

Lecture # 42

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Chapter 14

Two case studies presented in the chapter:

- **Press 120 -- Injection Molding case study
(Saline plant: Bob Deacon & Ray Newton)**
- **Accounts Payable case study**

TABLE 14.1 Operational Definitions for Defects

Defect	Criteria
Splay	Not acceptable on high surround or horizontal grille bars
Scratches/scuffs	Not acceptable on visual surround (use grease pencil test)
Flash	Not acceptable; must be repaired
Oil	Minimal amount; should be wiped clean so that residual amount will be removed by acid etch
Grease	Not acceptable if it cannot be wiped clean
Flow lines	Not acceptable in high surround (use grease pencil test); maximum $\frac{1}{4}$ -inch flow line at base of surround (see sample); flow line acceptable in lower rail and between vertical ribs
Short shots	Front surface and visual ribs must be full; acceptable—only back rib behind paint step allowed short to $\frac{1}{8}$ inch maximum (see sample)
Burns	Unacceptable on visual surfaces; minimal amount acceptable on back rib surfaces
Sinks	Unacceptable on visual surface; acceptable on bottom base rail at outer vertical ribs (see sample)
Sprue on part	Part requires being scrapped
Material buildup	No residue allowed
Black spots	Unacceptable as groups on surface; acceptable in minimal number under surface
Defective trim	Gouges and chatter unacceptable; flash standing can be repaired

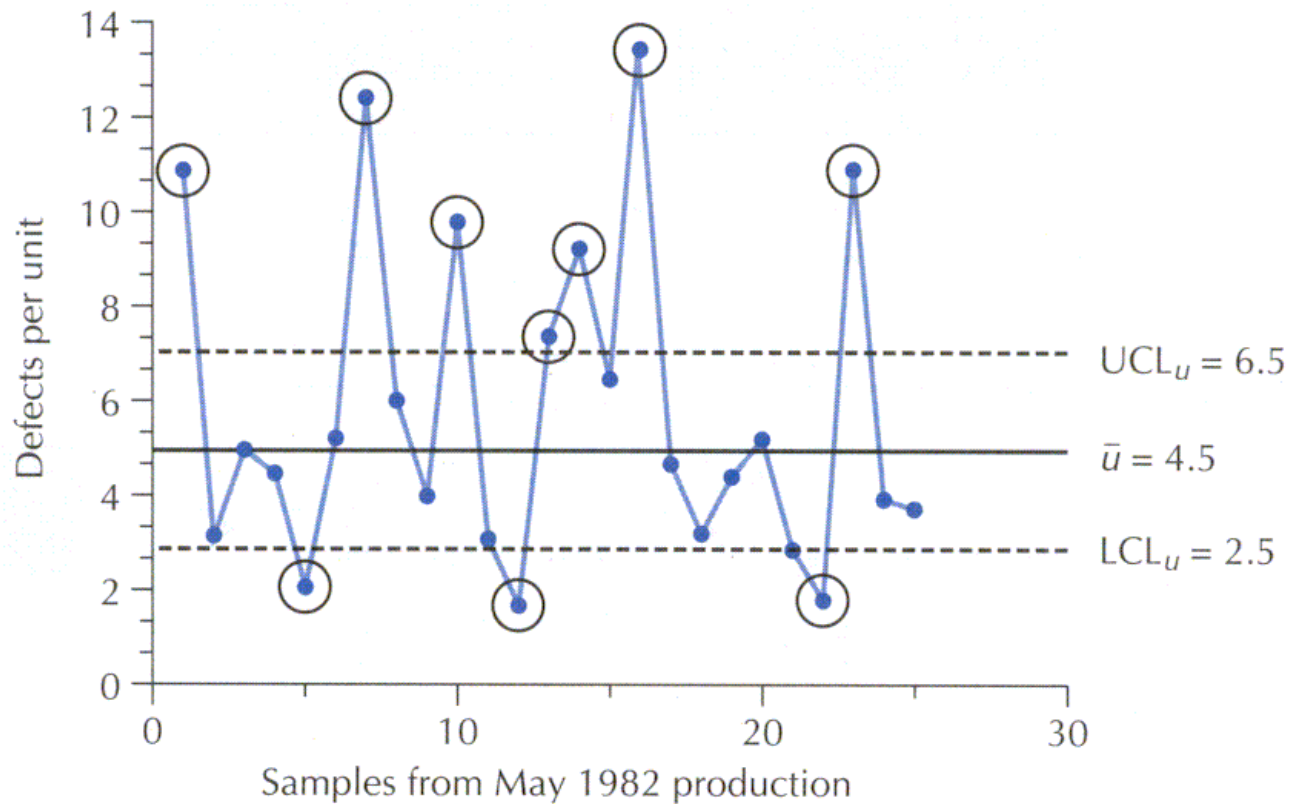


Figure 14.1 Initial Control Chart (u Chart) for All Defects from the Press 120 Molding Process

