



Sceptre Application Notes EMD Temperature Compensation

The EMD Temperature Compensation is available as an option to Sceptre systems to aid precision in uncontrolled environments. It consists of hardware and software for the automatic compensation of linear thermal expansion of the machine scales and work piece.

Four thermal sensors and related electronics are added to the machine. These sensors monitor the temperature of the machine scales XYZ and an attachable "Clip ON" part sensor determines the temperature of the work piece.

Before a measurement cycle is initiated the sensors are poled by the part program to determine the thermal state of the machine and part. This thermal state is assumed to be constant through out the inspection cycle.

The expansion coefficients of the scales are known in a predetermined configuration file. The expansion coefficient of the work piece can selected or a material can be selected that has default expansion coefficients. Alloys with unique coefficients will require the input of the proper value.

Graphic confirmation of the applied temperatures is displayed to the machine operator. The inspection report can be stamped with the thermal conditions at the time of inspection.

