TOPIC: *Power Transformer Design and Manufacturing*

Part 1: Transformer Design and Design Parameters

Abstract:
The presentation will be on the basics of transformer design. The presentation will explain how a transformer designer interprets parameters such as MVA, lightning impulse, switching impulse, percentage impedance that are supplied by customers. It will touch on power rating [MVA], core rated voltages, insulation coordination, short-circuit impedances, short-circuit forces, loss evaluation, temperature limits, cooling, sound level, Etc. It will also explain overload and life expectancy of a transformer as well as comparing when delta windings and wye windings are needed. The presentation will answer why in North America transformers are regulated from low voltage side where in Europe transformers are regulated from high voltage side.

Part 2: Transformer Manufacturing Processes

Abstract:
The presentation will be on the industry wide manufacturing processes used to build transformers on the shop floor. It will cover core construction, insulation, windings, coil, processing, tanking, testing and shipping. Some of the common trouble points during the manufacturing process will be explained as well what a customer should look into while doing factory inspection. The presentation will also cover reconnection both in LV and HV, LTC Tap changer (both in tank and separate tank), and lead works.

Speaker: Ronnie Minhaz, P.E.

Ronnie holds B.Sc. degree in Electrical Engineering from University of Manitoba, Canada. Before founding his own company "Transformer Consulting Services Inc (www.tc-servicesinc.com)", Ronnie worked as a Transformer Designer at Pauwels Canada (Manufacturer), as an Equipment Engineer at SNC Lava Lin (EPCM) and at Enmax Power (Utility), as Substation Lead Engineer at McGregor Construction (Substation Construction). Ronnie is a registered professional engineer in the province of Alberta, Canada and an IEEE member. Ronnie held various leadership positions at IEEE Section level and a regular member of IEEE PES society.

Where: Engineering Society of Detroit
20700 Civic Center Drive, Suite 450
Southfield, MI 48076

When: Thursday, March 31st 12:00 – 4:00 P.M.

PDH: 4 PDHs issued by IEEE Southeastern Michigan

Price: $25 Students, $30 IEEE Members, $35 Non-Members

Register at: https://meetings.vtools.ieee.org/m/37895