



Testing Method for Oxidation Stability of Internal Combustion Engine Oil

KES T – L235

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1. Scope of Application

This shall apply to a test method for oxidation stability of an internal combustion engine oil.

2. Equipment

2.1 Test sample container

Use the heat-resisting glass beaker with an inner radius 70mm and a height about 120mm as shown in Fig. 1. And, its lid should be covered.

2.2 Oil double boiler

This should be in an appropriate size as shown in Fig. 2 and have a cover with a hole for a test sample container, mixer, test sample container support (¹) and warmth keeping equipment capable of maintaining it at the regulated temperature $\pm 1^{\circ}\text{C}$.

Remark (¹) : A test sample container support should be located approximately 120mm down from the upper surface of an oil double boiler cover and have holes for a uniform heating of an oil double boiler.

2.3 Test sample mixing bar

Attach two glass wings with a diameter 20mm to one end of a glass bar with a diameter 8mm approximately at the inclination of 40 degree pitch and symmetrically. And, connect the other end of a bar with a motor of about 1300 rpm.

2.4 Oxidation catalyst

Use a deoxidized copper plate with its surface area 32.26 cm^2 (more than 99.9 % with Cu) and a steel plate with its surface area 64.52 cm^2 (type 1 of a thin steel plate regulated in KS D 3501)

2.5 Varnish bar

This shall be a bar with its diameter 4mm and length about 100mm. Use one with one end round and the other bended in a U type.