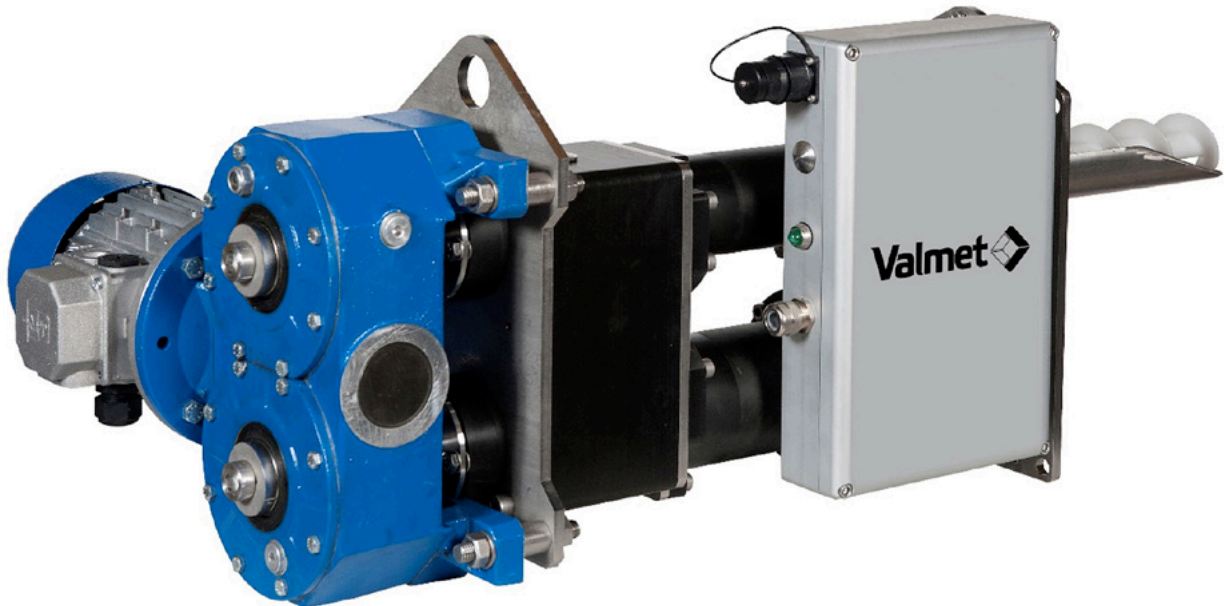


Valmet High Solids Measurement (Valmet HS)



Valmet High Solids measurement

Brand new solution for many different moisture measurement applications in variable industries.

