
Measuring the difference in refractive index between tin and glass side of float glass

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Abstract

The surface refractive index of float glass appears to be different from the bulk refractive index which is commonly used in designing optical coatings for glazing. furthermore, due to the diffusion of tin into the surface of float glass in contact with the tin bath during production, the properties of tin and glass side are known to be different. The work presented in this paper focusses on determining the differences in refractive index corresponding to these surfaces. It is shown that with proper sample preparation and the measurement procedure used by the author, sufficiently accurate results can be obtained using a spectrophotometer equipped with a simple reflection accessory. Results of the surface refractive indices are presented for a silicate float glass in the measurement range 250 nm - 2,500 nm

Keywords: refractive index, foat glass, tin side

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