

Title (en)
Atomizing nozzle for two substances

Title (de)
Zweistoffzerstäubungsdüse

Title (fr)
Ajetage d'atomisation binaire

Publication
EP 2444161 A1 20120425 (DE)

Application
EP 11195368 A 20061006

Priority
• EP 06792384 A 20061006
• DE 102005048489 A 20051007

Abstract (en)
Atomizing nozzle (30) for two substances comprises an annular gap (64) surrounding an outlet opening (52) for discharging compressed gas at high speed. Preferred Features: The outlet opening is formed by a peripheral wall having an outermost end forming an outlet edge (54). The annular gap is arranged in the region of the outlet edge. Control devices and/or compressed gas sources are provided to independently adjust the pressure of the compressed gas fed to the annular gap and the pressure opening into a mixing chamber (40).

Abstract (de)
Zweistoffzerstäubungsdüse zum Versprühen einer Flüssigkeit unter Zuhilfenahme eines Druckgases. Die Erfindung betrifft eine Zweistoffzerstäubungsdüse zum Versprühen einer Flüssigkeit unter Zuhilfenahme eines Druckgases mit einer Mischkammer, einem in die Mischkammer mündenden Flüssigkeitseinlass, einem in die Mischkammer mündenden Druckgaseinlass und einer Austrittsöffnung stromabwärts der Mischkammer. Erfindungsgemäß ist ein die Austrittsöffnung umgebender Ringspalt zum Austreten von Druckgas mit hoher Geschwindigkeit vorgesehen. Verwendung z.B. für die Rauchgasreinigung.

IPC 8 full level
B05B 7/04 (2006.01)

CPC (source: EP US)
B05B 7/0458 (2013.01 - EP US)

Citation (applicant)
• "Proceedings of the Third International Conference on Rain Erosion and Associated Phenomena", vol. 2, 11 August 1970, pages: 727 - 750
• "Dissertation", 1971
• PROCEEDINGS OF THE FOURTH INTERNATIONAL CONFERENCE ON RAIN EROSION AND ASSOCIATED PHENOMENA, vol. 1, 8 May 1974 (1974-05-08), pages 295 - 318
• "Advanced Problems and Methods in Fluid Dynamics", ARCHIVES OF MECHANICS, vol. 28, 1975, pages 5 - 6,969-987
• AIAA-11-TH FLUID AND PLASMA DYNAMICS CONFERENCE, 10 July 1978 (1978-07-10)
• "Droplet impingement on walls and wavy water films Colloquium EUROMECH 162", STABILITY AND EVAPORATION OF THIN LIQUID FILMS IN TWO-PHASE-FLOW, 20 September 1982 (1982-09-20)
• "Experimental and theoretical investigation of shear driven evaporating liquid films - Colloquium EUROMECH 162", STABILITY AND EVAPORATION OF THIN LIQUID FILMS IN TWO-PHASE-FLOW, 20 September 1982 (1982-09-20)
• "The subsonic-supersonic converse of the shear-driven liquid film flow Colloquium EUROMECH 162", STABILITY AND EVAPORATION OF THIN LIQUID FILMS IN TWO-PHASE-FLOW, 20 September 1982 (1982-09-20)

Citation (search report)
• [XY] DE 2005972 A1 19710902
• [X] DE 203004 C
• [X] WO 03006879 A1 20030123 - AIR LIQUIDE [FR]
• [Y] US 1451063 A 19230410
• [A] US 5681162 A 19971028 - NABORS JR JAMES K [US], et al
• [X] DATABASE WPI Week 200478, Derwent World Patents Index; AN 2004-796088, XP002412876

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)
DE 102005048489 A1 20070419; CN 101287555 A 20081015; CN 101287555 B 20130918; EP 1931478 A1 20080618; EP 1931478 B1 20130515; EP 2444161 A1 20120425; EP 2444161 B1 20151216; ES 2421923 T3 20130906; PL 1931478 T3 20131031; RU 2008117344 A 20091120; RU 2441710 C2 20120210; US 2009166448 A1 20090702; US 8028934 B2 20111004; WO 2007042210 A1 20070419

DOCDB simple family (application)
DE 102005048489 A 20051007; CN 200680037083 A 20061006; EP 06792384 A 20061006; EP 11195368 A 20061006; EP 2006009668 W 20061006; ES 06792384 T 20061006; PL 06792384 T 20061006; RU 2008117344 A 20061006; US 8313606 A 20061006