

Title (en)

A valve unit for modulating the delivery pressure of a gas

Title (de)

Ventileinheit zur Regelung des Gas-Versorgungsdruckes

Title (fr)

Arrangement de soupapes pour réguler la pression d'alimentation d'un gaz

Publication

EP 1058060 A1 20001206 (EN)

Application

EP 99120258 A 19991011

Priority

IT PD990121 A 19990602

Abstract (en)

A valve unit for modulating the delivery pressure of a gas comprises a servo-valve (4) having a closure member (5) with diaphragm control (8), the diaphragm (8) being subjected, on one side, to the gas-delivery pressure and, on the other side, to a control pressure (Pt) established in a control chamber (9) of the servo-valve (4), a pressure-regulation device associated with the servo-valve (4) and comprising a modulation valve (10;51) for modulating the control pressure and consequently the gas-delivery pressure, actuator means for the operative control of the modulation valve (10;51), and a circuit (39) for driving the actuator means. The driver circuit (39) comprises means for generating an operative modulation-valve driving signal (S) of constant frequency, with a preselected period (T), and means for duration modulation of the signal amplitude within the period (T) so as to modulate the control pressure (Pt) in a proportionally correlated manner. <IMAGE>

IPC 1-7

F23N 5/10; **F23N 1/00**

IPC 8 full level

F23N 1/00 (2006.01); **F23N 5/10** (2006.01)

CPC (source: EP)

F23N 1/005 (2013.01); **F23N 5/102** (2013.01); **F23N 5/10** (2013.01); **F23N 2227/22** (2020.01); **F23N 2229/16** (2020.01); **F23N 2235/20** (2020.01)

Citation (search report)

- [Y] EP 0635680 A1 19950125 - SIT LA PRECISA SPA [IT]
- [Y] EP 0379759 A1 19900801 - RANCO JAPAN LIMITED [JP]
- [Y] DE 4420333 A1 19951214 - GROHE ARMATUREN FRIEDRICH [DE]
- [A] EP 0800039 A1 19971008 - SIT LA PRECISA SPA [IT]
- [A] US 5180138 A 19930119 - MOLDENHAUER HERMANN [DE]
- [A] US 5341839 A 19940830 - KOBAYASHI HIROSHI [JP], et al
- [A] US 5518396 A 19960521 - MUZZOLINI DARIO [IT], et al

Cited by

WO03064928A1; ITPD20110261A1; CZ305381B6; IT201800010571A1; DE10232653B3; ITPD20100089A1; US7950622B2; US8096522B2; US6978798B2; WO2013017346A1; WO2007122092A3; WO0190648A1; WO2020109196A1; US6941962B2; US6945507B2; US8479759B2; US6938634B2; US7066203B2; US7255100B2; US11572847B2; EP1222429B1; WO2020181302A1; WO2022185294A1

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)

EP 1058060 A1 20001206; IT 1308113 B1 20011129; IT PD990121 A1 20001202

DOCDB simple family (application)

EP 99120258 A 19991011; IT PD990121 A 19990602