

Service product

Knowledge Manager Production Scheduler

Optimize and harmonize your operational planning



Frequently varying production constraints demanding immediate adjustments in the production schedule are a daily challenge for plant and production managers. Making the right adjustments can bring vast benefits: cost savings for energy consumption, optimized stock management or enhanced equipment performance. Therefore, production scheduling is one of the most important activities in order to achieve maximal operational efficiency while keeping costs low. To find the appropriate solution for each constraint your production managers need experience and expertise. ABB's Knowledge Manager Production Scheduler supports managers in this task providing them with an optimal schedule that is easily adapted to changing goals and operational constraints.

Managing your operational planning – while overcoming complex production challenges



Your plant manager needs to evaluate complex operational influencing factors to optimize a production schedule. The production planning team has to constantly consider a huge number of variables like restrictions in material transport and storage, planned and unexpected maintenance activities, complex energy tariff schemes and equipment power start-up curves. In addition, the weight of specific targets varies over time in order to adjust to changes in the production demand or energy cost. All goals, targets and constraints have to be taken into consideration while increasing equipment utilization, reducing cost of product changes and optimizing inventories.

To help you handle this complex task with different challenges and scenarios efficiently every day ABB bundled its long-lasting expertise and know-how in production processes in one simple tool: Knowledge Manager Production Scheduler.

The Production Scheduler application addresses all emerging considerations and allows the planning team create, evaluate and compare multiple scenarios before deciding which one goes into action. These scenarios are readily available when a production situation changes so that your plant managers can quickly activate them. This enables a very agile response, for example when it comes to an unplanned repair activity.

Benefits also arise from using consistent decision making criteria ensuring the best schedule all the time, additionally to increase efficiency and agility to quickly adapt to changes.

Managing multiple scenarios

Knowledge Manager Production Scheduler can increase the efficiency of your plant management significantly. Thanks to ready-made scenarios your production teams can assess “what-if situations” and their consequences before putting any tentative plan into action. Your managers can create and save scenarios that can promptly be applied when a deviation, which requires a change of the planned tasks, occurs.

Saved scenarios can be compared at any time based on their impact on various operational factors like forecasted inventories or energy costs. Production planners can choose which scenario is officially published and it will automatically be converted into a list of actions for the operators.



One tool to create an optimal schedule

The Production Scheduler provides the optimal schedule considering operation goals and constraints as well as energy tariffs.

Creating a new schedule requires the adjustment of important parameters like the following:

- Shipment demands
- Stock targets and start levels
- Energy tariffs
- Planned equipment maintenance
- Personnel availability
- Holidays
- Individual weight of production goals

The calculated schedules are displayed with three main information sections:

- Gantt chart of the short-term production schedule
- Forecast of inventory movements
- Forecast of energy consumption

Published scenarios are converted into a task list for the plant operators.

The planned values of the published scenario are written to the Knowledge Manager information system, which allows to include planned values in any report or chart so that you can easily use them for the comparison of actual versus planned figures, for example.

Your challenge

- Evaluate complex and changing operation restrictions
- Generate optimal production plans meeting production, inventory and total cost goals
- Promptly activate new production plans when unexpected events occur

Our solution

Knowledge Manager Production Scheduler generates the optimal schedule considering multiple operation goals and complex constraints.

Features

- Summarized and detailed visualization of schedule
- Forecast of inventory and of energy consumption
- Setting of goals and configuration of constraints
- Scenario management
- Maintenance and repair data entry screens
- Sales forecast screen
- Settings for energy tariff

Your benefits

- Optimized short term production schedule per mill and per product
- Reduced overall production costs and increased equipment efficiency
- Overcome complex scheduling constraints
- Increase efficiency and agility of planning tasks
- Consistent decision making criteria

How can Production Scheduler help you in your daily business?

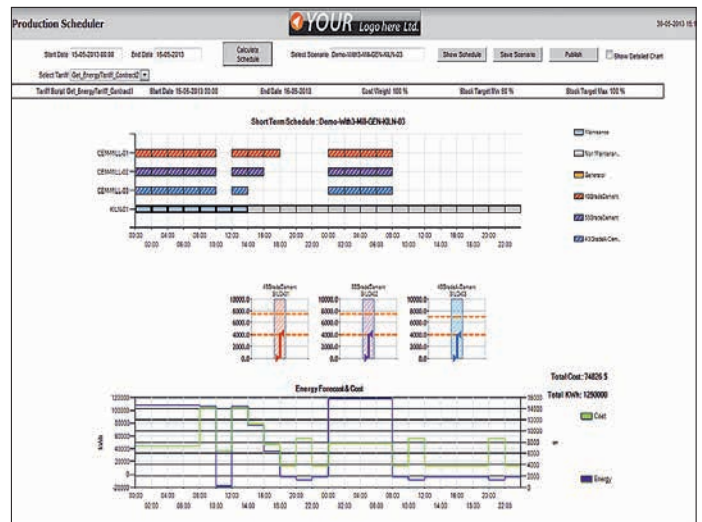
Real case scenarios

Obtain solutions within minutes in cases like these examples:

- Rescheduling due to an unexpected repair task:
 - One of your mills breaks down
 - The maintenance teams evaluates the situation and indicates the downtime will be of many hours
 - How can we make sure that we will have enough material in stock to fulfill all planned shipments?
- Rescheduling due to a delayed shipping:
 - Your production is running smoothly, as planned
 - The transport company announces a train will only be able to arrive a couple of days later than scheduled
 - How can we optimize our plan with this new restriction?

Using the Knowledge Manager Production Scheduler you can now quickly evaluate and compare the impact of alternative re-planning activities and put into action the one that better helps you keeping your goals, despite undesired events like the ones mentioned above.

With our system you can also save pre-defined scenarios known to be a best practice to overcome special events and activate them quickly at any time.



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