

## Title (en)

Device and method for drying granules based on powder and binder

## Title (de)

Vorrichtung und Verfahren zum Trocknen von Granulat auf der Basis von Pulver und Bindemittel

## Title (fr)

Dispositif et procédé de séchage de granules à base de poudre et de liant

## Publication

**EP 1818636 A1 20070815 (FR)**

## Application

**EP 07300785 A 20070209**

## Priority

FR 0650472 A 20060209

## Abstract (en)

The continuous dryer for malleable granules obtained from a powder or a binder before drying the granules, comprises a vertical drying column (1), an air supply unit in the column arranged laterally to a wall of the column, an used air evacuation unit emerging from the column arranged laterally to a wall of the column, sheaths (4) arranged in the column between the air supply and used air evacuation units, and half-sheaths (6) arranged in the column between the air supply and the used air evacuation units. The granules flow down by gravity from top to bottom of the column. The continuous dryer for malleable granules obtained from a powder or a binder before drying the granules, comprises a vertical drying column (1), an air supply unit in the column arranged laterally to a wall of the column, an used air evacuation unit emerging from the column arranged laterally to a wall of the column, sheaths (4) arranged in the column between the air supply and used air evacuation units, and half-sheaths (6) arranged in the column between the air supply and the used air evacuation units. The granules flow down by gravity from top to bottom of the column. A temperature and speed of the air is controlled in the drying column. The wall of the column is opposed to a wall of the air supply unit. Openings are arranged in the wall of the column at the ends of the sheaths to communicate with the air supply and used air evacuation units. The sheaths form a cylinder of which right-hand side generator makes a rhombus (5) truncated in its lower part in a perpendicular plane to a longitudinal principal axis of the cylinder. The sheaths are arranged in quincunx within the drying column. The longitudinal principal axis of the sheaths is perpendicular to a direction of a flow of granules in the dryer. The half-sheaths are inclined over all its length to the drying column wall and form a half rhombus truncated in its lower part in a perpendicular plane with a longitudinal principal axis of the half-sheaths. The sheath ends are contacted with the drying column wall, which is equipped by deflectors in the upper part to guide the granule flow towards the center of the drying column. Each sheath has an identical section of shape and size. A tight floor with gas is arranged inside the air supply unit and the outlet of the evacuation unit to divide each air supply unit and the evacuation unit in two tightly separated compartments.

## Abstract (fr)

La présente invention a pour objet un séchoir pour granulés obtenus à partir d'une poudre et d'un liant, ledit séchoir comprenant notamment des gaines (4,6), disposées dans la colonne de séchage (1) et formant un cylindre dont la droite génératrice dessine, dans un plan perpendiculaire à l'axe principal longitudinal (XX) dudit cylindre, un losange (5) tronqué dans sa partie inférieure. La présente invention a également pour objet un procédé de séchage des granulés. Le procédé et le dispositif objet de l'invention permettent un séchage des granulés jusqu'à obtenir une humidité résiduelle de 5% et même 1% ou moins pour certains produits de manière à assurer le maintien et l'intégrité des grains formés.

## IPC 8 full level

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