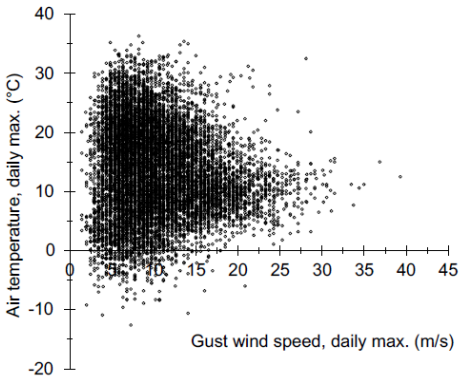
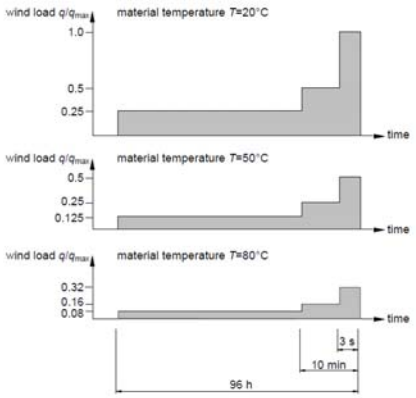
	Project sheet
Research project :	**Design shear modulus of PVB foils**
Images :	 
Keywords :	PVB, shear modulus, wind load, snow load
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Time span :	Since 2003
Description :	Laminated glass consists of two or more glass plies that are bonded by transparent intermediate foils or resins. For economic design, it is desired to consider the shear interaction of the plies. Therefore, with the shear modulus of the intermediate layer as the dominant parameter, several numerical models were developed that were based on the sandwich-theory. The key-problem is that, because of the rheological properties of polymers, the shear modulus depends upon the load duration and the material temperature. Due to missing information concerning the load duration of wind or snow loads and the correlated material temperature, very conservative assumptions were used for the shear modulus today. Based on meteorological data and measurements on laminated glass panels, more realistic load assumptions were determined that consider the chronological sequence of wind and snow loads and the correlated temperature of intermediate layers. Design values for the shear modules that implement all time dependent effects were then determined in a second step.
Most important publications :	- Wellershoff, F; Sedlacek, G.; Düster, H.: Bemessungsschubmodul für PVB-Folien in Verbundsicherheitsglas; Forschungsbericht G 2003/10-06 Lehrstuhl für Stahlbau, RWTH Aachen, 28.10.2003 - WELLERSHOFF, F. *Bemessungsschubmodul für Verbundglasscheiben* Stahlbau 76 (2007) Heft 3, Seite 177-188
Working group :	WG 2. Material characterization and material improvement
Category :	TG 6: Interlayer properties
Sheet compiled on :	2012/09/14