

Scope of Supply

Bascotecnia Steel is responsible for the complete turnkey electrical project:

Power installed: 23,000 KVA

- Project management
- Basic and detailed engineering
- Supply:
 - 22 kV medium voltage switchgears
 - Power transformers
 - Power compensation equipment at 22 kV
 - Low-voltage distribution centre
 - Main motors – manufactured by **INDAR**
 - Main DC drives – MOTOCON DC*
 - Auxiliary AC drives – MOTOCON AC*
 - AC motor control centre
 - Field sensors
 - UPS and voltage distribution
 - Control desks and local panels
 - Integrated control equipment (SISTEAM M)*
 - Control and supervision equipment (OPERATOR MT)*
- Erection
- Commissioning

(*) MOTOCON DC, MOTOCON AC, SISTEAM M AND OPERATOR MT is equipment designed and manufactured by Ingelectric-Team.



Auxiliary Cabinet



Local Control Panel



Rolling Stand DC Motor



Main Control Pulpit

After-Sales Services

- Hotline
- Spare parts in 24 hours
- Direct line with our technical staff
- Remote communication from our offices to the factory automation network

Industry Division



Combined Bar and Wire Rod Mill

AG SIDERURGICA BALBOA (Spain)



The Equipment

The installation consists of:

- 1 reheating furnace with a 90 tons/h capacity
- 1 continuous mill 18 stands
- cropping shears
- 1 dividing shear
- tempcore
- 66 m. cooling bed
- complete evacuation plant

The wire rod outlet consists of:

- 1 block with 8 stands
- 1 pinch roll and laying head device
- controlled cooling of spirals on roller tables
- 1 coil carousel

Slitting rolling will be used for diameters 8 and 10 from stand 16 onwards.

The main functions of the mill's automation and electrical equipment include:

- controlling the main substation
- loading the furnace
- regulating and controlling the reheating furnace
- mill's speed/tension/loops
- controlling the crop shear
- controlling the cut-to-length
- controlling the sheet length
- controlling the bar evacuation
- controlling the wire rod evacuation
- controlling the carousel
- controlling the water treatment plant

The stands are driven by DC motors and are controlled by four-quadrant thyristor equipment. The control equipment, based on PLC systems with high-speed multiprocessors, control the regulation process of the mill.

Some of the most outstanding speed control functions include:

- minimum tension
- regulation of position and of loops between stands
- continuity between stands,
- shear cutting, and cutting optimisation.

The mill also includes comprehensive HMIs (Human Machine Interfaces) in each control cabinet. Redundant operation and display systems are interchangeable.

Technical Features

Mill type: Continuous Mill with 18 Rolling Stands

- 9 horizontal stands
- 5 vertical stands
- 4 convertible H/V stands
- 1 wire rod unit
- 1 cooling bed
- 1 carousel

Mechanical supplier: Lagun Artea S.A.

Base material: 140x140x12.000 mm billet

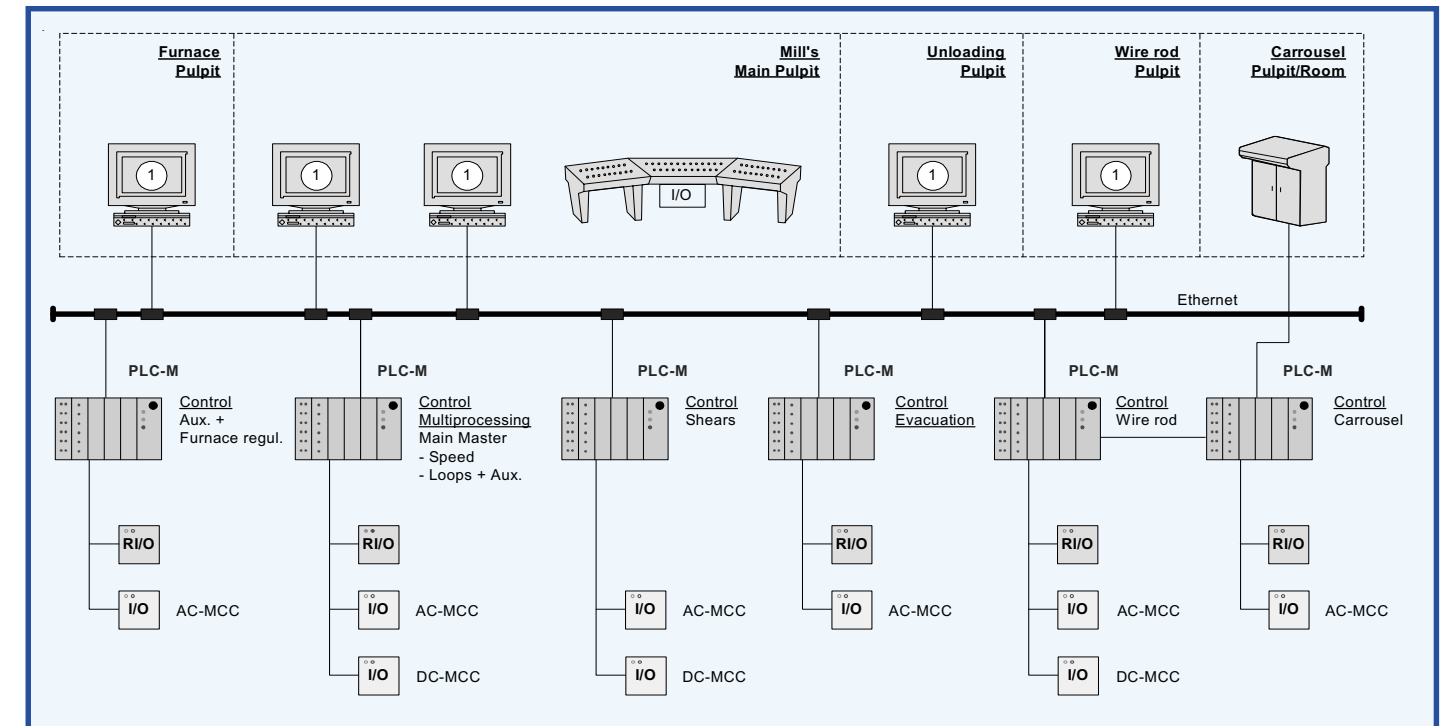
Finished product:

- Roll: 5.5 - 12 mm (max. 65mt/sec)
- Bars: 8 -50 mm
- Flats: 30 x 4 mm minimum
130 x 20 mm maximum
- Angles: 30 x 30 mm minimum
70 x 70 mm maximum
- T profiles: 30 x 30 mm minimum
70 x 70 mm maximum

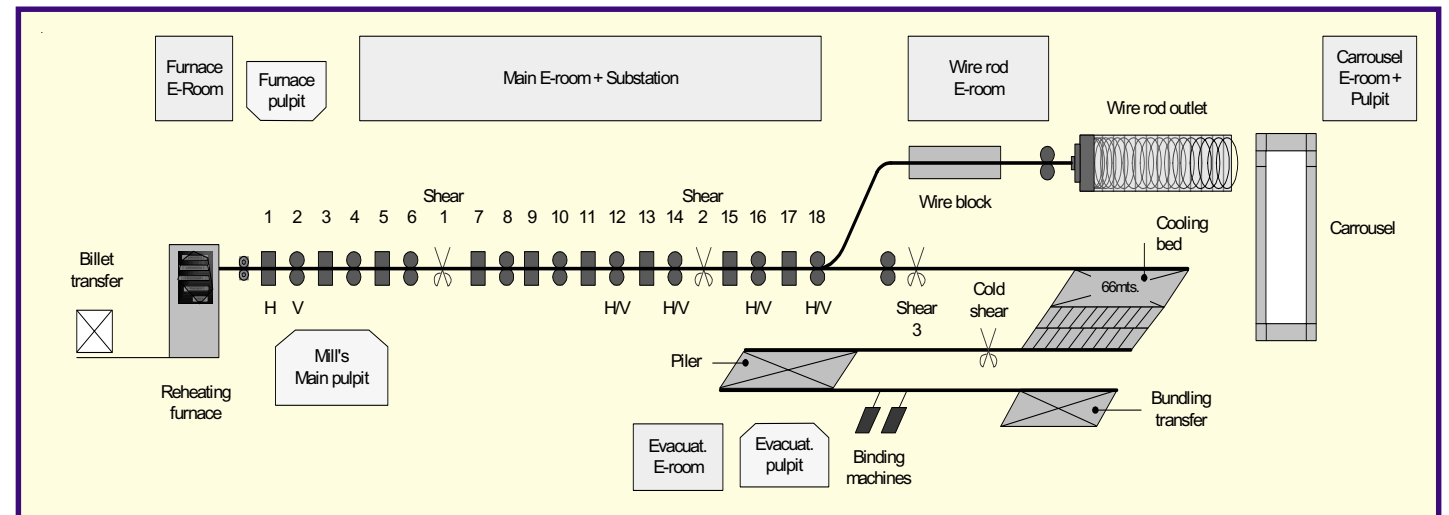
Commercial bar length: 6, 9, 12 m.



Automation Control Diagram



Mill Lay-out



Single Line Diagram

