

Sapa Shanghai, China has successfully installed a Stressometer System in the Hot Rolling Mill

Sapa Shanghai's aluminium hot rolling mill has achieved 10% speed increase and 2% yield increase through Stressometer flatness control



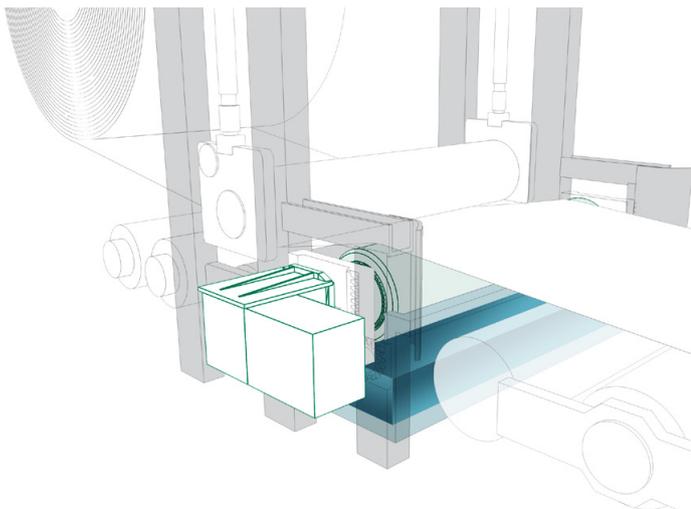
First pass - Stressometer roll in lower position



Last pass - Stressometer roll in measuring position

Background

At the end of 2011, Sapa Shanghai had for the first time a flatness system installed in the hot rolling mill. With a slab temperature of up to 500°C the requirements are very high to withstand the tough environment. Together Sapa and ABB set up the prerequisites for a successful installation of a flatness system. The positive functions of the Stressometer Flatness System have resulted in very satisfactory and reliable flatness measurement and control in Sapa's hot rolling mill.



What has been achieved?

We ask Mr Chen Peng, Process Control Engineer:

"The installation is working very well and the results are very good from the Stressometer Flatness system in our hot rolling mill. From December 2011, when we started running a closed loop for hot Stressometer, we have seen improved flatness and higher speeds in the cold rolling mill.

We have seen improved control for strip profile; a good profile is very important. We have also seen improvements in quality for the cold rolling mill.

There are some main benefits with a hot Stressometer. We get a good tail-out from the hot rolling mill saving material and getting out more material from the cold rolling mill; and also, we achieve a better yield.

To summarize: A good tail-out from the hot mill means a good start in the cold mill."

"The good tail-out from the hot rolling mill results in high quality head-in to the cold rolling mill. We have increased the rolling speed, and the yield is also better than before."

Mr Bengt Jansson, Strategic Project Director, comments the Stressometer installation in Sapa's hot rolling mill:

"When we create new process projects we pick the best solutions from Sapa Sweden and Sapa Shanghai and keep up the development with a minimum of mistakes.

The hot Stressometer installation is running very well and we have really achieved better quality. The good tail-out from the hot rolling mill results in high quality head-in to the cold rolling mill. Further, we have increased rolling speed and the yield is also better than before."

Bottom line improvements and rewards

- Basic cooling amount decrease with 50% to make spot cooling more effective to improve flatness
- 10 % increased speed at breakdown passes in the tandem cold mill (TCM)
- 2 % increased yield at edge trimming passes in the tandem cold mill (TCM)
- Speed increased from 300 to 350 m/min at edge trimming passes

Supplied equipment

ABB Force Measurement has supplied the following to the hot rolling mill:

- One Stressometer 8.0 FSA flatness system
- One Seamless roll, diameter 313 mm, 32 measuring zones, each zone 52 mm wide

Mill data HRM, 4-hi single stand, reversible

Mill builder	CNPT/ProEng
Rolled material	Aluminium
Tonnage	100,000 tons/year
Coil weight	9 tons
Slab/strip temperature	500°C
Strip width min./max.	900 – 1500 mm
Exit strip thickness min./max.	3 – 5 mm
Max. rolling speed	225 m/min



Sapa Heat Transfer (Shanghai) Ltd.

Sapa Heat Transfer (Shanghai) Ltd. is a wholly owned subsidiary of Sapa AB in Sweden, Sapa Heat Transfer (Shanghai) Ltd. together with the sister company, Sapa Heat Transfer AB in Sweden, are the only rolling mill plants in the world that works exclusively with rolled aluminium to produce brazed heat exchangers.

The Sapa Group develops, manufactures and markets value-added profiles, profile-based building systems and heat exchanger strips. The Group's business concept is built on close cooperation with their customers located all over the world, and has a combined turnover of USD 5 billion and 15,000 employees in some 33 countries.

In Shanghai Sapa began production in 1999 and over the years they have continuously invested in enhancing their production capacity and competencies in order to meet the always growing market demand. By 2010, the currently ongoing expansion investment in operation will allow them to reach an annual production capacity of no less than 80,000MT!

Sapa is concentrating all their resources on one single task ... to be the preferred partner for manufacturers of brazed aluminium heat exchangers. (For more information visit www.sapagroup.com)

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