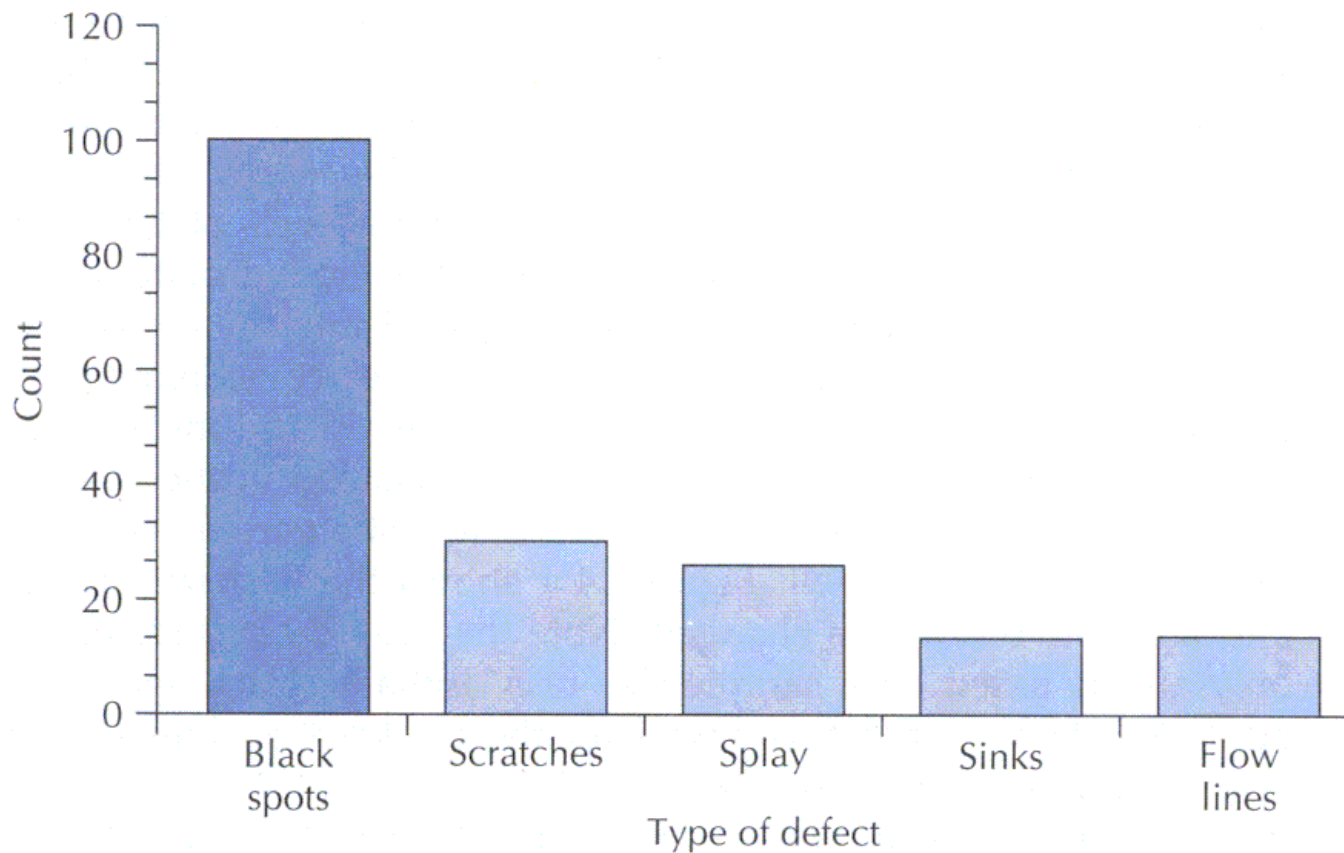


Figure 14.2 Pareto Diagram for Defects on Radiator Grille

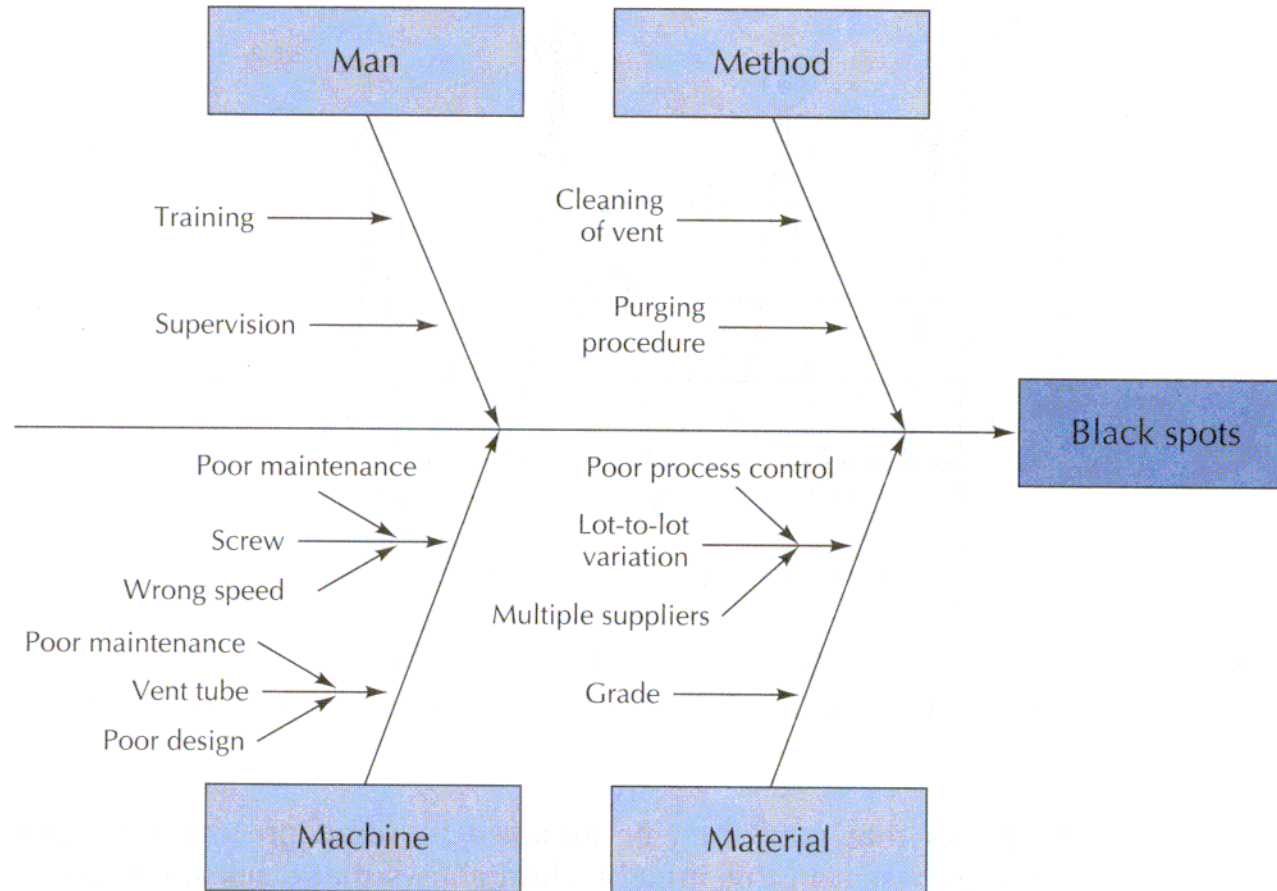


