



**MBS**

## ***Transportation and stock management***

**MBS supports energy supply companies in the delivery and stock management of fuel and other energy production related materials. The fuel management business processes can be broken down into the different activities of fuel disposition planning, delivery and transportation management, stock management, fuel burn, reporting and invoicing. MBS supports all these activities. This factsheet gives a quick overview of the areas of transportation and stock management in MBS.**

### ***Material Flow Management System from HAUK & SASKO***

MBS supports shipments and stock transfers by ship, train, trucks and conveyor belt. MBS manages the transportation of the following fuels and materials:

- Coal, Oil, Gas
- Substitute and special fuels (e.g. biomass, waste, orimulsion etc.)
- Additives (e.g. limestone, ammoniac)
- Coal combustion products (e.g. ashes, gypsum)

The system allows to track the progress of deliveries. MBS captures data such as the fuel type, the fuel source, method of transport, ship/vessel name or train number, load port/train station, destination, departure and arrival times etc. MBS alerts the user when shipments are behind schedule and indicates missing cargo and poor quality fuel.

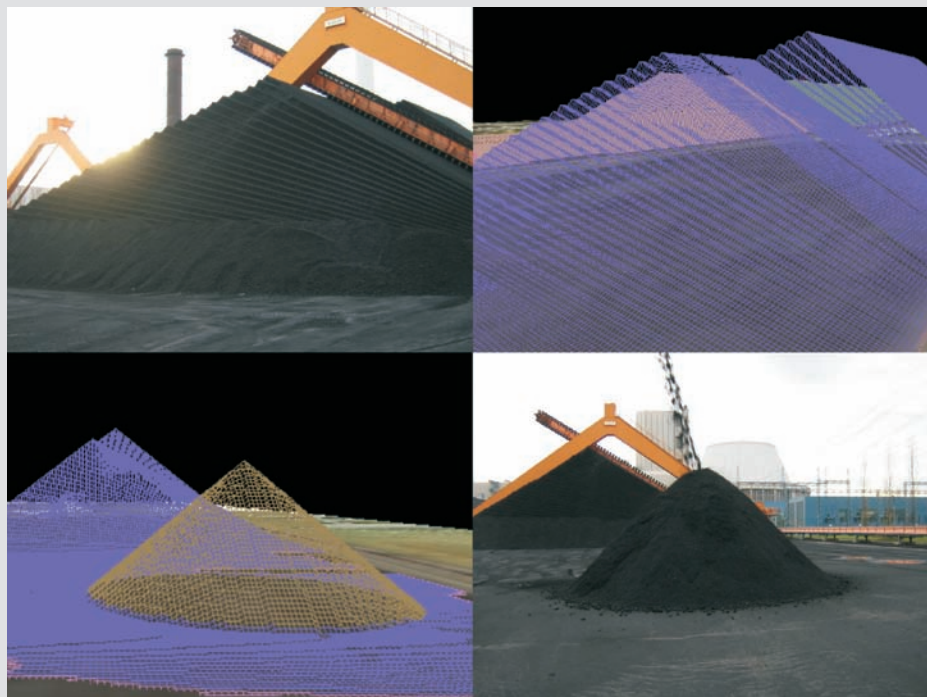
For every delivery, MBS captures data on the quantities and the quality parameters. It is possible to assign mixed cargo (e.g. coal from different mines) to a shipment. Quality parameters can be adjusted when new analysis data becomes available. Additional parameters can be calculated through scientific formulas. Whenever a parameter is missing, MBS offers substitute values - either calculated from a quantity and quality of a shipment or the benchmark values specified in supply contract. Fuel prices can be adjusted for discrepancies in the quantity and quality.

When the shipments arrive, MBS captures the location of the fuel or material stocks. It is possible to monitor the composition of coal stocks and the fill level of tanks. Fuel movements can be monitored from the arrival at the power station up to the moment the fuel is used in the burn process.

MBS has a sophisticated coal stockpile algorithm. It is possible to operate FIFO or LIFO stocks, and also mixed stocks using the Chevron method. MBS can compute the current stock mixture for each use of fuel using a calculation model (accounting model). The system is based on dynamic data. MBS adjusts stock composition every time new analysis values or stock measurement data is available. Stocks are automatically corrected and adjusted in real-time, taking into account any new data.

MBS is highly accurate. It is possible to combine geographic data from a GPS receiver on a conveyor belt system with MBS data on coal stockpiles. MBS is able to combine the geographic coordinates with data on coal quantity/quality to create virtual coal stockpiles. This feature is available as the MBS stockpile visualisation module.

The fuel management system MBS offers an improved transport and stock management. The system provides a high degree of transparency which allows to monitor the performance of fuel vendors and transport companies. MBS also serves as a powerful tool which tracks the stock composition and stock movements from the arrival at the power station to the moment the fuel is burned.



**Virtual coal stockpiles and reality**