

Self-Renewing Thermocouple Reference E11 Info

Surface Temperature Measurements

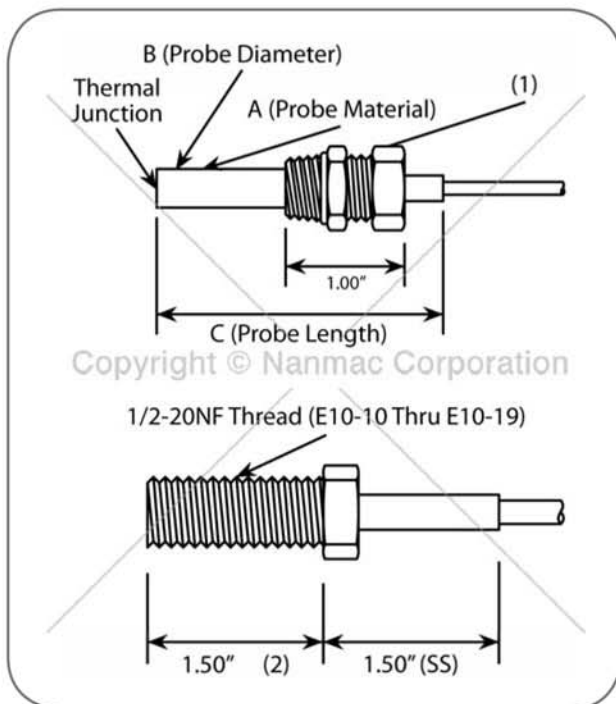
Used as a surface thermocouple, the Nanmac Self-Renewing Thermocouple will measure the precise temperature of the hot surface without obstructing the flow pattern. The probe can be made of any metal. Thus, matching the properties of the test wall and reducing the thermal conductivity errors to a minimum. As the surface of the wall (if subjected to erosion) wears away; the probe will continuously measure the surface temperature even while the probe itself erodes or wears away (up to 1/2 an inch during this process).

In-Wall Temperature

Used as an in-wall temperature measuring probe, the Nanmac Self-Renewing Thermocouple can be positioned to an accuracy of better than ± 0.001 inches. This feature, together with the fast response times of this probe make it an ideal in-wall thermocouple.

Immersion Temperature

Under certain applications the Nanmac Self-Renewing Thermocouple can be used for immersion applications such as within the stream of flowing plastic or high velocity gases. It is however recommended that Nanmac engineers should be consulted for the thermocouple design best suited for immersion.



NOTES:

- 20 milliseconds response time to transient temperatures
- Thermocouple junction renewable by filing or sanding the probe tip.
- Two-dimensional thermal junction for accurate positioning of the sensing tip.
- Temperature range up to 4,000 degrees Fahrenheit
- Pressure range up to 10,000 psi
- Probe diameters 1/8" OD and up
- Probe housing material fabricated from any machinable material.
- Sensing tip can be machined to match any desired shape.
- Available with several termination styles; such as standard plugs, flex leads, etc.

Special Notes:

1. Adjustable compression fitting available.
2. Machinable material; steel, plastic, ect.