

Orientation Lecture Report

Name of the Faculty	Mr. G.Chandra Sekhar, Associate Professor, EEE Department, K L University.
Venue	E 105
Date	29 th March 2014 (Saturday)
Time	11.00 am to 12.00pm
Topic	Importance of Negative Sequence Currents in Six Phase Transmission System Protection



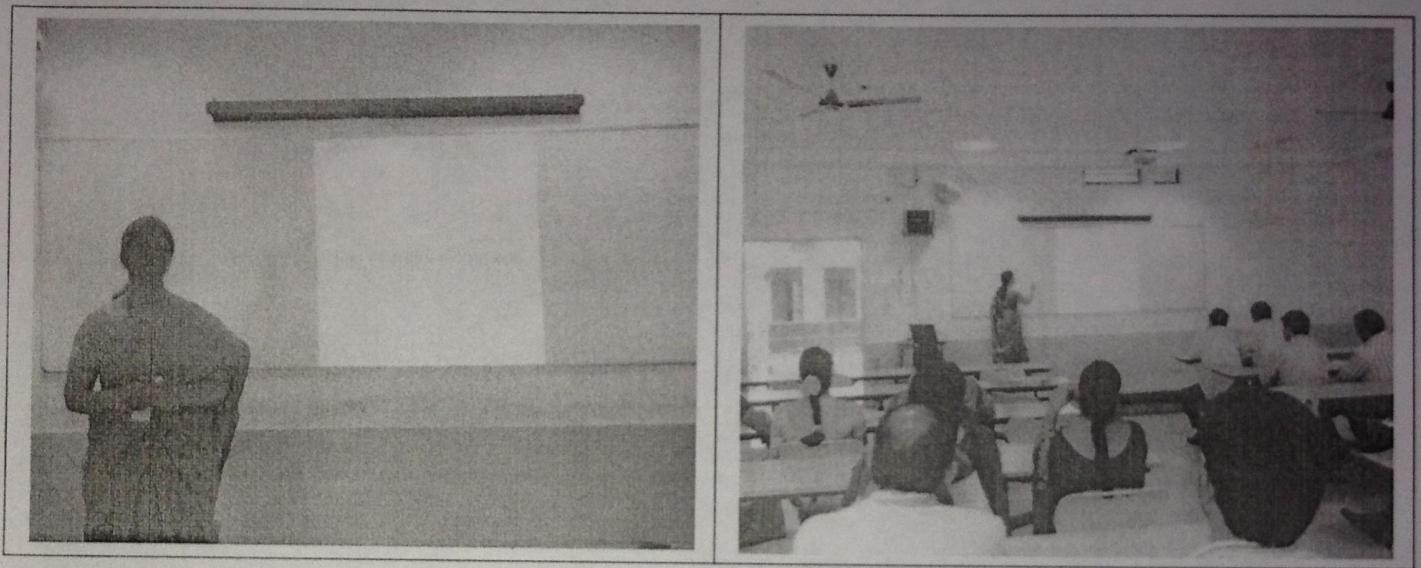
In view of the ever increasing demand of power the necessity to transmit more and more power goes on increasing without limits. More power can be transmitted with higher and higher voltages necessitating the demand for wider transmission corridor which in the present day scenario is difficult to provide due to increased cost of acquisition of additional land particularly so in thickly populated areas due to unavailability of land for this purpose.

Increase of power transfer capability of transmission leading to economic and efficient use of right-of-way is a problem faced by developed countries and of late by developing countries like India as well. To overcome this problem use of multi phase transmission system using compact line design is a feasible solution. A compact six phase line will meet the problem with a considerably small transmission corridor because it had been found that when phase vectors coincide with space vectors a clearance of as little as 3 feet was found to be sufficient between adjacent lines for 80kV six phase line. Also conversion of existing 138kV Three Phase line increases the power transfer capability to 1.732 times, maintaining the same conductor configuration and right-of-way with better efficiency, better voltage regulation, greater stability and greater reliability.

With the growth of increasing technology in power system and consideration of economic and environmental factors Multiphase Transmission is being tried as one of the alternatives to conventional Three Phase System. Under Multi Phase System, Six Phase System

Orientation Lecture Report

Name of the Faculty	J. Bhavani, Associate Professor, EEE Department, KL University
Venue	E 005
Date	15 th February 2014 (Saturday)
Time	11.45 am to 1.00pm
No. of Faculty Attended	30 (including 2 research scholars)
Topic	Direct Torque Control of 3 Phase Induction Motor



In the Present Scenario, Industries are increasingly demanding Process automation all the sectors. Automation results in to better quality, increase production and reduced costs. The Variable Speed drives, which steplessly control speed of AC motors, are controlling the automation systems. Depending on the application some are fixed and some of them are variable speed. The Advent of Power Electronics has changed the scene and today most of the variable drive systems are highly reliable and meeting all the demands of applications. Most of the Researchers are advancing towards the demands as mentioned in the above introduction and even I am one of them who has done the Research on "Performance analysis of Direct Torque controlled induction motor drive based on constant switching frequency PWM Schemes". I have Presented on the Advanced control strategy of 3 phase induction motor drive i.e "Direct torque control" scheme. I have explained about the in detailed information of topic and existing control strategies of 3 phase induction motor drive and their advantages and disadvantages. Method of speed control to overcome the disadvantages of existing control strategies and its working principle. Later I have explained about the additional features of the latest technique. Working of DTC scheme with simple pulse width modulation and with advanced PWM schemes. for the better understanding I have explained about the need of PWM Techniques also. My Lecture has concluded that we can achieve the constant switching frequency and the better performance with DTC Scheme along with advanced PWM Techniques.