THERMO ELECTRIC CORPORATION

Swaged Tip Thermocouple

Introduction:

Swaged Tip Thermocouples are special purpose thermocouples in which the thermal mass of the sensing area is reduced by Swaging so as to get fast response from the sensor.

Swaging is a type of forging process in which a part is hammered and reshaped using rotary dies. Swaging process does not compromise the ruggedness of the structure but helps to increase the tensile strength as the process strengthens the grain structure of the material.

These type of sensors have large diameters throughout the length to withstand harsh environment conditions, except the swaged area at the bottom where the sensor is located.

Specifications:

- Temperature Range: For K-Type -200 – 1250 °C (varies acc. to element).
- Insulation Material: Mineral (MgO)
- Swaged Outer Diameter: Upto ~0.15mm for a length of upto 50mm. (Varies acc. to the sheath diameter).
- Process Connection: Customizable acc. to application.
- Length of probe: upto 200m.
- Sheath Material: Inconel™ 600, SS 321 etc.

Features:

- Fast Response as a result of lower thermal mass at the tip.
- Rugged construction suitable for harsh conditions.
- Cost Effective compared to expendable thermocouples.
- Ceramic coated tip can be used to measure temperatures of molten metal with high accuracy without damaging the sensor.

Applications:

- Molten Metal and Non-Metal temperature measurements.
- Aircraft Engine and Ground Equipments.

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- Gas Turbines
- Temperature measurement of Fluid flow in extreme conditions.

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