

MOISTURE MEASUREMENT FOR WOOD CHIPS

Optimize your pulping process with
accurate online moisture measurement



ONLINE MOISTURE MEASUREMENT FOR WOOD CHIPS

Processing wood chips into any final product requires the wood first to be made into pulp. Kraft pulping, or pulping performed with the aid of chemicals, is the predominant method in the world today. To optimize the use of chemicals in Kraft pulping, it is mandatory to know the moisture content of the wood chips. Incorrect, or surface only moisture measurements yield to incorrect or incomplete moisture readings, what results in chemical overuse (costly) or chemical underuse (poor yield).

Unlike conventional measuring techniques, Berthold's microwave moisture measurement sends a signal through the entire bed depth of wood chips, providing a more complete representative measurement than a „surface only“ result. Berthold's more complete moisture measurement better reflects real conditions and results in better control over pulping chemical use.

Instruments for an ideal cooking process

The Berthold measuring system LB 568 provides an online and real-time moisture measurement of digester-fed wood chips. The LB 568 generates multiple microwaves in a wide frequency range, emitted by an antenna below the conveyor. The microwaves penetrate the wood chips and are received by a second antenna above the belt. When penetrating the wood chips, the microwave signal's characteristics change in terms of attenuation and phase shift. These changes directly correlate to the wood chip moisture.

Fluctuations in the layer height and bulk density can be compensated for by using a radiometric area weight measurement. The complete system thus provides a stable and reliable moisture reading.

The microwave moisture meters are installed on the feeder belt to the digester. The electronics for data evaluation are installed close to the antennas. Depending on the representativeness of the sampling and the measuring conditions, a typical accuracy of better than $\pm 1.0\%$ moisture can be achieved.

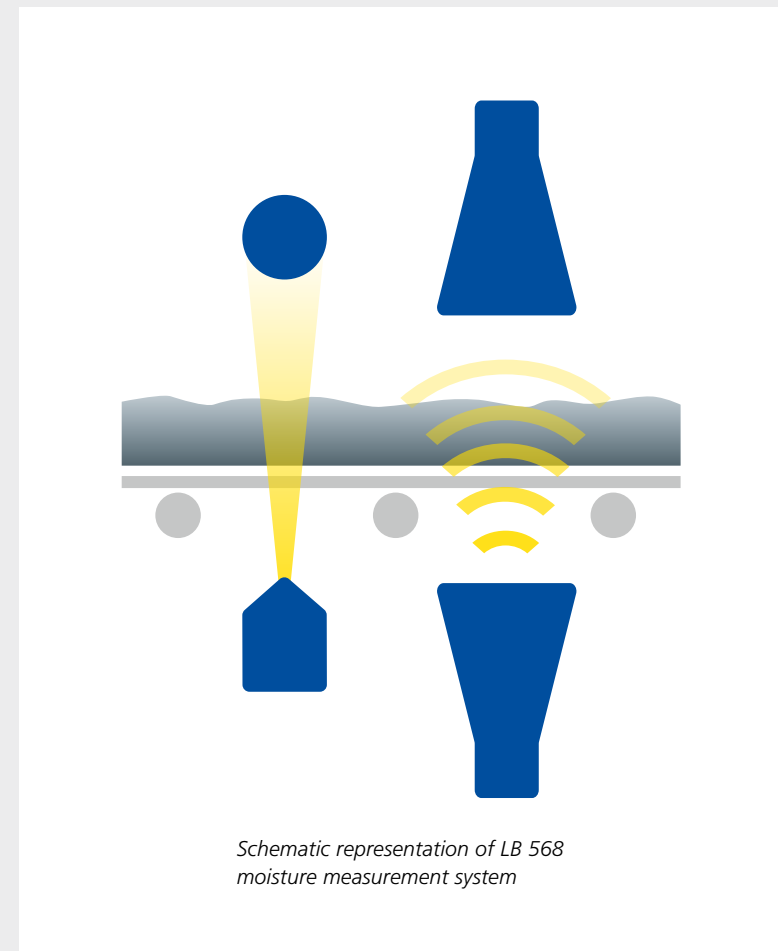


Customer Benefits

- Accurate moisture leads to accurate solids addition leads to accurate digester chemical charge
- Measurement independent of wood species
- Operates reliably at moisture levels up to and above 50%
- Transmission measurement provides representative sample as opposed to traditional „surface only“ measurements

Features

- Installs around existing conveyor belts
- Non-contacting measurement
- FCC compliant
- State-of-the-art microwave transmission technology measuring the material cross-section
- High measurement repeatability



Schematic representation of LB 568 moisture measurement system



THE EXPERTS IN MEASUREMENT TECHNOLOGY

Berthold Technologies stands for excellent know-how, high quality and reliability. The customer is always the focus of our solution. We know our business!

Using our varied product portfolio, our enormous specialized knowledge and extensive experience, we develop suitable solutions together with our customers for new, individual measurement tasks in a wide variety of industries and applications.

We are here for you – worldwide!

The engineers and service technicians from Berthold Technologies are wherever you need them. Our global network assures you fast and above all competent and skilled assistance in case when needed. No matter where you are, our highly qualified experts and specialists are ready and waiting and will be with you in no time at all with the ideal solution for even the most difficult measurement task.

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