

Protecting Sheaths

The thermocouples mentioned above need protection against mechanical injury and chemical attack. Metallic or ceramic protecting sheaths are provided as a cover for the thermocouple element.

Metallic Protecting Sheaths:

These are suitable for uses upto the temperature approximately 1200°C maximum, depending on the particular application. Our standard diameter of these sheaths are 22mm outer diameter (OD) and 3mm wall thickness. Other diameters from 4mm to 52mm outer diameter in various wall thickness are available on request.

Ceramic Protecting Sheaths:

These are suitable beyond 1200°C. Ceramic sheaths are sometimes used as additional covering along with either metallic or ceramic outer sheath for special applications.

Sheath Materials

Sheath	Melting Point °C	Usable Temp. °C	Characteristics
SS-304	1400	900	High Resistance to heat and corrosion.
SS-316	1400	900	Excellent resistance to heat, acids and alkalies.
SS-310	1410	1150	Good oxidation resistance and sulphur atmospheres at low temperature.
SS-321	1400	900	Excellent resistance to corrosion.
HRS-446	1400	1150	Good oxidation resistance at elevated temperature & sulphur atmosphere.
Inconel 600	1410	1150	Excellent oxidation resistance (do not use in sulphur atmosphere.
Ceramic 610		1600	Excellent thermal, mechanical, electrical and corrosion resistant.

Thermocouple Calibration

Type	Thermocouple	Calibration	Equipment calibration	Temperature Range °C
K	Chromel-Alumel	IS : 2054	IPTS-1968 DIN 43710 BS 4937 iv	0-1200
T	Copper-Constantan	IS : 2056	IPTS-1968 DIN 43710 BS 4937 v	0-400
J	Iron-Constantan	IS : 2057	IPTS-1968 ANSI/MC96 BS 4937iii	0-900
R	Pt 13% Rh-Pt	IS : 2055	IPTS-1968 DIN 43710 BS 4937 ii	0-1600
S	Pt 10% Rh-Pt	IS : 2055	IPTS-1968 DIN 43710 BS 4937 i	0-1600
B	Pt 30% Rh-Pt 6% Rh	IS : 6270	IPTS-1968 DIN IEC B8 BS 4937 vii	0-1800