Chockfast

Chockfast Dual Grouting System Prolongs Ball Mill Service Life at Processing Plant

Used in a variety of different industries, the ball mill is a versatile piece of equipment that is used to crush and grind or mix various materials. The ball mill compartment rotates heavy balls to crack rocks such as sandstone, limestone, and coal. One of the most vital aspects for the functionality of the machinery is the speed at which the hollow compartment rotates on a vertical or horizontal axis. At an optimal rotating speed, the balls reach the necessary velocity to crush the material. To maintain the optimal speed of the equipment's precise alignment of machinery is vital to ensure reliability and reduce vibration.

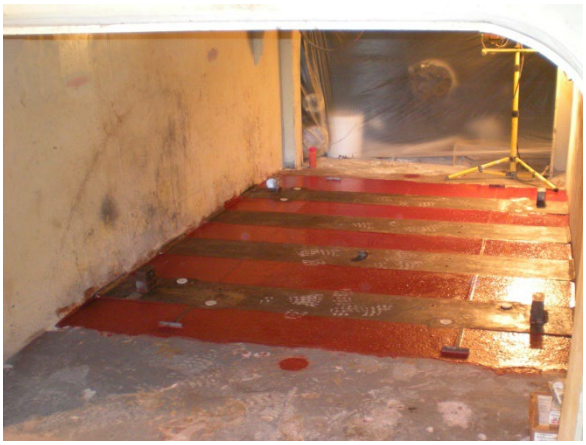
Problem:

A processing plant faced a difficult decision during the installation on how to mount a new ball mill machine. In order to facilitate the operation of the equipment, the plant needed to first select a grouting system that would help maintain the precise alignment of the rotating machinery. Without an adequate grouting system, misalignment could cause stress on shafts and bearings harming the reliability of the ball mill equipment. Without a proper grouting solution, this new machinery could face infrastructural damage within the first few months of operation.

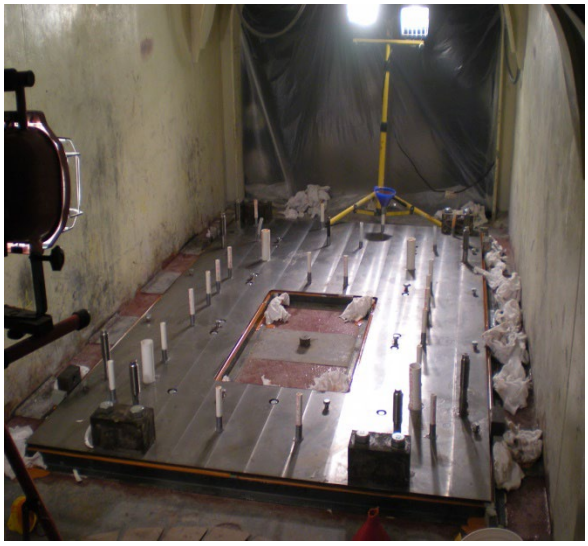
Solution:

The processing plant utilized Chockfast Red grout and Chockfast Orange chock as a dual grouting and chocking system to dampen vibration and ensure reliability of the ball mill machine.

- Chockfast Red grouting system was poured into the foundation to secure the unit to the mounting foundations.
- Once installation was complete, Chockfast Red was left to cure for one day in preparation of the Chockfast Orange chocking installation.
- The base plate of the ball mill was mounted and secured into place.
- Chockfast Orange was then installed and left to cure for 24 hours.
- Once this grouting and chocking system was complete, the ball mill machine was placed atop the foundation plate to finish installation.



Chockfast Red poured into foundation forms



Base plate of the ball mill mounted

Closeup: Base plate of the ball mill mounted

Case Study

Chockfast

Project Outcome:

Outstanding Vibration Resistance

This processing plant was looking for a solution which would provide proper alignment, minimize vibration, and prevent wear & tear to equipment components. Both Chockfast Red grout and Chockfast Orange chock isolate specific areas of the equipment to provide the required alignment and allow vibration to be dispersed. By utilizing both Chockfast Red and Chockfast Orange, potential for short and long-term equipment damage was eliminated.

Prolonged Equipment Service Life

The ball mill is a heavy-duty equipment that can outperform other machinery in crushing abrasive material into small particulates. In utilizing Chockfast Red and Chockfast Orange as a dual system, the efficiency of the ball mill machine is now maintained by preventing excessive damage and prolonging the useful equipment service life.

Reduce Equipment Downtime

The processing plant wanted to, above all, reduce equipment downtime and ensure reliable, consistent output to meet its productivity targets. Chockfast Red and Chockfast Orange were able to maintain the precise alignment of the ball mill machine, limiting the probability of equipment failure and maintenance cost.