PROBLEM SOLVED™ PAPER

SOLUTION: Cougar® DC Truck Vibrator

INDUSTRY: Chrome

LOCATION: South-Africa, North West Province

TITLE: Cougar® DC Truck Vibrators Deliver Cleaner Dumps Every Time

Material stuck in the bin due to its sticky and abrasive nature, causing several operational challenges

PROBLEM

A chrome mine located in the North West province of South Africa was experiencing persistent and costly challenges with its dump trucks used for transporting sticky and abrasive chromite. After dumping, a substantial amount of material often remained stuck in the truck bin. This required manual intervention to clear the residual load—introducing both safety risks and operational delays. The incomplete dumping process not only reduced overall efficiency but also increased operational costs, as the mine was effectively paying for undelivered material. Additionally, the abrasive nature of the material led to frequent wear and tear of the bin liners, requiring regular replacements and adding to maintenance costs.

Installation of Cougar® DC Truck Vibrator

SOLUTION

The customer initially attempted to resolve the issue using bin liners, however, the problem persisted. To address this, Martin Engineering's specialists recommended a test installation of a 24V Cougar® DC Truck Vibrator to facilitate the complete discharge of the material. Rugged and economical, the Cougar® DC Truck Vibrator improves the speed and efficiency of unloading dump trucks. By energizing the load and breaking the friction between particles, the vibrator effectively mobilizes bulk material, allowing for faster and more thorough unloading. This means faster, more complete unloading—getting trucks back on the road more quickly and improving overall operational efficiency.

Stuck material was eliminated—each truck is now fully emptied after unloading.

RESULT

The installation of the Cougar® DC Truck Vibrator significantly improved material flow efficiency and greatly reduced the need for manual material handling. The truck has been operating with the same liners for over a year since installation, without the need for replacement. Thus the DC Truck Vibrator exceeded expectations, delivering multiple benefits—including enhanced liner durability, substantial cost savings from reduced bin liner replacements, and a marked reduction in maintenance demands and manual intervention. Impressed by the results of the initial trial, the customer proceeded with the installation of an additional 50 units across the truck fleet.

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