

BLOCKS FOR RELIABLE HARDNESS TEST



Based on ISO·JIS Standard Blocks for Hardness

To improve tester performance before use



- Advantages Calibrating with the World's Most Accurate Blocks.
- The Most Consistent and Reliable commercially available in the world.
- Twice the Usable Test Areas. Thicker and More Stable

Types and nominal Hardness Values

| | |
|--|--|
| HR C | 70,67,64,62,60 |
| HR C | 57,55,50,45,40,35,30,25,20,10 |
| HR A | 87,85,83,81,78,75,71,65,56 |
| HR30N | 83,81,78,73,67,60,55,50,41 |
| HR15N(45N) | 92,90,87,85,80,75(43)(23) |
| HRB S | 100,95,90,82,72,62,52,42,32 |
| ★HRB Dual(HRB S+W) : d-HRB | 90,62,32 |
| HR30T S | 78,72,62,52,42,38,32 |
| HR15T S | 87,82,78 |
| HRE 90,HRM 107,67,HRL 118,92,HRR 123,105,HRF 90,HRS 90 | |
| HMV(1,0.1) | 1650 |
| HMV(1,0.1,0.01) | 900,800,700,600,500,400,300,200,100,40 |
| HMV(0.1,0.01,0.001) | 30(Au) |
| HV(30,1) | 1000,900,800,700 |
| HV(10,1) | 600,500,400,300,200,150,100,40 |
| UMV(0.01,0.002) | 900,700,500,200 (Berkovich 9.8mN tested) |
| ★HN-W Single crystal block for nanoindentation (≈430HV 0.01,0.001,Berkovich 9.8mN tested) | |
| HS | 100,95,90,80,70,60,50,40,30,20,7 |
| HLE(Dia) | 850,800,700,600,500 |
| HLD(WC) | 880,830,730,630,520 |
| HBW(10/3000) | 600,550,500,450,400,350 |
| HBW(10/3000) | 300,250,229(d=4mm),200,180,150 |
| HBW(10/500) | 125,100 |

Combinations for diamond indenter verification

HR C 55,25 HR45N 43, 23 HR15N 90

Combinations for daily control

HR C 60,50,30
HS 90,60,30
HBW 229

Charpy V-Notch Test Blocks

In compliance with JIS B7740-1990
Feature:Extremely small irregularity in Charpy absorption energy(CV:3% or less)
Material:SNCM439.Q.T(complying with JIS test piece No.4)
NK verification provided.



| | |
|--------------------------------------|--------------|
| | Energy Level |
| Type A | approx. 30J |
| Type B | approx. 100J |
| Type C | approx. 160J |
| 5 pieces each energy levels per 1set | |

Standard Microstructure

Standard pieces of metal material microstructures and detailed explanations with photographs and CD-ROM.



- Group 1. Carbon steel, Cast iron
- Group 2. Alloy tool steel, High-speed tool steel
- Group 3. Structural alloy steel, sttel for special use
- Group 4. Non-ferrous alloys
- Group 6. Metallic surface, modifications
- Group 1~6 25 types each
- Group 7. Abnormal structure (23 types)

● A.G.S.ETCHING SET

Conforms to JIS 0551
Etching set for revealing the prior Austenite Grainboundaries of steels for structural use in machines.

Standard Piece for Spark Test

Based on JIS G 0566-1980 (Manual with CD-ROM)

For studying Grinding Spark Test for Steel.

| Gr. "K" | Gr. "F" | Gr. "G" | Gr. "H" |
|---------------|------------------|--------------|--------------------|
| SUY | SUY | SKS2 | SNC631 |
| S10C | S10C | SKS3 | SNC415 |
| S20C | S15C | SKS4 | SNCM447 |
| S45C | S20C | SKS93 | SNCM420 |
| SK105 | S30C | SKD11 | SCR440 |
| SKS2 | S35C | SKD4 | SCR420 |
| SKD11 | S40C | SKD61 | SCM440 |
| SKD61 | S45C | SKT4 | SCM415 |
| SKH55 | S50C | SKH2 | SUS410 |
| SUJ2 | S55C | SKH4 | SUS420J2 |
| SCM440 | SK85 | SKH51 | SUS430 |
| SCM415 | SK105 | SKH55 | SUS304 |
| SUS420J2 | S10C(Carburized) | SKH57 | SUS316 |
| SUS304 | SWRCH10R | SUJ2 | SUH3 |
| SUP6 | FC30 | SKS3 | SUP6 |
| (Educational) | (Carbon steel) | (Tool steel) | (Structural steel) |

Hardnester

Standard File for Scratch Hardness

PAT.No. 196592

(Manual with CD-ROM)

HRC 8 Hardness(20~67)HV 8 Hardness(200~900)
HV 16 Hardness(200~950)
with one T.M each Hardness value.



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