

Abstract

COMPARATIVE ANALYSIS OF THE USE OF SAWS AND SAWING CENTERS IN THE MODERN CONDITIONS OF PRODUCTION OF FURNITURE PRODUCTS

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The article deals with a comparative analysis of use of saws and sawing centers. The article reviewed the device, the operating principle, control systems and automation equipment.

POSSIBLE STRUCTURES OF GLUED WOOD

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The article reveals the advantages and prospects of use of glued wooden constructions in modern construction and architecture. Analysis of domestic and foreign experience use the FTC (glued wooden constructions) allows you to discard the current patriotic project practice bias against the use of these structures. For example, buildings renowned architects discovered the possibilities of artistic expression data structures.

One of the most important developments in the field of wood construction, which gained recognition, is a laminated wood. Wooden glued structures (WGS) began to be applied even in 30-40-ies of the last century, their use is widely practiced since 1960-IES, and the vast majority of sports facilities is done with their application. Laminated wood is used in buildings and structures of different purpose. Compared with similar concrete constructions, the use of glued constructions allows to reduce a lot of designs in 4-5 times, the laboriousness of manufacture and installation of more than in 2 times. The greatest economic effect of glued constructions can be achieved when they overlap large spans. The analysis shows that, if the span more than 24 m, the economy grows in favor of wood: the more, the cheaper the cost structure, made in wood (saves costs to 30%). Their use in buildings and structures exposed to chemically aggressive environment impact. also Practiced integrated application bearing wooden glued constructions, together with lightweight protecting. Glued constructions are widely used in bridge construction. The distinctive features of such constructions are durability and ease of installation.

The WGS through the massiveness, density and integrity have higher reliability than conventional fire wood constructions. For example, the German experts, an impressive book "Atlas of wooden constructions" (translated and published in 1985), not only provide practical methods for calculating (tables and graphs) fire resistance

of ordinary and glued wooden structural elements, but also compelling evidence that fire glued elements in -1.4 1.2 times higher than similar items from ordinary wood. While noting the stability of fire-technical qualities WGS Unlike conventional wooden constructions, reliability varies greatly depending on shrinkage cracks, buckles and knots.

The leading company for the production of wooden glued structures claim that the WGS have a unique combination of properties: ecological purity and high artistic quality vie with technological advantages. This resistance to stress — including seismic — with low weight, ability to withstand aggressive media, e.g., effects of potassium salts, harmful for metal and concrete. In the WGS possible curved elements of the various sections and lengths that allow you to overlap the fabric constructions (up to 100 m). They can be easily machined, do not require high costs for Assembly (preparing for installation on production), do not give shrinkage and cracking, and the impact for feed supplements can easily be corrected correct design. In addition, unlike metal and reinforced concrete tree is radioprozračnyj material. Advantage over the whole bar is the ability to create a flexible layout with the dismantling of temporary partitions.



Figure. 1. Motorway bridge in Denmark.

Used wooden glued constructions of the Danish FIR. The bridge has two lanes of the carriageway in four rows, each 55 meters long, 3.5 meters wide, 2 meters in height and weighing around 55 tons.

Glued timber structures have high aesthetic quality and original architectural forms and design solutions. For example, the effect of the elastic ease construction can be achieved so that the design is not based on internal wall: metal tightening grounds with inserted into wood reinforcing rods passes efforts "to the point".

In Europe, the popular water parks and indoor pools, arches which usually are made of glued wooden constructions. The wide application of glued wooden constructions in public buildings says the fact that, in Germany, 66% of sports buildings and 25% of the Pavilion is erected type buildings with the use of such designs. The same ratio of sports buildings and pavilions noted in Switzerland. In the countries of Northern Europe and Scandinavia, where the timber industry is developed, bent tree received a special distribution. Danish architect Joachim Exner (Joahim Exner) reconstructed the Castle, not imitating, and constructing a modern

variation on the theme of the Romano-Gothic arches. Supports of Glulam beams resemble Gothic columns, "blossoming" ribs of the vault. Graceful columns support not only overlap, but also suspended loggias and the filled section of the façade.

The tree's ability to bend, creating forms smooth outlines, identified a number of experiments of architects and designers of the 20th century, associirovavših works with forms of wildlife. For example, the basis of the method of Alvar Aalto was giving curved sawn into thin layers of solid wood. Glued together plates and wooden pasta (Aalto) different elastic strength and aesthetic superiority over the curved contours of the wood frames of the previous generation furniture company, for example, is sinking. Method of bonding elements provided more freedom. In derevokleenyh structures through connection segments of arbitrary magnitude of opportunities has widened. Among the technology, not to mention the aesthetic advantages — the use of wood waste.



Reconstruction of Koldinghus Castle, Jutland, Denmark. Inger and Johannes Exner. 1994.

The creativity of renowned Spanish architect Enrique Miralesa has very bright plastic language, its architecture is complicated and wordy. Wood plays an important role in shaping the image of its buildings. One example is the reconstruction of the Santa Caterina market in Barcelona. The market has gained a new roof, reminiscent of a huge shutter tridacna shell with wavy edges. Derevokleenye arches are not only a constructive function, but also are the primary tool for creating artistic expressiveness of a building. New roof forms the market space and fits into the architecture of the surrounding area. Enric was awarded the main awards for this project.

Of all building materials wood has the high aesthetic and environmental advantages, the most expressive texture, "warmth". Such properties are required in buildings for public use in sports facilities where the designs seek to leave open in the Interior. The combination of the inexhaustible possibilities of glued wooden constructions makes the construction of them in engineering samples of invention. Diversity and aesthetic qualities of the design of bent wood are comparable only with

nervûrnymi the arches of Gothic cathedrals. At present, the introduction of wooden structures in the world going at a rapid pace and is constantly being improved.

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Аннотация

ПОТЕНЦИАЛ КОНСТРУКЦИЙ ИЗ КЛЕЕНОЙ ДРЕВЕСИНЫ

Мчедлишвили В.

Статья раскрывает преимущества и перспективы использования деревянных клееных конструкций в современном строительстве и архитектуре. Приведен анализ использования КДК (клееных деревянных конструкций) на примере зарубежного опыта.

Анотація

ПОТЕНЦІАЛ КОНСТРУКЦІЙ З КЛЕЄНОЇ ДЕРЕВИНИ.

Мчедлішвілі В.

Стаття розкриває переваги та перспективи використання дерев'яних клеєних конструкцій у сучасному будівництві та архітектурі. Проведено аналіз використання КДК (клеєних дерев'яних конструкцій) на прикладі закордонного досвіду.