I&C Design and Operational aspects of Large Vacuum System

Abstract

Instrumentation and control is an essential requirement of any scientific experiment or system in order to operate and gather process parameters from the various subsystems. For achieving sophisticated operation the robust control and automation is an integral part of the I&C system. Here a Large vacuum system is described by a large volume required to achieve ultra-High Vacuum using different type's vacuum equipment including actuators, gate valve and other associated vacuum instrumentation.
The project work involves the study of the operation of different vacuum equipment and various I&C requirement for the vacuum system. It also involves the study of configuration and operational requirements of the application developed using PLC Program and related Graphical user interfaces and I&C design of the system.

Pre-requisite:
• Knowledge of various instruments, sensors etc.
• Basic C/C++ /Python programming skills
• Familiarity with PLC programming, and its associated hardware configuration.

Academic Project Requirements:

1) Required No. of student(s) for academic project: 2

2) Name of course with branch/discipline: B.E./B.Tech. Electronics and Instrumentation Engineering

3) Academic Project duration:

(a) Total academic project duration: 18 Weeks
(b) Student's presence at IPR for academic project work: 5 Full working Days per week

Email to: arnabdasg@ipr.res.in[Guide's e-mail address] and
project_ece@ipr.res.in [Academic Project Coordinator's e-mail address]

Phone Number: 079 -07923962435 [Guide's phone number]