ift, Postfach 10 0451, 83004 Rosenheim

Uwe Forschner Bauelemente
Hrn. Uwe Forschner
Im Öschle 9

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Ihre Nachricht vom	
Unser Zeichen	sn
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Rosenheim	22. März 2004

Order 410 28135

Dear Herr Forschner,

The thermal transmittance coefficient U_g in accordance with DIN EN 673 and the total energy transmittance g according to DIN 410 were determined on the two panes of glass delivered by you on 11th March 2004.
The purpose of the investigation was to discover whether the SIGNAPUR coating present on level 1 of pane 1 has an influence on the Ug value and on the g value .

Panes of Glass

Pane 1
Structure: 4/16/4/16/4 with low e coating on levels 2 and 5, SIGNAPUR coating on level 1
Dimensions: 358 mm x 2298 mm

Pane 2
Structure 4/16/4/16/4 with low e coating on levels 2 and 5
Dimensions: 358 mm x 2298 mm

Mode of Procedure:

To resolve the above-mentioned question, test pieces were cut from the individual samples supplied and the spectral data in accordance with EN 410 and the emission capability in accordance with EN 673 were determined for the latter. The thermal transmittance coefficient U_g according to DIN EN 673 (_T = 15K) was calculated using the data established. A nominal gas fill of 90% argon was assumed for this. In the same way, the total energy transmittance g was calculated on the basis of the data measured for the individual panes and further technical characteristic data for light in accordance with DIN EN 410.

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Results:

Thermal Transmittance Coefficient U_g

The SIGNAPUR coating applied to level 1 does not lead to any change in the thermal transmittance coefficient of the glazing, as no change could be determined in the degree of emission in comparison with the uncoated pane of glass.

An emission capacity of (illegible) = 0.05 was determined for the low e coating used on levels 2 and 5 on the panes supplied.

The calculation of the U_g value according to DIN EN 673 for the above-mentioned glass structure with the assumed gas fill level of 90% argon and the degree of emission determined produces

$U_g = 0.6\ W/m^2K$

Total Energy Transmittance g

To determine the total energy transmittance g, small test pieces of the individual panes of insulated glass delivered were assessed with regard to the level of spectral transmission and reflection. The subsequent calculation was undertaken in accordance with DIN EN 410. The following characteristics were determined:

Pane 1: g = 0.51
Pane 2: g = 0.51

To summarise, it can be stated that, in the case of the panes investigated, no influence can be established from the SIGNAPUR coating on level 1 on the thermal transmittance coefficient U_g or on the total energy transmittance g.

Yours sincerely,
ift Rosenheim

(signed)

Norbert Sack
Head of Structural Physics Test Section