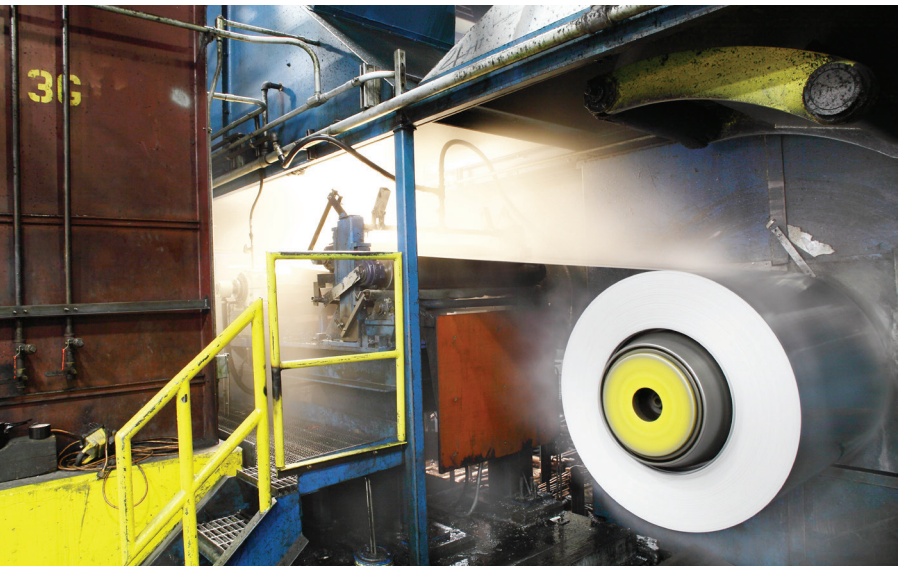
MEASUREMENT & ANALYTICS

Jupiter Aluminum, Hammond, Indiana, USA

Stressometer Systems and Millmate Thickness Gauges



Jupiter Aluminum's three rolling mills are running with three Stressometer systems and six MTG thickness gauges.

"After the Stressometer installations we have less rejects, increased speeds and 20 % productivity increase".

