



New High performance EDM wire

Sumi-Spark γ (gamma)

New EDM Wire for ultra precision processing

SEI has developed new EDM wire which is suitable for ultra precision processing. Special alloy coating on high carbon steel wire core realizes good compatibility between higher strength and better electric discharge performance. This new wire shows best matching for high speed and precision EDM.

Material Composition

High strength Steel wire core –Sumi-Spark γ is composed of high strength steel wire core with unique special brass coating which shows excellent EDM performance. Core Steel wire is made of special clean steel which non-metallic inclusions are strictly controlled. It makes good compatibility between higher strength (higher tension can be loaded at EDM) and prevention from wire breaks.

Features

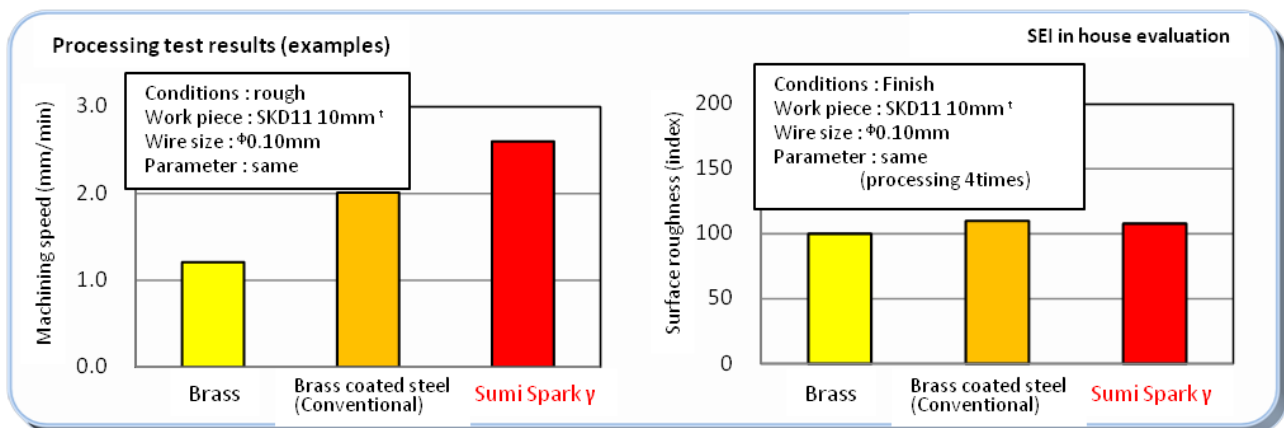
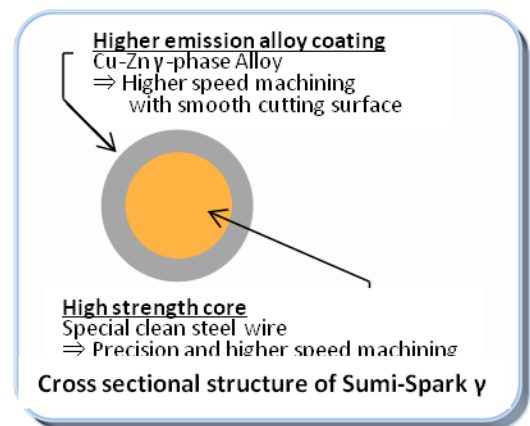
<Mechanism of high speed processing>

Low work function is key parameter for processing speed, which represents threshold energy of electron emission from metal surface. Sumi-Spark γ has thick Cu-Zn γ phase alloy coating which has lower work function than that of conventional brass coating. (α/β phase) This special coating shows excellent EDM performance and makes processing speed much higher than that of conventional material.

-Approximately 30% higher processing speed than that of conventional brass coated steel wire.

-Best match for higher speed and ultra precision machining

-Excellent property of wire straightness makes higher automatic recovery ratio from wire break



Specification(Mechanical properties and Electric conductivity)

Diameter (mm)	Tolerance (mm)	Tensile Strength (MPa)	Conductivity (IACS %)	Unit length (m/spool)
0.03	+0.000 -0.003	2000 \leq	9.0% \leq	5,000m(P-3R)
0.04				
0.05				5,000 · 10,000 · 20,000 (P-5R)
0.07				
0.10				

