

Title (en)

A device for controlling the content of tobacco on a cigarette manufacturing machine.

Title (de)

Vorrichtung zur Kontrolle des Tabakfüllguts in einer Zigarettenherstellungsmaschine.

Title (fr)

Dispositif de contrôle de la charge de tabac dans une machine de fabrication de cigarettes.

Publication

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Application

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Priority

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Abstract (en)

The invention relates to a tobacco content control device for use in a cigarette manufacturing machine, wherein shredded tobacco (T) is fed by means of a hole-provided cigarette conveyor (103), is trimmed by a trimming means (104a) for regulating the amount of the shredded tobacco (T), and is then wrapped by a wrapping means, thereby producing stick-like cigarettes (S). The control device comprises a first radiometric density detector (106) for detecting the density of the shredded tobacco (T) before the tobacco content is trimmed, a second radiometric density detector (116) for detecting the density of the stick-like cigarettes (S), a feed forward control circuit (200, 202, 205, 251, 252, 253, 254, 255), and a feed back control circuit (204, 222, 224). The feed forward control circuit (200, 202, 205, 251, 252, 253, 254, 255) includes a high pass filter for picking up only high-frequency components out of a first signal supplied from the first radiometric density detector (106), and a delay circuit (400) for delaying the high-frequency components by a predetermined time. By use of these structural elements, the feed forward control circuit (200, 202, 205, 251, 252, 253, 254, 255) generates a feed forward control signal corresponding to an instantaneous variation in the first signal. The feed back control circuit (204, 222, 224) includes an integrator for integrating a second signal supplied from the second radiometric density detector (116). By use of this structural element, the feed back control circuit (204, 222, 224) generates a feed back control signal corresponding to an average variation in the second signal. The feed forward control signal and the feed back control signal are added together, on the basis of which the trimming means (104a) is controlled.

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A24C 5/34

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EP1247462A3; CN114184517A; US6814082B2

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