

# **Preliminary Study and Design Optimization for 15kA current transport bus-bar from 30kA 30V Power Supply to Superconducting load.**

## **Abstract**

High current low voltage power supply with have many applications to charge the resistive and superconducting magnets of TOKAMAK machines and other scientific experiments. Magnet System Division has 30kA 30V DC power Supply and presently it is being used for Molten Lead Lithium Experiment. Magnet System Division also engaged in development of coils using Low Temperature Superconductor (LTS) and High Temperature Superconductor (HTS). These developed coils needs to be tested and validated for its design parameters. For this purpose, another parallel current transport bus-bar with necessary interfaces will be require in near future.

During the project, student shall carry out preliminary study of the system requirement and conceptual design of the high current bus-bar.

Duration of the Project: 2 Months

Discipline: B.Tech / B.E. in Electrical Engineering

## **Academic Project Requirements:**

**1) Required No. of student(s) for academic project: 1**

**2) Name of course with branch/discipline: B.E./B.Tech. Electrical**

**3) Academic Project duration:**

**(a) Total academic project duration: 8 Weeks**

**(b) Student's presence at IPR for academic project work: 5 Full working Days per week**

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