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Thermal behavior of Functionally Graded Materials

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Abstract : Mathematical expressions have been used to find thermal behavior of functionally graded plate. Temperature distributions are used on the basis of three different types to evaluate the thermal properties of FGMs. Material properties are vary continuously through the thickness according to a powerlaw function, exponential function, and sigmoid function in terms of the volume fraction of the constituents. The computational mathematical software Matlab.R2014b has been used to carry out the numerical calculations and the graphs been plotted using OriginLab.9.

Keywords : Functionally graded materials, Material properties, Temperature distribution