



ISO9001: 2000

What does it mean to me?



Quality Management

- ◆ Establish a documented quality system
- ◆ Implement the system
- ◆ Maintain & provide evidence
- ◆ Continually improve.



Organizing the paperwork

- ◆ Define your processes and how they interact with each other.

(As a group discuss and flowchart a process and show how it interacts with other processes)

- ◆ Provide enough resources to support operations.
- ◆ Measure and monitor effectiveness.
- ◆ Continually improve.



Documentation & Records

- ◆ All documents have to be controlled for
 - Review
 - Distribution
 - Change
 - Removal of obsolete



Documentation & Records

- ◆ If it's not recorded then how can you prove it happened? (Objective Evidence)
- ◆ All records have to be controlled for:-
 - Storage- electronic, paper copies & backup
 - Retention period
 - Identified & easily retrieved
 - Legible and maintained



Management Commitment

- ◆ Top management
 - The buck stops here.
 - Must communicate your commitment to meeting this standard and Customers needs.
 - This will be communicated through the Quality Policy and Objectives.
 - Management must review their performance and make adjustments as necessary.
 - (Get the group to list some examples of objectives)




Customer Focus

- ◆ What is it that the customer really wants?
 - Do we know already, are we second guessing, assuming or just providing what we have always done?
- ◆ Customer needs & expectations
 - (Discuss the difference between the two)



Quality Policy

- ◆ Have we defined our Quality policy?
- ◆ Do we understand it?
- ◆ Do we believe in it?
- ◆ Is it communicated to all personnel?



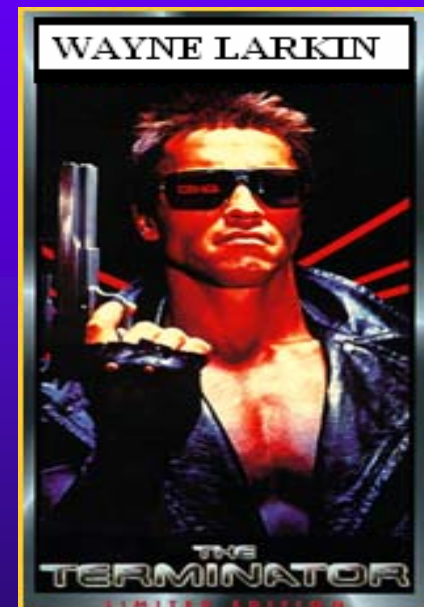
Who's steering the ship and who's rowing?

- ◆ We all need to know:-
- ◆ Our position within the team,
- ◆ What are role is
- ◆ Our responsibilities
- ◆ And our authority to make change



So who's going to be the captain?

- ◆ ISO9001 requires the Management to select a Management Representative who will:
 - ◆ Implement
 - ◆ Maintain
 - ◆ Continually Improve
 - ◆ Report the results.
 - ◆ (Discuss with Management what they think is important to provide to ensure that this person doesn't fail?)





Provide the resources to do the job right the 1st time.

- ◆ What resources do we need?
 - Trained, experienced people
 - Machinery and equipment
 - Time and Materials



Resource Management

- ◆ What is our most valuable resource at work?
- ◆ Trained people
- ◆ Provide the training, review the results, ensure the training is effective.
- ◆ Keep a record



Infrastructure & Facilities

“Failure to plan will lead the plan to fail.”

- ◆ Ensure that any major changes in the company are planned for.
- ◆ Provide adequate facilities
 - Lighting, air circulation, space etc..



Maintenance

- ◆ There are 3 types of maintenance not including “What till it breaks then fix it”.
- ◆ Routine maintenance
- ◆ Preventive maintenance
- ◆ Predictive maintenance



Quality Planning

- ◆ If a customer requires a new job or a change to an existing one then we need to plan for it.
- ◆ Ensure we can meet their schedule and have adequate skills to complete the job.
- ◆ Develop the product specific templates



