

Mineral Insulated cable for high voltage at high Temperature

High voltage Transmission cables in harsh environment

In [THERMOCOAX](#), we are constantly investing in R&D to bring **Mineral Insulated Cable** solutions to our customers

When your process needs high voltage (several thousand of volts), with temperature of 1000°C only THERMOCOAX has the experience to bring the right design.

Ignition system

The Aero engine market is looking for **ignition cable**, [THERMOCOAX](#) tested a demonstrator under 6100 volts under 400°C.

The concept is TRL3

Demonstrator tested and validated:

- Up to 6100 volts dc
- 1200A
- 400°C (752°F)
- With MgO and SiO₂ insulator
- 2 400 000 ignition cycles simulated





- Cable design tailored to meet customer’s demand
- Built on specification
- Single pair or multiple pairs
- No impact on outer sheath metallurgy
- No organic compound
- Cost effective process compared to others technologies

General Characteristics:

- Fire, water, UV resistant
- 3D Shape

Insulant material	Shaping	Length	Weight	Capacity	Insulation Resistance @ room Temp	Partial Discharge appearance @ room Temp	Dielectric test under 500V _{ac}	
							1min, @ room Temp	60sec
Magnesia	Shaped with 3 90° angles	1.20 m / 47.24"	937g / 2.08 lbs	300 pF	10 ¹¹ Ω	4.7 kV	Succeed	
Silica			880g / 1.94 lbs	135 pF			Succeed	

Part	Composition	Dimensions
Conductor	Copper	Ø 2.05 mm (~ OD 0.081")
Mineral Insulation	Highly compacted Magnesium Oxide (MgO) or Silica (SiO ₂)	3.19mm thickness (~ 0.126")
Intermediate Sheath	Oxygen free copper (Cu-B)	1.2mm thickness (~ 0.0472")
Outer sheath	Stainless steel 304L	Ø12.7 mm x Ø 10.84 (~ OD 0.5" x ID 0.4267")

