

Basics of Wood Materials and Woodworking Technology

Tursunboy Axmedov

Associate Professor of Fergana State University,
Candidate of Physical and Mathematical Sciences,

Siddikova Ranoxon Abdulkay qizi

Xusanova Lobarxon Murodovna

Masters of Fergana State University, Uzbekistan

Annotation: This article describes the rules of wood production, wood production technology, wood used in wood production, their properties, wood materials, technical safety rules for manual processing of wood on a carpentry machine.

Keywords and phrases: arches, beams stropil, sinch sarrob, frame, door, window, fence, air, gray, oak, ash, carpentry, pine, spruce, spruce, white birch, poplar, walnut, maple, slate, twig.

The leading branch of material production in the country is industry. The agricultural industry provides the population with raw materials and food products.

Wood production and logging also have a special place in our country. The task of the builder is the construction and reconstruction of industrial buildings, structures, housing, hospitals, schools and other facilities. There is no branch of the national economy in which wood is not used. Wood is especially used in construction. Load-bearing structures of buildings, arches, beams, rafters, sinks, protective elements, wall panels are made of wood. Wood is also used to make carpentry buildings, frames, doors, windows, grilles, as well as concrete formwork, vents and benches.

When sawing (sawing) wood, on average, 65% of the product, 35% of sawdust and other wastes are released. The quality of the product is much higher when the wood is sliced. If the wet wood is sliced, the sliced board is rolled into a triangular, rectangular shape and dried in a cool place.

The use of any wood depends on its physical and technical properties, conditions of use, quantity, and so on. As a result of advances in technology, there are constant changes in the use of wood materials. In the coming days, wood is also the main building material.

The use of prefabricated reinforced concrete structures in buildings and structures has significantly reduced the need for timber. Nevertheless, wood is currently the main material in the pulp industry. All woods are divided into broad-leaved and pine-leaved species depending on the type of trees from which they are derived. The constructions often use wood from trees such as pine, spruce, fir and cedar.

These trees are mainly imported from Russian countries. According to a number of advantages, wood from pine deciduous trees is the main material in construction and carpentry. Its advantages are: pine leaves have a long service life and do not rot, as they contain stool substances. It is lighter than pine leaves and easier to transport from one place to another. Nina deciduous trees are straight, smooth, from which a good quality stalk is made. In addition to pine hardwoods, some hardwood lumber is also used in construction and carpentry. For example: oak, ash, poplar, maple, barberry, etc. The type of growing trees is determined by their color, natural flower, smell, luster. Below we will get acquainted with some deciduous and pine-leaf species used in construction and carpentry, their external signs and properties.

Pine. The bark of the pine is thick, bluish-brown, the coconut is white-reddish in color, straight, lightly fir, resinous, and resistant to annuals, the rings clearly visible. Pine is widely used in construction, shipbuilding, carpentry, it is easy to process.

Spruce. The bark is thick, dark, gray and difficult to work with because the wood is dense. Since this is a soft layer, the main rays are not visible. Low moisture resistant, resistant to moisture. Spruce is used in construction, in the pulp and paper industry, in the manufacture of simple furniture, containers.

Белая береза. Кора березы не очень толстая. Кора старой березы треснула на куски. Древесина твердая, с ней тяжело работать, белые кольца отслоившейся коры не видны четко, хорошо берется прочная, хорошо декорированная краска. Береза широко используется в производстве

древесно-фанерной древесины, из которой изготавливают несложную мебель, гнутые деревянные деревья.

Poplar. Poplar bark is yellowish, smooth, sparse. There are fewer horns on the body than a straight baguette, from which a good quality stalk is obtained, the wood is white and strong. Poplar is mainly a building material.

Bakaterak. Bakaterak and poplar differ from each other in the structure of branches and leaves. The bark of the frog is white-blue, smooth, with a crackle in the lower part of the body. Sershek's body is not quite correct. Wood has a non-hermetic finish and is much harder and more durable to work with. Bakaterak is a building material. Wood is used in the manufacture of joinery

Walnuts. The bark of the walnut tree is bluish-gray, thick and smooth. In old walnut trees, the lower part of the body is covered with bark. The walnut tree is a well-groomed, hardy, unpretentious natural flower, beautifully decorated. Plywood, expensive furniture, carvings and decorations are made from it.

Chinar. Maple bark is reddish-yellow, smooth, thin. Older maples have a partial knock on the bottom of the body. The wood is neat, hard, very difficult to work with, well decorated. It is used for the manufacture of expensive furniture from planed plywood.

Pine is a dark wood, hard, high-strength, flexible, industrious, with a large fiber structure similar to oak. Wood screws, wooden nails, handles of various widths, wheels, rectangles, chisels are made from it. The natural flower is beautiful and is used to make shron in the plywood industry.

Wood materials are not always high-grade, good quality, serviceable. They have some flaws. Most of the defects found in wood occur during the growth of the tree, and some defects occur during the preparation, transportation, storage, and use of materials. Defects that are naturally present in wood materials and may occur later may include:

Branches. Branches are a natural defect that occurs as a result of spontaneous drying or cutting during the growth of tree branches, which is found in any tree. The shape and size of the branches will vary depending on the reasons for their formation. According to the dimensions, it consists of branches with a diameter of more than 40 mm, on average up to 15-40 mm and small up to 15 mm.

