

EDS

Engineering,
GM DAEWOO Auto & Technology
Standards

METHOD OF FILE HARDNESS TEST

EDS-T-7159

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1. PURPOSE

This standard aims at helping test personnel perform the test in an appropriate method by describing the method of file hardness test for metallic materials.

2. SCOPE

This standard applies to the three cases as follows.

2.1. In case general method hardness measurement is not impracticable due to too thin carburized depth

2.2. In case of examining the occurrence of the softened surface to the surface-hardened parts

2.3. In case of measuring the surface hardness of sintered materials

3. TEST PIECE

3.1. For the test piece, the product as it is shall be used.

3.2. For the first approval at least 3 test piece, and for the routine quality control at least 1 test piece shall be used.

4. TESTING METHOD

4.1. Push the file powerfully and slowly at an angle so that some tooth faces are close to the measuring surface at one time. Here, the pushing force shall be within approximately 4.5 to 5.5kg.

4.2. Measure the hardness from high to low level.

4.3. Record the file value pushed first in pushing.

5. MARKING METHOD

5.1. Marking shall be as "FILE HARD-H_{RC} □□□", or "FILE HARD-H_V □□□", and the mean value measured on three or more portions shall be recorded in □□ or □□□.

5.2. Marking example

FILE HARD-H_{RC} 65 mean that the surface hardness value measured with a file hard tester is 65 H_{RC}.

6. REFERENCE

SAE J 864 Surface hardness testing with files