Figure 14.3 Cause-and-Effect Diagram for Black Spot Defects

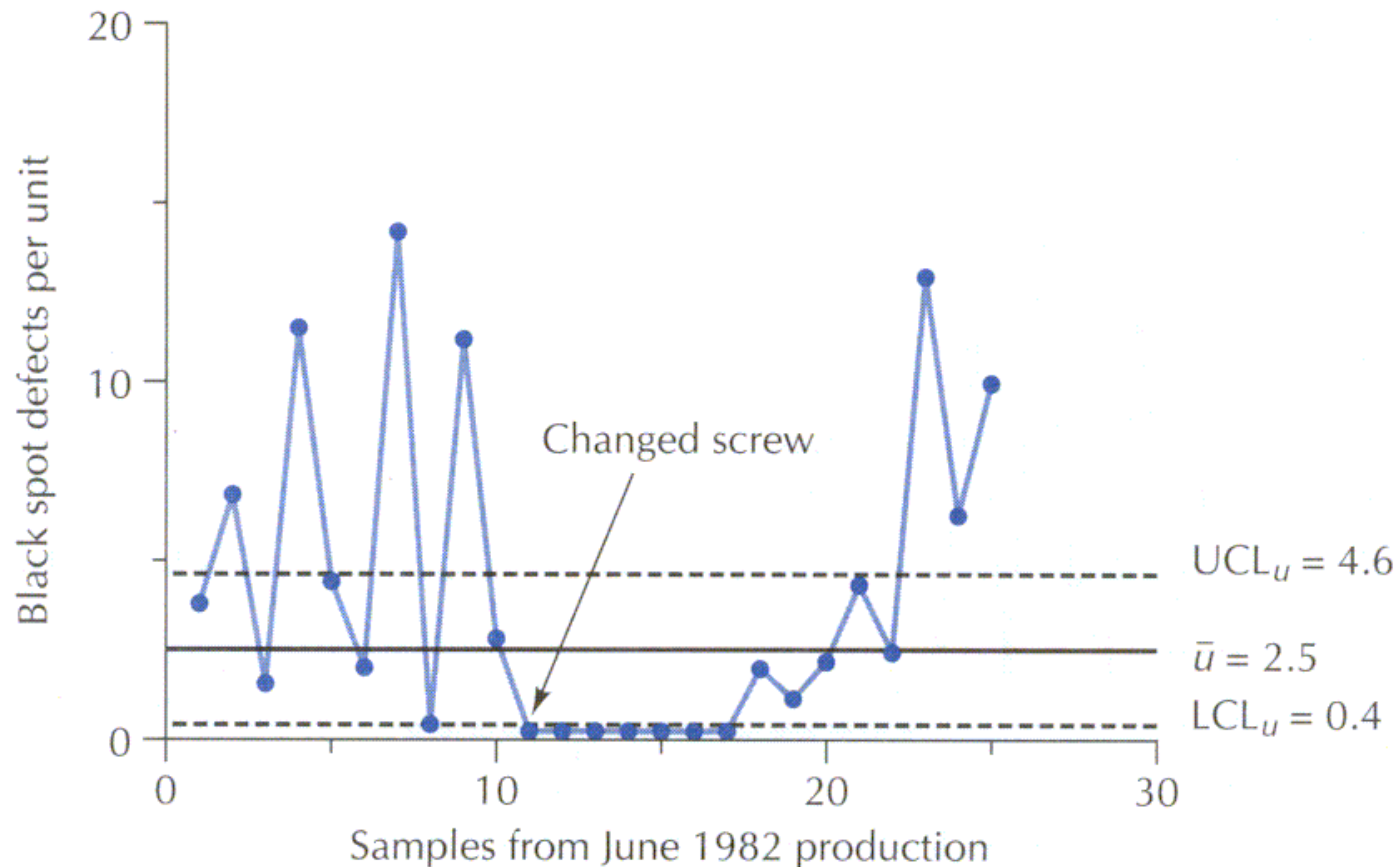


Figure 14.4 Continuation of Press 120 u Chart Showing the Effect of Changing the Screw

