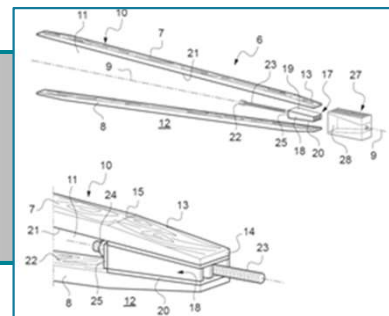


## Assembly of wood or prestressed fibrous materials

Assembly of wood / fiber materials / assembly process / wood furniture



### CONTEXT

This prestressed assembly process developed by the LERMAB laboratory at the University of Lorraine can transmit tensile or compressive forces by adhesion to fibrous materials.

After applying the preload during assembly, the threshold strength is guaranteed and the rigidity increased for clearance-free operation.

Parasitic forces leading to the rupture of traditional assemblies are thus avoided.

### DESCRIPTION

The concept has been tested and validated on bamboo and softwood.

The implementation phases can be digitally modeled in order to optimize the shape if necessary from an initial bar section.

Only a perfect characterization of the behavior under transverse compression of the material is necessary.

### COMPETITIVE ADVANTAGES

- Ecological process (no glue);
- Increased mechanical performance (mechanical efficiency of the assembly: 100%);
- Respect for aesthetics.



### Markets & applications

- ❖ Civil engineering;
- ❖ Construction wood ;
- ❖ Furniture Wood;
- ❖ Urban furniture



### Development stage

TRL 7



### Research team

LERMAB



### Intellectual property

Patent FR2947593; EP 10,742,023.4; US 13 / 378.915; CA 2,765,025.



### Target partnership

Patent licensing

### CONTACT-US

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