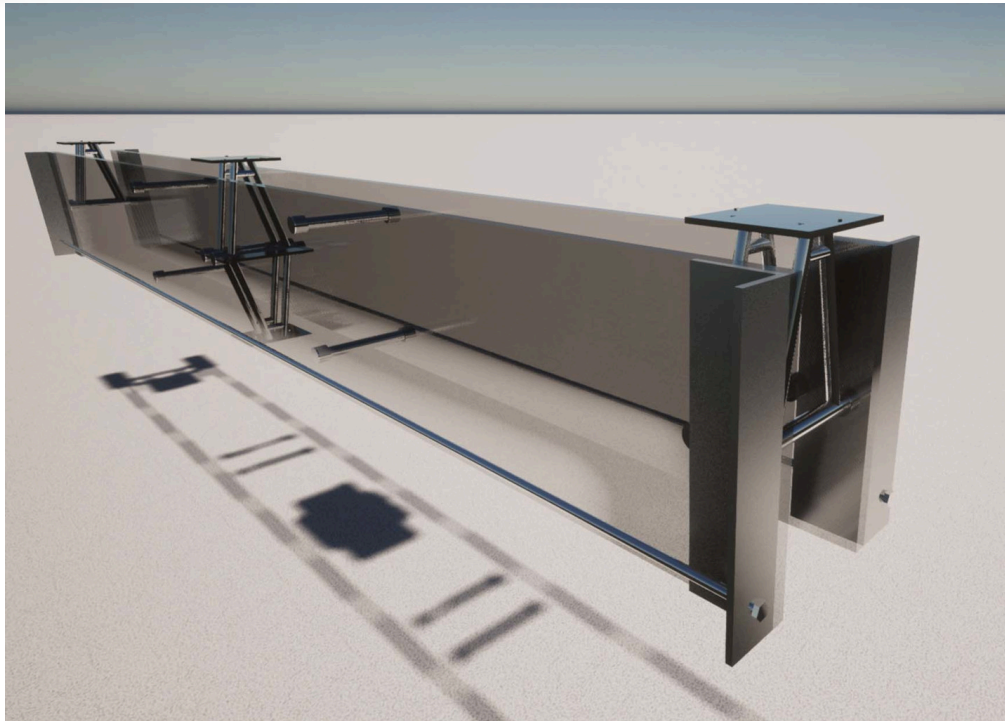


# HEAVY LOAD-BEARING STRUCTURE MADE OF GLASS PILLARS AND PLANKS



The invention consists of a method for making load-bearing structures, formed by pillars and/or planks connected to each other, essentially made up of structural glass sheets. The advantages of this system range from the flexibility of use allowing different structural types (for example real frames, linear or reticular planks) to the easy execution to the point that they can be produced industrially or by hand (no need of particularly construction skills). With respect to actual solutions, the proposed construction system guarantees high mechanical performance with a smaller size (thickness) of the planks (or pillars) and with a clean and elegant design.



## PRIORITY NUMBER

102023000005025



## KEYWORDS:

Four way planks, Glass building system, High breakage resistance, High load capacity, Pillars and planks.



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# HEAVY LOAD-BEARING STRUCTURE MADE OF GLASS PILLARS AND PLANKS

## DESCRIPTION

The planks or pillars are made by interposing spacers between two sheets of stratified (structural) glass arranged in parallel. Spacers are fixed to the sheets preferably with adhesive type unions, or alternatively with bolted union systems, so that they allow to follow the movement of the plates under load without inducing localized stresses. Metal profiles are applied (through adhesive type unions) at the two ends of the beam (or pillar) which allow anchoring with two, three and four-way joints, so as to create flat or three-dimensional framed structures. Profiles include housing for pre-tensioning metal bars which allow to reduce the tensile stresses, thus increasing the safety level of the structure up to the CC1 level of CNR-DT 210/2013 scale. Spacers are used to house the union joints (of the bolted type) to fix the closing panels (of the wall or floor) to the glass structure. The constructional system of the joint allows the adjustment of the positioning on the structure, to compensate for the construction tolerances. TRL 5.

## APPLICATIONS

- Buildings
- Urban structures

## ADVANTAGES

- greater ambient lighting compared to traditional systems
- improved stylistic impact
- greater breakage resistance and greater load capacity rather than other glass systems
- possibility of creating vertical and horizontal four-way planks

