



Tutorials for the 2012 Doble Conference

January 20, 2012 Update

Sampling Oil in Bushings and Instrument Transformers, Dissolved Gas Analysis and Interpretation Tutorial

Sponsored by the Insulating Materials Committee

Sunday, March 25, 2012

1:30 PM - 5:30 PM

America Center & South Ballroom of the Westin Hotel Copley Place

The sampling of oil from the main tank of electrical apparatus has been commonplace in the industry for years. Analytical tests such as dissolved gases-in-oil provides a tool to determine the condition of the apparatus. Bushings and instrument transformers that are oil filled may also be sampled for diagnostic and condition assessment purposes. The small quantity of oil and access to the oil requires modified sampling and filling techniques. The gassing signature for these smaller devices also varies compared to the larger counterparts. How are the gasses interpreted? Do utilities sample these devices routinely or only when trouble occurs? Find out this information and other useful facts to help with your maintenance program for bushings and instrument transformers.

These apparatus, especially bushings, pose some logistical issues because of the small oil volume. Therefore, this tutorial will also present information on adding oil to a low volume apparatus, re-securing the apparatus after sampling and other safety concerns and procedures.

In the past, manufacturers of bushings have dissuaded users from sampling as there are some risks involved which may impact the warranty. However, some manufacturers are now making it is easier to take samples by adding special accessories to the bushings which will be discussed along with the concerns of the manufacturers along with their instructions.

This tutorial will discuss items such as the selection process of identifying which bushings to sample, sampling procedures, special sampling tools, what analytical tests can be performed with such a small volume of oil and which are most important or provide the best information and interpretation of results.

IEEE Standard 115-2009 – IEEE Guide for Test Procedures for Synchronous Machines

Sponsored by the Rotating Machines Committee

Thursday, March 29, 2012

9:15 AM - 12:00 PM

America Center Ballroom of the Westin Hotel Copley Place

The tutorial planned for presentation will cover IEEE Standard 115-2009, IEEE Guide for Test Procedures for Synchronous Machines. This standard has 2 Parts. Part I pertains to acceptance and performance testing of synchronous machines; Part II pertains to test procedures and parameter determination for dynamic analysis or stand-still testing. This tutorial will concentrate on Part II of the standard relating to Hydro and Steam Turbine Generators. The Part II testing meets the FERC requirements for obtaining equipment parameters to replace the modeled or calculated parameters required for system stability studies.