Tohoku Univ. Technology

Exhaust gas cleaning catalyst

Does not contain precious metals and shows excellent exhaust gas purification performance

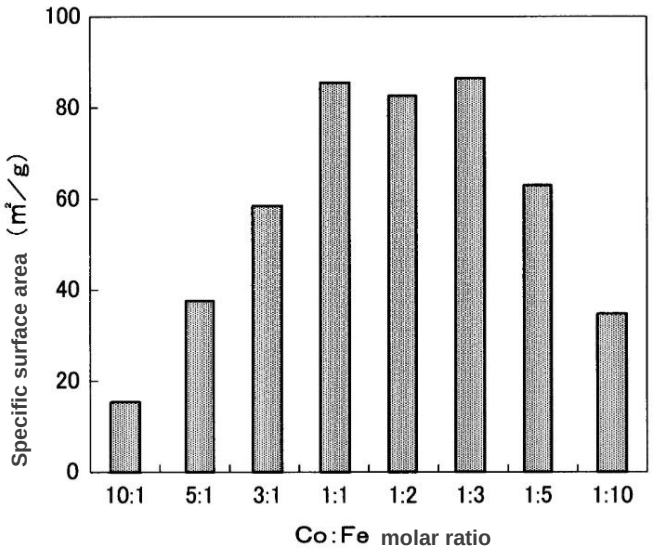
1. Exhaust gas cleaning catalyst
2. Porous metal particle
3. Fine metal particle
21. Open pore

Overview

Conventionally, a catalyst is used to purify the harmful gas contained in the exhaust gas before the exhaust gas discharged from an engine or the like is discharged into the atmosphere. Precious metals are widely used as an exhaust gas purification catalyst, but because precious metals are expensive, the development of an alternative metal catalyst is required. In addition, the use of porous metals containing precious and non-precious metals is being investigated. However, non-precious porous metals have the problem of insufficient purification performance in exhaust gas.

The present invention has made it possible to provide an exhaust gas purification catalyst capable of exhibiting excellent exhaust gas purification performance without containing precious metals. The exhaust gas purification catalyst has porous metal particles having a plurality of open pores on the surface and fine metal particles having a particle size smaller than the porous metal particles. Since the fine metal particles having a small particle size are supported on the porous metal particles having a plurality of open pores on the surface, the surface area becomes large. As a result, it was confirmed that the contact area with the exhaust gas becomes large and the reactivity becomes high. In other words, the exhaust gas purification catalyst of the present invention can purify hydrocarbons in the exhaust gas with excellent purification performance without containing precious metals.

A high specific area was obtained which is preferable as an exhaust gas purification catalyst without using precious metals



Product Application

- Internal combustion engine such as an engine

Related Works

[1]

IP Data

IP No. : JP5734223
Inventor : TSAI An-Pang, KAMEOKA Satoshi
Admin No. : T18-369

Contact

Tohoku Techno Arch Co., Ltd.
Please visit CONTACT here