CONTINUOUS ANNEALING LINE
TANGSHAN IRON & STEEL CORP. ,
TANGSHAN, PR CHINA
In April 2013, Tangshan Iron & Steel Corp., a key enterprise of Hebei Iron & Steel Group based in the eastern area of Hebei province, awarded Primetals Technologies with an order for the supply of a complete new cold rolling plant, including a coupled pickling line and tandem cold mill (PLTCM), a continuous annealing line (CAL) and a continuous galvanizing line (CGL), to produce high strength automotive plate and advanced household appliance.

The complex has been designed for a global capacity of 1,600,000 tons/year.

The two processing lines were manufactured by a consortium between Primetals Technologies for the supply of the key equipment and its associated partners: Siemens Ltd China for the electrical and automation and some mechanical parts, and Andritz Selas for the furnace. Full supply of the local part was within Siemens scope.

A remarkable aspect of this project was the extremely short execution period of only 21 months from the contract signing to the first coil.

**SCOPE OF SUPPLY**

- Coil charging section equipped with an entry walking beam, a shuttle coil car, an automatic unstrapping and a weighing station
- Entry section with a double pay-off reel, a scrap evacuation outside the building
- Welding section equipped with a laser welding machine including entry and exit centering units and a notcher
- Cleaning section including 2 vertical dip dunk tanks with spray, 1 brush scrubber, 2 vertical electrolytic cleaning tanks, 1 brush scrubber and 2 HP rinsing tanks
- 2x20 strands entry looper with a capacity of 1,000 m and a top movable carriage
- Furnace section equipped with an ART (All-Radiant Tubes) furnace technology
- 2x20 strands intermediate loops with a capacity of 1,000m and a top movable carriage
- TM-TL section equipped with a 4-hi temper mill, a shape meter, a roughness gauge and a tension leveler
- A mechanical properties measurement system
- Exit looper with a capacity of 400 m and a top movable carriage

**HIGH TECHNOLOGY TO SERVE AUTOMOTIVE EXPORT MARKET (EXPOSED AND NON-EXPOSED PARTS) AND HIGH QUALITY IN HOUSEHOLD APPLIANCES**

**BENEFITS**

- State-of-the-art continuous galvanizing line able to produce latest generation of Advanced High-Strength Steels (AHSS) for automotive export market
- One single project responsibility, Primetals Technologies is leader of the consortium for the PLTCM, CAL and CGL
- By completely integrating equipment and automation, Primetals Technologies has an actual control over productivity, quality and availability performance, which are key factors for profitability

**PLANT DATA**

- Annual capacity: 750,000 t
- Material to be processed: Cold rolled steel
- Product grade: CQ, DQ, DDQ, EDQQ, SED-DQ, BH, HSS, DP, TRIP, MS
- Strip width: 700-1,600 mm
- Strip thickness: 0.20-2.50 mm
- Coil weight: 26 t
- Entry section: 650 m/min
- Furnace section: 420 m/min
- TM-TL section: 650 m/min
- Exit section: 650 m/min
- TM-TL section:
  - Tempar mill roll force: max 1,200 t
  - Tension leveler capacity: max 25 t
The information (including, e.g., figures and numbers) provided in this document contains merely general descriptions or characteristics of performance based on estimates and assumptions which have not been verified.

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