

Title (en)  
Method for the pneumatic classification of toner

Title (de)  
Verfahren zur Windsichtung von Toner

Title (fr)  
Procédé pour le tri pneumatique de toner

Publication  
**EP 0933142 B1 20020605 (DE)**

Application  
**EP 99100551 A 19990113**

Priority  
DE 19803107 A 19980128

Abstract (en)  
[origin: EP0933142A2] A rotary disc (16) distributes toner evenly over the classification rotor (8) circumference. The toner descends under gravity, being guided through the classification zone (21). A spiral controls toner residence time distribution from top to bottom of the classification zone. Toner is introduced quickly in the homogenous state at the top and resides for a longer interval in the central part of the classification zone. At the bottom it is carried away continuously. Classification air driven past the outer edge of the rotor flows at a mean velocity of 3-7 m/s. The ratio of mass flowrate of toner to volumetric airflow is held at 0.05-0.3 kg/m<sup>3</sup>, based on product weight. Residence time is controlled by a coaxial spiral (29) around the classification rotor. This occupies only part of the radial extent of the classification zone. Over its length, the pitch of the spiral varies. Toner mass flowrate to classification air volumetric flowrate is preferably 0.1 kg/m<sup>3</sup>. Mean velocity of classification air is 5 m/s.

IPC 1-7  
**B07B 7/083**; **G03G 9/08**

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