Design options teploefektyvnyh individual houses   
using laminated wooden beams.

Gotz V.I.- Dean of the Kyiv National University of Construction and Architecture, Doctor. Sc. , Professor; Azutov V.P.- Associate - Kyiv National University of Construction and Architecture, PhD. Sc. Science; Bolkin O.H.- General Director of "ANT Ukraine"; Jürg Schmid, director of "Schmid Holtsbau"

Annotation

Describe the effect of external factors on the heat balance of the individual houses in residential as well as the construction of houses of laminated veneer lumber and sandwich panels.

Modern trends in approaches to the austerity of energy especially in the European countries that have achieved significant progress in energy efficiency in the construction of residential houses, and after that in Ukraine, raised the question of the designers and builders of a sharp increase in heat resistance barriers.

Increase of the standard requirements for the thermal protection of buildings made of construction participants move to the use of modern, more efficient materials in terms of improved thermal performance structures, which is one of the main energy-saving ways.

Minimize the cost of heating buildings and creating a comfortable environment for people dependent on the use of the repair, renovation and new construction of modern, efficient thermal insulation materials for thermal insulation of various building designs and construction of buildings.

In the industrial construction of apartment houses made significant progress to improve the thermal performance of external walls by applying, for example, in the production of large exterior panels for homes effective thermal insulation materials that will bring the value of heat transfer resistance to the normative.

One of the effective directions of the construction of energy-saving low-rise individual houses is the use of wood in combination with efficient thermal insulation materials when constructing fences.

One such option is the use of laminated wood elements in frame-panel houses.

These buildings include the houses from one to three floors with a light wooden frame of laminated veneer lumber or laminated wood panels Such buildings are recognized not only energy efficient, but also more environmentally friendly.

In the modern frame-panel house building is used a lot of individual design solutions with external walls of laminated veneer lumber.

One of the design options for the construction of frame-panel cottage-type houses being built in Ukraine, there is an option with barriers of sandwich panels

As a result of thermal calculations and domestic experience of the construction of individual houses with sandwich panels based on the use of laminated wooden beams prefabricated in the domestic wood-processing enterprises in combination with mineral wool insulation of various types and skin OSB and particleboard can be argued that this type of construction It is effective in terms of creating comfortable living conditions while ensuring minimum permissible heat loss of property of economic exploitation.