Industrial Solutions

Eccentric roll crusher ERC

The innovative solution for primary crushing
With its new eccentric roll crusher (ERC) thyssenkrupp Industrial Solutions has developed a groundbreaking solution for the primary crushing of hard rock and ore. The new crusher is particularly compact and robust. Its innovative design with an integrated screen permits capacities of up to 8,000 metric tons per hour. Ideally suitable for use both for underground and surface operations in mines and quarries, the ERC offers significantly higher efficiency and flexibility than conventional primary crushers in the processing of hard rock.

Operation principle

1. Fines are screened out by means of an integrated grizzly and bypassed through the crushe housing.
2. The coarse particles are transferred into the crushing chamber.
3. Consequently, the crushing gap between the roll and the jaw changes constantly and the feed material which has not been screened out is continuously crushed until the product exits the crushing chamber at the bottom.
4. A patented fully hydraulic gap setting/retraction system allows for automatic adjustment of the gap, compensation of liner wear and release of tramp metal or otherwise uncrushable material content.

Advantages – How you benefit

1. Revolutionary machine concept – compact, simple and robust
   The particular compact design and less number of components simplifies transportation, installation and maintenance.
2. Two machines in one – the unique integrated pre-screening boost capacity
   The integrated grizzly with efficient bypassing of fines boost crusher capacity, reduce energy consumption and increase liner lifetime.
3. The ERC hydroset – the smart way of equipment protection and flexible machine setting
   A patented fully hydraulic gap setting/retraction system for the jaw offers a wide range of gap setting for safe and simple adjustment of product size, compensation of liner wear and release of tramp metal or otherwise uncrushable material content.
4. Ideal suited for every application – efficient balancing pays off
   The symmetrical arrangement of the roll allows the crusher to be balanced with great precision which significantly reduce machine vibrations and loads on surrounding structures and makes the crusher also ideal for use in mobile and semi-mobile crushing systems.
5. The ERC crushing principle – highly energy efficient and powerful
   A particularly effective kinematic of the oscillating roll with constant stroke in the entire crushe cavity allows for higher reduction ratio and more effective use of crushing energy.
   The high moment of inertia of the roll and flywheels contributes accumulated crushing energy, reduce power requirements and effectively compensate load peaks.