



TOYO TANSO
Inspiration for Innovation

Premium Grade Graphite

TTK Series

- Super high accuracy mold machining -

Electrode Machinability

Extremely low & even distributions of impact on Cutting tools result "Superior shape machining" of electrodes.

Realize high speed machining by Low cutting resistance (about 1/10 of Metals like copper).

No burrs to remove in secondary operation

Wire-cut EDM

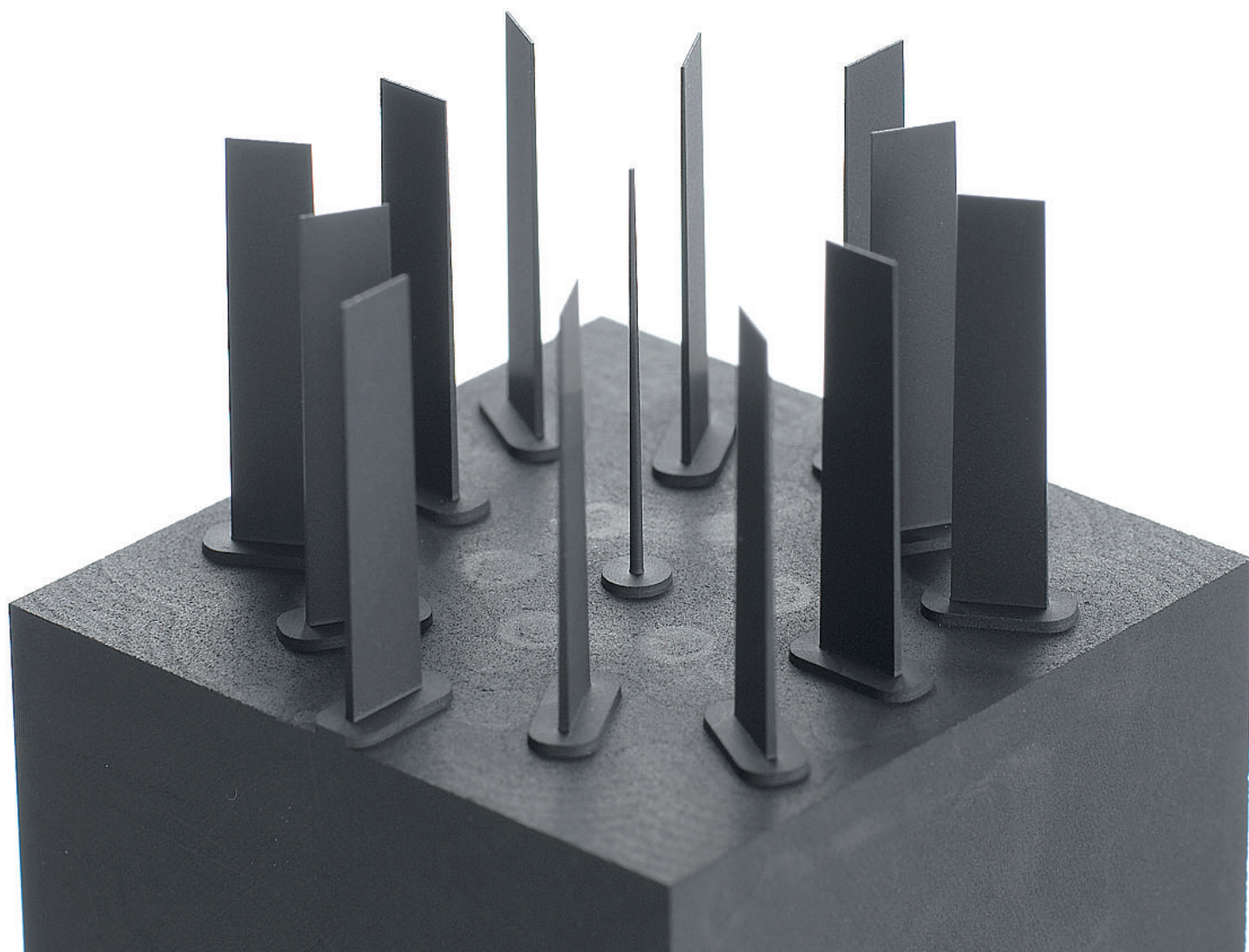
Extremely low & even pore distribution structure result in a "No Oxide" attack which could cause wire breakage"

