INTRODUCTION

We would like to extend our views towards the Electrical Engineering field. Our faculty being an Electrical Engineer having around sixteen years of industrial/ teaching experience.

After we entered into Electrical design field, we had went deeply into engineering that involves Designing of Electrical Control Panels.We had taken initiate to teaching rather coaching the upcoming electrical engineers, the basics of designing. Keeping this in mind, a **couorse had developed named**

"Designing of Electrical Control Panels with AutoCAD".– AutoCAD(Electrical) + Electrical AutoCAD+ Panel Design

It covers all the basic Calculations of electrical engineering, different types of Electrical Control panels

viz: MCC panels, PCC panels, APFC panels, AMF panels, ATSpanels etc.

we wish everybody, those who are from electrical background, should undergo this training, as it helps you to **quick start your career as a "Design Engineer". Since the module covers AutoCAD, AutoCAD Electrical and Designing of electrical control panels,**

Anybody who successfully completes the training can join a company as a Design Engineer, NOT as a trainee. Because of the "live projects" from leading industries, one can understand the industrial/technical languages of the clients.

The syllabus for the module are,

1. Basic Electrical calculations.
   a. FLC (full load current).
   b. Power factor calculations.
   c. Total connected load.
   d. Selection of motor starters
   e. Selection of switchgears.
   f. Power factor correction methods.
2. Types of Electrical Control Panels.
   a. Motor Control Centers (MCC) panels.
   b. Power Control Centers (PCC) panels.
   c. APFC Panels.
   d. AMF Panels.
   e. Power Distribution Panels.
   f. ATS Panels, etc.
3. Preparation of General Arrangement (GA) Drawings.
   a. Sizing of various compartments in panels.
   b. Non compartmental panels.
   c. Sizing of Cables & Cable entry.
   d. Busbar Routings.
   e. Cable terminations.
4. Preparation of Fabrication (GA) Drawings.
   a. (IP)Ingress Protection.
   b. Switchgear mountings.
   c. Cable supports.
   d. Busbar supports.
5. Fabrication calculations (CRCA Materials)
   a. Calculation of Weight of the panels.
   b. Powder coating process.
   c. Bending as per IP Protections.
6. Busbar Calculations. (Aluminum & Copper)
   a. Current carrying capacity.
   b. Total weight of busbar required.
   c. Ratings of busbars.
7. Power & Control wirings for various Electrical Control Panels.
   a. Motor starters.
   b. ATS Panels.
   c. AMF Panels etc.
8. Projects (Live Projects from leading Industries)