SECCION ESPECIAL EN IDIOMA INGLES

Inventory time—Picnic or panic?

Planning and training for inventory counts prevents many problems. With instructions and appraisal, manufacturers can make the process fast and efficient.

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USUALLY ONCE A YEAR, near silence falls over the manufacturing area. Machines halt, forklift trucks crawl at a leisurely pace, phones just about stop ringing, and a small workforce appears to converse occasionally in hushed tones. Operations have stopped for a physical inventory.

The task of a physical inventory can be a picnic or a panic—which it is depends upon the effort that went into the planning process prior to the plant shutdown.

In many companies, the physical inventory results in getting the plant and the inventory records in order. In others, the plant gets into somewhat more orderly condition, but long hours of investigation and effort still await those who must attempt to reconcile floor counts with the books.

In either case, a physical inventory is performed at substantial cost to the company, but an effective preplanning effort can help minimize the cost and maximize the benefits of the effort.

Basic plans can serve for years

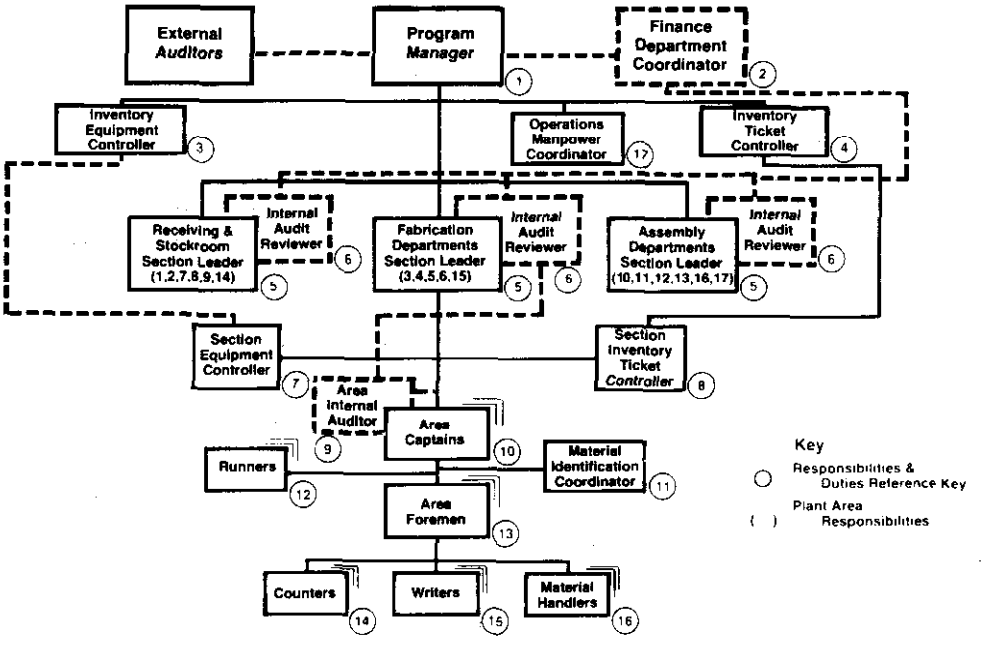
Basically, the physical inventory planning effort consists of documenting well thought-out activities that should occur prior to, during, and immediately following the physical inventory. These activities should be recorded in a set of operating procedures and instructions for manufacturing personnel: a *manufacturing department physical inventory operating manual.* In addition to pertinent instructions regarding the actual counting and accounting aspects of the work, the manual should contain, but not necessarily be limited to, the following sections:

- *Organization*
- Schedule
- Area plan
- Make-ready activities
- Operations cut-off instructions
- Start-up activities
- Performance appraisal

