

## SUCCESS STORY

### - Control, Electrical and Mechanical Revamp of FARREL Roll Grinder – ArcelorMittal Aviles Roll Shop Cold Strip Mill

#### Machine Details

OEM : FARREL

Year of Installation : 1971

Model : 60" H.D – BUR grinder w/o chocks

Control System : KP 5 - BOST 2000

Max. Roll length : 4.900 mm

Max. Roll diameter : 1.525 mm

Max. Rollweight : 32to

#### Description of Project:

The FARREL roll grinder has been selected as one out of five projects at ArcelorMittal Aviles, in order to modernize the roll shops of the hot and cold strip mills. The control system was obsolete and some mechanical parts damaged or wear, this drives the customer to select the RF4 roll grinder to be completely retrofitted. The project included a new control system, new electrical cabinet and revamp/repair of wear mechanical machine parts like telescopic covers, servicing of calliper, new cooling system, new X-axis ball screw spindle and gearbox, new crack detection system ET/UT and general maintenance on wear part.

During the project it was identified wear X-axis guide ways and the customer made an additional order to SBA. This service project has been satisfactory finished on July 2014.

#### Condition before and after job :



*before retrofit*



*after retrofit*

**Scope of Supply :**

- SINUMERIK 840D Solution Line
- New control cabinet and complete machine cabling
- Operator panel and hand wheel controller, joystick emergency stop
- Remote operator station for control center (control room)
- SINAMICS Motor 1FT6, 120S controller and power module for Z-axis
- SINAMICS Motor 1FT6, 120S controller and power module for X-axis
- SINAMICS Motor 1FT6, 120S controller and power module for U-axis
- 120S controller and power module for remaining AC-motor headstock drive
- Replacement linear encoder (X-axis and measuring device) – absolute
- Replacement probes (measuring device) – 1 Vss
- SINAMICS Motor 1FK7, 120S controller, power module measuring device
- Integration of existing Simoreg for remaining DC-motor grinding spindle
- Integration of existing measurement device
- Grinding wheel diameter measuring system (light trap system)
- sba grinder control software
- Replacement of head stock drive and grinding wheel drive
- Mechanical service measuring device
- Replacement ball screw spindle and bearings X-axis drive
- Replacement gearbox X-axis drive
- New crack detection system – Combi US/ET
- Interface for RSMS according to SBA specification
- Spanish RD 1215/97 certification incl. necessary safety equipment and actions
- Telescopic covers in Z - 2 pieces, 1 set
- Steel wear strip for telescopic cover in cooperation with AM
- Installation, Start-up and Test of Components before delivery
- Teleservice
- LaserJet printer with extra paper cartridge
- Set of documentation
- Delivery and shipment DDU
- Installation, Start-up and Test Grinding at Customer Premises
- Operator Training on-site at customer premises after start up
- Training for maintenance staff during installation and start up