

OORJAM

DEPARTMENT OF EEE APRIL 2022

CAREER GUIDANCE

Avodha, a job consultancy centre at Kochi gave orientation about different internship programs, 6-month courses & job opportunities. They are offering jobs to students who complete 6-month courses. S4 Diploma and final year B. Tech students attended the programme.



STUDENTS CORNER

WIRELESS POWER TRANSFER SYSTEM FOR ELECTRIC VEHICLE CHARGING

Wireless charging of Electric Vehicles (EV) is a trending research topic. In this project, a wireless power transfer system (WPTS) is designed and a prototype is built to analyse the charging process. First, an analysis is made on the operating principle of wireless power transfer technologies. From these technologies, Resonant Inductive Power Transfer (RIPT) charging system is selected as the best model, based on physical and power demands. A controller for the RIPT is proposed, along with the power converter and compensation networks. Simulation results are obtained, and a prototype is built. Experimental tests are carried out to validate the proposed topology and controller. The obtained waveforms are analysed, and conclusions are drawn regarding the resonant inductive charger's overall performance.



Department of Electrical and Electronics Engineering
Sree Narayana Guru Institute of Science and Technology
Thekkethazham, Mannam P. O., Manjaly, North Paravur, Ernakulam.
e-mail: sngist@sngist.org, Visit: www.sngist.org

OORJAM

DEPARTMENT OF EEE APRIL 2022

PAPER PRESENTATION



DESIGN AND IMPLEMENTATION OF POWER ELECTRONIC TRANSFORMER FOR INERTIAL MEASUREMENTS OF CIVIL AIR CRAFTS

Ms. Megha Anil, Assistant Professor, EEE Department presented a paper on the topic “*Design and Implementation of Power Electronic Transformer of Civil for Inertial Measurements Aircrafts*” at the International Conference on Electrical and Electronics Engineering (ICEEE) held at Chennai. This paper mainly focused on the practical design and application of a power electronic transformer for inertial measurement of civil aircrafts.

The services, which the aircraft supply has to satisfy increases with increase in size of the aircrafts. Most aircrafts use 120V, 400Hz AC supply, but the aircrafts may have multiple voltage requirements in order to power various components in aircrafts. Usually transformers, rectifiers and inverters are used to modify the supply voltage according to the requirement. The main objective of implementing the Power Electronic Transformer (PET) is to replace the ordinary low frequency transformers, as PET offers several benefits like reduction in size and weight. So that only less energy needs to be stored in the transformer core per cycle, so the core can be made smaller. Reduction in size is always ideal for aircrafts considering safer operation of aircrafts. Implementation of PETs for inertial measurements of civil aircrafts helps in solving low power factor problems and size reduction.



Department of Electrical and Electronics Engineering
Sree Narayana Guru Institute of Science and Technology
Thekkethazham, Mannam P. O., Manjaly, North Paravur, Ernakulam.
e-mail: sngist@sngist.org, Visit: www.sngist.org