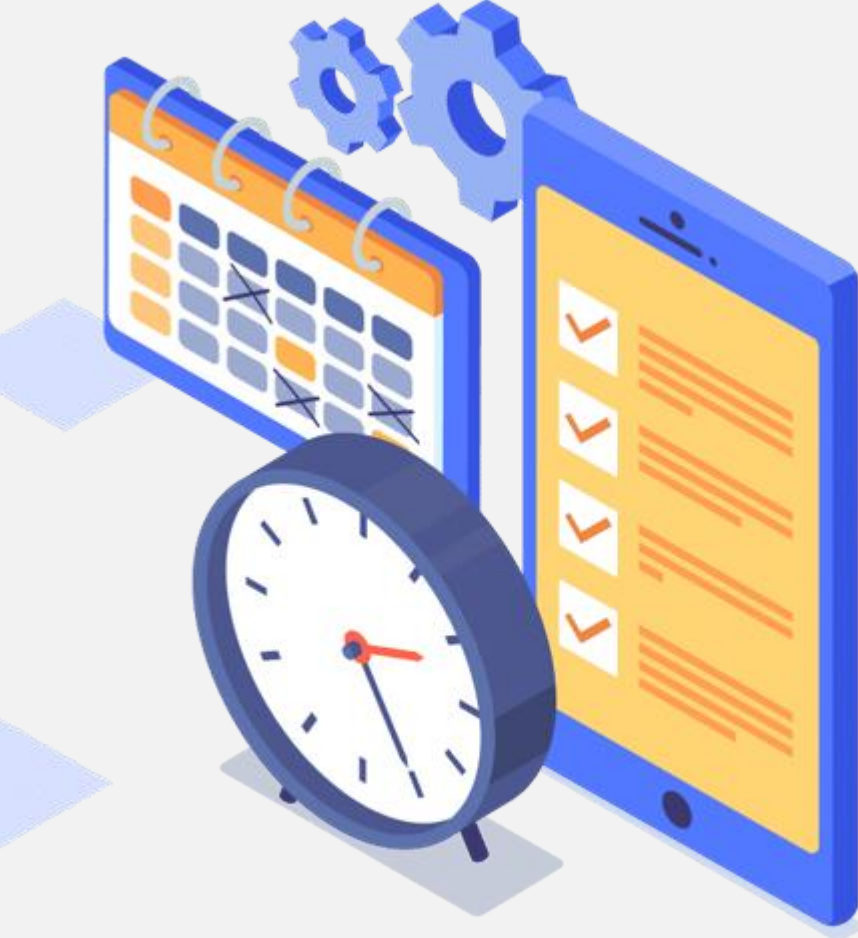




INFOTROL

Batch Optimal Production Planning

What is Batch Production Planning?

INFOTROL's 'batch optimal production planning' can be used for multiple lines and grades, requiring management of batch cycles, quality checks, packaging, and stock transfers.

It also considers production preferences based on inventory levels and market prices, with additional cleaning time needed for certain grade changes.

Batch Optimal Production Planning

- Optimal Production Planning Conditions
 - Multi-production line, multi-grade production
 - Different batch cycle times for each grade
 - Additional time required for quality inspection and transfer to inventory after each batch production
 - Preference order for production of each grade
 - Separate cleaning time required for each grade change
- Establishment of an optimal production mathematical model
 - MILP model

✓ Condition 1: Batch Cycle Time (B_i)

$$\sum_{i=1}^{\text{No. of Grade}} \sum_{k=B_i-1}^{k+B_i-1} W_{L,i}(t) - 1 \leq M[1 - W_{L,i}(k)], \quad \forall (\text{for every}) t, \quad \text{at each } L = 1, 2$$

✓ Condition 2: Integrated Inventory Requirements

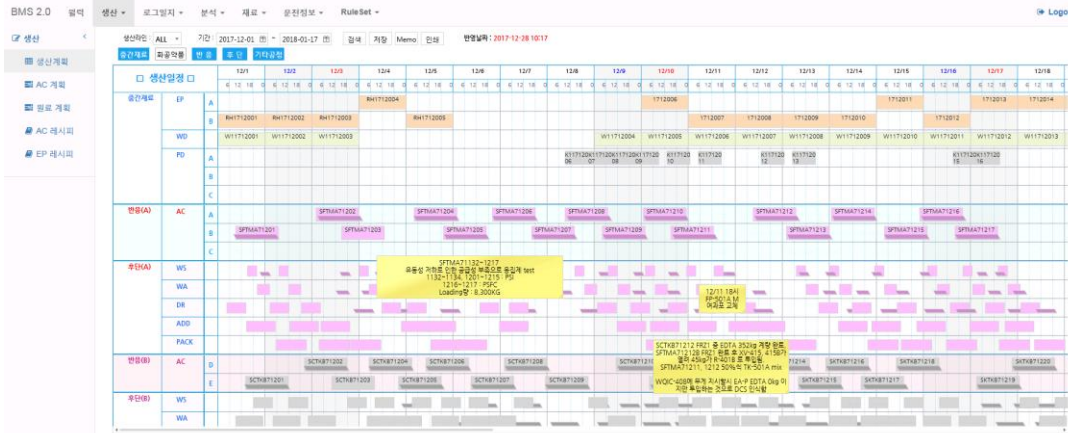
✓ Condition 3: Production and Inventory inflow

✓ Condition 4: Cleaning for a grade change

✓ Condition 5: Production Order Preference and additional conditions

$$\sum_{t=t_1+1}^{t_2-1} W_{L,g,g'}(t) \geq \sum_{i \in I_g} W_{L,i}(t_1) + \sum_{i \in I_{g'}} W_{L,i}(t_2) - \sum_{t=t_1+1}^{t_2-1} \sum_{i \in I} W_{L,i}(t) - 1$$

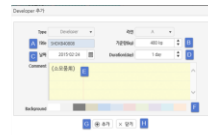
WEB Display



Batch 추가



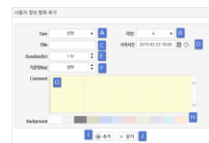
DEVELOPER 추가



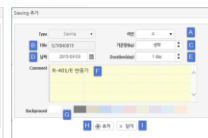
전달시험



기타 추가



SIEVING 추가



- Automatic Display of optimal production planning results
- Windows and Web-based System
- Integration with existing MES or production management systems