

Hot Annealing and Pickling Line with 2-Stand Inline Mill

Lianzhong Stainless Steel Corporation

Project background

The complete offer from ABB includes L1, L2, drives (ACS 6000 and ACS 800), online adaptation model and entire power distribution system.

Customer background

Lianzhong (Guangzhou) Stainless Steel Corporation (LISCO) is a large scale, modern integrated stainless steel producer. Designed with the world's most advanced technology, LISCO will be the largest integrated stainless steel manufacturer in the Southern China.



ABB technical superiority

- Complete hardware and software solution
- State-of-the-art MV and LV drive control system with unique ABB DTC control philosophy
- Advanced tandem cold rolling mill control concept with powerful thickness and flatness control (THFB, THFF, SPFF, TENFF, MFC, etc.)
- Different selectable and fully automatic weld passage modes with minimal off-gauge length
- High accurate weld seam and defect tracking and positioning
- DPC (Dynamic Program Change) ensures smooth automatic weld passage
- Stable and high accurate tension control solution through precise Direct / Indirect Tension Control
- Automatic model adaptation and recalculation with all functions models (speed, tension, flatness, etc.)

General Information

Material	Hot rolled material AISI 2xx, 3xx and 4xx Series
Productivity	400,000 Ton/year
Strip width	800-1300mm
Strip thickness	incoming 2.0-4.0mm, Finishing 1.0-4.0mm
Coil diameter	610-2200mm
Coil weight	2800 Kg (max)
Speed	Entry 200m/min, Mill 180m/min, Process 120m/min, Exit 200m/min, Threading 30m/min
Tension	Mill 160N/mm ² , Furnace 5N/mm ² , Scale Breaker 55N/mm ² , Pickling 19N/mm ² , Looper 8N/mm ² , Recoiler 15N/mm ²

Scope of Supply

ABB supplied the electrical and automation system and carried out the plant designing, project management, training, erection supervision and commissioning work.

Power distribution System:

- Medium Voltage Switchgear
- Transformer
- MCC
- UPS (2x60KVA)
- Diesel Generator

Drive System

- Medium voltage drive (ACS6000)
- Low voltage drive (ACS800)
- Synchronous Motor (2x3000KW)
- Induction Motor

Measuring System

- Tensiometer
- X-ray Thickness Gauge
- Laser Speed Measurement

Automation System

- Level1
 - 800xA system
 - AC800PEC controllers
 - Operation/ Engineer Stations
 - Control Desks and Boxes
 - I/O Panels
 - Emergency Stop System
 - Complete processing line control system
 - Complete tandem rolling mill technological control system
- Level2
 - Manufacturing Execution System with standby server configuration
 - Adaptive Rolling Mill Mathematic Model



Control Interface



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