Product Name :	Product Code :
PLC Process Trainer	EEH0007

Description :

PLC Process Trainer

Technical Specification :

PLC Process Trainer Manufacturer

Teaching objectives

To study automated control system associated to the hydraulic facilities (pump speed driving, level

measurement, vessel draining, vessel stirring).

Identification of the sensors, actuators, process to control, signals processing.

Writing of a GRAFCET program.

Permits more other to study a control loop with the introduction of an analogical measurement and an analogical action.

To calibrate an analogical sensor and to study its linearity.

PID single variable control loop (pH).

Measurement of the input/output of the controller.

Identification of the components (controller, actuator, sensor, process).

Definition of the variables.

Set point.

Measure.

gap variable.

Adjusting size.

Controlled size.

Disruptive size.

Algorithm Control (ON/OFF, PID).

Technical specifications

The system is made up of a mixing stirred vessel feed by two other vessels. Each vessel is equipped with an electric draining valve, a manual draining valve and a low level probe. The mixing stirred vessel is equipped with an additional high level probe.

This table top bench is made up of a stainless steel frame mounted on 4 feet with a PVC panel.

3 vessels

3 solenoid valves

4 level detectors

A stirrer (motor and propeller)

A control cabinet including :

1 section switch with lock

1 emergency stop button

1 rearmament button, 1 ON light , 1 start button and 1 cycle stop, 4 switches, the PLC wiring terminals

The control and the stirrer safety device

1 transformer 24V, relay, solenoid valve, 1 contactor,1 DC power supply 24V for the PLC.

It is made up of the same components with the bellow additional components:

A pH control loop managed by the PID function of thePLC. It is made up of :

A pH probe measurement

A transmitter pH/I (4-20 mA),

A peristaltic pump in 110V, with speed driver

A feeding vat of the acid or the base

Options:

Bench is proposed with two optional PLC:

Option 1

1 PLC Schneider.

Option 2

1 PLC Schneider Micro.

Bench is proposed with two optional PLC:

Option 1

1 PLC Schneider TWIDO.

1 digital control screen “Magelis” for the communication man / Machine.

Option 2

1 PLC Schneider Micro.

1 digital control screen “Magelis” for the communication man / Machine.

Essential requirements (Dimensions (L x w x h)

1000 x 400 x 1200 mm

1200 x 600 x 950 mm

Power supply :

220 V mono, 0, 15 kW

220 V mono, 0, 3 Kw

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