

Title (en)
Mixing device for the aftertreatment of exhaust gases

Title (de)
Mischvorrichtung zur Nachbehandlung von Abgasen

Title (fr)
Dispositif de mélange pour le post-traitement de gaz d'échappement

Publication
EP 2687697 A3 20170628 (DE)

Application
EP 13002561 A 20130516

Priority
DE 102012014334 A 20120720

Abstract (en)
[origin: EP2687697A2] The device (2) has a housing (4) comprising an inlet opening with an inlet cross-section. An inner pipe (6) is arranged within the housing. A mixing region is formed inside the inner pipe. A metering device (10) is arranged at a front end of the housing to supply a liquid and/or liquid gas mixture i.e. spray (14). The inner pipe comprises access apertures (18) at an outer surface (16), where exhaust gases are introduced into the mixing region by the access apertures. The housing comprises a helical casing section (22), which is extended along the access apertures of the inner pipe. An independent claim is also included for a method for mixing exhaust gas with a liquid and/or a liquid gas mixture by using a mixing device.

IPC 8 full level
F01N 3/36 (2006.01); **B01F 5/04** (2006.01); **F01N 3/025** (2006.01); **F01N 3/20** (2006.01); **F01N 3/24** (2006.01); **F01N 3/28** (2006.01)

CPC (source: EP RU)
B01F 23/2132 (2022.01 - EP); **B01F 25/102** (2022.01 - EP); **B01F 25/3131** (2022.01 - EP); **F01N 3/0253** (2013.01 - EP); **F01N 3/2066** (2013.01 - EP); **F01N 3/2892** (2013.01 - EP); **F01N 3/36** (2013.01 - EP); **B01F 23/2132** (2022.01 - RU); **B01F 2025/931** (2022.01 - EP); **F01N 3/0253** (2013.01 - RU); **F01N 3/2066** (2013.01 - RU); **F01N 3/24** (2013.01 - EP); **F01N 2240/20** (2013.01 - EP); **F01N 2610/02** (2013.01 - EP); **F01N 2610/03** (2013.01 - EP); **F01N 2610/06** (2013.01 - EP)

Citation (search report)

- [Y] WO 2011163395 A1 20111229 - DONALDSON CO INC [US], et al
- [Y] FR 1323501 A 19630412
- [Y] US 2003079467 A1 20030501 - LIU Z GERALD [US], et al
- [Y] US 2011167810 A1 20110714 - LEBAS JEROME [FR], et al
- [Y] DE 4012411 A1 19911024 - WEBASTO AG FAHRZEUGTECHNIK [DE]

Cited by
DE102014108809C5; EP3265656B1; CN115608102A; CN111672263A; DE102015103303B3; CN113056595A; DE102014108809B3; JP2015167946A; US10662851B2; WO2016177361A1; WO2018108755A1; US9718037B2; US10626773B2; DE202014102872U1; US9957870B2

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