

Title (en)

Solid product dispenser and method and apparatus to control dispensing rate of a solid product with changing temperature

Title (de)

Festkörperautomat und Verfahren und Vorrichtung zur Steuerung der Ausgaberate eines Festkörperprodukt mit sich ändernder Temperatur

Title (fr)

Distributeur de produit solide et procédé et appareil pour contrôler la vitesse de distribution d'un produit solide avec une température changeante

Publication

**EP 1980315 A3 20081029 (EN)**

Application

**EP 08013057 A 20051014**

Priority

- EP 05808958 A 20051014
- US 61978304 P 20041018
- US 61972704 P 20041018
- US 15291705 A 20050615
- US 15294005 A 20050615

Abstract (en)

[origin: WO2006044678A2] A dispenser (10) uses first and second flow controls (70, 73). The flow controls maintain first and second flow ranges independent of diluent pressure within a pressure range, wherein the use solution's concentration is maintained over the pressure range. A third flow control (75) may also be utilized in a third diluent passageway for maintaining a third flow range independent of the diluent pressure within the pressure range. A bypass valve assembly (41) is operatively connected to the third incoming diluent passageway. The bypass valve has a temperature control valve. The temperature control valve having a bypass passageway, wherein additional diluent is added to the use solution, thereby controlling the use solution's concentration.

IPC 8 full level

**B01F 1/00** (2006.01); **A47L 15/44** (2006.01)

CPC (source: EP)

**B01F 21/221** (2022.01); **B01F 21/4021** (2022.01); **B01F 35/2115** (2022.01); **B01F 35/2211** (2022.01); **B01F 35/718051** (2022.01)

Citation (search report)

- [XA] US 5607651 A 19970304 - THOMAS JOHN E [US], et al
- [A] US 5782109 A 19980721 - SPRIGGS JOHN ROSS [US], et al
- [A] US 6737028 B1 20040518 - SCEPANSKI WILLIAM H [US], et al
- [A] US 5846499 A 19981208 - LAUGHLIN TIMOTHY E [US], et al
- [A] US 6240953 B1 20010605 - LAUGHLIN TIMOTHY E [US], et al
- [A] US 2004124263 A1 20040701 - SEEMAN GEORGE [US]
- [A] US 4569781 A 19860211 - FERNHOLZ PETER J [GB], et al

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**WO 2006044678 A2 20060427; WO 2006044678 A3 20060810**; AT E406951 T1 20080915; AT E503566 T1 20110415; AU 2005295632 A1 20060427; AU 2005295632 B2 20091217; BR PI0515384 A 20080722; BR PI0515384 B1 20170620; CA 2575766 A1 20060427; CA 2575766 C 20121204; CN 101018600 A 20070815; CN 101018600 B 20101110; DE 602005009571 D1 20081016; DE 602005027271 D1 20110512; EP 1814649 A2 20070808; EP 1814649 B1 20080903; EP 1980315 A2 20081015; EP 1980315 A3 20081029; EP 1980315 B1 20110330; EP 2216089 A1 20100811; EP 2216089 B1 20120926; ES 2313436 T3 20090301; JP 2008516755 A 20080522; JP 5426096 B2 20140226; MX 2007004242 A 20070612; PL 1814649 T3 20090227; PL 1980315 T3 20110930; PL 2216089 T3 20130329

DOCDB simple family (application)

**US 2005037047 W 20051014**; AT 05808958 T 20051014; AT 08013057 T 20051014; AU 2005295632 A 20051014; BR PI0515384 A 20051014; CA 2575766 A 20051014; CN 200580030623 A 20051014; DE 602005009571 T 20051014; DE 602005027271 T 20051014; EP 05808958 A 20051014; EP 08013057 A 20051014; EP 10160228 A 20051014; ES 05808958 T 20051014; JP 2007536947 A 20051014; MX 2007004242 A 20051014; PL 05808958 T 20051014; PL 08013057 T 20051014; PL 10160228 T 20051014