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БЕЛОРУССКО-РОССИЙСКИЙ УНИВЕРСИТЕТ

Wood is a valuable constructional material which is a product of forests. The tree species used as constructional products demand adequate processing of a surface to increase their durability, to harden surface layers and to give them aesthetic properties.

Hardwood trees are generally broadleaved trees. These tree species are deciduous, retaining their leaves only one growing season. Softwood trees refer to one of the botanical groups of trees that have persistent needle-like or scale-like leaves.

Plywood does not split as easily as conventional wood and has a good dimensional stability under conditions of varying moisture conditions. Plywood can be considered as a high strength construction material used for internal and external load bearing panels.

Chipboard is made from particles of wood bonded together with a synthetic resin and sometimes other binders. The particles are obtained from sawdust and small pieces of wood unsuitable for other uses. Chipboard is normally only suitable for interior use in the manufacture of low cost furniture, wall panels and floor panels.

MDF is a wood substitute form which is made from fine wood fibres in a resin which is bonded under heat and pressure. MDF can be painted to produce a smooth quality surface. As MDF has no grain, it can be cut, drilled, machined and filed without damaging the surface.

Wood has been an important construction material since people began building shelters, houses and boats. Wood is used for furniture production, e.g. chairs and beds, as well as for tool handles and cutlery, such as chopsticks, toothpicks and other utensils. Wood can be cut into straight planks and used for wood flooring.

Surface modification designs can be made by covering them with various substances, for example paints and varnishes or just varnishes, etc. and the subsequent machining.

Practical application of methods of surface hardening and modification can be made in several ways. At present the most widely-used methods are processing a working surface with rods with rounded ends or metal balls with a diameter of up to 10 mm.

Some experiments were carried out with the use of rods. The results of the experiments can be used for furniture production or interior design.