

STEEL INDUSTRY

RACO Electrical Actuator adjusting the Measuring Arm on Roll-Grinding Machines

Litterly hundreds of rolls are installed in an integrated strip steel mill, from the hot mill to the cold mill and finally to the skin pass mill. At each of the production steps the thickness of the strip is reduced until the final gage and the surface texture is reached. Rolls need to be constantly re-ground based on the wear and the abuse they are subject to. Work rolls will last longer at a five stand hot mill than in a single stand stackel mill. At a Sendzimir cold mill work rolls may need to be changed after processing a couple coils. The damaged surface of rolls must therefore be reground and measured at appropriate intervals.

Roll refinishing is a major business worldwide and because of the weight of the rolls i.e. economics of logistics dictate that the roll grinding facility be located in close proximity to the rolling mills. The rolls are measured and checked for surface quality during the regrinding process. To accomplish this, a measuring arm swings into position to take constant measurements of the roll diameter and swings out of the way during loading and unloading of the rolls.

A RACO T1L6 Electric Actuators accurately positions the measuring arm. The RACO ACME screw provides sufficient stiffness to position the arm accurately and ensures a steady, self-locking maintained position when measurement readings are taken across the length of the roll. The performance of the roll shops is a critical part of the sheet mill operation. Precisely shaped rolls are constantly needed to insure a profitable utilization of the rolling mill equipment. This reliability is in part guaranteed by applying RACO Electric Actuators for the positioning of the roll shape measuring equipment.

Technical Data of the Electric Actuators:

RACO Electric Actuator Type T1L6
Linear force: $F = 4500$ lbs.
Stroke: $s = 15.7$ inches
Linear Speed: $v = 2$ inches / sec
(controlled by a VFD inverter)



Application Report



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