IMPACT: International Journal of Research in Engineering & Technology
ISSN(P): 2347–4599; ISSN(E): 2321–8843
Vol. 8, Issue 4, Apr 2020, 39–50

NEW MATERIALS DEPEND ON NYLON MATERIAL USED AS TEMPERATURE CONTROL IN AUTOMOBILE / CERAMIC SECTOR

V. Rameshsrenyvasan, V.Ganeshkarthikeyan & Sabiknainar

Assistant Professor, Einstein College of Engineering, Tirunelveli, Tamil Nadu, India

Associate Professor, Aditya Engineering College, Coimbatore, Tamil Nadu, India

Associate Professor, Kalasalingam University, Tamil Nadu, India

Received: 27 Mar 2020 **Accepted:** 13 Apr 2020 **Published:** 30 Apr 2020

ABSTRACT

Presently in textile industry the advances are rapidly changing substitution of minerals such as carbon particles in tall-recital areas. Single problem of this circumstances is heating, is created private owing the heat transfer shaped by heat radiation dwindling on the top, mostly on the roof. The study suggests the groundwork of a compound substantial comprising cotton usual fiber by way of a thermal fence to be facilitated as the roof of the textile industry. This study, 23 various seals of 6 coats remained ready, joining nylon fiber, cotton natural fiber, fiber glass, and extracts such as gum + Al2O3or resin + Al. Reference samples were taken from carbon steel and one reference sample was extracted from the top of the industry. As the solar energy along with heat transfer devices, the temperature of the shallow un protected to showed that the thermal conductivity of the steel with which the roof of the industry is manufacturedwas13. 43 W•m1•K−1and of the planned coat was 7.55 W m 1 K−•−1, Attaining a reduction in the thermal conductivity by 64. 11 %. By means of the temperature and thermal conductivity data, the simulation (ANSYS) of the thermal system was performed. The results showed that the temperature inside the roof with the carbon steel, which is currently used to manufacture high-performance machineries, would be 62.34°C, whereas that inside the car with the proposed laminate would be 54.96°C, achieving a thermal barrier that allows a temperature variation of 11.23°C.

KEYWORDS: *Nylon Material, Automobile Sector, Ceramic Sector*