

Plant Tour Analysis Workbook



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Table of Contents

| | |
|---|---|
| Introduction | 2 |
| Technology, Processes, and Facilities | 3 |
| Quality / Reliability..... | 4 |
| Process / System Flexibility..... | 5 |
| Materials Management | 6 |
| Manufacturing Cycle Time | 7 |
| On-time Shipment..... | 8 |
| Leadership Style and Employee Productivity..... | 9 |

Introduction

Manufacturing's vital role in creating a competitive advantage is widely recognized in many industries today.

The purpose of these tours is not only to familiarize you with the company's manufacturing facilities and processes, but also to broaden your understanding of modern manufacturing methods and practices.

This booklet is designed to help you gain maximum benefit from the plant tours. It contains a number of questions about the manufacturing practices and processes that you will observe and later have an opportunity to discuss. The questions are organized in the following categories:

- Technology, Processes, and Facilities.
- Quality/Reliability.
- Process/System Flexibility.
- Materials Management.
- Manufacturing Cycle Time.
- On-Time Shipment.
- Leadership Style and Employee Productivity.

The following pages contain all seven categories of questions for each plant tour. However, not all of the questions will apply to every tour.

You are encouraged to review the questions before each tour and to fill in your answers to as many of them as possible afterward. Do not attempt to fill in your answers during the tour. As mentioned above, a discussion of your observations will follow each plant tour.

These questions are intended to help you approach the plant tours with an active mind and to focus your attention on activities that are critical to an effective manufacturing operation. It is hoped that you will use the booklet to your full advantage.

Technology, Processes, and Facilities

Date:

Plant:

| Questions | Answers | Comments / Open Issues |
|--|---------|------------------------|
| 1. What areas of activity are research and development efforts primarily focused on? What is the level of research and development expenditures? | | |
| 2. What new product or process technologies are being employed? | | |
| 3. Is computer-aided manufacturing (CAM) or computer-integrated manufacturing (CIM) used? If so, how? | | |
| 4. Is continuous process improvement utilized? If so, list some examples of results achieved. | | |
| 5. What is particularly notable about the plant's facilities and equipment? What state-of-the-art tools are used? | | |
| 6. What particularly effective practices or processes did you observe? What, if any, problems? | | |

Quality / Reliability

Date:

Plant:

| Questions | Answers | Comments / Open Issues |
|---|---------|------------------------|
| 1. How is product quality controlled at each operation? | | |
| 2. What statistical or other methodology is used to measure quality? | | |
| 3. What are the procedures for analyzing failures, disseminating the results, and taking corrective action? | | |
| 4. What procedures are used for product testing? | | |
| 5. How is the transition from engineering handled? | | |
| 6. How are parts traced through the production process? | | |
| 7. What particularly effective practices or processes did you observe? What, if any, problems? | | |

Process / System Flexibility

Date:

Plant:

| Questions | Answers | Comments / Open Issues |
|--|---------|------------------------|
| 1. How are orders scheduled onto the shop floor? | | |
| 2. How quickly can stations be set up for new production runs? | | |
| 3. Who initiates, authorizes, and prioritizes changes in work orders? How frequently do changes occur? | | |
| 4. How are the flow of materials and the sequence of work controlled? | | |
| 5. How does actual utilized plant capacity compare with planned capacity? | | |
| 6. What particularly effective practices or processes did you observe? What, if any, problems? | | |

Materials Management

Date:

Plant:

| Questions | Answers | Comments / Open Issues |
|--|---------|------------------------|
| 1. How is the flow of materials through the plant controlled? | | |
| 2. How are materials routed to each work station? | | |
| 3. What inventory reduction programs such as supplier ship-to stock or ship-to-shop floor programs are in place? | | |
| 4. How are materials received? What, if any, process is used for testing releasing materials to the stockroom? | | |
| 5. What is the procedure for materials storage? For control of in-process non-conforming material? | | |
| 6. What is the process for recycling defective parts and scrap? | | |
| 7. What particularly effective practices or processes did you observe? | | |

Manufacturing Cycle Time

Date:

Plant:

| Questions | Answers | Comments / Open Issues |
|---|---------|------------------------|
| 1. What plant wide standards exist for manufacturing cycle time? | | |
| 2. What are the components of manufacturing cycle time? Which components require the most time? | | |
| 3. How are cycle times communicated to operators? | | |
| 4. What are the cycle times of your major competitors for products similar to those made in this plant? | | |
| 5. Is there a cycle time reduction program? | | |
| 6. Are customers' end product lead times being shortened? If so, by how much? | | |
| 7. What particularly effective practices or processes did you observe? What, if any, problems? | | |

On-time Shipment

Date:

Plant:

| Questions | Answers | Comments / Open Issues |
|--|---------|------------------------|
| 1. What is the process for tracking the status of customer orders? | | |
| 2. What is the plant's goal for on-time shipment performance? How has actual performance compared? | | |
| 3. How are customer orders prioritized? | | |
| 4. What percentage of orders is scheduled within the current product lead time? | | |
| 5. How and when are customers informed of late orders? | | |
| 6. Who is accountable for on-time shipments? | | |
| 7. How are operators made aware of late orders? | | |
| 8. What particularly effective practices or processes did you observe? What, if any, problems? | | |

Leadership Style and Employee Productivity

Date:

Plant:

| Questions | Answers | Comments / Open Issues |
|--|---------|------------------------|
| 1. What methods are used to obtain employees' ideas and suggestions? Can you give examples of employees' ideas that have been used to increase productivity or quality or to reduce costs? | | |
| 2. How would you describe management's leadership style(s)? Their communication practices with employees? | | |
| 3. What kinds of training do employees receive? | | |
| 4. How would you describe the work ethic among employees? What is their attitude toward their work, the plant, the company? To what extent do they reflect quality awareness? | | |
| 5. What work habits did you observe that were productive or unproductive? | | |
| 6. What kind of housekeeping and cleanliness practices are followed in the plant? | | |
| 7. What particularly effective practices or processes did you observe? What, if any, problems? | | |