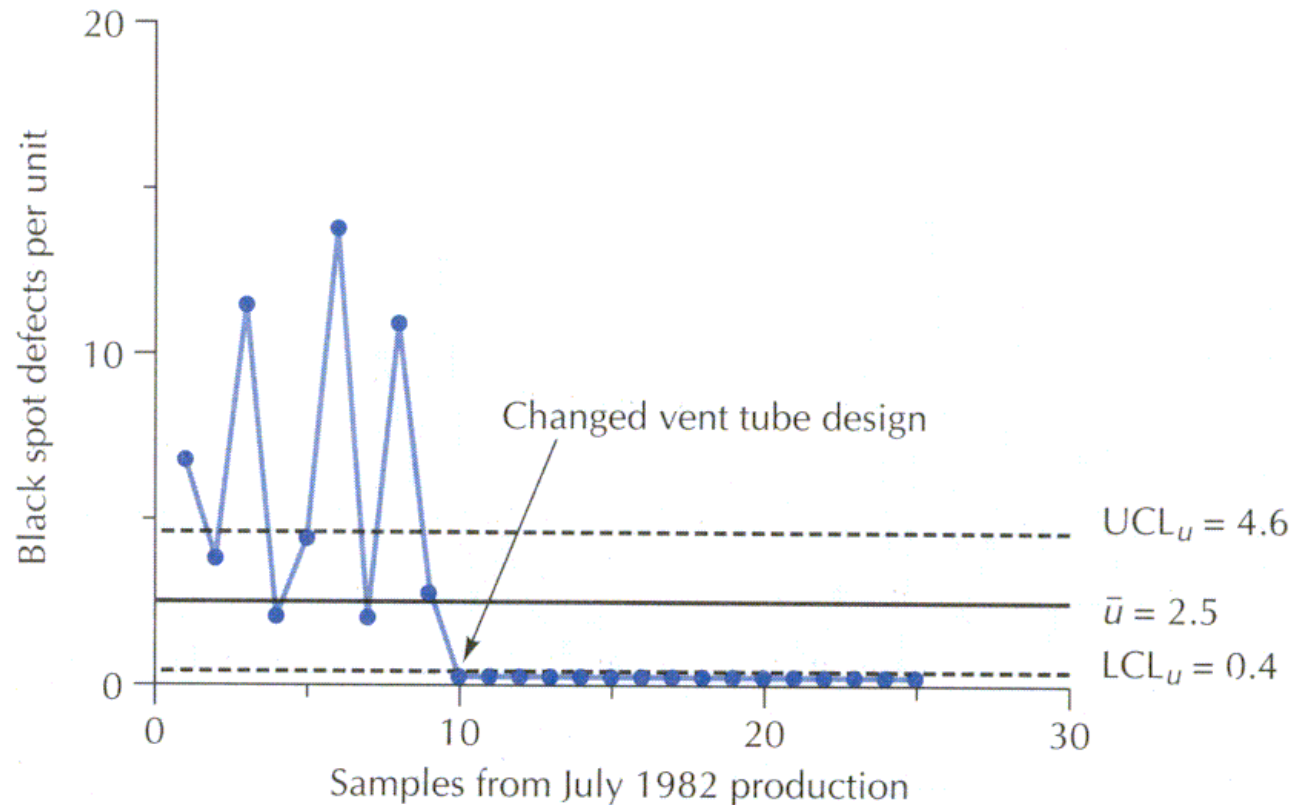


Figure 14.5 Continuation of the Press 120 u Chart Showing the Effect of the New Vent Tube Port Design

