Innovative solutions for the reconstruction and new installation of conveying equipment for opencast mining

Performance safeguarding and optimization

To ensure a full utilization of fossil fuels in the energy mix it is needed to design all steps from conveying via transport up to refinement as efficient as possible. Stones in the conveyed material belong to the most annoying troubles in the mining process. They often cause severe damages. Therefore an excavator with mechanical stone removal is required at the beginning of this mining chain. Advanced automation technologies are used for excavators as an essential precondition for plant efficiency improvement as well as need-based and high-quality exploitation of deposits.

Stone detection:
Advantages at a glance

> Low life cycle costs
> High availability of the machinery
> Automation of excavation processes
> Energy saving
> Reduction of wear and tear

Project solutions by Actemium

Actemium BEA GmbH is a product-neutral and proficient plant engineering and installation company for the electric and automation equipment of plants for opencast mining, handling and storage processes. We engineer and implement tailored solutions for the modernization of your existing installations or for initial equipment in excellent quality and with strict adherence to schedules. In the process of project development, our team will create solutions for equipping and retrofitting your mining plants that can be implemented as quickly as possible. One consistent effect of our turnkey projects is always an increase of the availability and minimized expenses for operation and servicing of your mining equipment.

Benefits for our customers

> Individual modular solution concepts
> Advanced safety concepts
> Excavator program control
> One-stop shop
> Cost-effective solutions
> Technical solution expertise
**Our performance package**

**Modernization**

Stones in the conveyed material may cause severe damages on components along the whole conveying path (bucket wheel, belt and rollers, transfer funnel, etc.). Within the scope of a modernization project, the whole control and electric installation will be upgraded, including all required mechanical modifications and corrosion protection. Our performances include:

> Project treatment, programming and visualization
> Manufacturing of auxiliary constructions for holding and fixing
> Cable and line installation
> Delivery, installation, commissioning and documentation
> Trial operation including calibration and proof of functioning
> Instruction of personnel on how to operate and maintain the systems

**Technical implementation**

A measuring unit and modified carrying garlands will be fitted to the equipment in order to detect weight differences. Measured values will be processed by a fast data acquisition system with integrated processing PC. A software application from Actemium will be used for evaluation. The excavator operator station will be extended by a visualization and operating screen for the stone detection system. This will ensure an early detection of stones and the issue of control signals for stone removal and wheel conveyor depending on the stone class.

**Technical key data**

> Automatic stone detection
> Manual or automatic operation
> Data acquisition system with integrated processing PC
> Control and visualization systems
> Modified carrying garlands

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