

Alunorf in Neuss, Germany has successfully installed a Digital Transmission Unit (DTU) on the Stressometer Flatness System in KW2 (CRM 2)

Alunorf has four cold rolling mills equipped with altogether five Stressometer Flatness systems. The new Digital Transmission Unit (DTU) is running perfectly on the Stressometer Flatness system in KW2 (CRM 2).

Measurement made easy



Background

Two decades ago Alunorf set up an organizational function for improving flatness measurement and control at the plant in Neuss, Germany.

Consistent signal transmission from the flatness roll is very important in a flatness system. Previous signal transmission methods have all required maintenance at regular intervals. Alunorf and ABB have worked together over the years to reduce this maintenance. The last step in this development has been to install completely contact-free and maintenance-free transmission of signals and power to the roll. The unit is called Digital Transmission Unit (DTU) and has been running flawlessly at Alunorf since February 2014.

Alunorf is always targeting an absolute minimum of maintenance and downtimes. The new maintenance-free DTU will help Alunorf achieving this.

What has been achieved?

What are the main benefits with the Digital Transmission Unit (DTU) installed on the Stressometer Flatness Measurement & Control System?

We ask Mr Wolfgang Kaspers, Product & Process Technology, Cold Mill / Finishing:

For Alunorf, being a very high-producing aluminium mill, minimum maintenance and minimum downtime is absolutely crucial in order to maintain a 100% capacity utilization that has been the case for a long time.

"We are constantly chasing the weakest links in order to minimize maintenance and downtime. With signal transmission being the weakest part of the flatness system, we have, over the years, been going through different phases with Schleifring and STU. Now we have reached the next level, a maintenance-free Digital Transmission Unit (DTU) to fulfil Alunorf's tough requirements to stay competitive.

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With the DTU we don't look at the transmission signals daily anymore. The DTU is working perfectly and nowadays I sleep well at night.

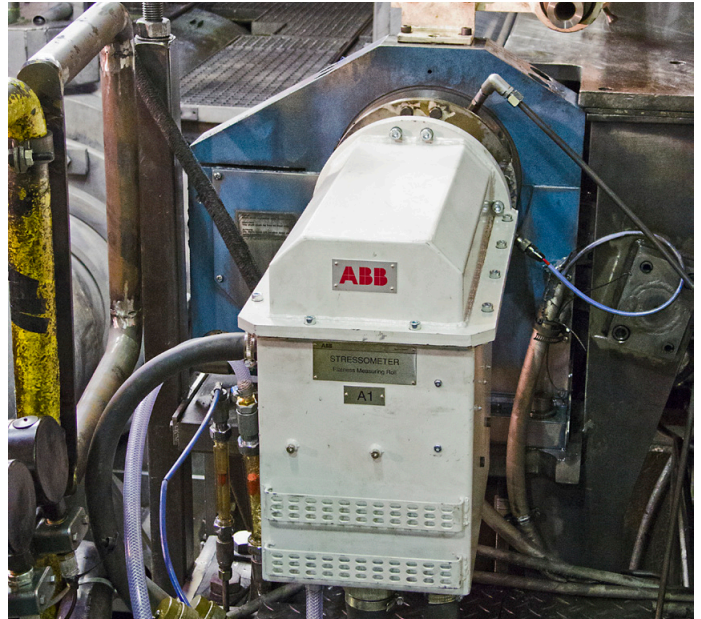
Also there is no decrease of signal quality after several months of running the DTU-installation. And it just continues like that. Excellent.

In February 2014 the DTU operated reliably, had correct and perfect readings and could go into production in KW2 (CRM 2).

We are very pleased with the commissioning team from ABB. They have really solved the problems one after the other. They are really specialists and really engaged.

The cooperation between ABB and Alunorf has been working very well and the final result is very satisfactory.

We, Alunorf, have shown our acceptance by ordering 2 more DTUs. We did this as soon as we were convinced that the test-DTU on KW2 was working without any problems"



DTU (Digital Transmission Unit) installed on Stressometer Flatness and Control System.



Left: Mr Andrea Ferrari and Mr Roger Ågren commissioning the DTU at Alunorf.



Right: Mr Magnus Sollander commissioning the DTU cabinet at Alunorf.

Facts on Alunorf

Aluminium Norf GmbH was founded in April 1965 by former Alcan (now: Novelis) and former VAW (now Hydro Aluminium) as a joint venture. This joint venture in Norf, near the city of Neuss, then created the biggest aluminium rolling and remelt plant in Europe, setting new standards for the processing of aluminium to sheet and plate for a wide range of applications. To meet the demand for even higher quality and ever increasing production volume Aluminium Norf GmbH has undergone considerable expansion and modernisation since its foundation. With the biggest expansion between 1990 and 1994 Aluminium Norf GmbH – in short Alunorf has become the world's largest aluminium rolling and remelt plant.

The area of Aluminium Norf GmbH encompasses 577,000 m² - this corresponds to the size of 60 soccer fields. 285,000 m² thereof are used for buildings, 212,000 m² for roads and railway tracks. Alunorf's production comprises the three units aluminium melting, hot rolling and cold rolling. Auxiliary and service departments, e. g. energy supply, maintenance workshops and stores support the production units.

Alunorf employs more than 2,200 people; the production is organized in shift systems that allow operation around the clock, 7 days a week. The sales volume has continuously increased and now totals to approx. 2,000,000 tons per year.

Mill data	KW2
Mechanical supplier	SMS
Thickness	3 – 0.22 mm
Min. width	1000 mm
Max. width	1716 mm
Rolling speed	1900 m/min

Facts on Stressometer

The Stressometer System is since 50 years recognized as the world standard in flatness measurement and control in flat rolling mills. Based upon the embedded experience from more than 1000 installations the Stressometer System provides the advanced automated control system needed to produce the high quality flat strip demanded by producers.



"In February 2014 the DTU had correct and perfect readings and could go into production in KW2 (CRM2)"



"A really good team from ABB. They have solved the problems one after the other. They are specialists and they are really engaged"
ABB team consists of Magnus Sollander, Roger Ågren, Andrea Ferrari and Stefan Stjernén (not in photo).

ABB Force Measurement products installed at Alunorf Neuss:

Stressometer Flatness Measurement & Control

High performing flatness measurement and control is a critical factor for flat rolling mills. It is the difference between winning and losing market share. A well-functioning system will have great impact on the bottom line result. The Stressometer System is designed to combine the best strip flatness performance with the lowest cost of ownership.



Digital Transmission Unit (DTU)

ABB's Digital Transmission Unit provides non-contact, maintenance-free sensor excitation and signal transmission from the Stressometer flatness measurement roll.



Contact us

ABB AB

Process Automation

Force Measurement
S-721 59 Västerås, Sweden
Tel: +46 21 32 50 00

www.abb.com/stressometer

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