IS 1448 [P : 56] : 2013
ISO 2909 : 2002

Indian Standard

METHODS OF TEST FOR PETROLEUM AND ITS PRODUCTS

[P : 56]

CALCULATION OF VISCOSITY INDEX FROM KINEMATIC VISCOSITY

(Third Revision)

1 Scope

This International Standard describes two procedures for calculating the viscosity index (VI) of petroleum products and related materials, such as lubricating oils, from their kinematic viscosities at 40 °C and 100 °C.

Procedure A is applicable to petroleum products of viscosity index up to and including 100.

Procedure B is applicable to petroleum products of viscosity index 100 or greater.

NOTE The results obtained from the calculation of VI from kinematic viscosities determined at 40 °C and 100 °C are virtually the same as those obtained from the former VI system using kinematic viscosities determined at 37,78 °C and 98,89 °C.

This International Standard does not apply to petroleum products with kinematic viscosities less than 2,0 mm^2/s at 100 °C. Table 1 applies to petroleum products with kinematic viscosities between 2 mm^2/s and 70 mm^2/s at 100 °C. Equations are provided for calculating the viscosity index of petroleum products having kinematic viscosities above 70 mm^2/s at 100 °C.

NOTE In cases where kinematic viscosity data are not available at temperatures of 40 °C and 100 °C, an estimate may be made of the viscosity index by calculating the kinematic viscosity at temperatures of 40 °C and 100 °C from data obtained at other temperatures. Such viscosity index data may be considered as suitable for information only and not for specification purposes.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3104:1994, *Petroleum products — Transparent and opaque liquids — Determination of kinematic viscosity and calculation of dynamic viscosity*