

# Quality Control

Or is it called  
something else?

# The Five Erroneous Assumptions About Quality

- ◆ Quality means goodness, elegance
- ◆ Quality is intangible, not measurable
- ◆ The “economics of quality” are prohibitive, not relevant
- ◆ Quality problems originate with the workers
- ◆ Quality is the responsibility of the quality department
- Quality is conformance to requirements
- Quality is measured by the cost of nonconformance
- It is cheaper to do things right the first time
- Most problems start in planning and development
- Quality is shared by every function and department

# Management Understanding and Attitude

- ◆ “Improvement itself is never the real difficulty. Once Individuals recognize and agree on their position, it is never difficult to improve”
- ◆ “What works in one industry to improve quality will work in others – if you take the time to understand quality and its content.”

# Quality Systems

- ◆ A Quality Management System (QMS) can be defined as a set of policies, processes and procedures required for planning and execution in the core business area of an organization.
- ◆ QMS integrates the various internal processes within the organization and intends to provide a process approach for project execution
- ◆ QMS enables the organization to identify, measure, control and improve various core business processes that will ultimately lead to improved BUSINESS performance.

# Key Elements for Quality Systems

- ◆ A Defined Quality Policy
- ◆ Document and Record Control
- ◆ Management Ownership/Responsibility
- ◆ Resource Management/Training
- ◆ Product Realization (Development and manufacture of the product)
- ◆ Measurement, Analysis and Improvement

# Quality Policy

- ◆ The Quality Policy provides a framework for establishment of measureable objectives

# Document and Record Control

- ◆ A method to be used to control distribution and use of various types of documents used within the Quality System.
- ◆ A procedure to ensure that documents are approved by designated authorities prior to use and that only the current revisions are in use.

# Management Ownership and Responsibility

- ◆ Top management must demonstrate its commitment to the development and implementation of the quality management system and to continually improving its effectiveness

# Resource

## Management/Training

- ◆ Resources must be identified and provided to:
  - ◆ implement and maintain the quality system effectiveness
  - ◆ enhance customer satisfaction by meeting customer requirements

# Product Realization

- ◆ In planning and product realization the following must be determined:
  - ◆ Quality objectives and requirements
  - ◆ Processes, documents and resources specific to the product
  - ◆ Verification, monitoring, inspection and test activities specific to the product and the criteria for product acceptance
  - ◆ Records needed to provide evidence that the realization processes and resulting product meet requirements

# Measurement, Analysis and Improvement

- ◆ To demonstrate conformity of the product
- ◆ To ensure the conformity of the quality management system
- ◆ To continually improve the effectiveness of the quality management system through:
  - ◆ Customer Satisfaction
  - ◆ Internal Audits
  - ◆ Monitoring and measurement of processes
  - ◆ Monitoring and measurement of product
  - ◆ Control of nonconforming product
  - ◆ Continual Improvement
  - ◆ Corrective/Preventive actions

# Types of Quality Systems

- ◆ ISO 9001, 9002, 9003
- ◆ ANSI/ASQC
- ◆ QS 9000
- ◆ EFQM
- ◆ TQM

# Transportation

# Are aerosols

- ◆ Hazardous?
- ◆ Regulated?

- ◆ Yes
- ◆ Yes

# How to ship

- ◆ Land
- ◆ Vessel
- ◆ Air
- ◆ 49 CFR 100-180
- ◆ IMDG
- ◆ IATA