Customer requirements

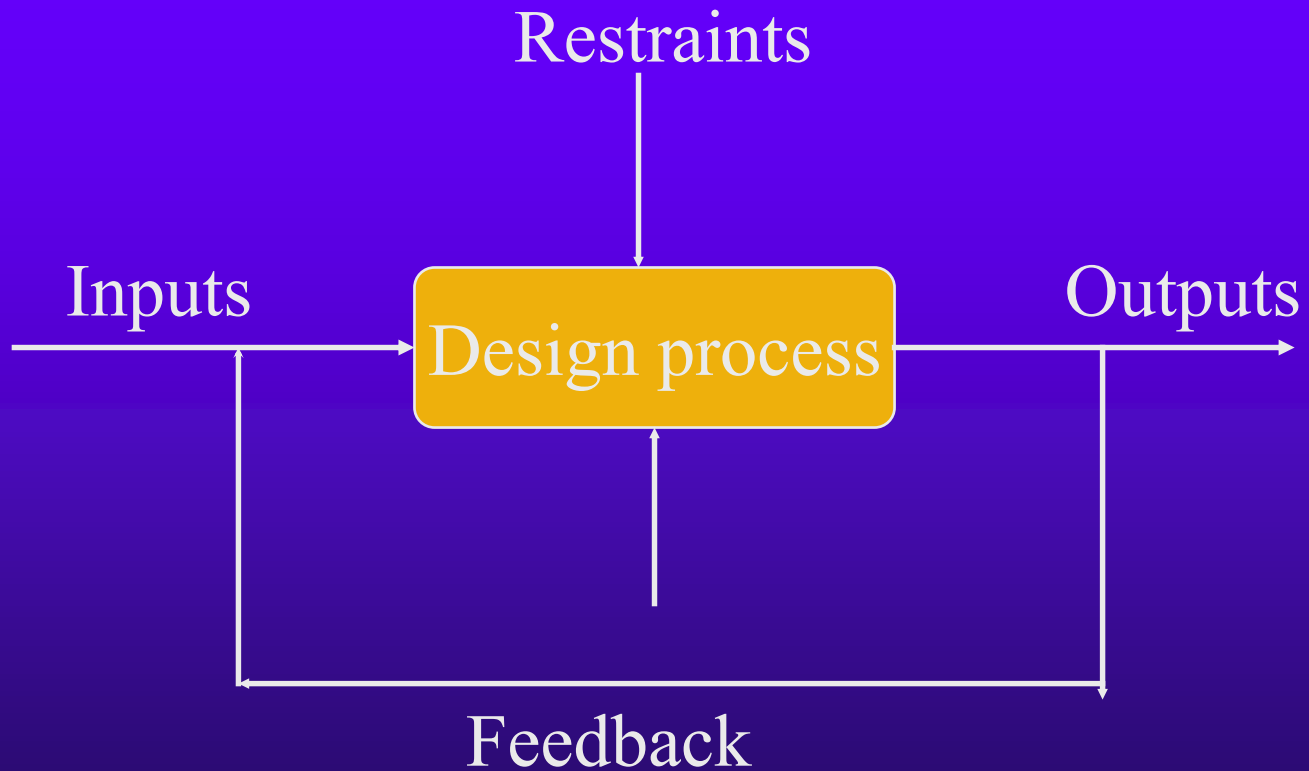
- ◆ Define the process for accurate order processing.
- ◆ The process must include:-
 - Request for quotes
 - Interface into design
 - Receipt of Orders
 - Changes to specification/order



Customer feedback

- ◆ Any feedback from a customer should be treated as a bonus
 - Complaints, recommendations, survey results
- ◆ Document, investigate, respond and review for trends.
 - This is a key metric for management

Design Control





Purchasing

- ◆ Accurate purchasing data will ensure accurate Orders.
- ◆ Check out your vendors prior to using them
 - Select the best vendors
 - Monitor them
 - Feedback and corrective actions



Production Operations

- ◆ Define the processes for shop floor flow
- ◆ Document work instructions where required
- ◆ Maintain equipment
- ◆ Control Measuring equipment for accuracy
- ◆ Monitor the processes for variation and make adjustments as required.