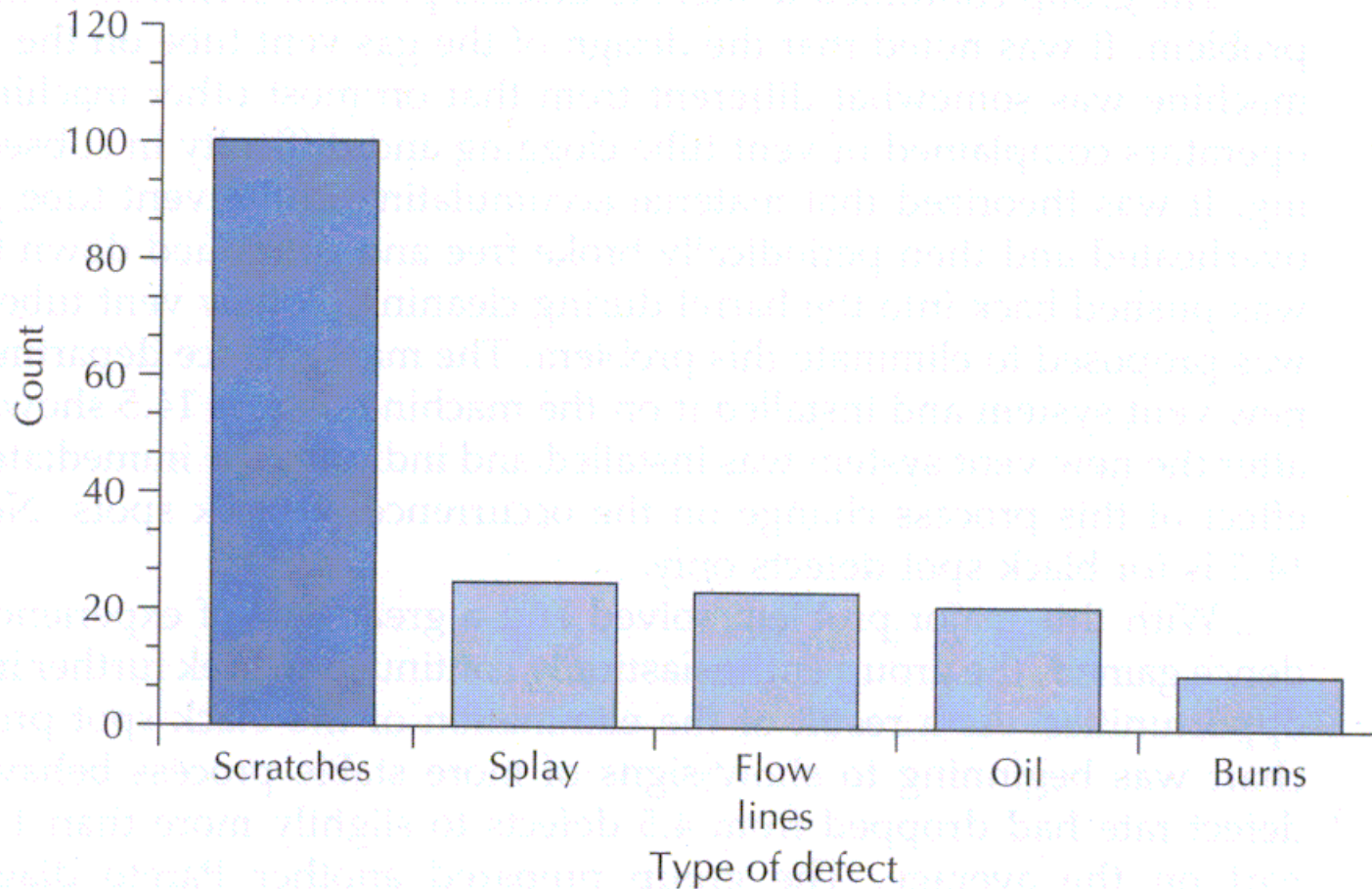


Figure 14.6 Pareto Diagram for Defects on a Radiator Grille After the New Vent Tube System Was Installed

