

TEMPERATURE COEFFICIENT STANDARDS

In 1983, the International Electrotechnical Commission (IEC) adopted the Deutsche Institute fur Normung (DIN) standard of platinum with a TC = 0.00385 ohm/ohm/°C.

In 1987, the ASTM also adopted this TC. In 1989, the Japanese Industrial Standard (JIS) was revised, and this is now the most commonly accepted TC throughout the world.

Particular care should be used, however, specifying a platinum RTD, because by alloying the platinum slightly different TC's can be obtained.

Other platinum TC's are 0.003902 (an old U.S. standard); 0.003916 (the old JIS standard), 0.005920 (another old U.S. standard); and 0.003923 (laboratory grade platinum).

Using a laboratory grade RTD with instrumentation designed for this IEC standard could give you an error of 8°C at 400°C.

This is also true for nickel RTD's, for which there are two accepted TC's: 0.00672, used occasionally here in the U.S., and 0.00617, is standardized in Europe under DIN 43760.