ESIMLAB – A BRIDGE BETWEEN INDUSTRY AND INSTITUTION

Motivation

A true teacher gets satisfied when his student excels the teacher. He would like to see his student get the earliest employment opportunity. But today's bitter reality is that there is not much industrial development, due to global recession. Industries are reluctant to accommodate the students as trainees.

How will a chemical engineering graduate student get exposed to plant operations? Should he not compete with his peers to enter a process industry? Should he not be more knowledgeable and exposed to latest technologies when he comes out of the institution. A student may get an opportunity to visit a process plant, but he may a get only a limited exposure within his shortest stay there.

ESIMLAB is the solution

ESDOTCOM has brought out a cost effective PC based Training Simulator ESIMLAB to teach the students the fundamentals as well as complex process phenomena.

ESIMLAB provides opportunity for the chemical engineering students to know what is happening in the industry. ESIMLAB trained students will have edge over their counterparts in the competitive scenario with respect to their knowledge in Instrumentation & Control and Process operations. Sound fundamental concepts can be easily reinforced with basic models. With Complex process models, one can understand the intricacy and complexity of the actual units.

With ESIMLAB, students will get trained in all the features like Trending, Tuning, and Graphic windows/panels of a typical DCS system. ESIM comes with three different DCS interfaces, namely Honeywell's TDC3000, Centum XL and Centum CS3000 for every model. User has the choice to select the DCS interface. This is a unique advantage of ESIMLAB, because even a student sent to industry will not get an opportunity work in different DCS for a single process.

Student can manipulate Controllers (Take Controllers from Manual to Auto, Auto to Cascade, Change Set Values, Change Outputs) and Digital Tags (Start/Stop, Open/Close) and monitor their effects from Instrumentation point of view. They can also tune the PID values of a controller. Complex Emergency Shut Down (ESD) system and interlocks can be easily understood. One can understand why a cascade level controller is better than a direct level controller. He can also find out the advantages of a feed forward control over a feedback control. All these, by hands on training on the system, based on the concept of "Learning by Doing".

ESIMLAB SUITE

Now chose your requirement from the ESIMLAB suite.
· ON-OFF CONTROL OF THERMAL PROCESS
· STUDY THE ACTION OF PROPORTIONAL CONTROL

ESIM LAB

- STUDY OF FLOW CONTROLLER
- STUDY OF FLOW TRANSMITTER
- STUDY THE EFFECT OF THE PI CONTROLLER OF
- FLOW CONTROL LOOP
- STUDY OF LEVEL CONTROLLER
- STUDY OF LEVEL TRANSMITTER
- EFFECT OF P CONTROLLER OF FLOW CONTROLLER
- STUDY OF PRESSURE CONTROL LOOP
- P, PI, PID CONTROL OF PRESSURE CONTROL LOOP
- CONTROL VALVE CHARECTERISTICS
- STUDY THE INHERENT CHARECTERISTICS COEFFICIENT OF CONTROL VALVE
- STUDY OF RANGEABILITY OF CONTROL VALVE
- STUDY THE OPERATION OF CASCADE CONTROL SYSTEM ON LEVEL PROCESS
- STUDY THE EFFECT OF PI CONTROLLER ON
- LEVEL + FLOW PROCESS
- RESPONSE OF NON INTERACTING LEVEL SYSTEMS
- RESPONSE OF INTERACTING LEVEL SYSTEMS

All the above modules comes with
- Rigorous Simulation model
- Instructor interface
- DCS configuration
- Tutorial
- Quiz

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