

Title (en)  
Mixing tube with a longitudinal element

Title (de)  
Rohrmischer mit einem longitudinalen Einbaukörper

Title (fr)  
Mélangeur de tube avec un élément longitudinal

Publication  
**EP 1312409 B1 20030604 (DE)**

Application  
**EP 02405221 A 20020322**

Priority  
EP 02405221 A 20020322

Abstract (en)  
[origin: EP1312409A1] A mixer assembly comprises a longitudinal tube incorporating an array of baffle plates, with alternating profiles generating a laminar mixing sequence for two ingredients (A, B). The tubular mixer baffles have a hybrid structure, with one group of guide vanes (Q) alternating with another (X) different set of vanes. <??>The assembly mixes substances which are not easily miscible. The first baffle section creates a laminar flow in the first substance. The second different section sets up a laminar flow in the second substance. Each substance transversely intersects the other substance's flow-path. One section has a structure (Q) comprising a group of four strands with mixing compartments (18) extending between two ends (14a, 14b), and longitudinally transposed (11) with respect to adjacent compartments. This structure (Q) generally dominates the mixing pipe. The second structure (X) (8) has cross-pieces (81, 82) which are inclined with respect to the longitudinal plane. The structures (Q, X) are made of injection molded plastic.

IPC 1-7  
**B01F 5/06; B01F 13/00**

IPC 8 full level  
**B01F 23/47** (2022.01)

CPC (source: EP US)  
**B01F 25/43151** (2022.01 - EP US); **B01F 25/432** (2022.01 - EP US); **B01F 25/4321** (2022.01 - EP US); **B01F 33/5011** (2022.01 - EP US); **B01F 2101/2305** (2022.01 - EP US)

Cited by  
DE102017117198A1; EP2181827A3; DE102006047811A1; EP1510247A1; US7438464B2; DE102006013411A1; DE102006013411B4; EP2548634A1; US8360631B2; US7997450B2; EP2599540A1; WO2004098759A1; WO2008032295A3; EP2181827A2; US8753006B2; US7434794B2; EP2614883A1; US10245566B2; WO2019020764A1; US9764296B2; US10828609B2; US10946349B2

Designated contracting state (EPC)  
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)  
**EP 1312409 A1 20030521; EP 1312409 B1 20030604**; AT E242045 T1 20030615; DE 50200013 D1 20030731; JP 2003275556 A 20030930; JP 4445207 B2 20100407; US 2003179648 A1 20030925; US 2006245299 A1 20061102

DOCDB simple family (application)  
**EP 02405221 A 20020322**; AT 02405221 T 20020322; DE 50200013 T 20020322; JP 2003077621 A 20030320; US 24293402 A 20020913; US 47415206 A 20060622