

ABB Slab Strand ElectroMagnetic Stirrers, Slab EMS, for Ferritic Stainless Steels

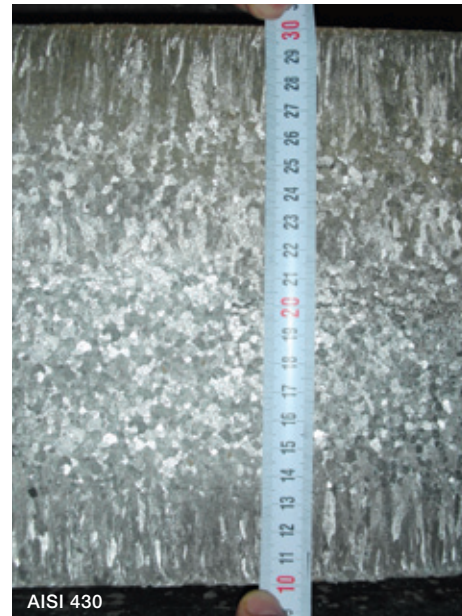
Greatly improved quality achieved at TISCO, China



Mr Zhao Shukun, Managing Director,
No. 2 Steelmaking Plant, TISCO.



Structures achieved with the new ABB stirrers
for AISI 410.



Structures achieved with the new ABB stirrers
for AISI 430.

“The ABB Slab Strand Stirrers work without problems and help us to overcome the ridging and roping problems” says Zhao Shukun, Managing Director of the TISCO steelworks in Taiyuan, China.

Summary

ABB has supplied two high power electromagnetic stirrers to TISCO, Taiyuan Iron and Steel (Group) Ltd at their steel plant at Shanxi, China. The first stirrer was commissioned in 2006 and after successful trials the order for the second unit was confirmed in 2007.

Customer

TISCO manufactures high quality stainless steel products; having an annual capacity of 3m tons it is the world's largest producer of stainless steel.

Highlights

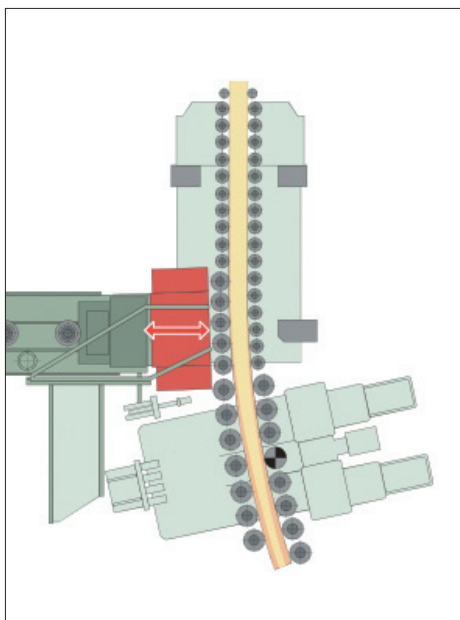
With the ABB high power electromagnetic stirrers TISCO casts ferritic stainless steel strands with equiaxed ratios consistently above 50%. This has enabled TISCO to almost completely eliminate ridging and roping defects in the final products, rolled stainless steel sheets and has helped to establish them as China's leading producer of high quality stainless steel.

ABB Scope

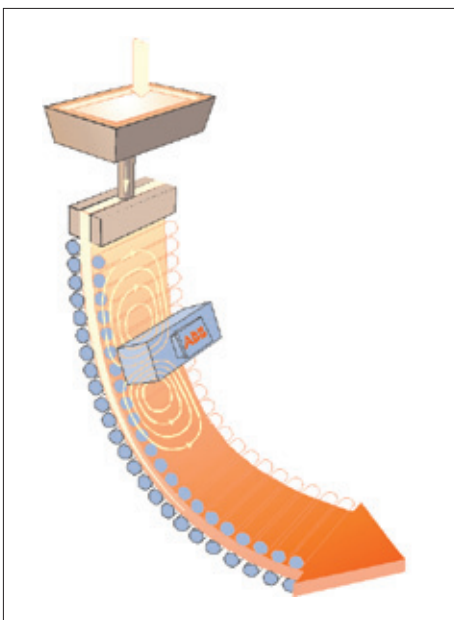
For the installation at TISCO, Shanxi, ABB supplied two box-type slab strand stirrers, model ORC 1600/2000M, together with the main auxiliary components including frequency converters and water cooling system. ABB also undertook extensive training of TISCO personnel and was responsible for commissioning the complete stirrer installations.

Benefits

- The high stirring force imposed produces a very long stirred zone
- Superheat is removed very effectively
- Large numbers of crystal fragments are generated in the liquid core
- Equiaxed ratio consistently above 50%
- The stirrer is located outside the rollers to give trouble free operation



Stirrer mounted behind rollers.



Long stirred zone.



ABB Box-type slab strand stirrer.

Leading solutions and challenging objectives

ABB is the world's leading manufacturer of stirrers for continuous casting machines and furnaces and was therefore pleased to take up the challenge of developing a high power unit to help meet TISCO's requirement to eliminate surface defects from their rolled ferritic stainless steel sheets.

ABB has the metallurgical and electrical expertise and the resources to offer comprehensive support to steel producers from the project concept through to commissioning and maintenance. These resources include simulation competence for magnetic fields and metal flows in the strand.

ABB is a world wide enterprise with a very strong network of sales, service and manufacturing facilities. This facilitates fast and effective communication and support to customers.

ABB Slab SEMS help customers manufacture high quality stainless steel products.

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