

A moisture control system for wood pellet production **Good Return on Investment**

For a year now, one of Scandinavia's largest bioenergy company, Neova AB, has been using the MoistureScan density-independent microwave-based moisture measurement system from Döscher & Döscher GmbH, Germany, to measure the moisture in the raw product.

Every year Neova supply approximately 5 TWh of fuel/energy.

– Our customers range from big heating plants to private home owners. We have a widely spread system of retailers and several production units, which keep us close to our customers, says Roger Norman, plant manager.

Neova consists of four sections: Local Fuels, Refined Fuels, Heat & Power, Garden & Environment

– We have four production locations for wood pellets in Sweden: Främlingshem (Valbo), Ljusne, Vaggeryd, Österbymo, continues Roger Norman.

Neova's wood pellet is in fact a refined fuel consisting of nothing but pure Scandinavian soft wood, dried and compressed into small cylindrical energy bundles.

Why does pellet production require moisture measurement?

Moisture is becoming an ever more important quality criterion in the production of wood pellets, both during the production process itself and in the completed pellets.

The information about the saw dust moisture is necessary both to control the dryer and to monitor the continuous production process.

During the production process, a raw material moisture in the range 6 to 18% is necessary depending on the machines used, for example, most presses work with an input material moisture

of 10 to 13%. The completed pellets require a moisture content of 7 to 10%.

Why MoistureScan?

In the case of the plant at Främlingshem, the moisture of the raw saw dusts has to be measured approximately 10m behind the dryer.

– We use the measured moisture values obtained here both to control the dryer and to monitor the production process and therefore the product quality.

After testing various other moisture measurement methods, we used a microwave moisture measurement system of type Moisture-

Scan by way of a trial in December 2008. We retained the measurement system after successful completion of the test phase, says Roger Norman

Technology

Due to its flat design, the MoistureScan in-line measurement system used is easy to integrate into a product flow, such as distributor screws, conveying ducts, and storage containers.

The 2-parameter microwave resonance technology (2PMR) from Döscher & Döscher, makes MoistureScan sensors function independently of the density, the color, and the surface structure of the raw sawdust.

The complete lack of moving parts and the robust design ensure low maintenance, and the method has the advantage over optical systems

of not requiring cleaning and recalibration.

Owing to use of the patented reference resonator, very good compensation of sawdust temperature fluctuations is achieved over a wide temperature range.

The acquisition of up to 10 measurements per second ensures fast and continuous monitoring of the important production factor raw sawdust moisture.

Based on a standard calibration for soft wood contained in the scope of supply, the calibration was optimized in the days following installation using an off-line moisture reference system.

After completion of the calibration, the system is ready to use and can be deployed for control and monitoring via the integrated 4-20mA outputs. The operating terminal supplied also enables call-up and evaluation of short-term trends and long-term data.

Benefits for Neova in Främlingshem

– In our pellet production process, effective and reliable monitoring of quality parameters is an absolute necessity. We have found that MoistureScan is an exact match to our needs when it comes to in-line measuring of moisture. We installed it, we calibrated it, and since then we have been benefiting from it, says Roger Norman

Conclusion

After problem-free use of a MoistureScan in the Främlingshem factory in



Roger Norman (right, Plant Manager) & Rainer Otto (left, Technical Director) behind the dryer, in front of the MoistureScan system



MoistureScan in a distributor screw



MoistureScan – In-line Moisture Measurement System from Döscher & Döscher GmbH

the first year, Neova is planning the acquisition of further measurement systems in two other production facilities.

Roger Norman (Neova AB), Rainer Otto (Döscher & Döscher GmbH)
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Babcock & Wilcox Vølund A/S Buys Götaverken Miljö

Babcock & Wilcox Vølund A/S announced the acquisition of all shares in Götaverken Miljö AB (GMAB), Sweden, from The Sixth Swedish National Pension Fund. Hereby Babcock & Wilcox Vølund follows its strategic objectives with focus on growth.

The acquired company employs highly educated and skilled specialists within flue gas cleaning and energy recovery. Thereby the company will both complement and expand Babcock & Wilcox Vølund's product and service offerings to the cleantech industry all over the world.

With the acquisition of GMAB, Babcock & Wilcox Vølund has taken a major step forward in the company's strategic focus on both growth and development of the company's global product and service offerings within the cleantech sector. GMAB will continue its activities with the current management, staff, and company name.

– GMAB fits perfectly into the Babcock & Wilcox Vølund strategy and organisation.

Together with GMAB our product offerings will be expanded with in-house resources and competencies of the highest standards in the world within the cleantech industry, said John Veje Olesen, Managing Director at Babcock & Wilcox Vølund A/S.

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