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Post-buckling analysis of the shape memory polymer sandwich composite beam under dynamic temperature variation

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IOP Conference Series: Materials Science and Engineering, Volume 1004, 1st International Conference on Recent

Advancements in Design and Manufacturing (ICRADM 2020) 16-17 July 2020; SVNIT, Surat, India

Citation Achchhe Lal and Kanif Markad 2020 IOP Conf. Ser.: Mater. Sci. Eng. 1004 012020

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https://doi.org/10.1088/1757-899X/1004/1/012020

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Abstract

Post-buckling analysis of the shape memory polymer sandwich composite (SMPSC) beam under HSDT utilizing von Karman kinematics using FEM is performed in present analysis. The aim of the study is to develop a model which accurately perform the buckling analysis. The nondimensional critical buckling load (NCBL) evaluation under the action of inplane uniform load with different boundary conditions (BC), plate thickness ratio, under dynamic temperature variation for SMPSC. The study clearly reveled the differentiation between SMPC and SMPSC beam.

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