4th semester Ceramics branch
5th chapter process control sub lecture note

Topic: Describe about control action

A controller compares the actual value of output with the reference input determine the deviation and produces a control signal that will reduce the deviation to zero or to a small value. The manner in which the controller produces the control signal is called the control action. A control system manages commands, directs, or regulates the behavior of other device or system using control loops. It can range from a single home heating controller using a thermostat controlling a domestic boiler to large industrial control systems which are used for controlling processes or machines.

For continuously modulated control, a feedback controller is used to automatically control a process or operation. The control system compares the value or status of the process variable (PV) being controlled with the desired value or set point (SP) and applies the difference as a control signal to bring the process variable output of the plant to the same value as the set point. control system manages, commands, directs, or regulates the behavior of other devices or system using control loops. It can range from a single home heating controller using a thermostat controlling a domestic boiler to large industrial control system. which are used for controlling processes or machines.

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5th chapter process control sub-lecturer

Topic: Automatic controller

The practice uses sensors and detectors to measure the output performance of the process being controlled. Huge measurement are used to provide corrective feedback helping to achieve the desired performance. System designed to perform without requiring human input are called automatic control systems (such as cruise control for regulating the speed of a car multi-disciplinary in nature control system engineering activities focus on implementation of control system mainly derived by mathematical modelling of a diverse range of system

Electrical circuit, digital signal processors and microcontrollers can all be used to implement control system. control engineering has a wide range of applications from the flight and propulsion system of commercial airlines to the cruise control present in many modern automobiles.

In most cases, control engineers utilize feedback when designing control system. This is often accomplished using a PID controller system for example. In an automobile with cruise control the vehicle's speed is continuously monitored and fed back to the system which adjust the motor's torque accordingly. where there is regular feedback control theory can be used to determine how the system respond to such feedback.

7th Semester ceramic branch

5th Chapter Process control Sub Recorder

Topic Different types of Recorder

Recorder :- A recorder is a device that records some signal. many measuring instrument also record the quantities they measure. It is a measuring instrument.

There are following types of Recorder

(1) Aircraft recorders (A)
(2) Cameras (IIC, 97, P, IF)
(3) Computer Storage device (C)
(4) Digital video recorders (D)
(5) Sound recording technology
(6) Tape recording

(1) Aircraft recorders - Aircraft recorders is an electronic recording device placed in an aircraft for the purpose of facilitating the investigation of aviation accidents and incidents.

(2) Cameras :- A camera is an optical instrument used to record images. At their most basic cameras are sealed boxes (the camera body) with a small

(3) Storage device computer storage device : Storage device are the computer hardware used to remember / store data. There are many types of storage devices eg HDD

(4) DVR :- A digital video recorder is an electronic device that records video in a digital format to a disk drive, USB flash drive, SD memory card,

(5) Sound recording technology :- The two main classes of sound recording are (1) analog (2) Digital recording

(6) Tape recording :- Tape recorder is a sound recording and reproducing device