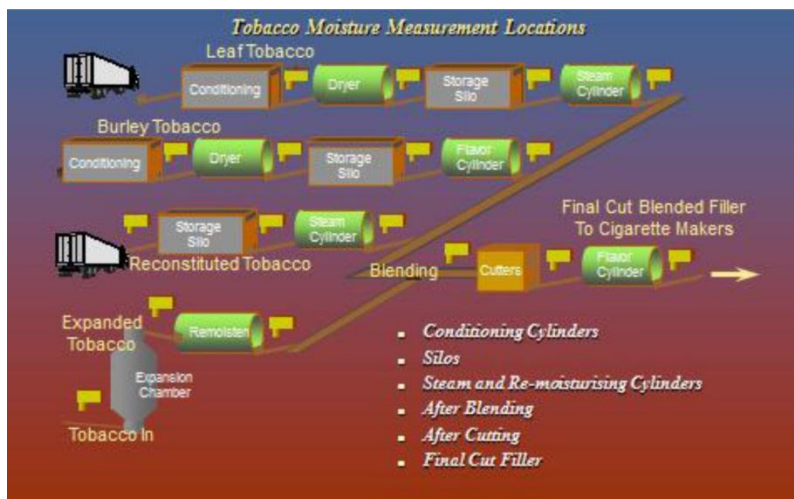


## Tobacco Moisture Applications

Tobacco Moisture Is critical in all phases of tobacco processing. Moisture impacts smoking quality, flavor, burn, fill, waste, and machine operation from green leaf threshing to primary processing. Each operation such as drying, re-moisturizing, rolling, cutting, and conditioning have an optimum moisture level to maximize efficiency.



**Tobacco Process**

## Tobacco Threshing Process

Tobacco moisture measurement is important in the threshing process that removes the backbone stem or midrib from the lamina leaf. The leaf ribs are removed so they do not impact flavor or pierce the cigarette rod. Shredded stem and lamina are mixed and the aggregate size is also impacted by the moisture content in the cigarette making process.

## Dryer Control

Dryer control of the tobacco blend is impacted by the moisture, temperature and volume throughput and efficiencies are improved with feed forward with feedback trim control that incorporates tobacco moisture measurement at the entrance and exit of the dryer.

## Primary Processing Plant

Different grades of tobacco are treated, blended and cut into “rag” to achieve a homogeneous final blend with good filling power and minimal waste. The varying tobacco types undergo different processes on route to the final blending cylinder. The treatments include: conditioning, casing, toasting, re-ordering, rolling, cutting, expansion and drying, and nearly all require the product to be at an optimum moisture % prior to or post treatment.

## Expanded Tobacco

A small percentage of tobacco is infused with a liquid that expands inside the tobacco as it changes to a gaseous state and is driven off. This creates a lighter fill that reduces tar and nicotine by increasing burn rate and reducing puffs per cigarette, while maintaining flavor. Expanded tobacco ranges from 5% in full flavor to 15% in light cigarettes. Moisture measurement is critical in this process.

## Reconstituted Tobacco

Reconstituted tobacco is a result of converting by products into filler via a paper making process. Moisture is critical in the manufacturing process as the tobacco paper is formed, and at dryer exit so it is not over dried adversely impacting burn rate.

## Casing Solutions

Casing solutions are applied prior to cutting the tobacco into rag for processing. The purpose of the casing is to facilitate processing, water retention and shelf life with humectants/glycerine and to add flavors via licorice, sugars, cocoa and other extracts. The amount applied to the tobacco is critical to maintain brand integrity.

## Toasting Process

Casing and toasting of burley tobacco is a key process in American Blended type cigarettes. The casing process elevates the lamina moisture to between 28 and 30% at which time it is toasted to 285°F (140°C). This temperature causes catalyzed reactions to the casing similar to the Maillard Reaction in baking that result in certain flavor and aroma characteristics to be imparted to the tobacco. Temperature and moisture control are critical to this process. Color measurement is also often employed with attention to the a\* value (red to green) to monitor the reaction.

## MCT360-T Tobacco Moisture Transmitter



The MCT360-T Tobacco Moisture Transmitter is an on-line sensor dedicated to measuring moisture in all forms of tobacco. The MCT360-T measures moisture - the component of most concern to every tobacco processor. The MCT360-T is simple to install, comes pre-calibrated and operates on all types of tobacco. It is the most reliable, stable and accurate online moisture meter, specifically designed for critical tobacco moisture measurements.

[MCT360-T Tobacco Moisture Brochure Click Here](#)

MOISTURE

TEMPERATURE

COLOR