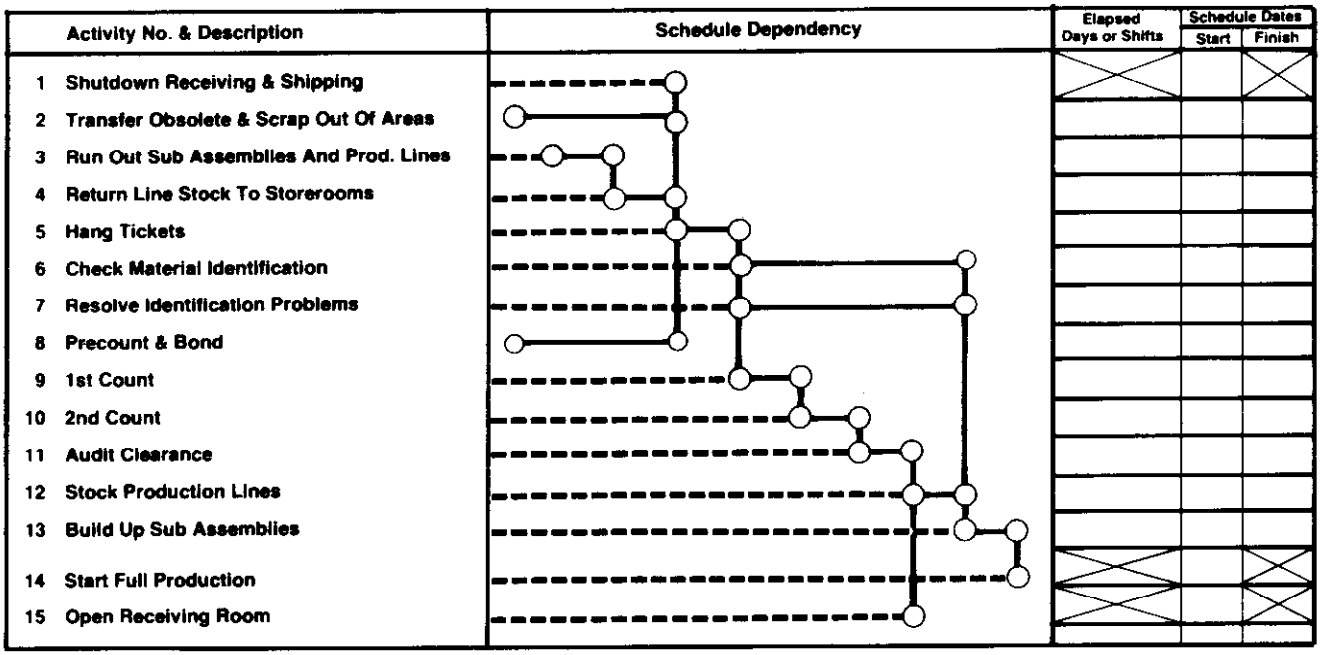
Properly prepared, the manual can be used year after year with just those modifications that evolve from continuing efforts to improve the accuracy of the counts or further reduce the cost of the effort. Internal and perhaps external auditors should be consulted in the early stages.

- *Organization.* An organization chart is required to prepare the staff for servicing the functional requirements of the inventory program and to delineate responsibility and levels of authority and accomplish the orderly completion of the physical inventory. Chart 1 depicts a manufacturing department inventory organization. (Another document, not shown, defines the responsibilities of each numbered organization component.) A personnel list prepared each year assigns specific individuals to each numbered organization component. Along with the manual, the chart and related responsibility definitions can probably be used year to year, with revisions and modifications recorded as they evolve.
- *Schedule.* Experience will usually indicate that there is a unique sequence of events appropriate to taking a physical inventory in a specific manufacturing company, but the durations will change, shortening each time the inventory is taken. A company can, therefore, develop a schedule, as shown in Chart 2, which

1. Inventory Organization for Manufacturing Department



2. Physical Inventory Schedule for Manufacturing



can be used year after year merely by changing the data regarding elapsed time and the start and completion dates each year.

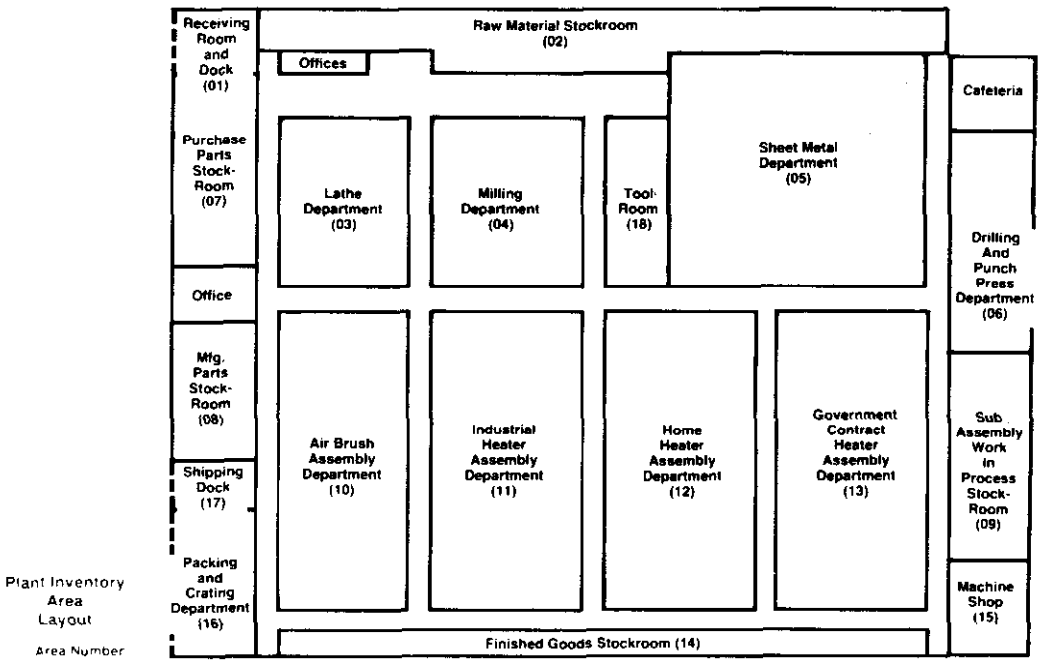
Area plan. An area plan, similar to that shown in Chart 3, is essential to the accounting controls of a physical inventory, as are necessary references within the organization chart and the schedule. A well thought-out area plan could potentially be used for many years, changing only if the facilities or the physical plant layout is significantly revised. The purpose of the area plan is to define the major locations that are to be inventoried. The objective is to subdivide the manufacturing facility into areas with physical boundaries described on the plan and to assign personnel responsibilities for each of the areas.