Tumor branches are also found on trees. Tumor branches are a continuation of the annual rings on the body and are tightly connected with layers of wood, so that the branches do not move and fall, regardless of drying and processing.

As the tree grows, the twisted branches formed from the cut branches become open dry branches, which are surrounded by annual rings growing on the body.

Dry coverings that form on the branches that have dried out during the growing season or on early pruned branches can be found in the woody materials of the branches. A hole is formed after they rot or fall off. The hardness of healthy branches is about three times the hardness of wood. They show excessive resistance to cutting cutters during woodworking. The number, size, location of the branches, and the variety of these, have different effects on the quality of the wood. The branches of some deciduous trees contain large amounts of resin, which melts under the influence of heat or sunlight and flows out of the wood, and its quality leads to deterioration of varnishes and paints.

Only healthy hard tumor branches have little effect on the mechanical properties of the wood. The large size and peripheral branches have a great influence on the mechanical properties of the wood.

During the processing of wooden materials, depending on the area of their use, instead of drilling or scraping the branches with them, they are made of the same type of wooden rhombus or round-shaped plugs. During plywood, the joints of the plug and the wood fibers are aligned with each other, glued, rubbed.

If the surface of the products made of branch board materials is covered with plywood veneer and the branch does not affect the durability of the product, in such cases, moving the branch does not need to orient the branch, because the branch under the plywood does not impair the quality of the product. In such cases, it is scraped off at once. The surface of the branches is cut with a chisel or other cutters to ensure that the blades are easy and the blades do not pass.

Carpentry works play an important role in tree species. Each wood material is used for specific purposes depending on its structure and level of quality.

Side construction does not cause rot on beams and beams. The shape of the stem changes due to side drying in the trunk. Drying from the side can lead to the destruction of the annual rings, which in some cases

can lead to internal rot, leaving the wood intact. All this spoils the quality of the wood. A coating defect is formed when the side-dried wood or bark is completely or partially covered with fresh bark. With freshly coated bark, a solid gap of resin is formed to open the dry wood. Coating defects occur both open and closed. Young build, if completely covered with new bark, the closed coating is defective. If new bark grows and the sidewall is not covered, the dew cover is said to be defective.

Closed defects in the shear of the poles will have the appearance of cracked cracks. Closed coating defects in wood materials are visible in longitudinal cracks. Open cladding defects are in the form of grooves or ditches on the side of the pole. The effect of cladding defects as wood depends on their type and size, number and location. Defects in the coating lead to bending and deterioration of the annual rings, a decrease in the integrity of the wood.

Safety rules for manual woodworking on joinery:

1. When working on the machine, the material must be firmly attached to the bottom of the screw mechanism clamps;
2. Do not allow the carpenter's tool to be sawn, planed, carved, or straightened with nails;
3. The tools should be placed randomly on the machine depending on the navigation, with the blades and blades facing forward;
4. The surface of the machine should be cleaned of debris frequently during operation;
5. Do not clean the surface of the machine by hand, with a vacuum cleaner or brush;
6. Before starting work, the machine should be inspected for serviceability by moving its mechanisms by hand and then running slightly. It is necessary to check the adequacy of the protective equipment on the machine and their good adjustment;
7. If the failure of the machine or mechanisms is felt to be due to the lack of protective equipment and careful installation, the identified defects should be rectified before starting.

References:

1. J. Ramizov.S. Makhkamov "Workshop in training workshops."
2. A.I. Vorobyov S.A. Liminsky.I G.Karimov "Labor education" for 6-7 grades
3. Nosirov I. Materials Science - T.: Teacher, 1993-232 pages.
4. Парпиева, ОР; Ҳожикаримова, ГТ; Назирова, АМ //FORMATION OF STUDENT PEDAGOGICAL SKILLS BASED ON THE REQUIREMENTS OF INNOVATIVE EDUCATIONAL ENVIRONMENT// Международном научно-практическом журнале "Экономика и социум". Вып №6(85) 2021. 157-161с
5. Парпиева О.Р. Болтабоева Н.М. //ЭТАПЫ РЕШЕНИЯ ПЕДАГОГИЧЕСКОЙ ЗАДАЧИ// Международный научно-практический журнал "Теория и практика современной науки" Вып №6(48) 2019. 388-391с
6. О.Парпиева Н. Содиқова "Олий таълимда таълимий кейсларни яратишнинг айрим услубий масалалари". IX Международной научно-практической интернет-конференции «Тенденции и перспективы развития науки и образования в условиях глобализации»: Сборник науч. трудов. – Переяслав-Хмельницкий, 3-4 декабрь 2015. – Вып. 9. –526 с. 208-211 стр.
7. Абдукаримова Нодира Убайдуллаевна, Парпиева Одина Рахмановна, Мўйдинова Ёқутхон Гийёсиддиновна, Болтабоева Нодира Маъруфжоновна, Парпиева Арофатхон Махмуджон кизи, "Пандемия шароитидаги хомиладор аёллар ва чакалоқларга тиббиёт тавсияларининг аҳамияти" "ACADEMIA SCIENCE" "UzACADEMIA" scientific-methodical journal. ISSN (E) - 2181-1334. 31.08.2020-yil. PART-12 370-377 стр.