



PROBLEM SOLVED™ PAPER

SOLUTION: Martin® Vibrating Dribble Chute

INDUSTRY: Chrome ore processing

LOCATION: Mpumalanga, South Africa

TITLE: Martin® Dribble Chute Vibrator solves chute blockage at Chrome plant.



Chute blockage at Chrome Plant

PROBLEM

A chrome processing plant located in Mpumalanga, South Africa with a combined annual production capacity of more than half a million tonnes of charge chrome, was experiencing a persistent blockage in the chute of its chromite dryer.

This piece of equipment plays a critical role in preparing chromite ore for further processing, particularly for the production of ferrochrome - an alloy of chromium and iron. The blockage frequently resulted in unplanned downtime and increased labour costs. Moreover, the manual unblocking of the chute posed a significant safety risk to personnel.



Martin® Vibrating Dribble Chute prevents material from clogging chutes and burying belt cleaners.

SOLUTION

A Martin Sales Engineer conducted an application inspection and recommended the installation of a Martin® Vibrating Dribble Chute, which utilizes an electric vibrator and a low adhesion plastic liner to prevent material from clogging chutes. It incorporates a rubber lining to isolate the chute wall from the bracket to reduce noise. To further reduce risk a safety cable was also installed to secure the vibrator in the event of a failure of the mount brackets. Regular follow up inspections after the installation have confirmed that the original problem of the blockage was resolved effectively and efficiently.



Low-friction plastic liner promotes material flow without accumulation

RESULT

The customer expressed high satisfaction with the installation, noting that it effectively eliminated unplanned stoppages and production losses.

Since the implementation, operations have run smoothly, with no recurrence of the previous issues. Impressed by the results, the customer even recommended the solution to a colleague at another operation, highlighting its effectiveness and potential value at similar facilities facing the same problem.