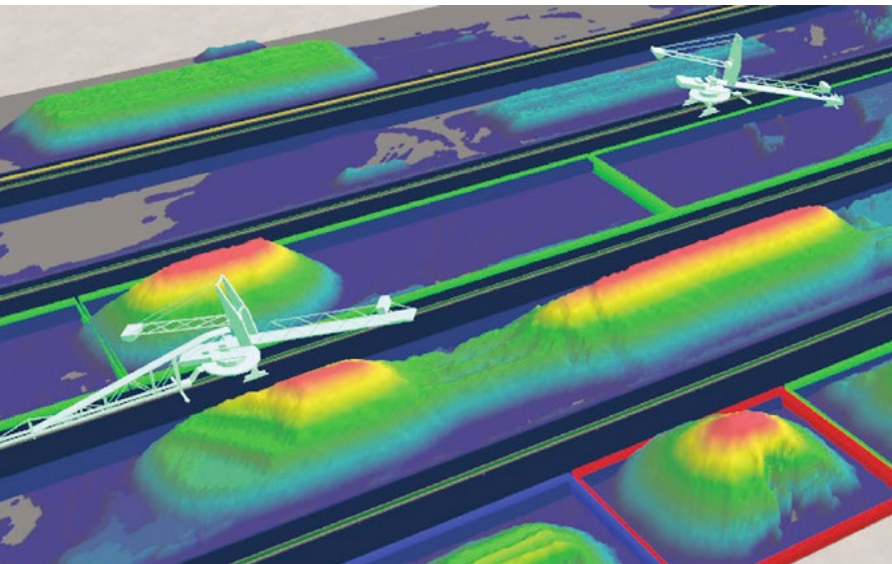


# ABB Ability™ Stockyard Management System

## Performance improvement for stockyard operations



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01 3D-view of  
stockyard based on  
calculated pile model

Stockyards are connecting consecutive steps in materials transportation chains with different time frames. In order to manage one or multiple inputs of different material qualities, storage, mixing and blending as well as output of single or multiple qualities ABB provides an astoundingly system solution.

### The Stockyard Management System comes with the following features:

- Modelling the transportation and stacking/ reclaiming process of a stockyard
- Material quality and mass tracking during transportation and modelling the stockpile build up
- Real time and real live overview of stock condition
- 3D and 2D visualization of stockyard layout, stockpiles and yard machines
- Color coded visualization of different material qualities in stockpiles, cut views into stockpiles
- Real-live pile updates by drones or laser scanners
- Laboratory system integration
- Downtime management
- Integration of fully automated operating yard machines
- Interfaces to different systems provide a seamless workflow from ERP to control system for stockyard operations

The ABB Ability™ Stockyard Management System closes the gap between ERP systems and the operational level.

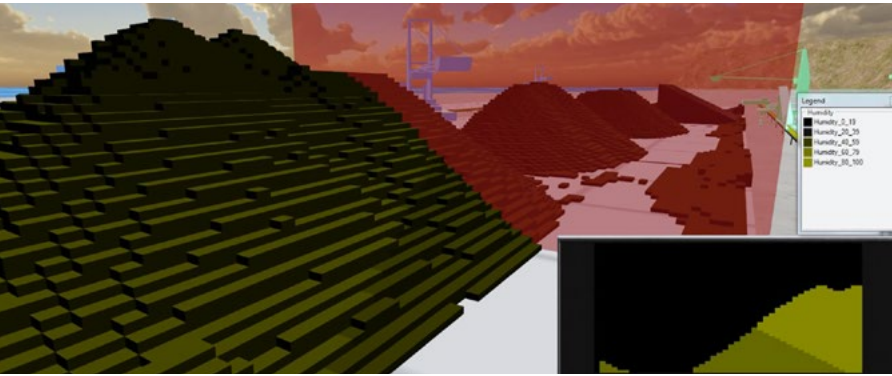
The state-of-the-art software solution includes several functions which reduce handling effort and increase the efficiency of bulk material handling terminals, stockyards of coal-fired power plants, steel plants or mines.

### Benefits

- Inventory information of material stock
- Increase storage capacity without a huge investment
- Reduce the gap between theoretical and real capacity
- Job overview for efficient production decision
- Improve operational execution
- Enable fully automated operation with manless machine control
- Data validation and reconciliation

### Material Tracking

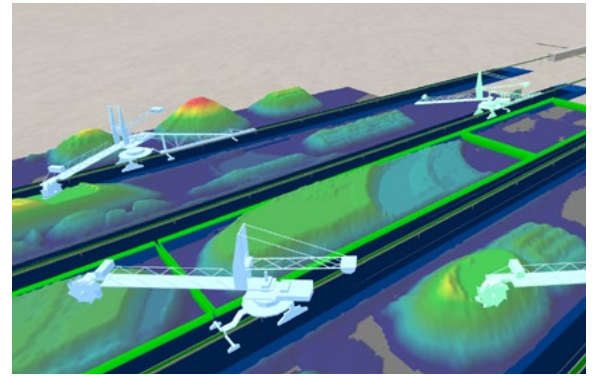
- Monitors the material flow of bulk material based on process data
- Monitoring of masses or volumes on belt conveyors
- Tracking of material also in blending operations with different source qualities
- Dynamic display of belt load with color differentiation according material type
- Stockpile monitoring



02

02 Slice view functionality to get detailed information about the inlet of the piles

03 Area definitions for optimal pile management



03

**Bulk material quality management**

- 3D overview of stockyard with slice view feature to look into the pile
- Detects empty spaces
- Evaluates possible material handling scenarios
- Slice view functionality to get detailed information about the inventory and also the inlet of the piles
- Simplifies the accumulation of inventories
- Provides data for reporting

**Altitude monitoring**

- Provides information of pile altitudes
- Improves the stockyard utilization
- Protect the pile against overrun

**Performance optimized operation**

- Calculate and suggest most energy efficient routes
- Find best possible alternative routes
- Presents device status and interlocking process

Are you interested to optimize your stockyard management? Contact us.

**Management of different qualities**

- Tracks actual and forecast (planned) material movements
- Quality tracking by integration of online analyzers and automated data exchange with the laboratory system or other quality information sources
- Shows material origin and material properties
- Qualities will be tracked, starting at the receiving chute of a belt conveyor, along the belt conveyor until it was spread onto the pile or loaded on a train/ship
- Coordinates blending and mixing
- Controlled creation of desired material quality

**The philosophy – job based handling**

The philosophy of stockyard management is based on job oriented handling. Every single material movement e.g. unloading, stacking, reclaiming, mixing and loading is understood as a job. A job can be started with data from ERP system as well as entered by the operator with an intuitive tool. To each job or respectively the moved material are several material properties attached e.g. quality, mass, volume, owner etc. which can be read automated from another-system or manual entered by an operator.

As an interface between operational level and ERP system the Stockyard Management System provides real time information of handled material, enables real live adjustment of the data and support operators best as possible to improve overall performance.