

Precision and Power for Heavy-Duty Crushing Applications - TECO Electric Motors Australia and New Zealand

Canonical:

<https://electricmotors.teco.com.au/challenges/precision-and-power-for-heavy-duty-crushing-applications/>

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Precision and Power for Heavy-Duty Crushing Applications

Custom Solutions for Enhanced Performance

Location : New Zealand

Industry : Heavy-Duty Crushing and Aggregates

Our customer faced significant challenges with their vertical shaft impact crusher, requiring robust motors that could withstand demanding conditions. The primary issues included maintaining precise alignment and tension in belt drive configurations to ensure operational efficiency and prolong equipment life. Additionally, there was a need for real-time temperature monitoring to prevent overheating and extend motor lifespan.

Solution:

To address these challenges, we sourced two 185kW 4 Pole PSD motors from TECO New Zealand stock and carried out significant modifications in our local ModShop. These modifications were tailored to meet the specific demands of the customer's application, ensuring optimal performance and reliability.

Benefits to the Customer:

Robust Performance : The 185kW 4 Pole PSD motors provide the power needed for heavy-duty crushing applications, ensuring efficient operation of the Barmac crusher.

Precise Alignment : Modifications for vertical shaft down, belt drive configurations ensure perfect alignment and tension, maintaining operational efficiency and prolonging equipment life.

Enhanced Safety and Lifespan : Incorporating winding Resistance Temperature Detectors (RTDs) allows for real-time monitoring of winding temperatures, preventing overheating and extending the motor's lifespan.

Effective Load Sharing : The dual-drive arrangement ensures perfect synchronization between the two motors, crucial for maintaining efficiency and minimizing wear.

Results:

The successful integration of the modified motors has significantly enhanced the performance and reliability of the Barmac crusher. The precision engineering tailored to the client's needs ensures efficient load sharing, reducing wear and preventing downtime. This project highlights TECO's commitment to providing custom solutions that meet the exacting demands of heavy-duty applications.

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