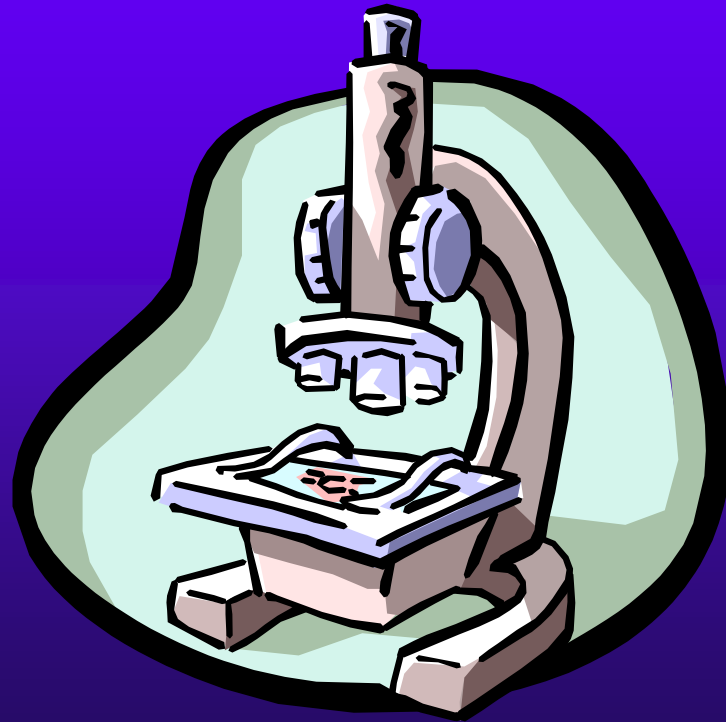


Identification & Traceability

- ◆ Can you identify all materials and operations used to manufacture the product?
- ◆ Can you trace all materials back to their original source of supply?
- ◆ Would you be able to notify customers of a specific defective batch of material?

Inspection Status

- ◆ Can you tell if a part has been inspected?
- ◆ Can you identify if it is accepted, rejected or reworked?





Handle, store, pack, preserve and deliver

- ◆ This section is all about prevention of damage to the product during the process flow. This is from the time of receipt – storage – production – packaging – shipping



Measuring Equipment

- ◆ Any equipment that is used to measure or test to confirm a result must be calibrated to a given standard.
- ◆ (Discuss what types of equipment are used at Renco Electronics with the group)



“If it can be measured it can be improved upon”

- ◆ This last section of the standard is critical to the improvement of the Company, this section is about processes for measuring, monitoring and improving.

Metrics



Tools we can use

- ◆ Statistical techniques
- ◆ Customer Satisfaction
- ◆ Internal audits
- ◆ In-process inspections
- ◆ Corrective & Preventive actions



Lets discuss some metrics!

◆ Customer satisfaction

- How do you measure customer satisfaction is it through dissatisfaction?
- Do you respond to individual customer concerns or collective customer concerns?
- How much data do you have on customs?
 - Feedback, repeat orders, awards, market share?
- How often do we have to rework and what is the % of returns from a customer?



Internal audits

- ◆ Does anyone scuba dive, what's the golden rule before diving?
 - Buddy checks – (Our equivalent to an audit)
- ◆ Check your processes not just for compliance but also for efficiency.
- ◆ Report this data and take positive corrective actions where required.



Inspection

◆ A true story.

“I can't afford ISO 9000 because I just hired 4 new inspectors and they have rejected more components for rework so I'm too busy reworking to worry about quality systems.”

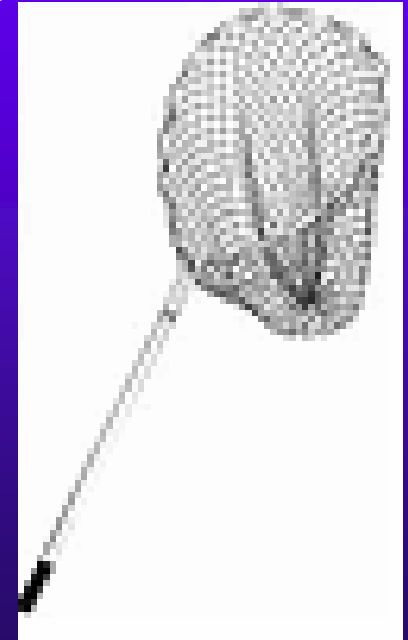
Inspection

◆ Remember



“Inspection is like a fishing net, the smaller the holes the more small fish you catch and the more large fish get away”

◆ Inspection is about detection which is important but not at the expense of prevention.





What do we do with all the non-conforming materials?

- ◆ Identify
- ◆ Segregate
- ◆ Document the problem
- ◆ Review
- ◆ Disposition – rework, scrap, accept as is, seconds etc..



Analysis of data

- ◆ The easy part of quality is measuring defects, problems, non-conformances etc.. The hard part is analyzing the data and making informed decisions.



What data & how do I analyze it?

- ◆ You decide, it's your company but here's some ideas.

Data:- % scrap, rework hrs, on-time delivery, returns, productivity, operation efficiency.

Analysis method:- pie charts, pareto, surveys, audits, etc...



Continual Improvement

- ◆ “The only constant in business is change.”
- ◆ Change is good if it leads to improvement, this is the main impetus of ISO 9001.
- ◆ (Discuss with the group examples of continual improvement at Renco Electronics)



Corrective & Preventive action

- ◆ What is the difference between corrective & Preventive action?
- ◆ Is rework or replacement corrective action?
- ◆ What is root cause?