

Title (en)  
MULTI-HOLE OR CLUSTER NOZZLE

Title (de)  
VIELLOCH- ODER BÜNDELDÜSE

Title (fr)  
BUSE À PLUSIEURS TROUS OU À FAISCEAU

Publication  
**EP 2190587 A1 20100602 (DE)**

Application  
**EP 08802252 A 20080916**

Priority  
• EP 2008007722 W 20080916  
• DE 102007044272 A 20070917

Abstract (en)  
[origin: WO2009036947A1] The invention relates to a multi-hole or cluster nozzle (45, 43, 49) with a plurality of outlet openings (56, 58) for fluid (1) which is to be atomized. According to the invention, the central longitudinal axes (44) of at least two of the outlet openings (56) are oriented askew with respect to one another, wherein a distance between the central longitudinal axes (44) of said outlet openings (56) and the central longitudinal axis (16) of the nozzle is initially reduced, as seen in the discharge direction, without intersecting the central longitudinal axis, and is increased again after passing through a minimal distance.

IPC 8 full level  
**B05B 7/04** (2006.01); **B05B 1/34** (2006.01); **B05B 7/06** (2006.01); **B05B 7/08** (2006.01); **B05B 7/10** (2006.01); **B08B 5/02** (2006.01); **F28C 3/08** (2006.01)

CPC (source: EP US)  
**B05B 1/3405** (2013.01 - EP US); **B05B 7/045** (2013.01 - EP US); **B05B 7/0466** (2013.01 - EP US); **B05B 7/0475** (2013.01 - EP US); **B05B 7/066** (2013.01 - EP US); **B05B 7/0846** (2013.01 - EP US); **B05B 7/0853** (2013.01 - EP US); **B05B 7/0892** (2013.01 - EP US); **B05B 7/10** (2013.01 - EP US); **B05B 12/18** (2018.01 - EP US); **B08B 5/02** (2013.01 - EP US); **F28C 3/08** (2013.01 - EP US)

Citation (search report)  
See references of WO 2009036947A1

Cited by  
EP4303481A1

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT RO SE SI SK TR

Designated extension state (EPC)  
AL BA MK RS

DOCDB simple family (publication)  
**WO 2009036947 A1 20090326**; AT E553848 T1 20120515; DE 102007044272 A1 20090402; EP 2190587 A1 20100602; EP 2190587 B1 20120418; ES 2384128 T3 20120629; PL 2190587 T3 20120928; US 2010219268 A1 20100902; US 8672241 B2 20140318

DOCDB simple family (application)  
**EP 2008007722 W 20080916**; AT 08802252 T 20080916; DE 102007044272 A 20070917; EP 08802252 A 20080916; ES 08802252 T 20080916; PL 08802252 T 20080916; US 73371508 A 20080916