

(19) DANMARK

(10) DK 2001 01419 L



(12) PATENTANSØGNING

Patent- og
Varemærkestyrelsen

(51) Int.Cl⁷: B 05 D 5/00 B 05 D 1/00

(21) Patentansøgning nr: PA 2001 01419

(22) Indleveringsdag: 2001-09-28

(24) Løbedag: 2001-09-28

(41) Alm. tilgængelig: 2001-09-28

(30) Prioritet: 2001-09-18 EP 01610097.6

(71) Ansøger: Aeromatic-Fielder AG, Hauptstrasse 145, CH-4416 Bubendorf, Schweiz

(72) Opfinder: Roger Tschudin, Mattenweg 13, 4415 Lausen, Schweiz

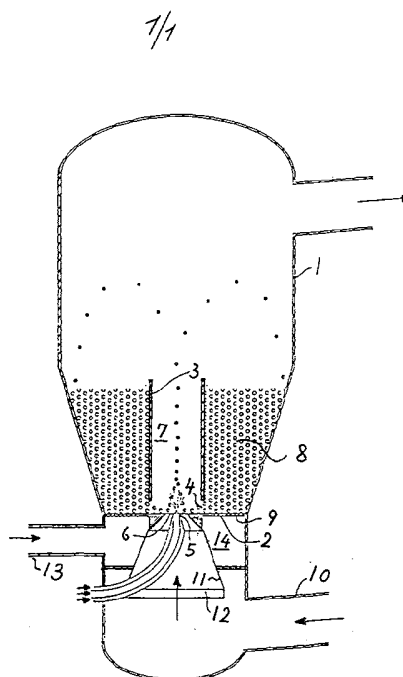
(74) Fuldmægtig: Internationalt Patent-Bureau, Høje Taastrup Boulevard 23, 2630 Taastrup, Danmark

(54) Benævnelse: Process for coating particles

(57) Sammendrag:

In a process for coating particles, in which the particles are circulated upwards through a first spraying and drying zone and downwards through a second drying and residence zone, the capacity is increased and agglomeration and heat damage avoided by using a lower temperature of gas supplied to said second residence and drying zone than the temperature of the gas supplied to said first spraying and drying zone.

(Sole Figure)



C L A I M S

1. A process for coating particles by circulating the particles upwards through a first zone and downwards through a second zone adjacent to the first
5 zone,

atomizing a coating liquid into the first zone,

introducing a first stream of gas into the bottom part of said first zone in an amount and at a velocity sufficient for creating a gas flow in the first zone
10 carrying the particles upwards through this zone while they are wetted by the atomized coating liquid and partly dried,

introducing a second stream of gas into the bottom portion of the second zone in an amount and at
15 a velocity insufficient to form a gas flow in the second zone which would blow particles received from the top of the first zone out of said second zone, but sufficient to increase the flowability of the particles in the second zone,

20 c h a r a c t e r i z e d in introducing said second stream of gas at a temperature below the temperature at which said first stream of gas is introduced.

2. The process of claim 1,

c h a r a c t e r i z e d in establishing said first
25 zone within a vertical duct and said second zone in an area surrounding the duct and defined downwards by a perforated gas distribution plate, and passing the particles to be coated from the bottom of the second zone to the bottom of the first zone through a spacing
30 between said duct and said plate.

3. The process of anyone of claim 1 or 2,

c h a r a c t e r i z e d in introducing said first stream of gas into said first zone at a direction

providing an upwardly swirling flow of gas and entrained particles in the first zone.

4. The process of anyone of the preceding claims, characterized in that the coating liquid
5 is atomized by means of a nozzle upwards from the centre of the bottom portion of the first zone.

5. The process of anyone of the preceding claims, characterized in that said first stream
of gas is introduced into the bottom part of the first
10 zone through an annular aperture encircling the nozzle.

6. The process of anyone of the preceding claims, characterized in using a coating liquid
containing a substance which in dry or moist condition
15 is sticky at the gas temperature prevailing in the upper portion of the first zone but less sticky at the temperature prevailing in the second zone.

7. The process of anyone of the preceding claims, characterized in using a coating liquid
20 containing a pharmaceutically active, heat-sensitive component.

8. The process of anyone of the preceding claims, characterized in using an aqueous
dispersion of a metacrylic acid-methyl methacrylate
25 copolymer as coating liquid and introducing said first stream of gas at a temperature above 35° C and said second gas stream at a temperature below 35° C.

9. The process of anyone of the preceding claims, characterized in passing particles partly
30 coated by circulation through said first and second zones to at least one further first atomizing zone for circulation through this and through at least one second zone, which may form a continuum with the

first-mentioned second zone or may be separated therefrom.

10. The process of anyone of the preceding claims, c h a r a c t e r i z e d in applying
5 consecutively on each particle two or more layers of different composition.

7/1

