



BUCKET WHEEL EXCAVATOR



NEED FOR BUCKET WHEEL EXCAVATOR

In Mining areas, the materials are dugged by backhoe loader and then the loosen material is carried by the dumper to the required destination. So totally two vehicles has been used for performing this work. By the use of bucket wheel excavator it is possible to perform two works at a same time.

BUCKET WHEEL EXCAVATOR

A bucket-wheel excavator (BWE) is a heavy equipment machine used in surface mining. The primary function of BWE is to act as a continuous digging machine in large-scale open-pit mining operations, removing thousands of tons of overburden a day. What sets BWEs apart from other large-scale mining equipment, such as bucket chain excavators, is their use of a large wheel consisting of a continuous pattern of buckets used to scoop material as the wheel turns. They rank among the largest vehicles (land or sea) ever produced, and the largest of the bucket-wheel excavators (the 14,200 ton Bagger 293) still holds the Guinness World Record for the heaviest land-based vehicle ever constructed.

MAIN COMPONENTS

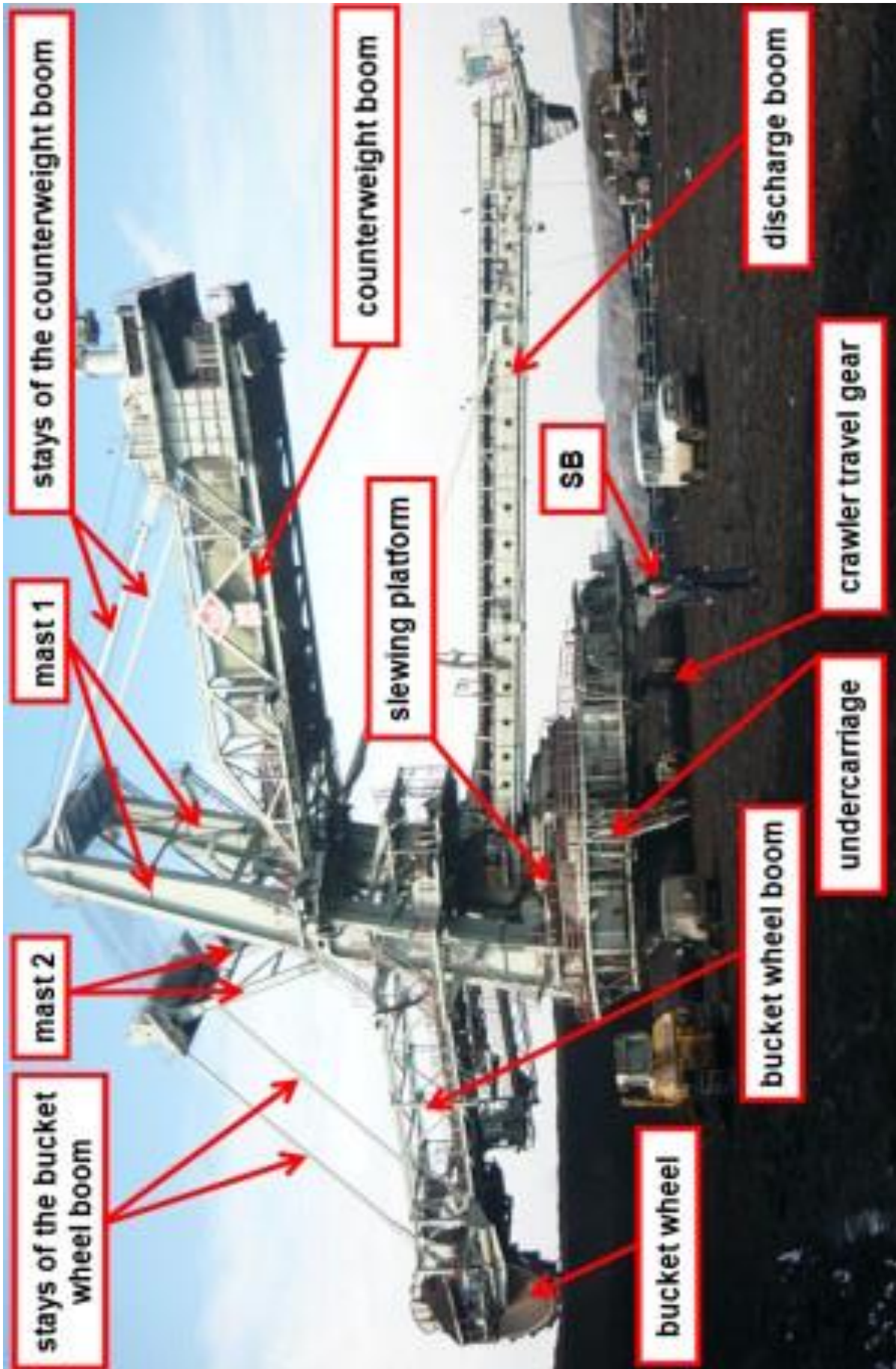
- Bucket wheel
- Bucket wheel
- Mast (1&2)
- Slewing platform
- Under carriage
- Counter weight boom
- Discharge boom

CONSTRUCTION DETAILS

A bucket wheel excavator (BWE) consists of a superstructure to which several more components are fixed. The bucket wheel from which the machines get their name is a large, round wheel with a configuration of scoops which is fixed to a boom and is capable of rotating. Material picked up by the cutting wheel is transferred back along the boom. A discharge boom receives material through the superstructure from the cutting boom and carries it away from the machine, frequently to an external conveyor system.



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A counterweight boom balances the cutting boom and is cantilevered either on the lower part of the superstructure (in the case of compact BWEs) or the upper part (in the case of mid-size C-frame BWEs). In the larger BWEs, all three booms are supported by cables running across towers at the top of the superstructure. To allow it to complete its duties, the superstructure of a BWE is capable of rotating about a vertical axis (slewing). The cutting boom can be tilted up and down (hoisting). Slewing is driven by large gears, while hoisting generally makes use of a cable system.

APPLICATION

- Used in Mining areas
- Used for material handling

MANUFACTURING COMPANIES

- FAM
- FLSmidth Dorr-Oliver Eimco
- Sandvik Mining and Rock Technology
- TAKRAF