



YASKAWA

Run-Out Table Application

The use of adjustable speed ac motors and adjustable frequency drives has increased within the metals industry. In the past, DC runout systems had been widely accepted, in spite of maintenance and performance problems.

Runout tables traditionally used DC power supplies and permanent magnet DC motors for speed control. However, permanent magnet DC motors can be damaged by very high temperatures, which eventually cause degradation of permanent magnet strength and a consequent reduction in torque.

Additionally, motors are often exposed to wet, corrosive environments. The results are rapid brush wear, poor commutation and premature winding failure in DC motors .

AC motors are better suited for this hostile environment. The selection of NEMA design D, high slip ac motors is important in applications such as this. The speed/torque characteristics of the NEMA D motor facilitate load sharing between motors as the product passes over adjacent rolls.

Motor slip also permits the system to compensate for differences in roll diameters and motor full-load speed. This ability to slip, prevents the roll from damaging the surface of the product as it passes over rolls that would otherwise operate at slightly different surface speeds.

Adjustable Speed Drives Increase Production at Steel Mill.

A major steel producer, installed nine Yaskawa Adjustable Frequency ac drives on its 13" bar mill runout tables. The drives are used to control several hundred motors which help deliver rolled product to the cooling area.

The Yaskawa drives have the ability to precisely control both the frequency and output voltage supplied to the motors. This enables the tables to consistently run at the desired speed for all products.

Since the installation, runout table failures have been significantly reduced and problems associated with insufficient spacing between bars due to improper table speeds have been all but eliminated.