2 to 3 times of higher EDMing speed
(Compared with conventional graphite)

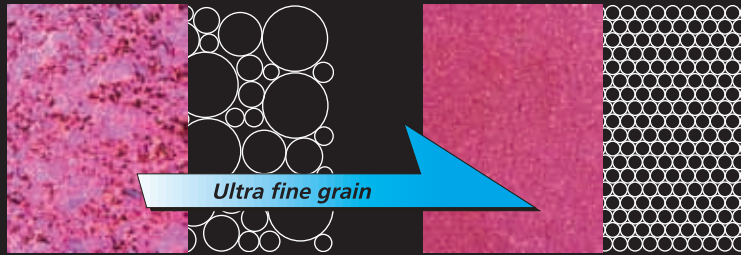
No warping & deforming in super small (thin) ribs machining are realized by low C.T.E property. C.T.E: Coefficient of Thermal Expansion

Die sinker EDM

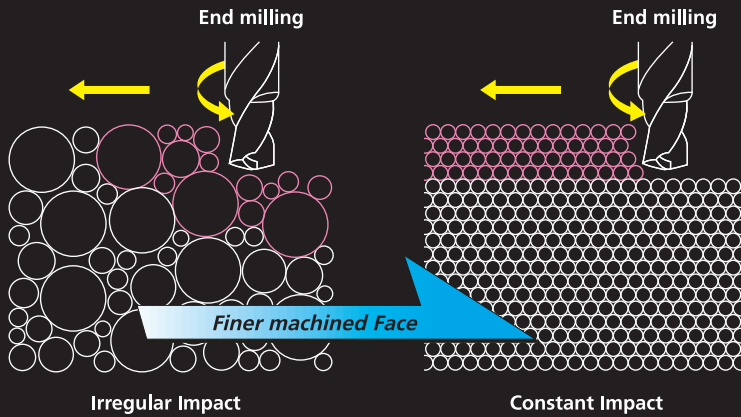
Extremely low electrode wear rate realizes sharper corners & edges. Realize no waviness on all discharging surfaces.



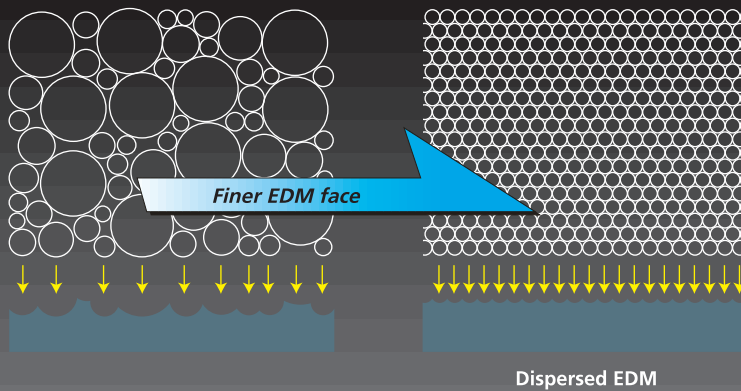
Structure



Machinability



Surface Roughness



Physical Properties

| Material Name | — | ISEM-8 | TTK-50 | TTK-4 | TTK-9 |
|------------------------|---------------------|--------|--------|-------|-------|
| Bulk Density | Mg/m ³ | 1.78 | 1.80 | 1.78 | 1.77 |
| Hardness | HSD | 63 | 70 | 72 | 90 |
| Electrical Resistivity | $\mu\Omega \cdot m$ | 13.4 | 13.0 | 14.0 | 18.0 |
| Flex.Strength | MPa | 52 | 60 | 73 | 92 |

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