Development of a heatable composite material for series production through functionalisation of a bonding agent layer in the manufacture of classical wooden materials (EleiK)

Object of research:
- Integration of a heating function into a classical wooden material (e.g. plywood)
- Development of an innovative functional bonding agent layer that is electrically conductive as a result of additives
- Specification of the thermal properties to achieve optimal stability of form of the composite material and use as low-temperature heating system

Key words
- Wooden materials
- Renewable resources
- Functional integration
- Electrical conductivity
- Heating function
- Bonding agent layer
- Temperature control

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- 03/2016 – 08/2017 (18 months)

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- € 154,750.32

Results:
- Definition of a guide formulation of the electrically conductive bonding agent layer and the reproducible manufacture of the latter
- Specification of the thermal properties of the composite material in view of the subsequent use as low-temperature heating system
- Testing of the dimensional stability of the multi-layer composite laminated wood with regard to continuous alternating stress
- Provision of the proof of functionality