**Investigating Behaviour of Functionally Graded Sandwich Plates - A Review**

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**ABSTRACT**

The modern materials in the composites family are the Functionally Graded Materials. The naturally occurring Functionally Graded materials are bamboo, wood, human skin and bones. Functionally Graded Materials have vivid applications in engineering structures, aircraft and spacecraft, navy and medical fields by virtue of its great advantages. Metal/Ceramic FGM composites are mostly used in which the ceramic part offers good thermal resistance and metallic part offers superior fracture toughness. Uniform and gradient variation in the material properties helps to eliminate the interfacial stresses and structural delamination. The capability to tailor the properties of advanced composites - Functionally Graded Materials according to the problem demand is the reason behind the significant attention of the research community. Now-a-days, Functionally Graded sandwich plates and beams are widely used in many applications. Therefore, this study deals with the review of the methods proposed by various research experts for the investigation of behaviour of Functionally Graded sandwich plates. Different methods and plate theories such as Classical Plate Theory, First Order Shear Deformation Theory, Higher Order Shear Deformation Theory, Layerwise Theory and Zig-Zag Theory along with their merits and demerits are presented in this study.

*Keywords: Functionally Graded Materials;* *Classical Plate Theory;* *First Order Shear Deformation Theory; Higher Order Shear Deformation Theory;Layerwise Theory; Zig-Zag Theory*