

World's Lost Treasure - Rate Based Scheduling

By Pat Martino

W Editor's Note: Don't you just hate when companies mess with something that's good, and the "new and improved" result is NOWHERE NEAR as perfect as the original? (Are you thinking "New Coke?" We knew you were. . .) Well, the Rate Based Scheduling application for World® 8.1 and EnterpriseOne® is a perfect example of taking something simple and easy, and making it more complicated. . . messing with a good thing. But, as Pat Martino, points out, it is possible to resurrect the "old" in the new when it comes to this alternative to work orders. Join him as he takes you through the steps.

Introduction

In a manufacturing environment where production is fairly steady and constant, such as on bottling, packaging, or assembly lines, older versions of the JD Edwards World product offer Rate Base Scheduling as an excellent alternative to work orders. Elegant in its simplicity, Rate Based Scheduling is a very straightforward application in which a basic schedule is entered for a production line or work center and then receipts to stock, component issues, and entry of labor transactions are entered against the schedules with a minimum of effort.

Rate Scheduling provides for a completely blind, theoretical consumption of materials, labor, and overhead directly against master files instead of against work order files. If desired though, it allows for the display of override screens for entry of actual materials consumed and actual labor reporting.

Unfortunately, this gem was lost to JD Edwards as of World version 8.1 and to EnterpriseOne, where a switch was made to more complicated programs and file structures in order to make the application able to cover more sophisticated line-scheduling requirements. This switch, however, resulted in adding a bit of complexity to the design. As an example, the old Rate Scheduling application allows for constant monitoring and managing of work center input/output control by providing a graphical output of load vs. capacity, as does the new version, but it uses roughly half of the number of files and does it without having to do a special setup for the graphing.

So, do you think the old version is what you'd prefer? If so, let's look at the setup for the old version of Rate Scheduling and then run it through to see if it will work for you.

System Set Up

A minimum amount of setup is required to begin to use rate based scheduling. Here are the elements that make that work:

Shop Calendar

Rate schedules use the same shop calendar as Planning and Shop Floor Control, so if you already use work orders, you are ready to go.

If you are not familiar with it, the Shop Floor Calendar is used to define the working days for individual Branch/ Plants for providing scheduling information within the system.

Figure 1 is an example of a calendar for a manufacturing branch.

As shown, the Shop Calendar for Branch/ Plant 9901 has been set up for 5 working days per week, but can be changed to fit your operation.

Rate Types

Rate Scheduling has its own Document Type for use in planning and for transaction processing, which is typically "AC" – Actual.

However, the system also provides for the capability of using different rate types for different situations. For example, a different rate

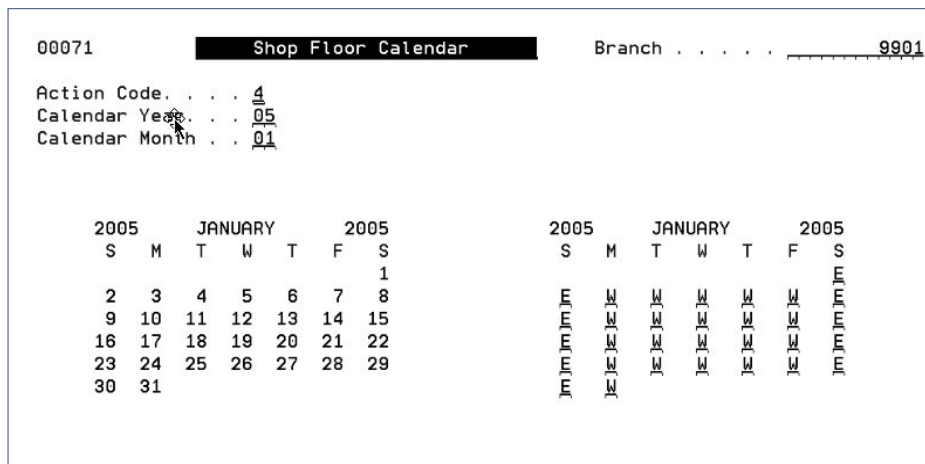


Figure 1 - Shop Floor Calendar

type could be generated by the Planning module vs. the actual Production schedule, allowing planners to send something of a basic production plan to Production using one schedule type. Production then takes the plan and determines the best way to run it through the factory and assigns different lines as needed along with a different schedule type to record actual transactions against.

Rate Control Numbers

Rate control numbers are system-assigned based upon Next Numbers, so no real setup is needed unless a certain starting point is desired.

Resource Units

Resource units are used to define the capacity of a given work center or groups of work centers for monitoring load vs. capacity.

3002		Enter/Change Bill		Branch/Plant 9901	
Action Code	4	Item Rev. Level.		Ultra, 1.5kg	
Parent Item	12210	Drawing #		Skip to Comp Line No.	
As of Date	*				
					F
0	Component Item	Description	Quantity Per	UM	V I
-	AHDP243WA	Ultra Color Bulk	1.5000	KG	V I
-	99017010	Foil, Refill Bag	1.0000	EA	V I
-	99012000	Sealing Label	2.0000	EA	V I
-	99008050	Pallet Cover	0.0002	KG	V I
-	99008010	Stretch Foil	0.0005	KG	V I
-	99001010	Pallet	0.0138	EA	V I
-					
-					
-					
-					

Figure 2 – Bill of Material Set Up for Rate Scheduling

Resource units may be manually entered from menu G3141/19 or generated from G3141/20.

Item Setup Manufacturing Data

An item's Order Policy Code distinguishes it as being a Rate Scheduling item.

All Rate Schedule items must carry a value of "5", but otherwise item setup for rate based scheduling is the same as for using work orders.

Bills of Materials

Bills of materials define the raw materials, ingredients, or components required to produce, fabricate, or package an item, or to define a product configuration.

Rate Schedule functionality uses the bill of material to backflush components (issue upon receipt of item to stock), whereas work orders and the new repetitive manufacturing application use separate work order parts lists.

By comparison, while work order parts lists may be changed prior to the start of activity—such as when substitutions are known in advance—this is not possible with rate schedules.

Substitutions may not be defined in advance, but may be done after backflushing by negative issuing of the unused component and issuing the correct component.

Otherwise, bill of material setup for rate based scheduling is the same as for work orders – see Figure 2.

BOM Quantity Per

The bill of material Quantity Per defines how much of a component is used in a product configuration. Quantity Per may be a theoretical usage quantity, may include scrap, may include drop, or a combination.

In repetitive environments, a theoretical quantity often does not reflect the true quantities used in the process. For example, small parts might drop on the assembly area floor and are later discarded; line loss can occur when changing formulations in filling lines; gates, runners, and flash may not be able to be added back into an injection molding process.

In each of these cases, some kind of loss factor needs to be applied to the theoretical quantity consumed, otherwise a couple of negative consequences can occur. The first is that an item's product cost for material

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