Project background

ABB’s scope of supply covers a broad range of electrical and automation technologies, including drive system, basic automation, TCS system, L2 system and instruments.

Customer background

Baosteel Group Corporation (Baosteel) is the most competitive producers of iron and steel in China. Baoshan Iron & Steel Co., Ltd. Special Steel Branch (BSSB) is the subsidiary company of Baosteel. The company operates a production in Shanghai with an annual capacity of around 12 million tons of steel.

These facilities will process strips and plate made of special grades such as titanium based alloys and special stainless steels. As part of the firm’s extension of production capacities for special and stainless steel grades, BSSB ordered the power and automation system from ABB for the steckel rolling mill project. They will go into operation in Shanghai in 2010.

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 hot rolling plate control and steckel mill control concept with powerful thickness and flatness control
- Accurate Micro-Tracking and Precise Position Control
- Dynamic Tension Control System
- Reliable Material Tracking and Products Management System

Control Function

- Advanced HMI system: Production Display, Sequence Supervision Display, Status and Alarm, Event List
- Roughing Mil: Tracking, AGC, AWC, Tension Control, Ski-Up Control, SSC Control, Roll Bending Control, Ghost Rolling
- Steckel Mill: Material Tracking, AGC, AWC, Profile and Flatness Control, Coiler Control, Ghost Rolling
- Up Coiler: Laminar Cooling Control, Pinch Roll Gap Control, Wrapper Roll Step, Coiler Control
Installed base reference: The BSSB Steckel Mill Hot Rolling Line

General Information

<table>
<thead>
<tr>
<th>Productivity</th>
<th>282,200 Ton/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slab Thickness</td>
<td>150-200 mm</td>
</tr>
<tr>
<td>Slab Width</td>
<td>600-1600 mm</td>
</tr>
<tr>
<td>Slab Length:</td>
<td>500-6000 mm</td>
</tr>
<tr>
<td>Strip Thickness</td>
<td>2.5-7 mm</td>
</tr>
<tr>
<td>Strip Width</td>
<td>600-1300 mm</td>
</tr>
<tr>
<td>Coil Weight</td>
<td>16 Ton (Max)</td>
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<tr>
<td>Plate Thickness</td>
<td>4-80 mm</td>
</tr>
<tr>
<td>Plate Width</td>
<td>600-2500 mm</td>
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<tr>
<td>Plate Length</td>
<td>2000-8000 mm</td>
</tr>
<tr>
<td>Plate Weight</td>
<td>6.6 Ton</td>
</tr>
</tbody>
</table>

Scope of Supply

ABB will supply the electrical and automation system and carry out the plant design, project management, training, erection and commissioning.

Drive System

- Medium Voltage Drive (ACS6000)
- Low Voltage Drive (ACS800)

Automation System

- Level 1
  - 800x A System
  - AC800PEC Controller
- Level 2
  - All line Material Tracking and Production Management

Measuring System

- ABB Mill Mate
- IMS γ -ray Thickness Gauge
- X-ray Thickness Gauge
- IMS Width Gauge
- IMS Profile Gauge

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