

AICSA commissioned a new bar rod mill

This year, AIC South America was hired for commissioning the new bar line of Aço Verde do Brasil - AVB (former GUSA). This rolling mill was built in Açailândia city, Maranhão state, Brazil.

The bar line equipment commissioned by AIC South America comprises:

- Water boxes
- Pinch roll
- Divide shear
- Chopping shear
- Cooling bed run in roller tables
- Braking slide
- Moving rakes
- Aligning rollers and lifts
- Chain transfer system
- Tray transfer system
- Cold shear run in roller tables
- Cold shear
- Cold shear run out roller tables
- Gauge beam with gauge head

Last November, due to some performance issues, AVB asked for a consulting from AIC South America to improve the mill utilization and yield. Some of these improvements were:

- Prevent billet discharging logic review
- Complete new pacing algorithm (automatic gap control)
- Short gap detection and action at roughing mill crop/cobble shear
- Tracking accuracy
- Loop forming/deforming optimization
- New NTM cobble detection
- Roll change procedures using remote control
- Analysis and implementations in order to avoid or mitigate repetitive cobbles
- Reduce the dead times to improve the production rate

All the drives in the mill, but the medium voltage drive from NTM, were commissioned by AIC South America.

AVB rolling mill main specifications:

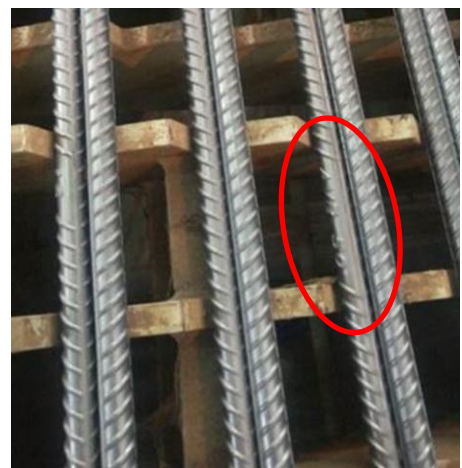
- Mechanics: PRIMETALS
- Automation application software: PRIMETALS / Siemens PCS7
- PLCs: Siemens S7 416-5 H PN/DP
- Drives: Siemens SINAMICS S120 / Siemens AC motors

For rod product, sizes 5.5 mm to 16 mm diameter, the process section from the last finishing stand is delivered to ten stand No-Twist® Mill (NTM®) "Vee" type block mill.

Intermediate mill and finishing mill are also used to produce bar products at maximum size 40 mm. For rebar products, intermediate mill can split single pass material to 2, 3 or 4 strands in operation.

Mill Production Data

- Billet Size: 150 mm square x 12.0 m long, 2080 kg nominal
- Mill Speed
 - ✓ 105 m/s for rod outlet
 - ✓ 15 m/s for cooling bed
- Mill Capacity: 130 t/h @ 100% efficiency
- Annual prime output capacity: 550,000 t



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AIC is a global system integrator providing advanced and tailored automation solutions for the steel industry, with the aim to continuously improve both efficiency, competitiveness and safety of the production processes. With more than 1000 applications worldwide and over 40 years of history, AIC can boost an unique experience in both greenfield and revamping projects in long products rolling mills and continuous casting machines.

Aço Verde do Brasil, a Ferroeste Group company, was born as a competitive player in the sector of steel, with the philosophy of sustainability as the core of its strategies, which are guided by innovation and the constant improvement of its products and processes, thus ensuring fossil fuel free operations (zero carbon footprint).

Aço Verde do Brasil activities are supported by the ongoing search for better conditions that contribute towards environmental improvement, by means of investments on differentiated, cutting-edge technology which brings immediate results and forecasts highlighted herein:

- *Production of high-quality steel, from investments already made on modern equipment;*
- *Use of sustainable charcoal obtained from planted, renewable forests, and not fossil fuel in the company's s production process, thanks to the investments made on modern gas recovery systems;*
- *For each ton of steel produced with the use of gases recovered from the process, AVB will cease to consume the equivalent of 45 liters of fuel oil;*
- *For the first 10 years of operation, AVB is expected to produce 6 million tons of steel;*
- *About 18 million tons of CO2 will cease to be emitted thanks to the sustainable use of charcoal;*
- *With the use of gases resulting from the process, 270 million liters of oil will cease to be burned.*

This press release is available at

- <http://www.aicnet.it/rassegna-stampa/>

Contact for journalists:

Mr. José Puga

- email: jose.puga@aicnet.it
- Tel: +5511 985714061

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