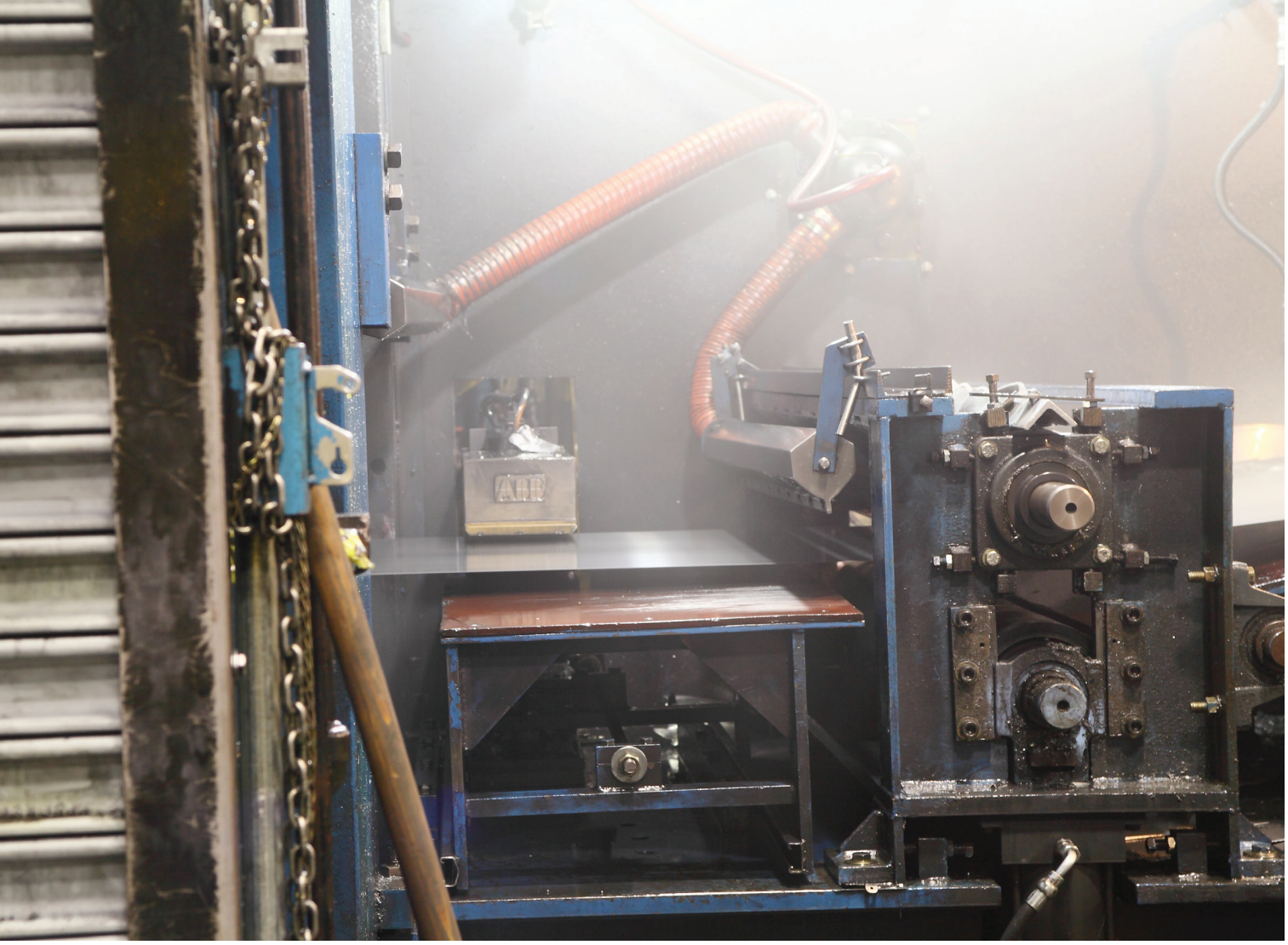
Measurement made easy

Background
In 2006, Jupiter Aluminum had the first contact with ABB. Sales engineer Pat Mueller presented the benefits with ABB's Millmate Thickness Gauge (MTG) and he also showed a live MTG-demo to prove the features with the unique Pulsed Eddy Current measurement technology (PEC). Jupiter decided to go with ABB's thickness gauges and the MTG-gauges were successfully installed in the mills and the measurements were very accurate.

At the same time Jupiter started talking about acquiring a shape control system in Cold Mill 2. Jupiter contacted ABB and the Stressometer flatness control system, with the unique magneto-elastic Pressductor technology, was presented. Two years later, in 2008, Jupiter had two Stressometer systems installed in Cold Mill 2 and in Cold Mill 4. The two ABB flatness control systems were running very well and two years later, in 2010, Jupiter decided to go for a third Stressometer system in Cold Mill 3. Today, three Stressometer systems and six MTG-gauges are rolling just fine at Jupiter Aluminum premises in Hammond, Indiana.

What has been achieved?
We ask Mr Rob Krupinski, Electrical Engineer, and Mr Steve Swisher, Rolling Mill Manager, who concordantly express their opinion about the Stressometer and MTG-gauge installations: "MTG thickness gauge is measuring very accurately and has good repeatability. We do not have to recalibrate for alloys – there are no alloy problems with MTG compared to X-ray. We have not had any customer complaints in 4 years and the over time failure rate is much less with MTG than before. We have decreased the variability in our off-gauge material. Earlier we had to check every fifth coil."

"Regarding maintenance – there is much less problems with MTG than before. Now we have consistency of the gauge control in the mill. We produce what we expect to produce."



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01 ABB's MTG thickness gauge installed in rolling mill.
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02 Mr Nick Urena, Electrical Engineer, and Mr Steve Swisher, Rolling Mill Manager.

”The Stressometer roll is very robust and the complete shape system is excellent. We have no complaints on Stressometer and now we have much better controlled flatness. As a result we see lower I-units, increased speeds and less returns leading to a productivity increase of 20 %.”

“It is easy to navigate the system. The measurement equipment is working very well, but we need more training to keep ourselves updated on all functionalities. Sometimes you need someone to see if you do wrong. Otherwise, ABB products just roll and go and there is no problem.”

