



LAIWU IRON&STEEL CO, LAIWU, CHINA
3-STRAND BEAM BLANK CASTER CC1

3-STRAND HEAVY SECTION BEAM BLANK CASTER

for the production of the largest beam blanks worldwide.

MAIN BENEFITS

- Increase of production and flexibility
- Optimum performance and availability
- Assurance of optimized solutions for unique and specialized requirements
- Maximum system and plant availability at low maintenance costs

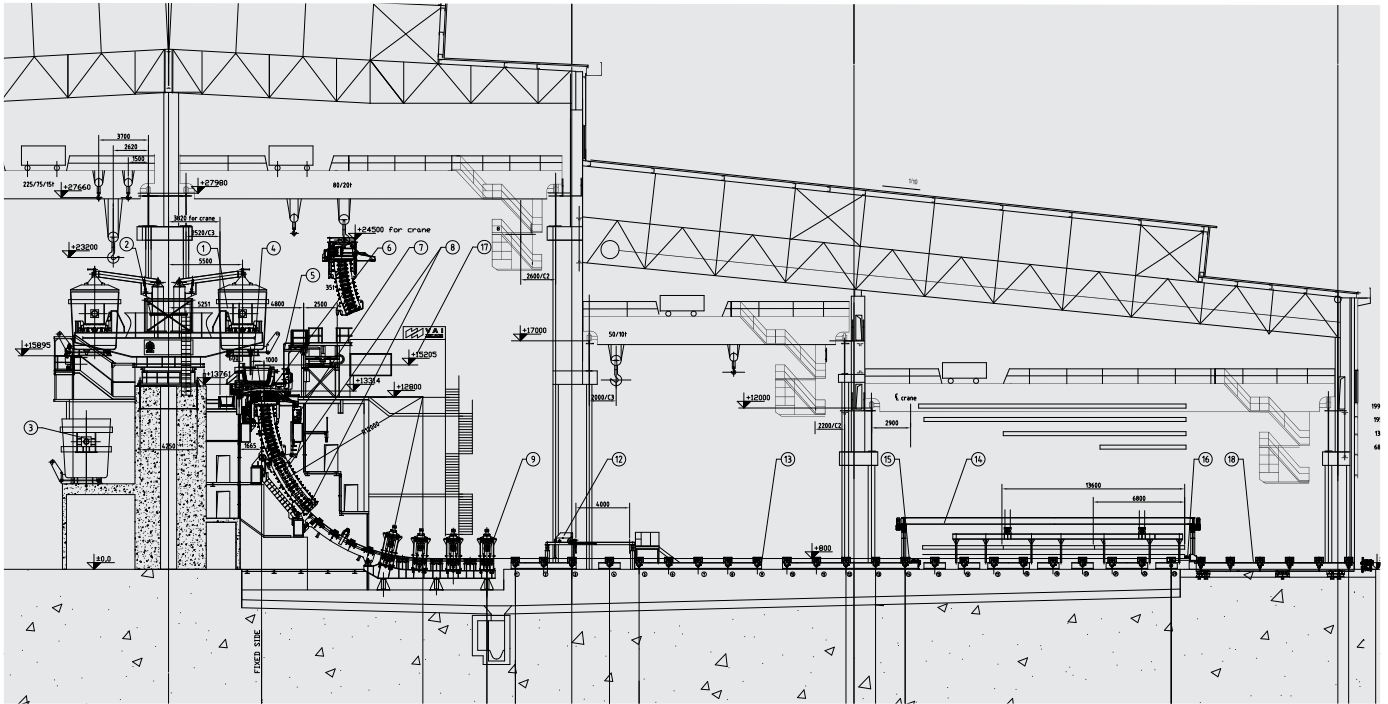
On December 17, 2003, Siemens VAI Metals Technologies (now Primetals Technologies) received an order from Laiwu Steel Group Ltd., Province Shandong, P.R. China to supply a three-strand heavy-section beam blank casting machine.

Start-up was on August 17, 2005.



SOLUTION

- Fixed fork arm turret with ladle weighing (customer supply), semi-gantry type tundish car, T-shape tundish and open stream casting with LevCon automatic mold level control
- Curved plate type mold, 800 mm length
- DynaFlex hydraulic oscillator (on-line stroke, frequency and wave pattern adjustment)
- Strand containment: segment 1 (size dependent), segment 2 (size dependent), segment 3, 4 straightening pinch roll stands
- In-line torch cutting machine, product weighing, hot charging and walking beam cooling bed
- Cooling system DynaSpeed, 1 zone with water cooling, 4 zones with air mist cooling
- Chain type dummy bar with bottom feeding system
- CC Control (Level 1), CC Optimization (Level 2), Yield Expert, Quality Expert Bloom



Longitudinal section

SCOPE

- Basic engineering for all caster equipment and utilities
- Detail engineering for:
 - Tundish equipment
 - High performance mold
 - DynaFlex hydraulic oscillator
 - Segments
 - Straightener
 - CC Control and CC Optimization
- Supply of:
 - Molds
 - Oscillators
 - Torch cutting machine
 - Automation
 - Key assembly parts

PLANT DATA

Steelmaking facilities	BOF, LF
Heat size	130 t
Caster production capacity	1.2 Mtpy
Radius	12 m
Metallurgical length	9 m
Beam blank sections	BB1: 555 x 440 x 90 mm BB2: 750 x 370 x 90 mm BB3: 1024 x 390 x 90 mm
Max. casting speeds	2.15 m/min
Cut lengths	6.8 - 13.6 m
Strand center distance	3000 mm
Steel grades	carbon structural steel, bridge structural steel, low alloy structural steel, mining steel, climate resistant steel

Primetals Technologies Austria GmbH

A joint venture of Mitsubishi Heavy Industries and partners

Turmstrasse 44
4031 Linz
Austria

primetals.com

Brochure No.: T03-O-N538-L4-R-V2-EN

Printed in Austria

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