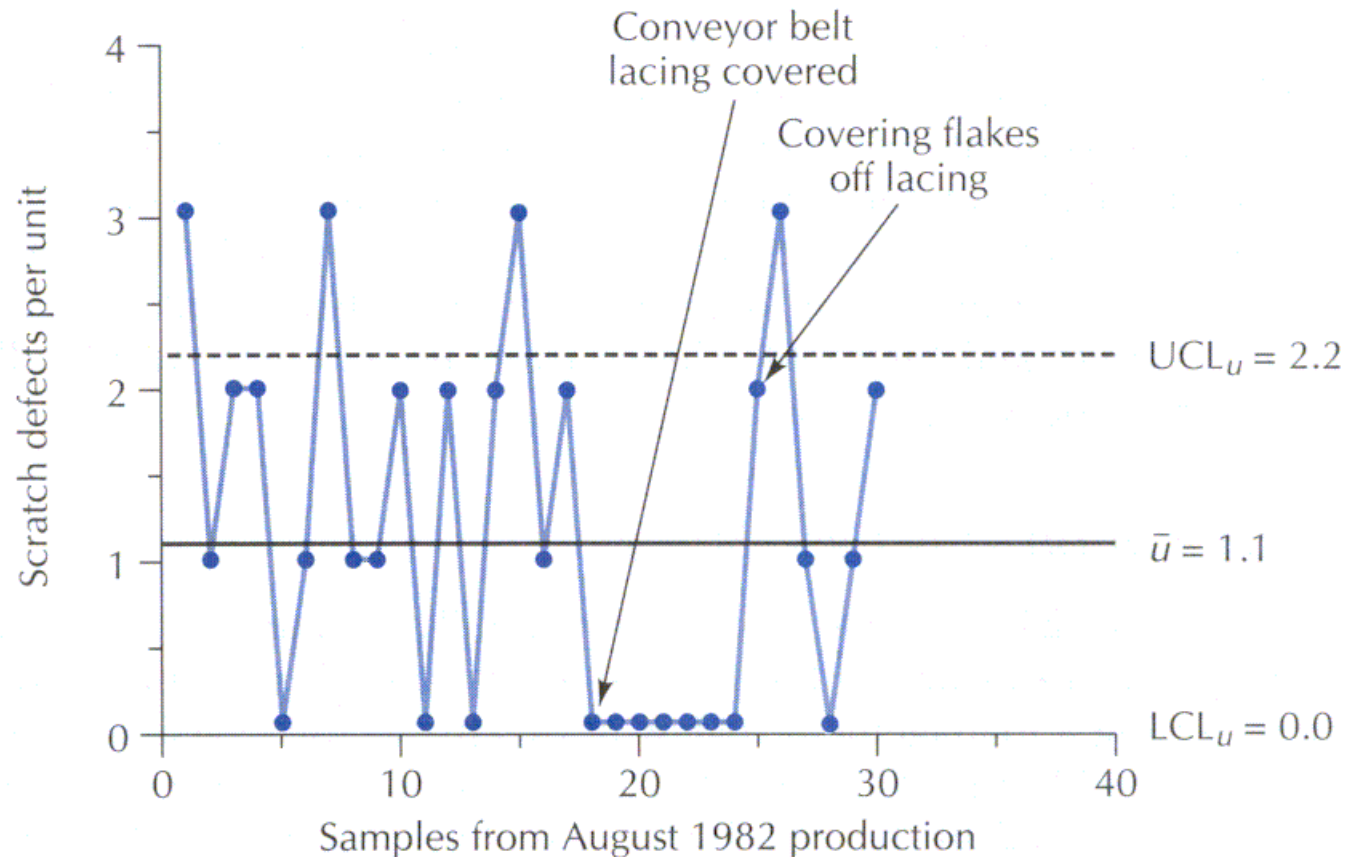


Figure 14.7 Control Chart for Scratch Defects Before and After Latex Coating Was Applied to the Belt Lacing

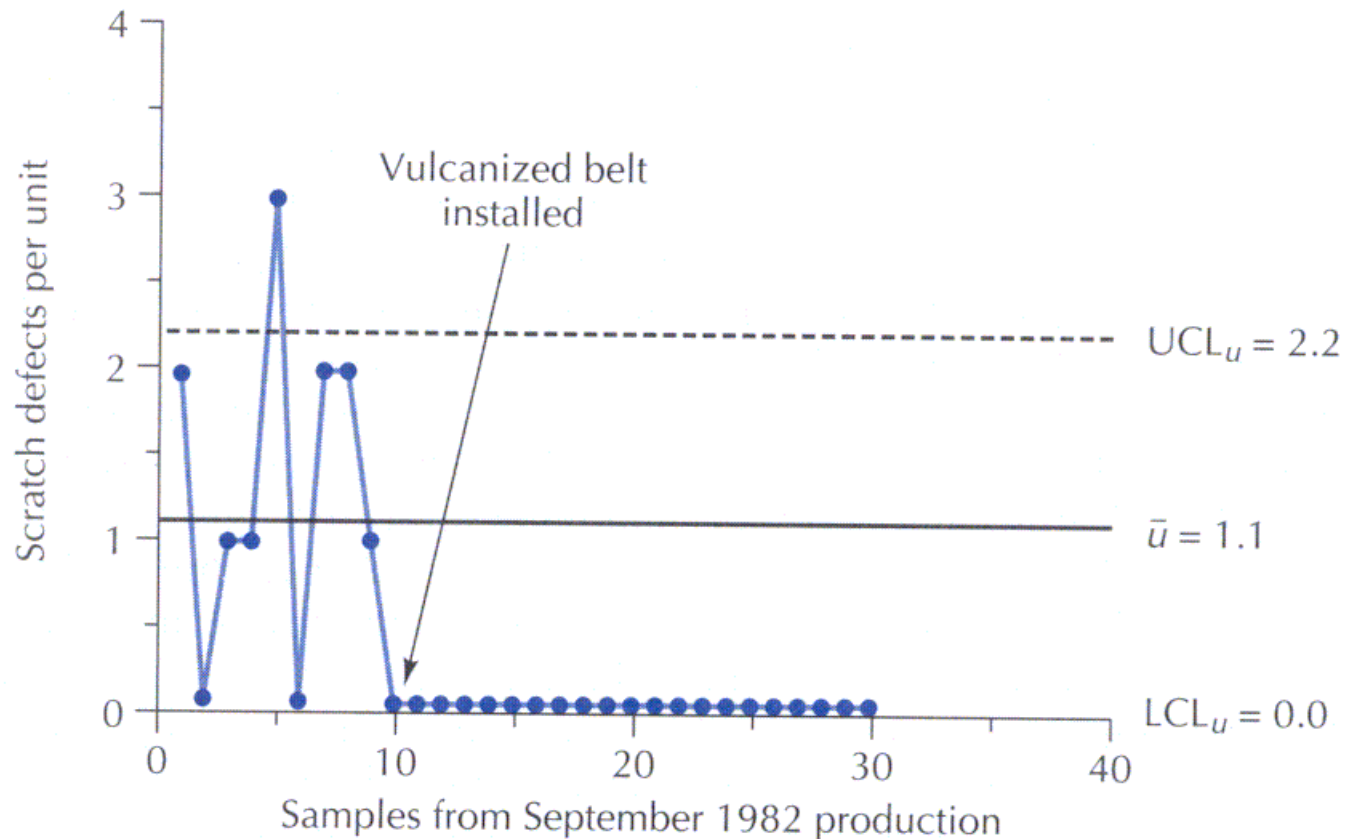


Figure 14.8 Control Chart for Scratch Defects Before and After the Bonded Belt Was Installed