Make-ready activities. This vital section of the manual contains specific instructions regarding activities that should be completed prior to plant shutdown in preparation for the physical inventory. Drawings, photographs, and other illustrative materials or exhibits should be used to help convey accurately the instructions to manufacturing personnel.

This manual section should cover such topics as:

- Disposition of the prior year's inventory tickets.
- Instructions regarding the handling of refuse and disposable containers prior to inventory taking.
- Specific instructions regarding the determination of marking of tare weights for containers, bins, and so on that will contain inventory material to be scale counted at inventory time. If this operation is correctly performed, it need not be repeated for all containers in subsequent years.
- A listing of types of materials that will *not* be inventoried. In some instances, the accounting department may not require counts of expense items such as glue, lubricants, and paints. Also, some obsolete materials that were inventoried on a prior occasion and subsequently placed in a secured area may not have to be inventoried in the current year.
- Arrangement of materials to be inventoried. This would include specific instructions regarding grouping materials into physically identifiable units or placing them into specific areas for consolidation.
- Material identification. It is important to specify standard tags or methods of identifying all materials, including partly completed work. A

3. Area Layout for Plant Inventory



procedure for validation of identification should be developed. In this regard, it traditionally took one company six to eight months to track down and correct invalid part numbers that appeared on inventory tags. This was a time-consuming operation because materials had to be moved immediately following completion of the inventory, and a great deal of time was wasted in trying to locate the original inventory tags. The problem was resolved when a specially designed copy of the inventory tag was immediately forwarded to data processing for part number validation shortly after the tag was attached to the material. All part number discrepancies were resolved within the seven working days allotted to taking the inventory.

- Precounting instructions. Materials which will probably not be used prior to plant shutdown are prime candidates for counting before the scheduled shutdown. Often, this can be done without any additional cost to the company. This activity, however, must be carefully planned and monitored.

Operations cut-off instructions. The purpose of this manual section is to define the detailed cut-off procedures required to make the accounting records and physical inventory count compatible. Here again, the planning that goes into the preparation of these instructions will have a significant impact on the cost of the inventory effort and the cost of resolution of problems. There is an old manufacturing adage that says, "If you don't have it, you don't have to count it!" Operations cut-off instructions should deal primarily with means of reducing the levels of inventory in the plant prior to plant shutdown. Specific examples are:

- Accelerate shipments of finished goods to customers.
- Reduce levels of finished goods inventory as much as possible, especially the slow-moving items.
- Dispose of scrap and obsolete materials.
- Build up subassemblies and assemblies to the levels of completion reflected in the bills of materials structure. This will eliminate a problem of costing products at intermediate and not readily identifiable levels of completion.
- If appropriate, run all conveyor lines dry of work in process.
- In general, complete all open production orders.
- To the extent possible, return line stock items to storerooms or

primary storage locations. This reduces the number of inventory tags that will have to be prepared and simplifies the part number identification and validation process.

- Reduce the level of inventory of raw materials and purchased component parts as much as possible, especially slow-moving stock.
- Shut down the receiving operations for receipt of production materials as far in advance of the plant shutdown as possible.
- In general, force suppliers to hold materials for immediate delivery after the physical inventory.

Start-up activities. This section of the manual should communicate special procedures that should commence with completion of the final counts and should be completed before the plant is back to full production operations. Typically, they include:

- Moving any unresolved part identification materials to a specified area.
- Moving obsolete materials to the area designated for their storage.
- Starting the receiving operations and moving new receipts of materials to their normal in-plant storage locations.
- Replenishing subassembly and assembly areas with floor stock.
- Building up subassemblies to support main assembly operations.
- Preparing production orders and required documentation for starting production in all departments when they return to work.

Performance appraisal. The purposes of this manual section are to provide a system for appraising the performance of the physical inventory program and upgrading the procedures for the new physical inventory. The performance appraisal, which is rarely done, points up ways to improve the quality of future inventories and reduce future costs. It should be conducted as soon as possible after the completion of the inventory when all the facts are readily available and the experience is fresh in the minds of the participants.

A performance appraisal consists of:

- Defining factors that are to be evaluated.
- Assigning a value to each performance factor.
- Developing a rating format, a written chart showing planned and actual completion of each activity in the inventory process.
- Assigning responsibility for rating.
- Establishing a rating review procedure.
- Establishing responsibility for reporting and reviewing critiques.
- Assigning responsibility for upgrading procedures as expeditiously as possible.

The goal: Inventory taking without shutdowns

One common overall objective of management is to eliminate the need for a plant shutdown and a massive year-end physical inventory. This objective can be reached only when it can be demonstrated that there is consistently very little difference between the physical inventory count quantities and those recorded on the inventory records. A manufacturing department physical inventory operating manual, coupled with physical inventory performance appraisal procedures, provides the means to reach this goal. •