



MATERIAL SELECTION

One of the main factors in selecting the material for the thermowell is the corrosion conditions the thermowell will face. Recommended materials for a number of applications are shown in the table on page 15. The high polish given to all stainless and Monel thermowells provide maximum corrosion resistance. On occasion, the material consideration is one of strength rather than corrosion. For example, a brass thermowell would be sufficient from a corrosion standpoint; however, a stainless thermowell would be required in a high pressure application. The user should consult the pressure-temperature ratings given for each thermowell type.

THERMOWELL MATERIAL RATINGS									
Material MTI Code	Melting Point (F)	Max. Oper. Temp.	Allowable Stress Values(PSI) Temperature (F)						
			0	300	500	700	900	1100	1300
304SS	2600	1650	18800	14100	12100	11100	10200	8900	3700
316SS	2525	1650	18800	14600	12500	11300	10800	10300	4100
310SS	2550	2000	18750	16400	15500	15100	11650	8500	3500
304LSS	2600	1650	15700	12000	10300	9400	-----	-----	-----
321SS	2575	1600	18800	14200	12000	11000	10600	6900	1700
446SS	2725	2000	17500	16100	15000	-----	-----	-----	-----
MONEL	2450	1000	17500	16100	15000	-----	-----	-----	-----
C.Steel	2760	1200	16600	13600	13100	13100	13100	8000	-----
Brass	1850	600	10000	10000	-----	-----	-----	-----	-----

BORE SIZE

Endurance characteristics of thermowells depend on their material of construction, size, shape, static pressure and ambient temperature. Almost any installation can use several types of temperature measuring devices; therefore, the selection of a standard bore diameter can provide extreme flexibility. The same thermowell can accommodate either a thermocouple, bi-metal thermometer or resistance temperature sensor.

The bore sizes of wells shown in this catalog accommodate the most commonly used temperature sensing elements used in the industry.

.260 Diameter Bore:

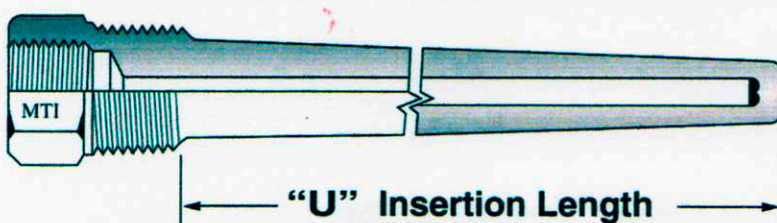
- ★ Bi-Metal Thermometers(1/4" stem)
- ★ Beaded Thermocouples (20 AWG)
- ★ MGO Stainless Steel (.250 OD)
- ★ Liquid in Glass Test Thermometers
- ★ Other .250" Max Stem O.D.

.385 Diameter Bore:

- ★ Bi-Metal Thermometers (3/8" stem)
- ★ Beaded Thermocouples (14 AWG)
- ★ Liquid In Glass (Armored)
- ★ MGO Stainless Steel (.375" OD)
- ★ Other .375" Max Stem O.D.

INSERTION LENGTH

The insertion length of the thermowell refers to the distance from the end of the well to the underside of the thread. Proper installation



requires the entire temperature sensitive part of the sensing element to be immersed into the temperature medium being measured. Ideally, if the temperature medium is a liquid, the temperature sensor should project into the temperature medium plus one inch. In a medium of gas or air, the element should be immersed its sensitive length plus at least three inches. Therefore, the user must determine the sensitive length of the sensing element before choosing an insertion length.