“In order to keep the measurement products in good condition we do the recommended maintenance. We have start-up checks for operators. At shift change we have startup checklists for all operators. We want to do things right from the beginning.”

“To summarize: ”After the Stressometer installations we have less rejects, increased speeds and 20% productivity increase.”

Mr Nick Urena, Electrical Engineer, adds his opinion about the Stressometer and MTG-gauge installations: “We recalibrate MTG thickness gauge only once per year, it’s a wonderful gauge.

“The Stressometer system has a maintenance-free roll, but we do the regular checks. For example, the humidifier is checked every other month and we fill it with instrument water. In order to keep infrequent users updated on the Stressometer and MTG systems we need training on a regular basis regarding interaction on displays and equipment.”

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“The Stressometer roll is very robust and the complete shape system is excellent. We have no complaints on Stressometer and now we have much better controlled flatness.”

Rob Krupinski, Electrical Engineer and Steve Swisher, Rolling Mill Manager at Jupiter Aluminum in Hammond, Indiana, USA.

Company profile
Jupiter Aluminum is a major employer in northern Indiana and has grown substantially since 1992. Located on 25 acres and with more than 600,000 square feet under one roof, the company has emerged as a significant actor in the building and construction market.

During the last ten years, the plant has been substantially upgraded and virtually replaced. In December of 2004, a new 42" Hazelett Continuous Caster was installed to bring the company's output to a new volume platform.

The employees of Jupiter Aluminum are their most important resource. The team is well trained and dedicated to producing a quality product that meets or exceeds the requirements of Jupiter's customers. It is their most important challenge to effectively satisfy the total needs of its customers and provide the very best value possible.

Jupiter Aluminum is one of the largest employers in Hammond, Indiana. The company has been successful in serving customers and has kept increasing its workforce since the start of operations at its two locations in Indiana.

This listing is for Jupiter Aluminum Corporation's headquarters location in Hammond, Indiana. It primarily operates in the alumina and aluminum production and processing companies industry.

- Jupiter Aluminum Corporation was founded in 1992, and is privately held.
- Jupiter Aluminum Corporation employs around 200 people.

For more information visit:
www.jupiteraluminum.com

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Supplied equipment

ABB Force Measurement has supplied the following equipment to Jupiter Aluminum's three rolling mills in Hammond, Indiana, USA:

- Three Stressometer systems
- Three Standard rolls, diameter 313 mm
- CM2: 24 measuring zones, 24 x 52mm
- CM3: 24 measuring zones, 24 x 52mm
- CM4: 28 measuring zones, 28 x 52mm
- Six MTG standard gauges
- Six standard sledges for horizontal movement of the gauges

Mill data

CM 2, 4-high single stand rolling mill	
Mill builder	Jupiter Aluminum
Electrical supplier	Crown ESA
Rolled material	Aluminium
Total production (CM2+CM3+CM4)	300,000 tons/year
Strip width min./max.	24 to 42" (609.6 to 1066.8 mm)
Exit strip thickness min./max.	0.009 to 0.080" (0.2286 to 2.032 mm)
Rolling speed	2000 ft/min (600 m/min)
Mill motor	2000 hp
Coil weight	8.0 tons max

CM 3, 4-high single stand rolling mill	
Mill builder	Jupiter Aluminum
Electrical supplier	Crown ESA
Rolled material	Aluminium
Total production (CM2+CM3+CM4)	300,000 tons/year
Strip width min./max.	24 to 42" (609.6 to 1066.8 mm)
Exit strip thickness min./max.	0.009 to 0.080" (0.2286 to 2.032 mm)
Rolling speed	2000 ft/min (600 m/min)
Mill motor	1500 hp
Coil weight	8.0 tons max

CM 4, 4-high 2-stand tandem cold mill	
Mill builder	Jupiter Aluminum
Electrical supplier	Crown ESA
Rolled material	Aluminium
Total production (CM2+CM3+CM4)	300,000 tons/year
Strip width min./max.	24 to 56" (609.6 to 1422.4 mm)
Exit strip thickness min./max.	0.007 to 0.150" (0.1778 to 3.81 mm)
Rolling speed	2000 ft/min (600 m/min)
Mill motor	4000 hp
Coil weight	8.0 tons max

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abb.com/thicknessgauging

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