Moisture Content in Wood Pellets

MoistTech Instant NIR Online Moisture Sensors

Moisture measurement and control is a crucial aspect of the wood pellet manufacturing process. MoistTech's new IR-3000 Moisture Sensor allows you to do instant, non-contact, continuous moisture measurement.

Manufacturing wood pellets requires the refining, drying and blending of wood waste prior to entering the pellet press. By integrating MoistTech's IR-3000 into the process, users can monitor 100% of their product quality, instantly and consistently. Measuring moisture throughout the wood pelletizing process will produce pellets at a specific moisture percentage preventing the out of specification when the product is too wet or too dry. Additionally, pro-active adjustments can be made to the process, to optimize pellet manufacturing.

MoistTech recommends installing sensors in several locations throughout the pellet process. First, installing a sensor prior to the dryer will monitor the moisture levels going in. Too dry of a product will result in over drying causing a dusty, ambient environment but could also result in a fire. Installing sensors after the dryer, prior to the pelletizer will also result in significant cost savings. Product too dry will prevent pellets compacting and not molding together very well. Product too wet could cause the pelletizer to plug up - both resulting in shutting down the line and product waste.

All purchasing of wood fuel should be based by weight. In this practice the moisture content is critical to knowing how much you are paying for your energy. The higher the moisture content of incoming fuel results in overpaying for wood fuel. Due to this very importance MoistTech has many installations located at truck dumps, incoming fuel conveyors and reclaiming systems.

Unlike other instrumentation of this type, some of the unique features of the IR-3000 is that it can monitor the product even with small gaps in product flow and is unaffected by ambient light without impacting the accuracy. The IR-3000 is also ideal for installations on chain conveyors and screw conveyors.

The sensor(s) can be located throughout the pellet process and can be directly connected to the users PLC or any laptop. Ethernet 4-20 ma are included as well as our high-tech Windows operating software. DPM-Digital Panel Meter and a Color Touch Screen Operator Interface are also available as read-out options.

For more information or to discuss your application, please contact our headquarters.