

**MADANAPALLE INSTITUTE OF TECHNOLOGY & SCIENCE**  
(UGC - AUTONOMOUS)

**Report on Alumni Guest Lecture**  
**Operation and Application of Multi-level inverter**  
**Organised by Department of Electrical and Electronics Engineering**  
**26<sup>th</sup> November 2016**



**Submitted by:** Dr M. Vaigundamoorthy, Associate Professor., Dept. of EEE

**Resource Person:** **Mr. REDDY SEKHAR, Senior Section Engineer & Technical Assistant to Chief Workshop Manager/ South Central Railway.**

**Attended: III B-Tech EEE students (40 students)**

The guest lecture was started at 10 a.m. the resource person **Mr. REDDY SEKHAR**, was introduced by HOD, Dept. of EEE. The guest speaker addressed about operation and application of Multi-level inverter.

One of the basic and well-known topologies among all multilevel inverters is Cascaded H-Bridge Multilevel Inverter. It can be used for both single and three phase conversion. It uses H-Bridge including switches and diodes. At least three voltage levels are required for a multilevel inverter. A multilevel inverter is a power electronic device which can provide desired alternating voltage level at the output using multiple lower level DC voltages as an input. Mostly a two-level inverter is used in order to generate the AC voltage from DC voltage.

The inverter for home is used for emergency backup power and used in some aircraft systems to convert a portion of the aircraft DC power to AC. The alternating current mainly used for electrical devices used in homes like radio, lights, motor, etc.

**Feedback:** The students were too enthusiastic to know about the career opportunities and preparation required to achieve the task.