KES

Taking Standard for Sample for Evaluation of Catalyst

KES T – L506

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1. Scope of application

It shall be applied to purifier catalyst for exhaust gas of vehicle and commercial car.

2. Purpose

This test standard shall be taking method for sample to catch instrument for purifying exhaust of vehicle, the characteristic of catalyst,

Note ([1]) Catalyst : Coated basic material(Alumina, ceria, zirconia etc) over the metal substrate or ceramic for purifying exhaust product.

3. Definition of term

(1) Conversion efficiency

Values calculated disparity of gas consistency as one-hundredth part Before and after catalysis.

$$Conversion\ Efficiency,\ \% \ = \left(1-\left(\frac{Cat_{\ output}}{Cat_{\ input}}\right)\right)\times 100$$

In this Catinput : Gas consistency before catalyst (Vol% or ppm)

Catoutput : Gas consistency after catalyst (Vol% or ppm)

(2) Light -off temperature

Temperature when conversion efficiency of catalyst becomes 50℃ when temperature of preceding part of catalyst raises by being injected gas of regular consistency .hereinafter "LOT" marked.

(3) Surface area

Physical characteristic helping promotion of conversion of catalyst and dispersion of precious metal. Characteristic controlled by basic materials (Alumina ceria, zirconia) marked above.

(4) Aging

Aging catalyst artificially at electric circuit as taking sample size as more than ϕ 2.54cm x 7cm core.

(5) Poisoning

Chemical aging covering precious metal with Pb, P, S,Si in fuel or engine oil. If poisoning is progressed, conversion efficiency is decreased.

4. Taking sample for catalyst

4.1 Quality confirmation for development and mass production of catalyst.

(1) Measure volume and weight of catalyst.

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