

INDUSTRIAL ENGG.AND QUALITY CONTROL

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*Branch - MECHANICAL
Semester – 6th Semester*

INESPECTION and QUALITY CONTROL-

An **inspection** involves checking something, i.e., examining and assessing something. ... In the world of business, **inspection** is the critical appraisal of materials, items, or systems involving examination, testing, and gauging. Inspectors take measurements and make comparisons
Quality control (QC) is a procedure or set of procedures intended to ensure that a manufactured product or performed service adheres to a defined set of **quality** criteria or meets the requirements of the client or customer.

PLANNING OF INESPECTION-

Inspection plans provide details about what characteristics must be tested in order to ensure the quality of the product, as well as specific metrics and measurements that must be achieved in order for the product to be judged in compliance with standards.

TYPES OF INESPECTION-

There are three primary **types** of quality **inspections**: pre-production, **in**-line, and final. **There** are a variety of details that must be **inspected** and approved during each phase **in** order to detect and correct quality problems.

- **FACTOR** – Money: Most important **factor affecting the quality** of a product is the money involved in the **production** itself. ...
- **Materials**: To turn out a high **quality** product, the raw materials involved in **production** process must be of high **quality**.
- **Management**: ...
- **People**: ...
- **Market**: ...
- **Machines and Methods**:

TQM-

Total quality management (TQM) consists of organization-wide efforts to "install and make permanent climate where employees continuously improve their ability to provide on demand products and services that customers will find of particular value."^[1] "Total" emphasizes that departments in addition to production (for example sales and marketing, accounting and finance, engineering and design) are obligated to improve their operations; "management" emphasizes that executives are obligated to actively manage quality through funding, training, staffing, and goal setting

ISO9000/1400-

The International Organization of Standardization (ISO) is a worldwide federation consisting of member bodies from 91 countries, which promotes the development of international manufacturing, trade and communication standards.

ISO 9000 refers to a generic series of standards published by the ISO that provide quality assurance requirements and quality management guidance. ISO 9000 is a quality system standard, not a technical product standard. The ISO 9000 series currently contains four standards - ISO 9001, ISO 9002, ISO 9003 and ISO 9004. Firms select the standard that is most relevant to their business activities. However, these four standards will be revised in late 2000. More information is provided later in this paper under ISO 9000:2000.

ISO 14000 refers to a series of standards on environmental management tools and systems. ISO 14000 deals with a company's system for managing its day-to-day operations and how they impact the environment. The Environmental Management System and Environmental Auditing address a wide range of issues to include the following:

1. Top management commitment to continuous improvement, compliance, and pollution prevention.
2. Creating and implementing environmental policies, including setting and meeting appropriate targets.
3. Integrating environmental considerations in operating procedures.
4. Training employees in regard to their environmental obligations.
5. Conducting audits of the environmental management system.

ISO 9000 and ISO 14000 are tools to assist business and government to insure the quality of their products and services, and to manage the impact of their activities on the environment. Like all ISO standards, their use is voluntary unless a business sector makes them a market requirement or a government issues regulations making their use obligatory. Organizations that implement ISO 9000 and ISO 14000 voluntarily do so to improve operations and provide real benefits

JIT-

What Is Just-in-Time (JIT)?

The [just-in-time \(JIT\) inventory system](#) is a management strategy that aligns raw-material orders from suppliers directly with production schedules. Companies employ this inventory strategy to increase efficiency and decrease waste by receiving goods only as they need them for the production process, which reduces inventory costs. This method requires producers to forecast demand accurately.

The JIT inventory system contrasts with just-in-case strategies, wherein producers hold sufficient inventories to have enough product to absorb maximum market demand.

SIX SIGMA-

Six Sigma is a method that provides organizations tools to improve the capability of their business processes. This increase in performance and decrease in process variation helps lead to defect reduction and improvement in profits, employee morale, and quality of products or services.

LEAN MANUFACTURING-

Lean manufacturing is a methodology that focuses on minimizing waste within **manufacturing** systems while simultaneously maximizing productivity. Waste is seen as anything that customers do not believe adds value and are not willing to pay for.