



Application Notes

Moisture in Tobacco – Measurements in the GLT Plant

Moisture % is critical throughout the whole tobacco process, from green leaf threshing to primary processing; it affects not only smoking quality, but also storage properties, “filling properties”, tobacco wastage and machine ability.

Green Leaf Threshing Plant

The GLT process separates the lamina from the stem, and grades both on their color, nicotine, and sugar content. Throughout this process the moisture levels are raised in order that the leaf is pliable enough to cut, and then lowered until the lamina and stem reaches optimum moisture content for storage. Ultimately the aim is to have an homogenous moisture content of 10-12%, this eliminates spoilage, and damage due to over brittle tobacco.

Measurement Locations

1. Prior to the threshing operation, where the lamina and stem are separated
2. At the exit of the re-orderer of each re-dryer for stem and lamina lines

Gauge Installation

The gauge should be positioned after the conditioner, or re-orderer ideally in a location following a rotation/mixing of the tobacco to get the most representative moisture reading.

The gauge should not be positioned immediately at the exit of the conditioner as the tobacco moisture will be in a state of flux, variable equilibration, which will lead to noisy gauge readings.

Most importantly the product flow should be continuous, and of sufficient bed depth such that the transporting medium isn't seen by the gauge.

Pass height tolerance is such that if the gauge is mounted perpendicular to, approximately 8 inches from the tobacco, readings will remain unaffected by changes in the bed height.

Measurement Performance

Measurement	Location	Target	Typical Accuracy
Whole leaf	Exit Conditioner	20-22%	+/- 0.3%
Stems (whole)	Exit re-orderer	10-12%	+/- 0.5%
Lamina(strips)	Exit re-orderer	10-12%	+/- 0.7%

The measurement made at the exit of the re-orderer is primarily a quality control measurement as opposed to control measurement; the gating option is frequently used to obtain average moisture content per bale.