

Title (en)  
Gas introducing system.

Title (de)  
Gaseintragssystem.

Title (fr)  
Système d'introduction de gaz.

Publication  
**EP 0376008 A1 19900704 (DE)**

Application  
**EP 89122476 A 19891206**

Priority  
DE 3841618 A 19881210

Abstract (en)  
The invention relates to a gas introduction system for introducing gas into a flowable medium in a vessel 1. To enable the gas to be introduced in the form of the finest bubbles possible, it is proposed to provide bottom nozzles 7 on the vessel bottom 6 for the introduction of gas into the medium, which nozzles are connected to quick-opening and -closing valves. <IMAGE>

Abstract (de)  
Die Erfindung betrifft ein Gaseintragssystem zum Begasen eines fließfähigen Mediums in einem Behälter 1. Um einen möglichst feinblasigen Gaseintrag zu ermöglichen, wird vorgeschlagen, auf dem Behälterboden 6 Bodendüsen 7 zum Eintragen von Gas in das Medium anzuordnen, die mit schnell öffnenden und schließenden Ventilen in Verbindung stehen.

IPC 1-7  
**B01F 3/04; B01F 5/02; B01F 13/02**

IPC 8 full level  
**B01F 33/40** (2022.01)

CPC (source: EP)  
**B01F 23/238** (2022.01); **B01F 25/21** (2022.01); **B01F 33/4062** (2022.01); **B01F 35/71755** (2022.01)

Citation (search report)

- [X] EP 0069633 A1 19830112 - SERTAC SA DENIS [FR]
- [X] DE 1782092 A1 19710708 - INST CHEMII OGOLNEJ
- [X] CH 336250 A 19590215 - FULLER CO [US]
- [A] FR 2163802 A5 19730727 - ROLLAND A
- [A] US 3653639 A 19720404 - MUELLER MARVIN C
- [A] DE 3433018 A1 19860320 - LINDE AG [DE]
- [A] US 3259998 A 19660712 - JEAN-CLAUDE LECLERE, et al
- [A] NL 266357 A
- [A] DE 726101 C 19421021 - KARL LUDWIG LANNINGER
- [A] DE 2722202 A1 19771201 - BOC LTD
- [A] EP 0225526 A2 19870616 - GRUBER BRUNO
- [A] DE 629722 C 19360509 - LOUIS PETERS
- [A] FR 2293972 A1 19760709 - NAT RES DEV [GB]

Cited by  
DE102009022208A1; WO2008053174A1; DE102009022208B4; GB2443396B; KR101378672B1; US8287175B2; US10377651B2

Designated contracting state (EPC)  
AT CH DE ES FR LI NL

DOCDB simple family (publication)  
**EP 0376008 A1 19900704; EP 0376008 B1 19930303**; AT E86140 T1 19930315; DE 3841618 A1 19900613; DE 58903672 D1 19930408; ES 2040444 T3 19931016

DOCDB simple family (application)  
**EP 89122476 A 19891206**; AT 89122476 T 19891206; DE 3841618 A 19881210; DE 58903672 T 19891206; ES 89122476 T 19891206