presented from a consultant point of view not representing any PD brand equipment. It will be general and applicable to all the equipment. During the Q&A session the instructor will be able to discuss specific cases related to the customer test equipment.

## **Delivery of Virtual Session**

The virtual session will be delivered online comprising 12 sessions of 2 hours per session, with **75 minutes allocated for presentation and 45 minutes of Q & A.** Participants can submit questions prior to or during the session.

**This workshop should not be confused with the full PD assessment VILT session style presentation which provide a complete understanding of the subject from A to Z.**

## **The sessions will occur every Wednesday of the week, beginning from 7<sup>th</sup> April 2021**

- These 12 challenges series are **extensively targeted** to assist engineer in tackling specific issues face during PD measurement and data interpretation.
- You can bring your recent PD case (recent issues) which are related to the challenges to discuss by submitting the question in advance.
- You can submit questions to be addressed during the virtual session without identifying yourself to other participants.
- The access to the virtual platform can be via any devices (laptop, mobile phones or notepads) with good internet connection, from anywhere in the world. However, it is highly recommended to use your laptops / desktops for better understanding of the content to be presented.
- You are highly encouraged to be interactive during the virtual session.

## **This program is intended for:**

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**This 12 series Virtual session will be valuable to all levels of engineers and managers dealing with condition assessment of medium and high voltage electrical assets who work in the power industry from generator companies to transmission and distribution system operators. Engineers working in oil and gas industry who are involved in performing PD measurement in Critical MV assets such as Motors, distribution transformers, cables and switchgears will gain from the course.**

- Electrical engineers: to learn about partial discharge and gain knowledge, tips and tricks related to PD measurements and data interpretation.
- Engineers interested on PD data analysis and interpretation.
- Asset managers: to evaluate the condition of their assets. **(only the challenges related to that subject)**
- Project engineer/ manager involved in new project who want to have a clear idea of what is needed and how to evaluate the different solutions available in the market. **(only the challenges related to that subject)**
- Maintenance engineers/technicians: to perform condition assessment test and/or re-commissioning after repair. **(only the challenges related to that subject)**
- Engineering and maintenance personnel who are involved in condition assessments of electrical assets.
- Company who employed 3<sup>rd</sup> party to perform partial discharge testing: will learn what information to look for in order to do the correct analysis based on the asset/test performed. This will help to evaluate the test reports provided by third party contractors and in selecting the right test follow up action.
- Any industries/engineers involved with: **Cables (MV: 6kV – 35kV / High and Extra HV: 66kV – 500kV), Switchgear (AIS 6kV – 35kV / GIS: 35kV – 500kV), Transformers (MV: 6kV – 35kV/ HV and EHV: 66kV – 500kV), Motors (6.6kV – 11kV / 17.5kV) and Generators (6.6 – 30kV).**

# 12 Series of Partial Discharge Assessment Challenges

## Virtual Session (Discussion Q&A)

### The 12 targeted challenges series are:

- 1. What the PD pattern is showing? (7<sup>th</sup> April 2021)**  
Learn how to read the PD Pattern by analyzing together with the instructor some real phenomena.
- 2. Is the PD detected to high? (14<sup>th</sup> April 2021)**  
Learn how to properly weight the PD amplitude in your analysis.
- 3. Should I perform Online or Offline PD measurements? (21<sup>st</sup> April 2021)**  
Learn the advantages offered by the two measurement techniques.
- 4. Why there are different capacitance values for the coupling capacitor? How they affect my PD measurement?**  
Learn how to select the right measurement setup by analyzing the principle behind the PD detection using Coupling capacitors. (28<sup>th</sup> April 2021)
- 5. Transient Earthing Voltage, Ultrasonic, High Frequency Current Transformer what should I use for Online PD measurement? (5<sup>th</sup> May 2021)**  
Learn how to select the right measurement setup by analyzing the principle behind the online PD measurement.
- 6. Am I properly collecting the data? (12<sup>th</sup> May 2021)**  
Learn what is required to have a complete set of PD data.
- 7. pC or mV?!? (19<sup>th</sup> May 2021)**  
Learn when pC/mV are used and how they affect your analysis.
- 8. How can I filter the noise? (26<sup>th</sup> May 2021)**  
Learn how to recognize the noise and when and how to filter it.
- 9. Where the PD activity is located? (2<sup>nd</sup> June 2021)**  
Learn how to pre-locate the PD activities and which are the limitations.
- 10. Should I repeat the measurement regularly? (9<sup>th</sup> June 2021)**  
Learn how to determinate the PD measurement interval based on the asset to be tested.
- 11. When should I remove the asset from service if it is affected by PD? (16<sup>th</sup> June 2021)**  
Learn how to assess the PD test results and determinate the right action.
- 12. Can I fix it? (23<sup>rd</sup> June 2020)**  
Learn where and how to mitigate the PD activities.

### ONLINE COURSE DELIVERY & PARTICIPATION DETAILS

Energy1 Asia will use Microsoft Teams to facilitate participation in the upcoming event. Attendees do not need to have an existing Teams account to participate in the broadcast. The course will play in attendee's browser. When attendees sign on, their microphones are typically muted. Attendees should keep their mic muted until such time as it's needed to ask a question.

During the event, participants will have the option of using a microphone to speak with the room and ask questions, or type in any questions via the chat window and our online administrator will relay your question to the instructor.

- Each attendee will receive an event invitation by email, which will include one link to sign on for the full 2 Hours session.
- The remote meeting connection will open approximately 30 minutes before the start of the course. We encourage attendees to connect as early as possible in case of unforeseen problems.

