Routing & Dispatching

Defines the process and rework flows as well as it provides step and resource level dispatch rules

Overview

In any manufacturing environment, it's necessary to define in a controlled manner the different process flows that can be assigned to products and materials. These process flows can also include rework flows to recover material from certain problems.

Dispatching provides a mechanism to define flexible material sorting rules for a step or for a resource so that the operator

knows what is the next material to be processed, or the next resource for a material. Dispatching works based on services. Resources provide services and materials require services at certain processing contexts (Step, Flow, Product, etc.). When there is a match between the service required by the material and the service provided by the resource, the material can be dispatched and processed in that resource.
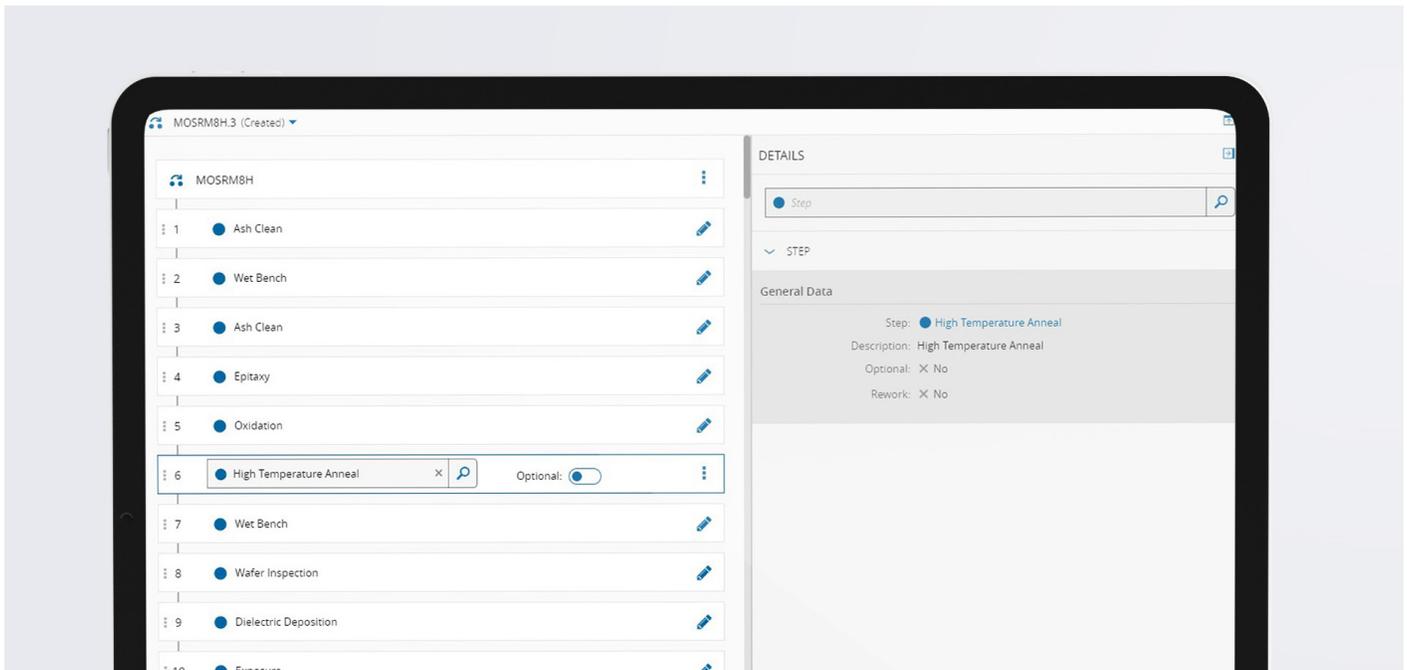

Figure 1 Flow definition

Critical manufacturing 11.2

contact@criticalmanufacturing.com · www.criticalmanufacturing.com

Key Features

- Support for flow version management with access and change control.
- Support for hierarchical flows that contain other flows in order to promote flow re-usability.
- Support for alternate flows, alternate steps, and optional steps.
- Support for non-sequential flows which means that the steps of the flow can be performed in any sequence.
- Support for multiple rework paths at every flow-step combination. A rework path defines a go-to and return point.

- Support for flexible dispatch sorting rules, using predefined or user created rules.
- Support for push (what's next for material?) and pull (what's next for resource?) dispatch rules.
- Support for conditional steps and flows. A condition can be defined as an expression, a rule or as sampling functions and it's evaluated automatically during execution.

Benefits

- Increased process control
- Increased process automation

- Reduction in the opportunity for errors

Figure 2 Flow Structure View