Measurement made easy

Baosteel has installed many of ABB’s products in their processing lines – in hot strip annealing and pickling lines for stainless and special steels

Introduction

Baosteel’s processing lines for stainless and special steels are running with ElectroMagnetic Flowmeters, Vortex/Swirl meters, Pressure transmitters, Actuators/Positioners, Analyzers, Stressometer Flatness Control Systems, PillowBlock Strip Tension Systems and Millmate Strip Scanner Systems, all from the ABB Measurement Products portfolio.

For more information

Further details of the ABB Measurement products are available for free download from www.abb.com/measurement or by scanning this code:

Further details of Baosteel are available from www.baosteel.com or by scanning this code:
ABB Measurement Products
Baosteel Group Corporation | Shanghai | China

Baosteel overview

Baosteel Group Corporation (hereinafter referred to as Baosteel) is a typical enterprise arising from China’s reform and opening-up. The construction of Baosteel commenced on the bank of Yangtze River in north Shanghai on December 23rd, 1978, only one day after the closing of the Third Plenary Session of the Eleventh CPC Central Committee. After over 30 years of development, Baosteel has grown into China’s most competitive iron and steel group with the highest level of modernization. At the end of 2012, Baosteel had a total of 130,401 employees located all across the world.

Baosteel, with its primary operation in iron and steel, produces premium iron and steel products with high technology contents and added values and has fostered three major product lines, namely carbon steel, stainless steel and special steel.

In 2012, Baosteel achieved steel output of 43.83 million tons and a total profit of RMB 10.4 billion, ranking the second among the world’s iron and steel enterprises. Last year, in 2013, Baosteel was listed among the Fortune Global 500 by the U.S. Fortune magazine for the tenth consecutive year and ranked 222nd. In addition, Baosteel has also been awarded the honor of the ‘World’s Most Admired Company’ for another year and the highest credit ranking among the world’s iron and steel enterprises by the Big Three credit rating agencies, namely Standard & Poor’s, Moody’s and Fitch Ratings. In 2012, Baosteel has been recognized jointly by the Ministry of Industry and Information Technology and the Ministry of Finance as the ‘National Model Enterprise for Technological Innovation’.

What are the main benefits with ABB Measurement Products and how are the different measurement products performing in Baosteel’s processing lines?

ABB Measurement Products portfolio installed at Baosteel, Shanghai consists of:

— Electro-Magnetic Flow meters
— Vortex/Swirl meters
— Pressure transmitters
— Actuators/Positioners
— Analyzers
— Stressometer Flatness Control Systems
— PillowBlock Strip Tension Systems
— Millmate Strip Scanner Systems

We ask Mr Jia Fan Zeng, representing BaoSteel No 5 and Mr Min Shi, representing BaoSteel No 1 to comment the ABB Measurement Products in Baosteel’s processing lines:

"We have long experience working with ABB and in general ABB products are very good, including the MP-products"

"We also want to mention that Baosteel is the most modern steel plant in China. Baosteel has the ambition to be in the frontline with measurement products and that’s the reason for us to buy quality products from ABB. And especially we want to emphasize the excellent Ratio Quality-to-Price provided by ABB"

Electromagnetic flowmeters

The competitive ABB Measurement Products have been installed since 2006 and the instrumentation has been working very well ever since.

"The performance of the Electro-Magnetic Flow meters (EMF) has exceeded expectations and the main benefits are:

Excellent quality
Service: On-time service, from commissioning to after-sales is good
Stable measurements
High measurement accuracy
Robust products
No maintenance

To summarize: Ratio quality-to-price is good"
The EMFs are placed in the control loop and they are installed where there is water flows such as:

- Cooling water
- Recycled water
- Waste water
Vortex / Swirl meters

ABB Measurement Products have a wide product portfolio of competitive Vortex/Swirl meters and the performance of the meters is very good. Vortex is very critical in measuring steam flow and water.

"Main benefits with ABB Vortex/Swirl meters are:
- High Accuracy – very important & crucial
- Problem-free installation & service – very important & crucial"

Pressure transmitters

ABB Measurement Products have a wide product range of pressure transmitters and the performance of the transmitters is very good in comparison on the commodity-like market with many competitors.

"We have very good experience from the old ABB pressure transmitters still measuring very accurately after running more than 10 years in the steel mill"

At Baosteel pressure is measured for general purposes such as:
- Water pressure
- Gas pressure
- Steam pressure
Actuators / Positioners

ABB Measurement Products, being one of the major players on the world market, have a wide portfolio of Actuators & Positioners. The Actuators & Positioners performance is very reliable and has a good reputation on the market.

“We really want to emphasize ABB’s well-designed products in the Actuators & Positioners portfolio. Further, the quality is excellent and you can trust the products for many years to come.”

Analyzers

ABB Measurement Products, being one of the major players on the world market, have a wide portfolio of Analyzers in for example PH connectivity, dissolved oxygen, turbidity and water treatment supply.

“The performance of the Analyzers is:
  - Very accurate
  - Very reliable
  - Very stable analyzers
  - Very robust analyzers

There is no need of maintenance for ABB Analyzers.”

Fig. 7: ABB Contrac electric valve actuators

Fig. 8: ABB 4675 turbidity system, panel-mount analyzer with wall-mount 4670 and 7997 sensors
Fig. 9: ABB SCC-C Sample gas cooler

Fig. 10: ABB FE2 modular sample gas extraction system filter unit
Stressometer flatness control systems

ABB Measurement Products have a leading position on the world market for Flatness measurement & control systems in metal rolling mills.

"Stressometer is the best flatness measurement system on the market"

"We know the Stressometer system well and it is really good"

"We have had hands-on training at the ABB facilities in Sweden with good results"

PillowBlock Strip Tension systems

ABB Measurement Products have a leading position on the world market for Strip tension measurement solutions in metal rolling mills.

"Tension control is one of the most important process parameters in a process line. In order to achieve good tension control you need reliable input of the actual tension. Therefore the selection of reliable tension load cells is crucial. For Baosteel the choice was ABB’s Large PillowBlock Tensiometers and the underlying Pressductor technology. We appreciate the reliable and accurate measurements with ABB’s Large PillowBlock Tensiometers"

"ABB PillowBlock load cells are really robust and reliable"

Fig. 11: Stressometer Measuring Roll with HMI

Fig. 12: PillowBlock Strip Tension Load cells
Millmate Strip Scanner Systems (MSS)

MSS-systems are widely used to measure strip edge position, off-center and strip width in rolling mills as well as in processing lines. "The MSS-sensors have been running perfectly for many years of operation. MSS provide reliable solutions for strip position and width measurement"

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