Proposal for more Sustainable Re-Moisturizing Tobacco Leaves

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Abstract

The re-moisturizing is an important step in the processing of tobacco leaves. It is crucial to obtaining the final moisture content of processed tobacco, essential for their physical preservation, handling and ensuring conservation of their intrinsic qualities. Current techniques of tobacco leaf reumidificação uses water vapor and, therefore, have high energy consumption for steam production, high water consumption for the steam generation, a constant vapor generation promotes corrosion and requires intensive and constant equipment maintenance, finaly, treat a large amount of boiler blowdown water consumes chemicals and energy. The aim of this work was to test a tobacco leaves re-moisturizing by steam created from cold water mist generated by use of ultrasound. For experimental testing bench was developed a Test Box, which was attached to a commercial humidifier equipment, simulating an industrial vapor re-moisturizing camera. This Tests Box was built to assess the ability of re-moisturizing tobacco leaves with cold water, testing the differentes positions for water mist entrance, different positions for ventilation or suction of steam mist, always comparing in the same time required in the industrial plant. The measurement of the initial and final tobacco moisture was made by mass loss in a apropriated laboratory equipment, applying the tobacco industry methodology. From these assays could be proved the more sustainable re-moisturizing process is possible having the leaves with the necessary final humidity in the industrial required time and also was find a more efficient position for the water mist get into the Test Box.

Keywords: *Tobacco, Re-moisturizing, Ultrasound moisturizing, sustainable re-moisturizing.*