

## MANUFACTURING—Shrink – Scrap – Yield: How JDE Adjusts to Account for Known & Planned Production Losses

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*Mike's article addresses the additional material and time resources required to make up for known and planned losses that occur in manufacturing. Michael focuses on PDM and SFC JDE (Systems 30 and 31). This is the first in a series, with the next installment to cover the Manufacturing Accounting and Costing implications of these losses.*

*Look for future issues of JDEtips to contain follow-up articles that address the impacts of production losses on other systems such as: standard and actual costs (Systems 30A and 31A), how requirements planning (Systems 33 [capacity] and 34 [material]) address production losses, and Quality considerations (System 37) including test requirements and grade/potency considerations.*

Over the years I have encountered a number of clients who absolutely had no idea of what it costs to produce a given product. Some could determine, in aggregate, what the monthly revenues and expenses were for a given plant, and so long as the revenues exceeded expenses, they were happy. Needless to say, without any cost basis, their product costing was a sham, or nonexistent, and manufacturing accounting (variance analysis) was not being performed.

This article is NOT about JDE product costing or manufacturing accounting. For that, you can read the excellent article by Roy Peters in the January 2002

issue of JDEtips (available in the JDEtips Document Library).

Rather, this article presumes that some data exists, or can be generated, to identify what kinds of losses occur when and where in the production process. Although we use a discrete manufacturing model for the illustrations, the key points are also relevant to process manufacturing. This article examines how those losses can be specified in the JDE PDM system, and how the JDE Shop Floor Management system uses those specifications to plan for adequate resources to allow production output in quantities sufficient to cover the planned losses and satisfy the demands.

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If shop floor reporting is used, actual output and resource consumption can then be compared to those planned values. The results of the comparisons and analysis of the losses allow the decision-makers better control and management of their production processes. Production losses go beyond just materials impacts. They affect other resources such as labor, machine time, and available capacity. Accurate data quantifying the production resources planned and consumed is a prerequisite to determining the costs to produce any given product.

To examine these losses, we have defined four manufactured parent items and given them the following descriptive part numbers: Item Shrink, BOM Scrap, OP Yield, and Combo Loss. Each part will be fabricated from 10 pounds of sheet metal and will have a Time Basis Code of 3 (1,000 pieces per hour). In each case, the demand quantity entered in the work order will be 1,000.

### Item Shrink

We start with the simplest case. In Figure 1 (on the next page), we have defined part number "Shrink" to have a shrink factor of 10%. As originally conceived by JDE, shrink refers to losses that occur to a parent part, typically while in inventory. When manufacturing functionality was added, the concept of shrink was expanded to include losses expected to occur as part of the production process.

*Shrink-Scrap-Yield continued on page 2*

**Additional System Info**

Business Unit: M30

Item Number: ITEM SHRINK

Shrink Parent:

**Plant Manufacturing** | Grade and Potency | Customer Service | Depot/Product Info

Order Policy Code: 1 Lot for Lot, As Re  
Value Order Policy:  
Planning Code: 2 Planned by MRP  
Planning Fence Rule:  
Planning Fence:  
Freeze Fence:  
Message Display Fence:

Accounting Cost Qty: 1  
Issue Type Code: 1 Manual Issue  
Time Basis: 3 Hours per 1000 Units  
Item Revision Level:  
Shrink Factor: 10.00  
Shrink Factor Method: %

Figure 1: Item Shrink

**Enter Bill of Material Information**

Parent Item: ITEM SHRINK

Branch/Plant: M30

Batch Quantity: EA

As of Date: \*

Drawing #: \*

Type of Bill: M

Oper Seq#: \*

Item Rev. Level: \*

Skip to Line No.:

default | Scrap | Yield

Item Number	Description	Quantity	UM	F V	Is Cd	S
SHEET METAL	RM for Shrink Scrap Yield	10	LB	V	I	P
		1				

Figure 2: BOM for Item Shrink Parent

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