

## Module 800 – JOB PLANNING & MANAGEMENT

### **Lesson Description:**

Course includes how to read, understand and use a Process/Control Plan (elements, requirements and steps) or Job Packet/Job Card. Introduction and exposure to the planning process, scheduling requirements, productivity factors, in-process monitoring procedures and QC techniques. Guest speaker or plant tour focusing on process planning applications and theory and their impact on quality and business management is recommended for this lesson. Identification of warning signals and adverse conditions during production operations. *Prerequisites:* Module 600 – *Part Inspections & Quality*.

### **Learning Objectives:**

At the completion of this lesson, the student will be able to:

- ◆ Explain the relationship of Statistical Process Control (SPC) and statistical correlation to process planning.
- ◆ Explain the differences between and Quality Plan and a Process (Flow) Plan/Control Sheet.
- ◆ Read a Process Plan and make a verbal presentation describing each requirement and step explaining the responsibilities of the operator stressing the importance of accuracy.
- ◆ Explain process control and monitoring techniques and how to manage scrap.
- ◆ State the three stages of process planning.
- ◆ Understand production rates and standards and how they relate to productivity.
- ◆ Recognize potential warning signals, adverse variations in metals and selected process deviations, surface defects, out-of spec conditions and/or equipment malfunctions.

### **Methods of Instruction:**

Lecture, group/team exercises and role-plays, application demonstrations/simulations (individual and group) and real-world examples.

### **Methods of Evaluation:**

Individual and group/team presentations, demonstrations (*Skill Checks*), written reports, and a written exam (*PROficiency Practices and Assessment*) after training.

### **Lesson Materials Provided by PMA:**

- ◆ PMAEF Video – *Indicators of Incorrect Operation*.
- ◆ PMAEF *Instructors Guide* with *SMART* Lesson Plan.
- ◆ PMA Pocket Reference – *Dimensional Variations in Flat Rolled Metals*
- ◆ Student Handouts
- ◆ Overhead Transparency
- ◆ Process Planning Tour/Speaker
- ◆ PMAEF Item Bank (assessment questions) for construction of end of lesson examination.
- ◆ List of recommend student reading and study materials (textbooks, manuals, benchmarking applications, videos, etc.).

☞ Note: Handouts, role-plays, transparencies and item bank provided on CD or disk.

***Lesson Topics & Content Outline:***

◆ **Process Planning, Requirements and Steps**

Process Planning Stages, Methodology and Protocol  
Applications and Operations of Process Planning  
The Process/Control Plan  
Job Number  
Part Number/Code and Name  
Part Quantities and Production/Productivity Calculations and Rates  
Routing  
Material(s) and Tooling  
Work Instructions and Standard Operating Procedures (SOPs)  
Quality Control and Documentation Techniques  
Labeling and Traceability  
Packaging and Shipping  
Order Fulfillment  
Sources of Information and Chain of Command.

◆ **Quality Planning**

The Quality Plan  
Interval (Frequency) of In-Process (or intermediate) Inspections and Sampling Standards  
Control Chart, Inspections Sheet and Quality Documentation/Data Input.

◆ **Identify Production Warning Signals**

Common Production Problems, Dimensional Variations of Materials and Surface Defects  
(i.e. Mis/double-hits, slug marks, scratches, galling, die marks, wrinkles, scoring,  
burnishing, worn edges, coil set, camber, crossbowing, etc.)  
Reaction and Response to *Out-of-Spec* Part Dimensions  
Cause and Effect Relationships for Common Production Problems  
Action Items and Cost Justification for Process Improvements/Adjustments.

❖ **End of Lesson Exam (*PRO*iciency Assessment)**

☞ Note: See SMART Lesson Plan contained in the Instructor's Guide for detailed topic content, flow of lesson, and in-training assessments (*PRO*iciency Practices and *Skill Checks*). Tour or speaker recommend.