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Concise Dictionary of Engineering

A Guide to the
Language of Engineering

 Springer

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Automated Inspection Equipment

Measuring or gaging instruments that make a pass or fail determination of a dimensional characteristic without human interaction. Automated inspection equipment is usually integral to a production line and is often computer controlled.

Automated Path Analysis

A software technique that scans source code in order to design an optional set of test cases to exercise the primary paths in a software module.

Automated Radio

A radio with capability for automatically controlled operation by electronic devices that require little or no operator intervention.

Automatic

Pertaining to a process or device that, under specified conditions, functions without intervention by a human operator.

Automatic Data Processing (ADP)

(1) An interfacing assembly of procedures, processes, methods, personnel, and equipment to perform automatically a series of data processing operations that result in a change in the semantic content of the data. (2) Data processing, by means of one or more devices, (a) that uses common storage for all or part of a computer program, and also for all or part of the data necessary for execution of the program; (b) that execute user-written or user designated programs; (c) that perform user designated symbol manipulation, such as arithmetic operations, logic operations, or character-string manipulations; and (d) that can execute programs that modify themselves during their execution. Automatic data processing may be performed by a standalone unit or by several connected units. (3) Data processing largely performed by automatic means. (4) That branch of science and technology concerned with methods and techniques relating to data processing largely performed by automatic means.

Automatic Gain Control

A process or means by which gain is automatically adjusted in a specified manner as a function of input level or another specified parameter.

Automatic Test Equipment (ATE)

(1) Test, measurement, and diagnostic equipment that performs a program to test functional or static parameters, to evaluate the degree of performance degradation, or to perform fault isolation of unit malfunctions. The decision making, control, or evaluative functions are conducted with minimal reliance on human intervention. (2) An equipment that is designed to automatically conduct analysis of functional or static parameters, evaluate the degree of performance degradation, and perform isolation of item malfunctions.

Automatic Testing

The process by which the localization of faults, possible prediction of failure, or validation that the equipment is operating satisfactorily is determined by a device that is programmed to perform a series of self-sequencing test measurements without the necessity of human direction after its operations have been initiated.

Automation

(1) The implementation of processes by automatic means. (2) The investigation, design, development, and application of methods of rendering processes automatic, self-moving, or self-controlling. (3) The conversion of a procedure, a process, or equipment to automatic operation.