

KES

Method for Determination of
Oil Content in Sintered Metal

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1. Scope of Application

This testing method shall be applied for the method of converting the weight of oil included in sintered metal to volume.

2. Test Instruments

Oil gravimeter, Weight Scale

3. Testing Method and Order

(1) Since the micro scale is not so accurate for heavy ones, the weight of specimen shall be more than at least 2 g. Many specimens can be used in order to have the minimum weight.

(2) After clean up the water-containing specimen, measure its weight. Say this "A."

(3) After done with (5), method of removing the oil in the specimen shall be as following. In order to set the weight B, extract oil in an appropriate size soxhlet that uses toluole or petroleum ether for its solvent. Remove the residue by heating this specimen up at 120 °C for 1 hour.

(For most of the specimens, the practical and fast way of removing oil is heating up the specimen using a protecting machine at 705 °C ~ 815 °C.

Since this kind of process's melting point (660 °C) is, for Al, low, it cannot be used for sintered Al.)

(4) Extract the oil continuously and repeatedly, and dry it. After cleaning up the surface of this specimen, measure the weight. Say this "B."

(Measure these weights by 0.001g.)

(5) Hang the oil containing specimen of A on the wire hook, and submerge it in distilled water more than at least 6.5mm. Be careful with that air bubbles don't attach to