KES

Laboratory Aging Method of Monolithic Catalyst for Automobile

KES T – L500

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1. Scope of application

For laboratory aging method of monolithic catalyst for automobile, it indicates the heat durability of the car.

2. Test instrument

(1) An electric furnace (Possible use of combined box type or tube type)

① Maximum temperature : 1,700℃

② Must be possible to control the cycle

③ Possible device to inject gas : an oil gauge, pipes, tube sealing jig

④ Tube : Possible to use till 1,700℃

Temperature sensor : Possible to sense till 1,200℃

(2) Kind of used gas : Oxygen(O_2), air, water(vapor)

3. Kind of aging

(1) Method A : 540℃ × 1 hour

(2) Method B : 950℃ × 6 hour, injection 2% O_2

(3) Method C : 950℃ × 100 hour, injection air

(4) Method D : 950℃ × 100 hour, injection nothing into electric furnace

(5) Method E : 982℃ × 4 hour, injection 2% O_2 and 10% H_2O

4. Aging method

(1) Method A : 540℃ × 1 hour

Pretreatment, it is executed when a new catalyst is stocked in order to measure purification efficiency and light-off temp.

① Pick catalyst sample as core.

② Control the temperature of electric furnace to 540℃.

③ When end the temperature controlling of electric furnace, put the catalyst core sample into the electric furnace.

④ Leave it in the electric furnace for 1 hour.

⑤ After 1 hour, take the catalyst core sample out of the electric furnace and leave it in the room.

(2) Method B : 950℃ × 6 hour, injection 2% O_2

① Pick catalyst sample as core. The size of the core must picked more largely than that

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