



RECENT ADVANCES IN TRANSMISSION INSULATOR

PROF. SUBBA REDDY

Department of Electrical Engineering
IISc Bangalore

TYPE OF COURSE : Rerun | Elective | UG/PG

COURSE DURATION : 4 weeks (24 Jan' 22 - 18 Feb' 22)

EXAM DATE : 27 Mar 2022

PRE-REQUISITES : Basic knowledge of Electrical Engineering.

INTENDED AUDIENCE : 3rd or 4th year UG, 1st year masters and research students UG/PG course, industry/utility participants can also register.

COURSE OUTLINE :

This course introduces the recent advances in EHV/UHV transmission Insulators. The course emphasizes learning and understanding the newer design criteria for the UHV transmission insulation. The course starts with an introduction to the importance of EHV /UHV transmission, its present and future growth. The discussion on the various components used for UHV transmission, design considerations etc are strengthened with the aid of lectures, practical video demonstrations and assignment exercises.

ABOUT INSTRUCTOR :

Prof. Subba Reddy B is a Principal Research Scientist at the High Voltage Laboratory, Dept. of Electrical Engineering, Indian Institute of Science, Bangalore, India. He received Bachelor in Electrical Engineering degree from Karnatak university, Dharwad, and MSc(Engg) and PhD from Indian Institute of Science, Bangalore, India.

His research interests are high voltage engineering, transmission line insulators, numerical techniques for high voltage applications, condition monitoring and diagnostics of HV equipment, surge arresters, renewable energy systems etc. He has received national and international recognition for his research work. He is a Fellow of Institution of Engineers (India), Fellow, Society of Power Engineers (India) and Senior member IEEE

COURSE PLAN :

Week 1: Introduction, Important components of transmission system, Insulation coordination

Week 2: Non ceramic insulators performance-service experience, Pollution/contamination flashover phenomena modelling etc , Failures, importance of reliability and testing

Week 3: High Voltage testing and techniques employed, HV testing techniques for Ceramic / Glass Insulators

Week 4: Surface degradation studies on composite insulators , Recent studies on composite insulators \ Summary