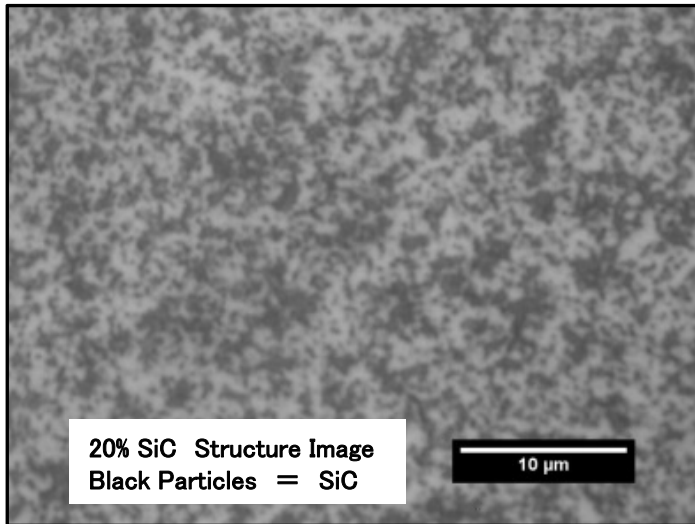


Metal Matrix Composite (MMC) Drawing Technology Development

World's first wire productization ※JFS research

Al-SiC Composite Wire



20% SiC Structure Image
Black Particles = SiC

X 1000

●New Material 「What is Al-SiC Composite Material ?」

Aluminium Alloy + Extra Fine Ceramic Particles



Metal Matrix Composite(MMC)

Unique and excellent new material !

●Excellent Characteristics

- Comparable rigidity
- Specific Strength
- Fatigue Strength
- High temperature strength
- High temperature Fatigue Strength
- Coefficient of thermal expansion
- Abrasion resistance
- Sliding composition
- Vibration Damping
- Corrosion resistant

●Field of practical use in Al-SiC Composite Material

- Racing Car, Production Vehicle, Train
- Aerospace
- Equipment for industrial products
- Sports products
- Audio equipment
- Hobby products



Type of Material : AMC612XF
Wire Dia: φ 1.2 mm

●Wire processing result

Mother Alloy: A6061
SiC Filling rate: 6、12、20vol%
(Ave. Particle Size 0.7 μ m)
Wire Diameter: 0.5~3.0mm φ
Length: ~50m

●Expected Wire used in below market

- Forging products
- Gear (Damping •Wear resistant •Sliding •Thermostable •Lightweight)
- Screw • Bolt (Damping •Thermostable •Lightweight)
- Frame of glasses (Lightweight •High rigidity)
- Bending article
- Wire spring (Damping •Fatigue-resistant •Lightweight)
- Cable • Cord
- Control Cable (Sliding • Lightweight)

Material	Mother Alloy	SiC Content rate (vol.%)	Tensile Strength (MPa)	Cold-Working Method
AMC612XF	A6061	12	354 (After Drawing)	✓
AMC620XF	A6061	20	471 (After Drawing)	✗



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