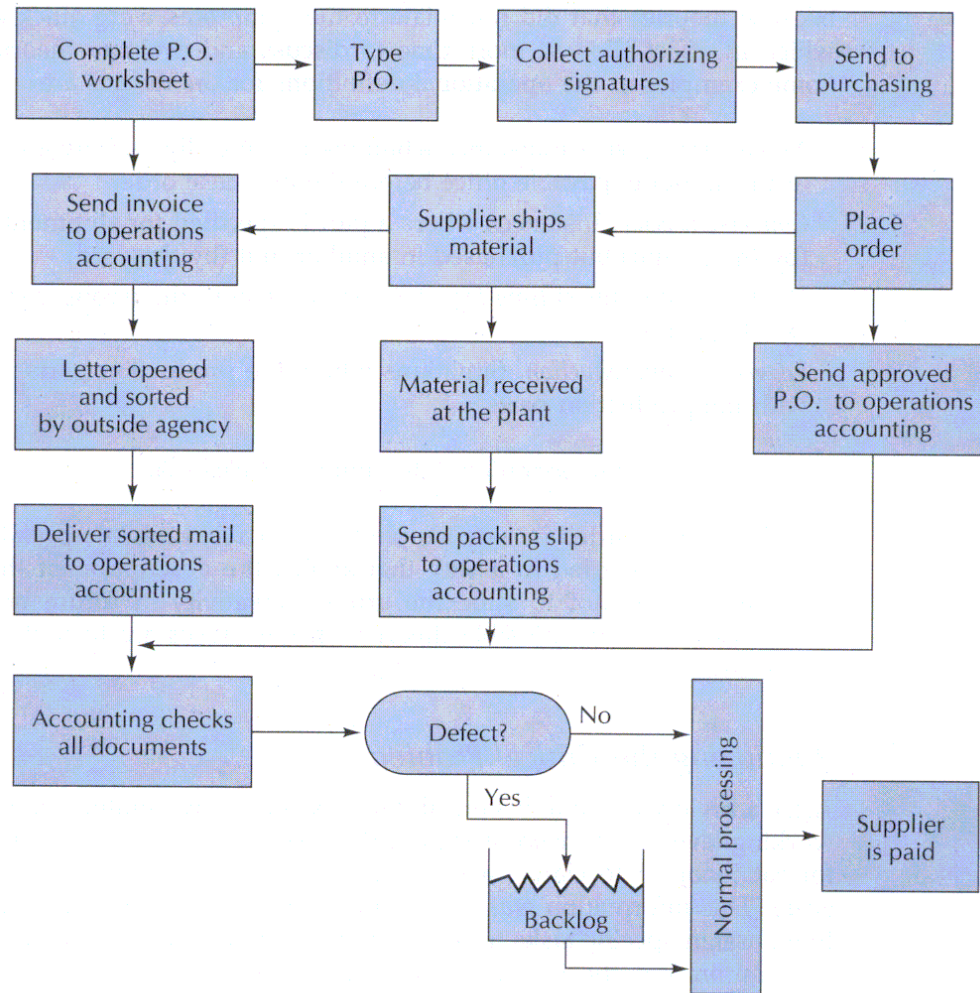


Figure 14.9 Flowchart of Accounts Payable System

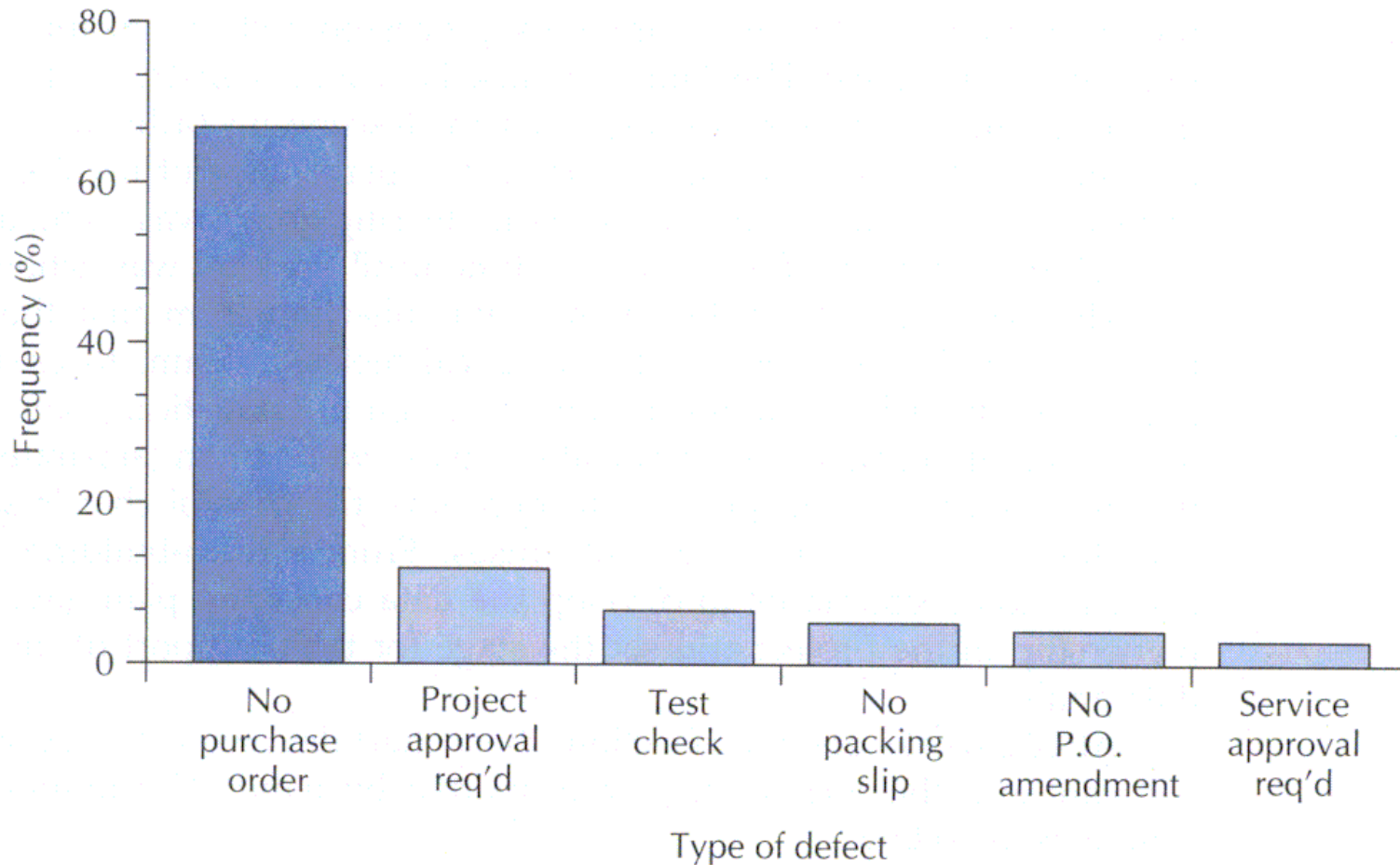


