



**National Conference on Emerging Trends in Engineering,
Science, Management and Humanities (NCETESMH – 2020)**
27th September, 2020

CERTIFICATE NO : NCETESMH /2020/ C0920421

**DEVELOPMENTS IN NON-TRADITIONAL CORE CONCEPTS
FOR SANDWICH STRUCTURES**

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ABSTRACT

The sandwich involves the analysis of a carbon fiber core construction with rods that are oriented to face and temperature throughout a wide variety of temperatures in which strength as well as rigidity were found to be deficient at high temperatures due to polymer matrix softening whereas the characteristics were completely preserved and enhanced at cryogenic temperatures. Various truss-core designs were also studied using pyramidal carbon-fiber truss core cores. After exposure to high temperatures, the analysis of residual compression strength showed in particular a decline in strength owing to a degradation of the matrix and fiber matrix interface as well as pores and crack growth at a high temperature. Pyramid truss core sandwich panels torsional behavior has also been investigated.

A performance of aerodynamic-sensitive aerodynamic core panels compared to corrugated core rivals. The previous panels were better isolated and strong than the ones with a corrugated core. A lightweight C/SiC pyramidal core has an evaluated integrated thermal protection system grille with the core filling of aluminium fibres and may be used in hypersonic vehicles. FEA as well as empirically examined the influence Random damage in metal sandwich plates with a pyramid truss core caused by manufacture on their dynamic behaviour. Tetrahedral panels were manufactured using a novel method for the moulding of hot presses and experimentally evaluated the compressive and shear response. Experimentally, the effect of the grid angle on the crash resistance at the centre.

Keywords : Non-Traditional Core Concepts, Sandwich Structures