

Title (en)

A method of mixing a liquid and solids and apparatus therefor.

Title (de)

Verfahren zum Mischen einer Flüssigkeit mit Feststoffen und Apparat dafür.

Title (fr)

Procédé pour mélanger un liquide et des solides, et appareil.

Publication

EP 0460804 A1 19911211 (EN)

Application

EP 91303940 A 19910501

Priority

GB 9012605 A 19900606

Abstract (en)

In a method of mixing a liquid and solids, the solids are fed into the liquid whilst the liquid is swirling about the surface of a converging chamber (18). The chamber (18) is defined by at least two frusto-conical portions (20, 22) disposed one above the other. The upper portion 20 has a substantially larger included angle than that of the lower portion (22). Inlet nozzles (44) are supplied from an annular plenum 42 and are arranged tangentially with respect to the upper end of the chamber (18) so as to induce swirling of the liquid injected into the chamber (18). Mixed liquid and solids from the chamber (18) are arranged to discharge into a vessel (14) having a vortex breaker at its outlet. <IMAGE>

IPC 1-7

B01F 5/00

IPC 8 full level

B01F 3/12 (2006.01); **B01F 5/00** (2006.01)

CPC (source: EP)

B01F 23/56 (2022.01); **B01F 25/10** (2022.01)

Citation (search report)

- [X] EP 0050312 A2 19820428 - HOECHST AG [DE]
- [A] GB 2130908 A 19840613 - CONOCO INC
- [A] US 3741533 A 19730626 - WINN F
- [A] FR 2307570 A1 19761112 - ANLIKER WERNER [CH]
- [A] GB 1290486 A 19720927
- [A] US 4053142 A 19771011 - JOHANNES WALTER
- [A] US 2653801 A 19530929 - FONTEIN FREERK J, et al

Cited by

WO2009145874A1; EP2436905A4; EP0959153A3; US7175337B2; WO0056432A1; US9290729B2; WO2005044436A1; WO2004096421A1

Designated contracting state (EPC)

AT BE CH DE DK ES FR GR IT LI LU NL SE

DOCDB simple family (publication)

EP 0460804 A1 19911211; AU 7812591 A 19911212; CA 2042122 A1 19911207; GB 2245190 A 19920102; GB 9012605 D0 19900725; GB 9110005 D0 19910703; JP H04227836 A 19920817

DOCDB simple family (application)

EP 91303940 A 19910501; AU 7812591 A 19910603; CA 2042122 A 19910508; GB 9012605 A 19900606; GB 9110005 A 19910509; JP 13127791 A 19910603