

HEATING RADIANT SYSTEMS MANUFACTURED FROM ADVANCED COMPOSITE MATERIALS

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Abstract: The paper presents two 3-D micro structural models of polymer matrix composites with conductive spherical particles and non-deformed flakes as fillers and heating radiant systems manufactured from advanced composite materials. The description of heating radiant systems for public and industrial buildings, including the heating principle, is also presented. These heating radiant systems provide more clean and advantageous heat, are energetically efficient and lead to conformity with the procedures of IGEF-Internationale Gesellschaft für Elektrosmog-Forschung (International Society for Electronic Smog Research), regarding the electronic smog. The main feature of these heating radiant systems is that the energy transfer does not accomplish through air (convection), but through electromagnetic waves (radiation), namely the air between the heat bearer and its receiver does not heat.

Key words: radiation, convection, composites, percolation, conduction.