

Performance of Sb-V-CeO₂-TiO₂ commercial monolith catalyst for simulated exhaust gas in the marine engine of NH₃-SCR

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Antimony(Sb) over V-CeO₂-TiO₂ monolith type catalyst was carried out for the selective catalytic reduction(SCR) of NO_x by NH₃. The monolith catalyst can be adjusted to reduce the simulate exhaust gas of marine engine at wide temperature (150~500°C). The characteristics of the monolith catalysts were thoroughly characterized by surface area, temperature programmed desorption (TPD) of NO, SO₂ and NH₃, X-ray Fluorescence (XRF) spectrometer and scanning electron microscope (SEM). The Sb-V-CeO₂-TiO₂ monolith catalyst showed higher activity at low temperature under SO₂ and H₂O condition than commercial catalyst.