

KES

Measurement of Porosity for Sintered Metal Ports

KES T – K002

(EST.) 1988 – 12 – 14

Contents

1. Scope of Application
2. Test Instruments
3. Testing Method and Order



1. Scope of Application

As a method of measurement of porosity with a microscope, this standard shall be applied for all kinds of sintered metal, using area percentage calculation.

(Here, porosity means closed and opened porosity as a common name.)

2. Test Instruments

Optical Microscope

Eye-lens with latticed line

3. Testing Method and Order

- (1) Put a specimen done with grinding and polishing on the microscope. Insert the lens that has 20 of each horizontal and vertical line in the eye-lens holder. Check several parts on the surface repeatedly. Count the number of latticed point centers that are captured by porosity. In this case, the standard of measuring view field shall be "60," and it shall be more than 30 times. (The microscope's magnification shall be 100 times.)

- (2) Number of Total Latticed Points on Surface in View Field

It shall be the number of latticed point centers that are captured by porosity and the number of view field.

Has the amount (%) by calculating the percentage that porosity occupies with following expression.

$$d (\%) = \frac{n}{P \times f} \times 100$$

Here, n : The number of latticed point centers that are captured by total porosity at the number f of view fields

P : Number of total latticed points on the surface in view field

f : Number of view fields