Strain Gage Selection

Karma Alloy

Modified Karma, or K alloy, with its wide areas of application, represents an important member in the family of strain gage alloys. This alloy is characterized by good fatigue life and excellent stability; and is the preferred choice for accurate static strain measurements over long periods of time (months or years) at room temperature, or lesser periods at elevated temperature. It is recommended for extended static strain measurements over the temperature range from -452 deg to +500 deg F (-269 deg to +260 deg C). For short periods, encapsulated K-alloy strain gages can be exposed to temperatures as high as +750 deg F (+400 deg C). An inert atmosphere will improve stability and extend the useful gage life at high temperatures.

Among its other advantages, K alloy offers a much flatter thermal output curve than A alloy, and thus permits more accurate correction for thermal output errors at temperature extremes. Like constantan, K alloy can be self-temperature-compensated for use on materials with different thermal expansion coefficients. The available S-T-C numbers in K alloy are limited, however, to the following: 00, 03, 05, 06, 09, 13, and 15. K alloy is the normal selection when a temperature-compensated gage is required that has environmental capabilities and performance characteristics not attainable in A-alloy gages.

Duplex Copper Feature

Due to the difficulty of soldering directly to K alloy, the duplex copper feature, which was formerly offered as an option, is now standard on all Micro-Measurements open-faced strain gages produced with K alloy. The duplex copper feature is a precisely formed copper soldering pad (DP) or dot (DD), depending on the available tab area. All K-alloy gages which do not have leads or solder dots are specified with DP or DD as part of the designation (in place of, or in addition to, the option specifier). The specific style of copper treatment will be advised when the Customer Service Department is contacted. Open-faced K-alloy gages may also be ordered with solder dots.