

SIMINE^{CIS} MAQ from Siemens is an important add-on for easy quality planning and the production of material mixes. Thanks to a comprehensive material monitoring system from the seam to the storage area, all current quality and volume parameters are available online. The result is a precise 3-D visualization of the stockpile and its composition, so that every material mix can be planned with simple graphical links between stockpile areas.

The challenge

Customers' demands for the quality of the final product continue to grow in the mining sector. One requirement for surviving the increasingly tough competition is the punctual delivery of the material in the required quantity and defined quality.

This means that all quality-related process and material data must be available online. At the same time, fast planning tools and highly automated material monitoring systems are required in order to control the process efficiently and to compensate for any possible faults in a flexible way.

These demands for material data entry and monitoring, planning and production of the required material quality can no longer be met with conventional solutions. This is why there is now a need for new, comprehensive automation concepts.



Good reasons for SIMINE^{CIS} MAQ

- **Fully automated, high-resolution** online material data and quality data entry
- **Support for quality planning** by a highly precise 3-D stockpile model
- **Easy coupling with the process** and with higher systems thanks to open standard interfaces
- **Can be operated flexibly** as an individual solution or integrated in a master control system
- **Comprehensive and convenient tool** for recording and analyzing data and displaying trends

SIMINE^{CIS} MAQ

Planning and producing material mixes
in the right quality, both online and in 3-D

Mining Technologies

SIEMENS

Our solution

SIMINE^{CIS} MAQ – a system specially designed for the mining industry – optimizes the properties of the material produced. The main focus is on material monitoring throughout the conveying and storage process on the one hand, and material quality management in the storage areas on the other. All the sub-systems required for material transport and analysis are integrated in the system.

The online approach to the 3-D stockpile model

The basis for reliable quality planning is material monitoring with SIMINE^{CIS} MAQ. Direct links to the process mean that all changes in the system, even during operation, are automatically detected. Process values such as weight, volume or quality parameters are processed by the system directly online.

The segment-specific recording of data on the transport paths means that there is a precise knowledge of which materials with which properties are stored on the stockpile – as the basis for a 3-D stockpile model. The operator is kept informed of the current flow of material and the current material quality at all times.

Quality planning made easy

The SIMINE^{CIS} MAQ quality management module ensures simplified material quality management in the storage area. The virtual matrix plays a decisive role here, enabling the stockpile to be divided into

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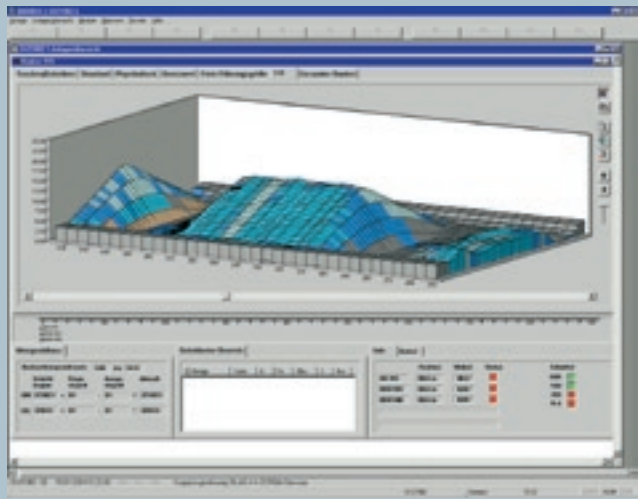
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In particular, they help you by

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3-D stockpile image; different colors signify different materials

various segments. All quality parameters and the calculated material classification are displayed for each segment. Material can be mixed in precisely the required volume and quality on this basis.

The system then produces the associated transport jobs. Thanks to the continuous coordination of volume and quality, the operator can intervene as necessary during the subsequent unloading process.

More material data required?

Standardized interfaces enable fast, easy coupling with other systems. This means, for example, that the material quality data supplied by the dredger is processed directly, as is the information from the train or ship loading and unloading stations when used in storage areas. All of this enables an even more precise picture to be built up, while also optimizing the flow of data.

Easy integration in other automation systems

SIMINE^{CIS} MAQ is suitable for every system configuration and size because it can be operated as an individual solution or integrated in the SIMATIC PCS7 master control system. The object-based hierarchy and modular structure ensure a high level of flexibility. It can also be integrated in master control systems from other manufacturers.

Our services ensure your success

It's crucial to ensure top performance throughout the entire life cycle of your plant. We make certain that you achieve that goal with our professional services, which range from financing and conception to project planning, integration and commissioning, as well as optimization of your plant operations.

For operation of your facility, we offer sophisticated diagnostic tools and service strategies to ensure high availability, including spare parts service, hotline service, correction of faults via a dedicated modem line, and ongoing maintenance to ensure high reliability. And by modernizing your plant at the right time, we can bring it up to a performance level in line with today's expectations.

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