# Registration Form

## 12 Series of Partial Discharge Assessment Challenges

Attend full 12 series or Your prefer choice series

<b>Only USD 75 Per Series (Please choose your prefer series)</b>			<b>PROGRAM DETAILS</b>
<input type="checkbox"/> 7 <sup>th</sup> April 2021	<input type="checkbox"/> 5 <sup>th</sup> May 2021	<input type="checkbox"/> 2 <sup>nd</sup> June 2021	<b>ONLINE VIRTUAL SESSION</b>
<input type="checkbox"/> 14 <sup>th</sup> April 2021	<input type="checkbox"/> 12 <sup>th</sup> May 2021	<input type="checkbox"/> 9 <sup>th</sup> June 2021	<b>Every Wednesday of the week starting:</b>
<input type="checkbox"/> 21 <sup>st</sup> April 2021	<input type="checkbox"/> 19 <sup>th</sup> May 2021	<input type="checkbox"/> 16 <sup>th</sup> June 2021	<b>7<sup>th</sup> April 2021</b>
<input type="checkbox"/> 28 <sup>th</sup> April 2021	<input type="checkbox"/> 26 <sup>th</sup> May 2021	<input type="checkbox"/> 23 <sup>rd</sup> June 2021	<b>Time: 13:30 – 15:30 (GMT+8)</b>
<b>Set of 12 series (**Recommended)</b>		<b>USD 900 ( )</b>	<b>STEPS TO REGISTER:</b>
<ul style="list-style-type: none"><li>The above investment price is for Per Delegate.</li><li>The sessions will occur every wednesday of the week, beginning from 7<sup>th</sup> April 2021</li><li>Please note the Online Virtual discussion session time zone will be as "Malaysia / Singapore" time zone (GMT+8).</li></ul>			<b>Simply fill up the registration form and:</b> <b>Email to : <a href="mailto:registration@petro1.com.my">registration@petro1.com.my</a></b> <b>Call us : +603 7727 3952</b> <b>Mobile /Whatsapp: +6012 568 4696 (Harn)</b>

### Participant Details

1. Name: \_\_\_\_\_ Mr  Mrs  Ms  Dr

Job Title: \_\_\_\_\_

Email : \_\_\_\_\_

Contact No: \_\_\_\_\_

Department: \_\_\_\_\_

2. Name: \_\_\_\_\_ Mr  Mrs  Ms  Dr

Job Title: \_\_\_\_\_

Email : \_\_\_\_\_

Contact No: \_\_\_\_\_

Department: \_\_\_\_\_

3. Name: \_\_\_\_\_ Mr  Mrs  Ms  Dr

Job Title: \_\_\_\_\_

Email : \_\_\_\_\_

Contact No: \_\_\_\_\_

Department: \_\_\_\_\_

Head of Department: \_\_\_\_\_

### Invoice Details

Invoice Attention to: \_\_\_\_\_

Company: \_\_\_\_\_

Industry: \_\_\_\_\_

Address: \_\_\_\_\_

Postcode: \_\_\_\_\_ Country: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

Email: \_\_\_\_\_

Authorized Signature : \_\_\_\_\_

### Payment Method

By Direct Transfer: Please quote invoice numbers on remittance advice.

**ACCOUNT NAME : PETRO1 SDN BHD**

**BANK : United Overseas Bank (Malaysia) BHD**

**ACCOUNT NO : 2609008514 (USD)**

**All bank charges to be borne by payers. Please ensure that PETRO1 SDN BHD received the full invoice amount.**

### CREDIT CARD PAYMENT

Credit card payment will include a charge 3%.

**Payment Policy:** Upon receipt of a completed registration form, it confirms that the organization is registering for the seat(s) of the participant(s) to attend the conference or training workshop. Payment is required with registration and must be received prior to the event to guarantee the seat. Payment has to be received 7 working days prior to the event date to confirm registration.

### DATA PROTECTION

The information you provide will be safeguarded by Petro1 that may be used to keep you informed of relevant products and services. We take it seriously when it comes to protection of our client data.

### TIME ZONE:

All our Online Virtual instructor-led Training time zone will be as "Malaysia / Singapore" time zone (GMT+8).

### Cancellation & Substitutions:

Should you be unable to attend, substitutes are always welcome anytime at no additional cost. Please inform us as early as possible. Payment is non-refundable if cancellation occurs 7 working days prior to event commencement. However, delegates will receive a 100% credit on the amount paid which can be used in another PETRO1 SDN BHD training course for up to one year from the date of issuance. The credit is transferable to other persons in the same company and applicable against any future PETRO1 SDN BHD public course/ Online Live Webinar. If cancellation occurs 7 working days prior to the registration date and there is no substitute, the organizer reserves the right to charge 50% of the total investment from your organization.

In the event that, PETRO1 SDN BHD, postpones or cancels a course, delegate payments at the date of cancellation or postponement will be credited to a future PETRO1 SDN BHD course. This credit will be available for up to one year from the date of issuance, and it is transferable to other persons in the same company and applicable against any future PETRO1 SDN BHD public course.

PETRO1 SDN BHD is not responsible for any loss or damage as a result of a substitution, alteration or cancellation/postponement of an event. PETRO1 SDN BHD shall assume no liability whatsoever in the event this training course is cancelled, rescheduled or postponed due to a fortuitous event, Act of God, war, fire, labor strike, extreme weather or other emergency.

### Program Change policy:

The organizer reserves the right to make any amendments and/or changes to the webinar, Date/ time, facilitator replacements and/or modules if warranted by circumstances beyond its control.

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