KES

Testing Method for Carbon Residue of Petroleum Products (Conradson Method)

KES T – L234

(EST.) 1989 – 06 – 15

Contents

1. Scope of Application

2. Apparatus

3. Operation

4. Operation for Special Cases

5. Operation for Rigid Fuel Oil

6. Calculations and Report

7. Accuracy

Additional Rule

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1. Scope of Application

This standard shall specify a testing method for carbon residue of petroleum products by the Conradson method.

Remark: Carbon residue mentioned in this testing method is carbon residue formed after vaporization pyrolysis of oil. This residue is not only composed of carbon, and may be in a state of cokes after more pyrolysis.

2. Apparatus

2.1 Crucible

Use a homemade or a silica crucible, which is as shown in Figure 1, a as well as in a shape and sizes shown in the following table.

Table 1

Capacity (mℓ)	29 ~ 31
Diameter of mouth (mm)	46 ~ 49

2.2 Use a crucible, which is as shown in Figure 1, b and made of metal, as well as has a flange that has a shape and sizes shown in the following table with a lid and made of metal.

A horizontal part of the lid must be cleaned before use.

Table 2

Capacity (mℓ)	65 ~ 82
Inner diameter of flange (mm)	53 ~ 57
Outer diameter of flange (mm)	60 ~ 67
Height (mm)	37 ~39
Outer diameter of the bottom (mm)	30 ~ 32
Diameter of horizontal part	About 6.5

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2.3 Use a crucible, which is as shown in Figure 1, c and made of metal, as well as has a shape and sizes shown in the following table with a lid and made of metal.

Table 3 Units : mm

Diameter of mouth	78 ~ 82
Height	58 ~ 60
Thickness	About 0.8

After spreading about 25 mℓ of sands flatly below this crucible and placing the crucible b on the top, a lid of the b shall be close to a surface of the mouth of the outer crucible c.

2.4 For a tripod support, use nichrome wire, which diameter is about 1.8 mm, and make so that the bottom of the crucible c can be supported along the thermostat.

2.5 Use a chimney, which is as shown in Figure 1, e and made of thin sheet metal, as well as has a 50 mm-high bridge h, that is on top of chimney and made of iron or nichrome wire with a diameter of about 3mm, that has a shape and sizes shown in the following table.

Table 4 Units : mm

Top of chimney	Diameter	50 ~ 56
	Height	50 ~ 60
Bottom of chimney	Diameter	120 ~ 130
	Height	50 ~ 53
Distance between top and bottom of chimney	125 ~ 130	

2.6 Thermostat

Use an empty box, which is as shown in Figure 1, f and made of fire-resistant material block or metal. When using a cylinder-shaped material, make its diameter 150 ~ 170 mm, and when using a box-shaped material, make each side 150 ~ 170 mm. Make both heights 32 ~ 38 mm.

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