



Steel

Plant

The Steel Plant Process

The steel production process begins in the Ore Primary Bunker, which temporarily holds iron ore from the junction before further processing; this area consists of six bunkers, each with a capacity of 20 tons, leading to a total storage capacity of 120 tons. The iron ore is then prepared for steel production in the Iron Circuit through a series of processes: crushing and grinding reduce the size of the iron ore particles, screening separates them by size, and separation removes impurities. Following these preparations, the processed iron ore undergoes several transformations in the steel plant. This involves the careful handling and processing of raw materials through various stages using advanced equipment and safety measures, ultimately producing high-quality steel.



Conveyor Belt for shifting Material from Primary Bunker to the Iron Circuit

Conveyor Belts in Steel Plant

The process of steel production in a steel plant involves a series of critical stages and departments, each performing specific roles to transform raw materials into end steel products. Conveyor belts play a crucial role in the efficient, continuous transport of materials throughout the various stages of steel production.

Key roles include:

- Continuous material handling of raw iron ore and intermediate products.
- Facilitating the transport of materials from storage bunkers to different processing areas.
- Optimizing space utilization in space-constrained steel plant layouts.

The relevance of conveyor belts in steel plants cannot be overstated, as they ensure the streamlined operation of material transport, contributing significantly to the efficiency and productivity of steel manufacturing processes.

S70

In Steel Plant

Benefits of Deploying S70 in Steel Plant

Material spillage and running parts associated with conveyor belts in steel plants present numerous risks that must be carefully managed to ensure both operational efficiency and worker safety. The Bobcat S70 skid steer loader is a compact and versatile machine that can effectively address these challenges.

"While also reducing the manpower efforts required for tasks by 5-6 people, allowing those resources to be effectively utilized in other areas of the plant"

✓ Working in Confined Spaces

- **Accessibility:** Its small footprint allows it to operate in confined spaces and under conveyors, ensuring cleanliness and safety. With dimensions comprising a width of 3 feet and a height of 6 feet, the Bobcat S70 is capable of navigating tight spaces under conveyor belts effectively.

✓ Enhancing Safety

- **Reducing Slip and Trip Hazards:** Prompt removal of spills by the skid steer loader reduces slip and trip hazards, contributing to a safer work environment.
- **Reducing Overhead Material Spills/Fall Hazards:** The Bobcat S70 comes standard with a FOPS/ROPS cabin, which ensures operator safety from overhead fall hazards.
- **Minimizing Labour Exposure to Polluted Air:** Reducing workers' exposure to dusty and polluted air enhances their lifespan and ensures the stability and well-being of their families.

✓ Efficient Clean-Up of Material Spillage

- **Rapid Response:** The skid steer loader can quickly respond to material spillages, facilitating efficient cleanup.
- **Regular Cleaning:** The skid steer loader can perform routine cleaning and maintenance, reducing the accumulation of spilled materials that could cause operational disruptions.

✓ Supporting Operational Efficiency

- **Minimizing Downtime:** By preventing blockages around conveyor belts, the skid steer loader ensures smooth and uninterrupted operation.
- **Maintenance Flexibility:** Quick deployment for various maintenance tasks helps minimize interruptions in the production process.



Bobcat S70 working in confined space



S70

Attachments

✓ Versatility in Application

- Versatility with Attachments: Equipped with various attachments such as bucket, Dumping Hopper, and Sweeper, the skid steer loader can handle different types of jobs effectively.



Dumping Hopper

The loader can also transport materials to different sections of the plant and assist in loading and unloading bulk materials, enhancing logistical efficiency.



36" Std Bucket

Ideal for scooping and transporting loose materials.



44" Sweeper

Useful for sweeping fine materials and keeping floors clean.

In conclusion, the Bobcat S70 skid steer loader is a valuable asset in a steel plant for material handling and enhancing the safety of operations around running conveyor parts. Its ability to rapidly clean spills, perform routine maintenance, and support operational efficiency while minimizing downtime makes it indispensable. By incorporating the Bobcat S70 into maintenance and safety protocols, steel plants can create a cleaner, safer, and more efficient working environment, while also reducing the manpower efforts required for tasks by 5-6 people, allowing those resources to be effectively utilized in other areas of the plant.