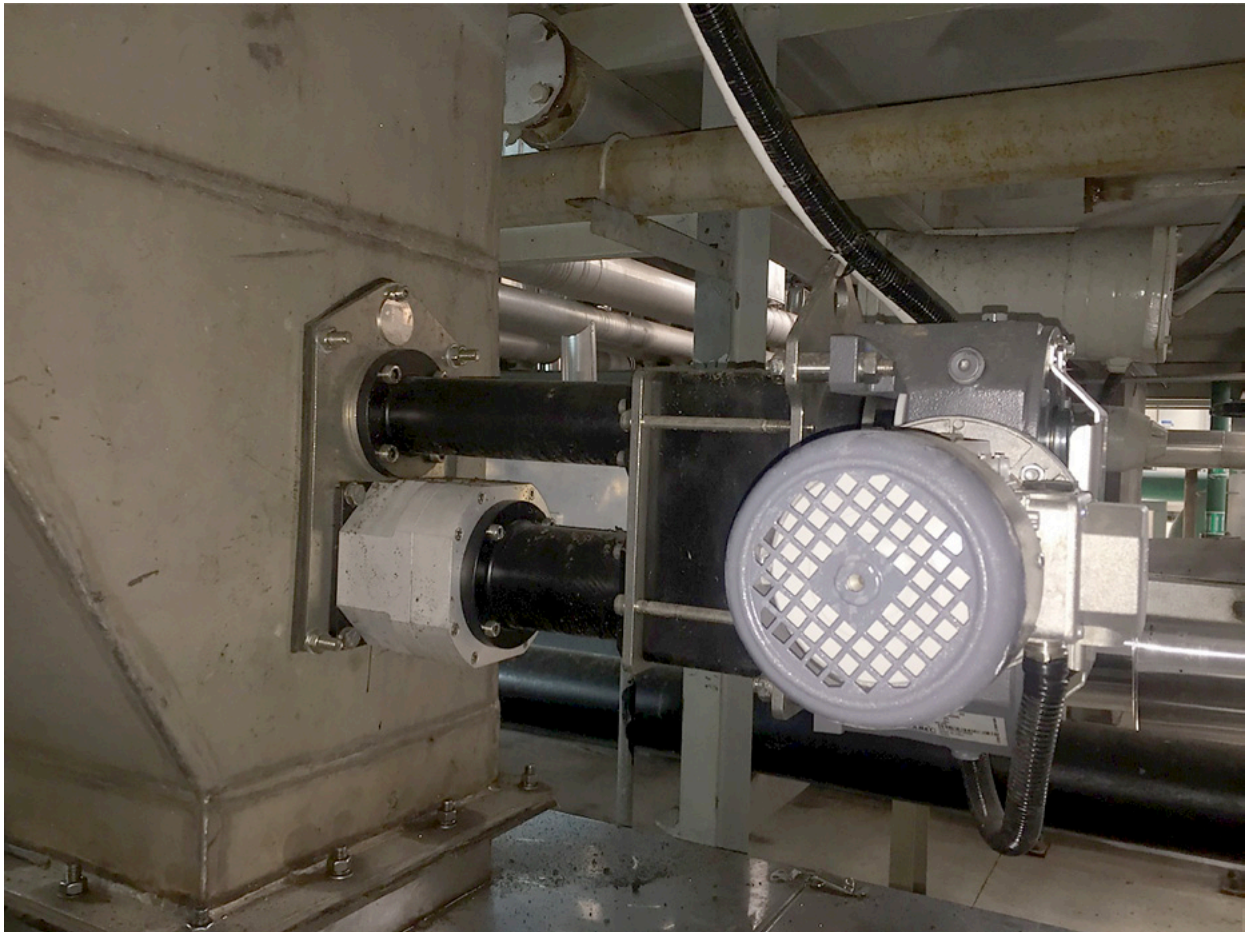
Thus far tested applications:

