

Title (en)
THERMALLY INSULATING GLASS LAMINATES WITH A NON-UNIFORM COATING LAYER AND SEALED CAVITIES OF GAS MOLECULES

Title (de)
WÄRMEDÄMMENDE GLASLAMINATE MIT UNGLEICHMÄSSIGER ÜBERZUGSSCHICHT UND ABGEDICHTETEN HOHLRÄUMEN VON GASMOLEKÜLEN

Title (fr)
STRATIFIÉS DE VERRE THERMIQUEMENT ISOLANTS AVEC UNE COUCHE DE REVÊTEMENT NON UNIFORME ET DES CAVITÉS SCELLÉES DE MOLÉCULES DE GAZ

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Abstract (en)
[origin: WO2018145014A1] The present disclosure provides thermally insulating glass laminates that mitigate or prevent heat loss from heated cavities. The present disclosure also provides a heating device, such as an oven, that includes the insulating glass laminates as diffusers, to shield a functional element. In some embodiments, the thermally insulating glass laminates have a first substrate, a second substrate, and a non-uniform low or non-conductive coating layer that forms a chemical bond with at least one inner surface of the substrates. The coating layer can have a thickness of about 0.010 inches or less and forms a pattern that contacts about 30% or less of at least one inner surface of a substrate. The coating layer also forms a plurality of sealed cavities of gas molecules between the substrates. Since there is a small amount of gas molecules in each cavity, convective heat transfer between the substrates is minimized thereby minimizing heat loss through the laminates into the surrounding environment.

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