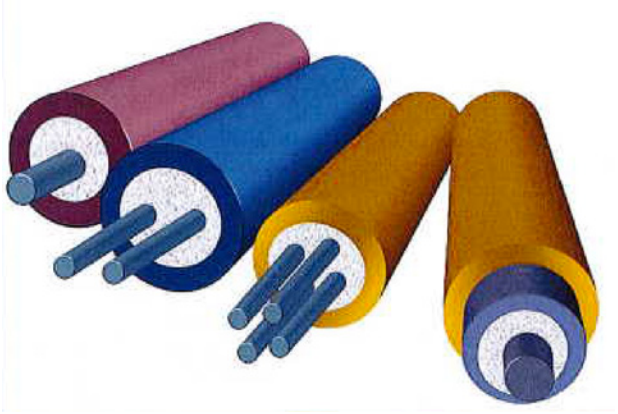
THERMOCOAX

Mineral Insulated Signal Transmission Cables



- Single conductor,
- Multi conductor,
- Coaxial and triaxial for high frequency signals,
- Low capacitance signals.

DEDICATED TO

- Nuclear energy,
- Aeronautics, Defence and Space,
- Cryogenic processes,
- Chemistry and petrochemistry,
- Vacuum technology,
- Hydraulic systems,
- Steam and gas turbines,
- Robotics...

Thanks to their exceptionnal properties, THERMOCOAX cables can:

- Be used in the most agressive media:
  - high pressure,
  - corrosive liquids or gases,
  - vibration,
  - nuclear,
  - vacuum.
- work up to 1200°C
- carry relatively high currents as well as very low signals at high frequency, and
- be welded or brazed onto any part or to pass through a wall.

The metallic sheath is usually made of:

- Stainless steel AISI 304L or INCONEL® 600 which ensures tightness, good mechanical strength and protection against external chemical agents. It is oxidation resistant at high temperature INCONEL 600® is recommended above 700°C.

The mineral insulating material is a highly compacted powder of either:

- Magnesium Oxyde (MgO): the most often used as it ensures the best electrical insulation at high temperature,
- Alumina (Al_20_3): recommanded for certain applications, especially for PWR system,
- Silica ($Si0_2$): for applications which require particularly low capacity.

The conductors are usually made of the same material as the one of the sheath, giving the best mechanical properties to the cable.

However, when low conductor resistance is required, a copper core (C), or a copper core plated with stainless steel (Zs) or a nickel core (N) can be used.

To choose the right core, it is necessary to take into account the temperature during mounting (welding or brazing) and operation. See the chart hereunder

Working temperature	Temperature during mounting	
	< 1 000°C	> 1 000°C
< 600°C	Zs-C	N
> 600°C	N	N

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