



SLT 11- Vibration Analysis of Electrical Machines

Ver 1.1

Topics Covered

General Construction – Vibration Analysis – Line Frequency Vibration – Slot Frequency Vibration – Stator and Rotor Defects – Non Uniform Air Gap and MMF – Case Study - - Do's and Don'ts – Practical Tips – Exercise.

The Significance

Vibration Analysis is one of the best methods to diagnose all types of defects and inaccuracies in electrical machines. Electrical machines will be subjected to all inaccuracies like any mechanical equipment. In addition, these machines shall be subjected to all types of electrical inaccuracies also. Therefore, the Vibration Analysis of electrical machines is much more complex than mechanical equipments.

Vibration Analysis to identify mechanical defects is separately covered in our earlier SLTs and the same methodology shall be equally applicable on electrical machines such as motors, generators etc. This SLT gives a never before in-depth overview of methods of using vibration analysis to find out the exact problems causing various defect such as the Stator and Rotor Defects, Non Uniform Air Gap etc.