

KES

Method of Measuring
Hardness of Nitriding Layer

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1. Scope of Application

This standard determines the method that measures hardness of surface nitriding layer of the product that is nitriding-processed (Gas, salt shower, ion).

2. Test Instruments

Micro Vickers Hardness Tester

3. Specimen Shape and Hardness Measuring Method according to nitriding layer thickness

There are hardness measuring method as a completed product and the other method that measures the hardness after cutting vertically and mounting.

3.1 Hardness Measuring Method as a Completed Product

3.1.1 Product's roughness is high and nitriding condition shall be smooth.

Example : Inlet valve, exhausted valve, etc.

3.1.2 Measuring Method

Before the hardness checking, grind the part to be measured with #1000 sandpaper.

(Surface condition shall become flat, but nitriding layer shall not be removed.)

(1) The specimen shall be maintained horizontally.

If there is decline, cone shape shall become uneven. Then, accurate hardness value shall not be obtained.

(2) If the specimen shape is round, the cone shall be spotted in the middle.

Example : Inlet valve, exhausted valve

(3) Check the load with Hv(1.0).

Hv(0.05) shall be fine if needed.

Remark : Follow Vickers hardness testing method, KES T-L001 for hardness checking