Title (en)

SELECTIVE CATALYTIC REDUCTION CATALYST AND CATALYTIC ARTICLE COMPRISING THE SAME

Title (de)

KATALYSATOR ZUR SELEKTIVEN KATALYTISCHEN REDUKTION UND KATALYTISCHER ARTIKEL DAMIT

Title (fr)

CATALYSEUR DE RÉDUCTION CATALYTIQUE SÉLECTIVE ET ARTICLE CATALYTIQUE LE COMPRENANT

Publication

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Application

EP 21803037 A 20210426

Priority

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Abstract (en)

[origin: WO2021231070A1] The present invention relates to a selective catalytic reduction (SCR) catalyst comprisinga support, vanadium and antimony, a catalytic article comprising the SCR catalyst, and an exhaust treatment system for an internal combustion engine comprising the SCR catalyst.In one embodiment,the invention provides an SCR catalyst for reduction of 5 nitrogen oxides, comprising: a support, and an active material on the support;wherein the support, calculated as its oxide, is present in the SCR catalyst in an amount of 40 to 99% by weight, relative to the total weight of the SCR catalyst; the active material comprises vanadium and antimony; the vanadium, calculated as V2O5,is present in the SCR catalyst in an amount of 1 to 15% by weight, relative to the total weight of the SCR catalyst; the 10 antimony, calculated as Sb2O3, is present in the SCR catalyst in an amount of 0.5 to 20% by weight, relative to the total weight of the SCR catalyst; wherein the SCR catalyst, after hydrothermally aged at 550°C for 100 hours with 10% water, has a 200-300°C denitrification efficiency of at least 60%, with 60,000h-1 space velocity and an ammonia to NOx molar ratio of 1:11

IPC 8 full level

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Citation (search report)

- [A] KWON DONG WOOK ET AL: "Promotional effect of antimony on the selective catalytic reduction NO with NH 3 over V-Sb/Ti catalyst", ENVIRONMENTAL TECHNOLOGY, vol. 40, no. 19, 4 July 2018 (2018-07-04), GB, pages 2577 - 2587, XP093144113, ISSN: 0959-3330, DOI: 10.1080/09593330.2018.1491632
- [A] KUMAR PULLUR ANIL ET AL: "Low temperature NH3-SCR activity enhancement of antimony promoted vanadia-ceria catalyst", CATALYSIS TODAY, ELSEVIER, AMSTERDAM, NL, vol. 293, 24 December 2016 (2016-12-24), pages 61 - 72, XP085063552, ISSN: 0920-5861, DOI: 10.1016/J.CATTOD.2016.11.054
- See references of WO 2021231070A1

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