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HARDNESS TEST REPORT

Condition of Part:
Surface Preparation:
Grinding Δ Machined Δ Lapping Δ Filling ▲ Others Δ

Measuring Unit: Rockwell C (HRC) Δ Rockwell B (HRB) Δ Brinell (HB) ▲ Vickers (HV) Δ

S/N	SAMPLE ID	TRIAL 1	TRIAL 2	TRIAL 3	AVERAGE
1	A	12.12	11.8	12.0	11.97333
2	A1	9.3	9.3	9.3	9.3
3	B	11.2	11.5	11.4	11.36667
4	B1	10.5	10.5	10.6	10.53333
5	C	9.9	10.2	9.8	9.966667
6	C1	10.9	11.4	11.4	11.23333
7	CCN	11.2	11.0	11.0	11.06667
8	OCN	11.2	11.2	11.6	11.33333
9	CCAN	9.8	10.1	9.9	9.933333
10	OCAN	10.3	9.9	10.1	10.1

Procedure

The Brinell method was used for the testing of the material, since its Polymeric in nature. In the Brinell hardness test, an optical method, the size of indentation left by the indenter is measured. In contrast to the likewise optical Vickers method which involves a pyramid-shaped indenter being pressed into a specimen (sample), the Brinell method uses a spherical indenter to hit the sample for the test. The larger the indent left in the surface of a work piece (sample) by the Brinell indenter with a defined ball diameter and a defined test force, the softer the tested material.

In order to determine the Brinell hardness (HB) according to ISO 6506, the spherical, hard metal (tungsten carbide) indenter is pressed into the sample with a defined test load (between 1 kgf and 3000 kgf). The Brinell hardness (HB) results from the quotient of the applied test force (F in newtons (N)) and the surface area of the residual indent on the specimen (the projection of the indent) after withdrawing the test force. The measurement is obtained by transforming the physical hit to an electric signal which is then detected by the amplifier and then displayed.

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