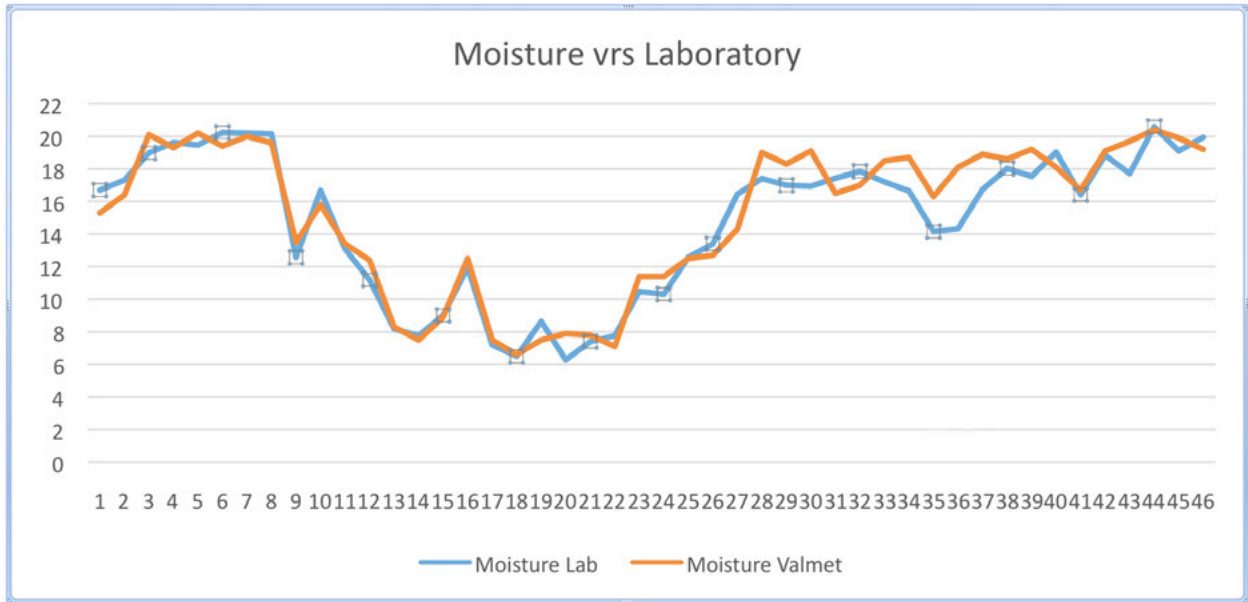
- Thermally dried municipal waste water sludge. Moisture 5...55 %. Target of the measurement is to control thermal drier and stabilize output moisture of the dryer. Stable moisture output brings many advances to the customer: Savings in energy consumption for not over drying the sludge. More stable moisture improves process control after the dryer.
- Moisture measurement of saw dust before pelletizing. Moisture 6...14 %. Target is to produce stable moisture to saw dust and maximize successful palletization process. Here too saving typically can be achieved through lowered energy consumption and more successful palletization process.
- Dried pulp mill waste water sludge. Moisture 20...40 %. Target of measurement is to optimize drying process. Optimal output is maximal dryness in the sludge and therefore minimum amount of water to be transported further in the process. Optimization of polymer dosage is the other major factor here. Accurate moisture measurement helps customers in finding the right chemical to their process and finding the optimal dosage of chemicals.
- Thermally dried municipal waste water sludge before incineration. Moisture 1,5...25 %. Target of the measurement is to control thermal drier and minimize output moisture of the dryer. Minimal moisture to the incineration plant means lower side fuel expenses and smaller emissions.
- New applications are coming up all the time.

Valmet High Solids Measurement (Valmet HS) utilizes microwave technology, requiring no special certification or safety procedures, to make a stable and accurate solids measurement for dewatering control in waste water treatment. Valmet HS extracts a continuous sample from the falling cake flow after a centrifuge or screw press and measures the solid content before returning the sample back to the process. Valmet HS is an on-line measurement with continuous moisture output. When the customer's process is on, Valmet HS is running and giving the customer accurate moisture information.

- Reliable screw based sampling
- Moisture range of 0–70 %
- Built-in calibration routine
- Industrial Internet remote access

In addition to full remote access of Valmet DS functions, measurement data, alarms and diagnostics via the Industrial Internet, the Valmet DS Ethernet connection can be used for local control with a laptop or tablet computer during commissioning.





Graph 1. Actual real-life comparison between Valmet HS on-line and laboratory moisture measurement.

Operation

Valmet HS is installed where material is dropping in chute or from conveyor to another conveyor. A sample retrieval screw feeds a return screw which compresses and pushes the sample through the microwave sensor chamber before being returned to the process.

The Valmet HS measurement is based on multivariable microwave resonance, compensated for variations in material temperature and density and calibrated during commissioning with samples taken from the screw and oven dried.

Specifications

Sensor material	HDPE / Body Al
Measuring range	0...70 % Moisture-%
Material measured	Saw dust, municipal and industrial waste water sludge, HC Pulp, starch, other applications coming up all the time
Temperature-range	+0...65 °C (High temperature version max 95 °C)
Repeatability	0.1 % Theoretical value of the sensor
Resolution	0.01 % Theoretical value of the sensor
Mill system interface	4...20 mA, Ethernet
Power	24 VDC (measuring electronics) 3 phase AC (sample screws) *
IP-classification	IP65

