MANAGEMENT OF QUALITY
(CH. 7)

ADM4307 Apparel Manufacturing
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SYSTEMS FOR QUALITY MANAGEMENT

- Quality can be measured:
  - By comparing the product to other similar goods in the marketplace.
  - By comparing the consistency of product’s intrinsic cues to the firm’s standards and specifications.
Systems for Quality Management

- Product variation and classification of defects
  - It’s impossible to make each product like the previous one.
  - Therefore, “Tolerances” are stated.
  - Defects: Exceed tolerances (or do not meet specifications)
    - Critical- prevents usability or performance.
    - Major- may affect usability
    - Minor- will not affect usability
  - Average rate of defective garments 10~12%
  - Goals are targeted at less than 5%
QUALITY ASSURANCE (QA) & TOTAL QUALITY MANAGEMENT (TQM)

- Concepts of QA and TQM
  - Evaluation of conformance to standards involves performance of all the company's divisions.
  - Employees receive training on how to identify causes of defects and how to solve problems.

- Quality Control (QC):
  - A more limited form of quality management.
  - QC is the process of assuring that products are made according to specifications. (Focus on the production process, Not the entire firm).

- A written quality policy and quality manual includes:
  - Priorities relative to materials, processes, training, product development, and customer service.
  - See example p.209. Figure 7-2 (Quality manual).
QUALITY MANAGEMENT TEAMS

- Quality management teams (4 types):
  - Product development teams:
    - for Intrinsic quality (Quality Assurance)
    - A technical designer, or quality manager who work with designers, merchandisers, and product managers.
    - Example: assure sewing/ finishing problems
  - Independent quality management groups:
    - A separate division, Quality specialists.
  - Teams of divisional managers:
    - Team incorporating management representatives from each division.
    - Special training for quality management.
  - Teams of production workers:
    - Empowered work teams, through teamwork, share responsibility for quality and quality of output.
METHODS OF ASSURING QUALITY

- Preproduction quality assurance
  - Lab testing for quality and performance
    - Fabrics and findings
    - Design prototypes
    - Product assemblies and components
    - Conformance to specifications
    - Evaluations of customer requests and feedback
  - Returned merchandise
  - Competitor's goods.
METHODS OF ASSURING QUALITY

- Quality assurance during production
  - Firms have “quality assurance engineers” or “field quality managers”.
- Inspection:
  - To determine whether products have been made according to specifications / if meet standards / if products are Acceptable.
  - 100% inspection of finished goods. (costly time and labor)
- Statistical quality control (SQC)
  - SQC in Europe since 1920s.
  - WW II. Edward Deming in U.S.
  - SQC is a means of reducing the amount of inspection.
  - Proportion and type of defects in the total production lot.
  - Firm uses Acceptance Sampling (SQC process, Statistical sampling) based on sampling plans (single, double, and multiple).
- Monitoring the garment assembly process.
- Finished garment evaluation
- Mill flaw and general repair.
METHODS OF ASSURING QUALITY

- Postproduction quality assurance
  - Quality assurance while goods are stored at plants, and distribution centers.
- Quality audits
  - To determine the defect level of the output.
  - Auditing, monitoring, and reporting quality of finished goods, packing, and shipping in distribution centers.
- Analysis of returned merchandise by customers.
  - Quality management can be a time-consuming and expensive process.
  - The pay off is reduced production costs and satisfied customers season after season.
COSTS OF QUALITY PROGRAM

- Costs and benefit of quality program
  - High quality, high cost.
    - Factors that contribute to the cost of garment production (material costs + Labor costs)
  - Costs are reduced when consistency increases:
    - More desired products/ Less defective products/ fewer products are salable at regular price.

- The cost of quality
  - Ranges from 10 to 35 % of product costs.
    - Inspection: 2 to 15 % of labor costs
    - Scrap: 2 to 10 % of material costs
    - Excess material made but not used: 0 to 5% of material costs
    - Rework: 0 to 5% of labor and material costs
    - Field service: 0 to 20 % of labor and material costs.
    - Customer dissatisfaction

- Quality cost index
  - To determine the value of quality management .
  - Quality costs per direct labor hours or dollar is a common index.

- Trends in Quality Management
LABELS
RESULT OF THREAD SHRINKAGE
SHADING WITHIN GARMENT
FADING FROM LIGHT AT SHOULDERS
FADING AND SHRINKAGE, BEFORE AND AFTER LAUNDERING
PILLING/ZIPPER HUMP
GARMENT TWIST AFTER LAUNDERING
GARMENTS CUT IN OPPOSITE DIRECTIONS FROM NAPPED FABRIC
NEXT CLASS

- Read Ch. 8 (Costs, Costing)
- Bring 1 Calculator and Text book !!!!