

## **Tutorial on Motor Insulation and Partial Discharge by Integrated Power Services - IPS, Cleveland- Ohio**

**Location on Tuesday, April 17 from 5:30 PM to 8:00 PM at:**

Beacon Place  
6055 Rockside Woods Blvd  
Suite 200, Independence, OH

**SYNOPSIS:** A leader in motor/generator repair and refurbishment, IPS Cleveland is one of many IPS North American Service Centers offering services for:

- industrial AC & DC electric motors and generators,
- mechanical power transmission equipment such as gearboxes, pumps, fans and compressors.

Electric motors used in fan, pump or drive train cover many areas of our everyday lives in automobiles, trains, factories, power plants and homes. IPS North American service centers handle all industrial AC & DC electric motor and generator repairs — from small, fractional HP, low-voltage units (<690V) to assets weighing 145 tons and rated up to 15kV.

**PRESENTATION:** This presentation is a follow-up to large electric motor manufacturing, focusing on problems associated with machines rated at 6.9 kV to 13.8 kV. It will provide an in-depth review of the impacts of improper vacuum-pressure impregnation, poor coil manufacturing techniques, and other common problems experienced with electric motor repair. There is a discussion on the effects of partial discharge as it relates to case studies and mathematical approach to quantifying partial discharge.

This presentation covers design of motor construction as follows:

1. understanding motor insulation design and effects of partial discharge,
2. winding insulation systems,
3. case studies of common field failures related to insulation,
4. mathematical quantification of and processing procedures.
5. Q&A

**The Speaker:** Mr. David Hinchliffe P.E. is the Senior Electrical Engineer for IPS Cleveland since 2014. David oversees electrical failure investigations, repair and testing. He is



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also the Electrical Insulation Engineer for the development and maintenance of the IPS proprietary insulation systems.

David graduated in 2002 from Drexel University, Philadelphia, PA with a BS in Electrical Engineering and is a Licensed Professional Engineer in Pennsylvania and Ohio.

From 2002 until 2004, David worked for STV Incorporated in Philadelphia as a Vehicle Specialist, performing qualification testing on electric locomotives prototype propulsion testing on new diesel-electric locomotives for NJ Transit in Tarbes, FR and Valencia, ES.

From 2004 to 2014, David worked for Exelon Generation in progressively advancing roles at Oyster Creek Nuclear Generating plant. Starting as an Electrical Component Specialist and advancing to System Manager. He oversaw maintenance and quality issues of electrical motors based on predictive maintenance technologies, vibration monitoring, thermography, lube oil analysis, motor design analysis, protective device assessment and motor load effects. He also held the position of Electric Motor Corporate Subject Matter Expert and the Large Power Transformer Subject Matter Expert.

## Notes:

1. This event is cosponsored by IEEE, Cleveland Section and PES chapter.
2. Snacks and beverages would be served from 5:30 to 6:00 PM.
3. Eligible for 2 hour PDH certificate.



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## PDH CERTIFICATE

This is to certify that \_\_\_\_\_ attended IEEE-sponsored technical presentation “**Motor Insulation and Partial Discharge by Integrated Power Services**” on April 3, 2018, Certified by [IEEE Cleveland Section for 2 PDH hour](#).

Certificate of attendance and other evidence of PDH activities should be retained by the attendee.

Authorized Signature:

Date: 4/17/2018