Appendix - Routing

Operation Types

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1. INTRODUCTION

Routings or operations are steps or tasks used to manufacture a product, which can be carried out by internal work centers or by contracting external providers. Typically, a routing is made up of a series of operations, also called routing steps or routing positions.

In beas, inside an item's routing, we will find the following information:

- A list of all the internal or external tasks required to manufacture it
- The standard, alternative, and parallel resources
  - Labor
  - Machine
  - Tools
- The quality control inspection plans linked to the tasks or operations
- The setup and production time required for each operation
- Details about the work centers

  Example:
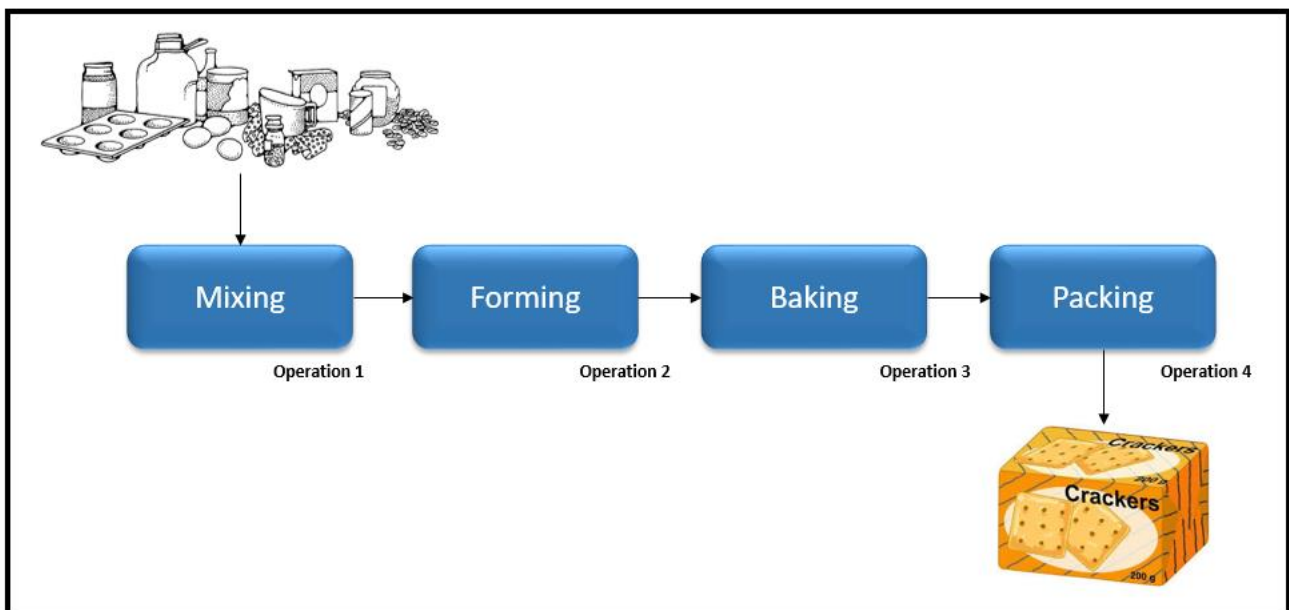
2. PROCESS

Operations types is master data that determines the type of operation to be used. These types include: machine, external operation, labor and so on. This setup includes different parameters to consider in manufacturing processes, when the routing position is assigned to the item's production.

This master data is directly linked to the resource to be used.

  Example: in the routing, if the operation type selected is external operation, only the resources are defined as a service.

  Resource:

Routing:

2.1. Operation Type List Screen

Operation types must be defined before creating the routing. These are some operation types that can be created:

PATH: Setup > Production > Operation types

#	ID	Description	...	Default	External	Service Order	Create purchase order	Order time	Cost	Only confirm OK	No times	Milestone	
1	costs	Cost	$	☐	☑	☐	☐	☐	☑	☐	☑	☐	
2	externaloperation	External production		☐	☑	☐	☑	☐	☐	☐	☐	☐	
3	homework	Homework		☐	☑	☐	☑	☑	☐	☐	☐	☐	
4	machine	Machine		☐	☐	☐	☐	☑	☐	☐	☐	☐	
5	milestone	Milestone		☐	☐	☐	☐	☐	☐	☑	☑	☐	
6	operation	Operation		☑	☐	☐	☐	☑	☐	☐	☐	☐	
7	personnel	Personnel		☐	☐	☐	☐	☑	☐	☐	☐	☐	
8	qc	quality control		☐	☐	☐	☑	☑	☐	☐	☐	☐	

This screen allows the user to create, edit, delete and set as default the operation types.

2.2. Operation Type Detail Screen

In order to create an operation type, just click on *New* and a new screen will be displayed.

ID: Field used to define the name of the operation type.

Description: Field used to include a description of the operation type.

Picture: Field used to define an icon for the operation type.

Color: Field used to set a color font for the operation type.

External Operation: Field used to set whether the operation will be an external operation. If it is checked, only external resources can be selected and if it is unchecked, only internal resources can be selected. The *External Operation* tab, in routing, will be visible.

Create purchase order: Field used to set if this type of operation allows purchase order creation. This is mostly used for external operations.

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Create Service order: *Field used only with beas 2005, for compatibility reasons*. If this option is activated, then an additional purchase order system for external operations is provided in addition to the default external production system. This system can be used to manage external productions using the service order.

Order time enter: Field used to set if this type of operation allows registration of order times.

Register costs: Field used to set if this type of operation allows registration of external costs. This means that instead of the normal time receipt screen, a cost registration screen is displayed. By checking this option, the option *No times* is also checked. If this option is the only one checked, only *Extended, Cost* and *Attachments* tabs will be visible.

Only confirm OK: Field used to set if this type of operation allows reporting completion without times, cost or quantity. If a milestone is created, it is activated. This type does not support the following functions: QC orders, master slave operations and work order back-flushing.

No times: Field used to set if this type of operation is not valid for scheduling or report times. By checking this option, the *General* tab in the routing is hidden. If this option is the only one checked, only *Extended* and *Attachments* tabs will be visible.

Milestone: Field used to set if this type of operation is a milestone. If this operation is a milestone, then no time can be reported. By checking this option, the options *Only confirm OK* and *No times* are also checked. If this option is the only one checked, only *Extended, Milestone* and *Attachments* tabs will be visible.