Figure 14.10 Pareto Chart for Defects for Nonproduction Invoices

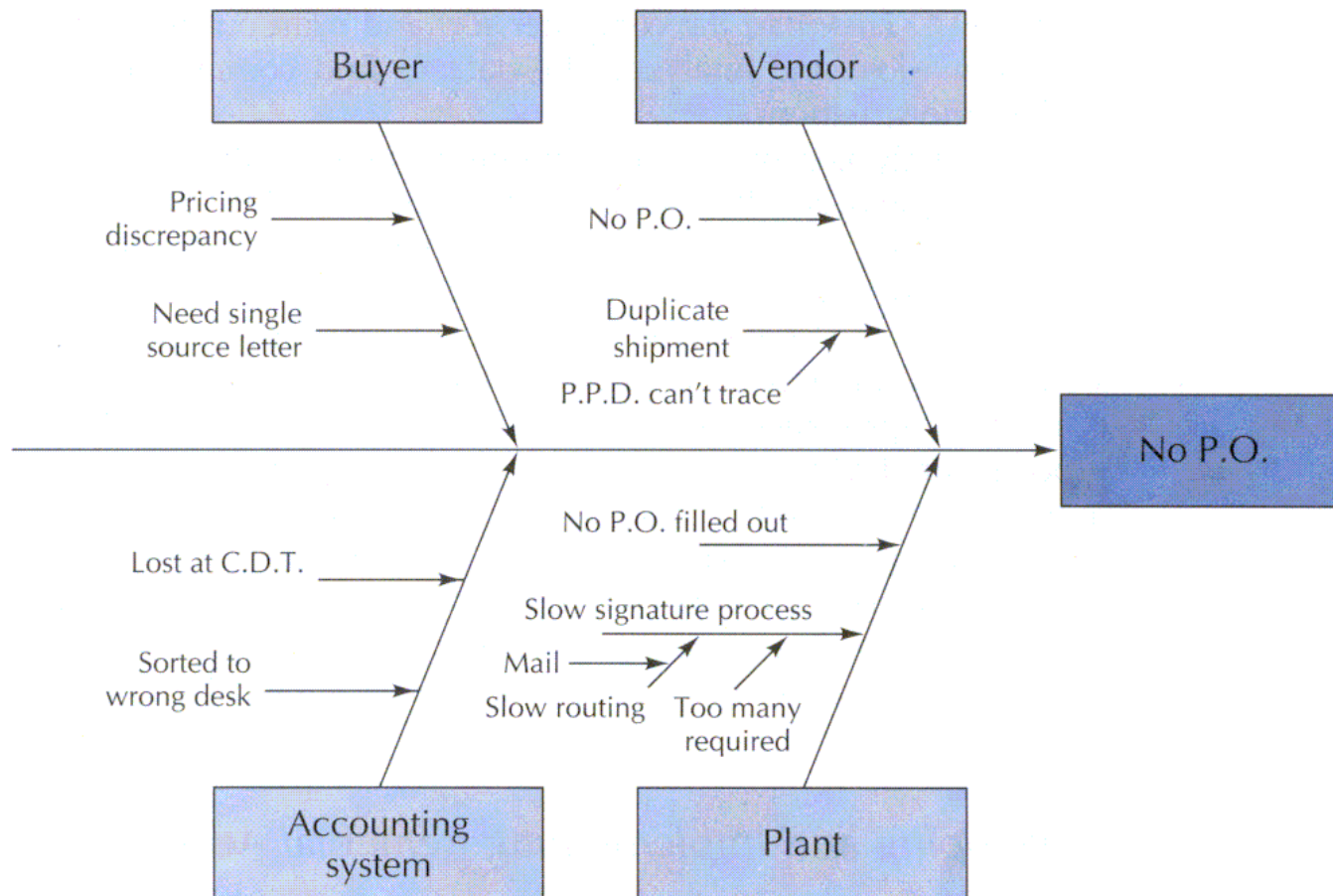


Figure 14.11 Cause-and-Effect Diagram for "No Purchase Order" Symptom

