

KES

**Method of Measuring
Thickness of Nitriding Layer**

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1. Scope of Application

This standard determines the method that measures thickness of nitriding layer of surface of products that are nitriding-processed (Gas, salt shower, ion).

2. Test Instruments

Micro Camera

3. Testing Method and Order

- (1) Cut vertically the section of nitriding-processed product as the size you want.
- (2) After mounting it, polish it so that there occurs no rounding.
- (3) Check the nitriding layer of the product done with polishing with a micro camera before etching.
 - Generally there occurs no nitriding layer before etching.
 - Although it occurs, it is not recognizable clearly.
- (4) You shall have to make a good choice for etching fluid in order to make the nitriding layer show up clearly according to material.

Example : Top ring → Nital, inlet valve → Fed3

- (5) After etching properly with appropriate etching fluid, dry it so that there occurs no stain.
- (6) You can measure the thickness of nitriding layer by observing nitriding state of surface through a metal microscope.

Remark : Objective of metal microscope (x 10 for ocular)

x 5 → 20 μ for 1 scale

x 10 → 10 μ for 1 scale

x 20 → 5 μ for 1 scale

x 40 → 2.5 μ for 1 scale