

Title (en)
Process and apparatus for the dissolution of a solid product

Title (de)
Verfahren und Vorrichtung zum Auflösen eines festen Produktes

Title (fr)
Procédé et dispositif de dissolution d'un produit solide

Publication
EP 0917906 A1 19990526 (FR)

Application
EP 97401506 A 19970627

Priority
EP 97401506 A 19970627

Abstract (en)
To dissolve a given volume of a solid detergent by stirring in a given volume of liquid, the solid detergent is passed to a vessel with an agitator and is weighed. It uses a closed screw conveyor for the transport to spread the detergent in the vessel but without being weighed. The set volume of liquid is passed into the vessel by a feed line which avoids the weighing unit. The weighed measure is less than a first level, and the product is delivered by the screw into the vessel until a second weight level is achieved, and the detergent delivery is stopped. The liquid is fed into the vessel until a third weight level is achieved, and the water feed is stopped. A system compares in real time the delivery of the detergent and/or the water for a given time span, and an alarm is generated if the real time breaches the nominal time. The screw conveyor unit is rotated at a speed of ≤ 30 rpm. An Independent claim is included for an apparatus with a vessel (1) mounted on to a weighing unit (2). The detergent is fed by a screw (3) in a closed cylinder (4), where its outlet is at the upper part of the vessel (1) without the conveyor being weighed (2). The detergent bag (5) is opened (7,8) towards the entry into the conveyor screw (3). Preferred Features: The conveyor screw (3) pitch is larger at the outlet than at the entry. The free edge of the conveyor screw (3) is notched. A feed line (14) opens into the vessel (1) without being weighed. The bottom of the detergent bag (5) has a shutter (7) which can be opened.

Abstract (fr)
Ce dispositif de dissolution d'un produit solide comprend : une cuve (1) montée pesante sur un dispositif de pesage (2), une vis convoyeuse (3) à fourreau (4) fermé dont l'extrémité de sortie débouche dans la partie haute de la cuve (1) et qui est montée sans peser sur le dispositif de pesage (2), et des moyens de maintien (7, 8) d'un sac (5) de manière que l'ouverture du sac (5) soit tournée vers le bas et communique avec l'extrémité d'entrée de la vie convoyeuse (3) <IMAGE>

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Citation (search report)
• [X] EP 0722769 A1 19960724 - DAMMANN & WESTERKAMP [DE]
• [X] EP 0032460 A1 19810722 - ALFA LAVAL AB [SE]
• [A] EP 0381346 A2 19900808 - FULLER CO [US]
• [A] FR 2534518 A3 19840420 - FINUMBRA SPA [IT]
• [A] DE 3834068 A1 19900405 - BAYYOMI FAWZI ALI [KW], et al
• [A] EP 0098219 A1 19840111 - ROUSSEL UCLAF [FR]

Cited by
CN114768609A; WO2006000237A1; WO2014095061A3

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