

BF Series Geared Motors

ALUMINUM MILL ROLLER TABLE



PROBLEM

A leading global aluminum producer needed to replace the antiquated direct drive motors on an ingot transport roller table at its mill in Tennessee. The facility produces high quality aluminum sheets that are used for cans. Prior to processing, molten aluminum is initially cast into ingots that can be up to 5 ft. long and weigh approximately 44,000 lbs.

The problem was that the roller table's original motors were expensive to maintain and had been experiencing reliability issues due to heat, water ingress, and general wear and tear. The plant operators wanted a replacement drive solution that would provide enhanced reliability and allow fast, easy installation with minimal modifications required to the mill infrastructure.

After an initial plant visit, the Bauer™ Gear Motor team collected the physical data of the aluminum transport process and calculated the necessary torque, horsepower, and gearing for the application. Many prints were provided showing all critical dimensions of the installation, including motor spacing, footplate bolt patterns, shaft heights, and guard clearances.

SOLUTION

Based on the detailed analysis, Bauer engineers determined that Model BF70 parallel shaft geared motors were the optimal choice to meet the challenging application requirements. The 22 kW (30 HP) BF70 geared motors supplied feature a 14.9:1 gear ratio, an output speed of 119 RPM and a service factor of 2.1. Units also featured IP66 rated corrosion protection.

Bauer also designed and delivered custom steel mounting plates to adapt the standard geared motors to the existing mounting platform at the mill. The plates were precision-ground to thickness with multiple bolt hole patterns and special output shaft dimensions required for the replacement drop-in package.

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HIGHLIGHTS

- BF Series geared motors feature high-tensile cast housings
- Complies with NA and International standards, including NEMA, IEC, CSA and CE
- Low-noise gearing
- Corrosion protection CORO1, CORO2, CORO3
- Connection Standard with CAGE CLAMP®*
- Enhanced IP66 Enclosure Rating
- Completely enclosed, sealed against dust and moisture
- Custom steel mounting plates included



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