

Title (en)  
MULTI-HOLE OR CLUSTER NOZZLE

Title (de)  
VIELLOCH- ODER BÜNDELDÜSE

Title (fr)  
BUSE À PLUSIEURS TROUS OU À FAISCEAU

Publication  
**EP 2190587 B1 20120418 (DE)**

Application  
**EP 08802252 A 20080916**

Priority  
• EP 2008007722 W 20080916  
• DE 102007044272 A 20070917

Abstract (en)  
[origin: US8672241B2] A multi-hole or cluster nozzle having several outlet openings for fluid to be atomized. The central longitudinal axes of at least two of the outlet openings are aligned askew relative to one another, where a distance between the central longitudinal axes of these outlet openings and the main longitudinal axis of the nozzle is initially reduced when seen in the outflow direction, without intersecting the central longitudinal axis, and increases again after passing through a minimum distance. Use for example in nozzles for evaporative cooling or for flue gas cleaning.

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** (2018.02 - EP US); **B08B 5/02** (2013.01 - EP US); **F28C 3/08** (2013.01 - EP US)

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

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