

Technology offer

A connection element for connecting glass to timber

Field of use

Building construction

Current state of technology

Stage of Development:
Available for demonstration
TRL7

Patent status

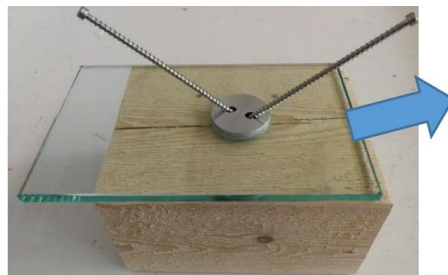
Patent pending

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Background

The research field of timber-glass composites has become a dynamic segment of modern building construction where technical solutions are being developed and new applications defined. The existing timber-glass composites reach from timber-glass beams to timber-glass floor/roof panels and also to timber-glass wall panels. In order to join glass and timber with self-tapping screws, an additional structural element is needed to transfer the screw forces to the glass in a way that the stresses in the glass are held at low levels.

Description of the invention

The researchers from the University of Maribor developed a new connection element for connecting glass elements to timber elements with the help of self-tapping screws. The new connection element is made from aluminium and may be attached to the glass element by means of adhesive materials. The self-tapping screws are screwed through the connection element to the timber element. The new connection is minimally invasive and provides sufficient load-bearing capacity and stiffness. Another possible application could be the strengthening of existing timber structures, thus adding glass to existing structures and forming timber-glass composites. The motivation behind such an attempt is the possibility of a visually unnoticeable strengthening or stiffening measure due to the transparency of glass. Such a measure would be especially favourable for renovation purposes where the originality of the building elements needs to be preserved in the highest possible extent, either due to architectural heritage demands or even due to the individual requests of architects, owners or investors.

Main advantages

The new connection is minimally invasive and provides sufficient load – bearing capacity and stiffness.



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