

Title (en)
VOLUMETRIC GAS MIXING DEVICE

Title (de)
VOLUMETRISCHES GASMISCHGERÄT

Title (fr)
DISPOSITIF VOLUMETRIQUE DE MELANGEAGE DE GAZ

Publication
EP 1152818 A4 20050914 (EN)

Application
EP 99968408 A 19991223

Priority
• AU PP793498 A 19981224
• AU PQ257399 A 19990901
• IB 9902113 W 19991223

Abstract (en)
[origin: WO0038497A2] A gas mixing apparatus including a plurality of selected volume gas chambers (20, 22; 66, 67, 68), a pressure regulated gas supply line (15, 16) to each chamber, a valve (40, 41; 69, 70, 71) in the supply line, an outlet line (42, 43; 88, 89, 90) of each chamber to a mixed gas reservoir (46, 73), and an outlet valve (47, 48; 69, 70, 71) in each outlet line. Each outlet line may also include a variable orifice throttle valve (85, 86, 87), enabling proportional mixing during the whole cycle of emptying the chamber. The selected volume gas chambers (66, 67, 68) may have variable volumes and may be cylinders (25, 31) with pistons (24, 30; 66a, 67a, 68a) moveable to change the selected volumes of the chambers. The inlet and outlet valves to the chambers may be a single three-way valve (69, 70, 71) having three gas lines extending therefrom, with one being the pressure regulated gas supply line, a second being a combination of inlet line and outlet line, and a third being a line to the mixed gas reservoir. A baffle (81) in the mixed gas reservoir (46, 73) is useful in mixing the gases upon entry.

IPC 1-7
B01F 1/00; F17C 5/06; F17C 7/00; G05D 11/16

IPC 8 full level
F17D 1/02 (2006.01); **B01F 23/10** (2022.01); **F17C 5/06** (2006.01); **F17C 7/00** (2006.01); **G05D 11/16** (2006.01)

CPC (source: EP KR)
B01F 23/10 (2022.01 - KR); **B01F 23/19** (2022.01 - EP); **F17C 5/06** (2013.01 - EP); **F17C 7/00** (2013.01 - EP); **F17C 2201/0109** (2013.01 - EP); **F17C 2201/0119** (2013.01 - EP); **F17C 2205/0146** (2013.01 - EP); **F17C 2205/0326** (2013.01 - EP); **F17C 2205/0332** (2013.01 - EP); **F17C 2205/0335** (2013.01 - EP); **F17C 2205/0338** (2013.01 - EP); **F17C 2227/0142** (2013.01 - EP); **F17C 2250/032** (2013.01 - EP); **F17C 2250/0426** (2013.01 - EP); **F17C 2250/043** (2013.01 - EP); **F17C 2250/0626** (2013.01 - EP); **F17C 2250/0636** (2013.01 - EP); **F17C 2265/025** (2013.01 - EP)

Citation (search report)
• [X] EP 0877196 A2 19981111 - BOC GROUP INC [US]
• [PX] DE 19842413 C1 19991028 - LINDE AG [DE]
• See references of WO 0038497A2

Cited by
CN105090738A; CN106609907A

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

DOCDB simple family (publication)
WO 0038497 A2 20000706; WO 0038497 A3 20001019; CA 2353979 A1 20000706; EP 1152818 A2 20011114; EP 1152818 A4 20050914; JP 2002533202 A 20021008; KR 20010099895 A 20011109

DOCDB simple family (application)
IB 9902113 W 19991223; CA 2353979 A 19991223; EP 99968408 A 19991223; JP 2000590463 A 19991223; KR 20017007955 A 20010622