

A Guest from China: Tung Oil on Your Terrace

Wooden terraces and verandas are always spectacular elements of the architectural composition of any private house or country cottage. They connect the dwelling space with the surrounding landscape; allow being outside the house while maintaining the level of comfort that we have gotten used to in home environment.

In order that wooden terraces may have a long service life, specialized materials from very strong (and expensive) wood breeds are used in their construction. Usually these materials undergo special treatment in workshops – oiled or impregnated under pressure. Although producers guarantee a 15-year service life for such products, they also stress the importance of correct care for them and a periodical renovation of the protective coating.

For renovation of protective coating, special stains based with natural oils are recommended. These oil stains do not form a film on the surface, but they penetrate into the wood and dry, creating a water repellent barrier due to the formation of a high polymer spatial grid with characteristics depending on the chemical composition of the oils. Their advantages include ecological compatibility, user-friendliness and surface renovation.

In European countries, flax oil based stains have been widely and successfully used for wood treatment for a long time. However, note that flax oil is not the best to use in the line of natural oils by its technical, decorative and protective characteristics. So a “guest” from China, tung oil, has recently come to Europe to help flax oil.

Remember that “Made in China” does not always mean surrogate and counterfeit. The Chinese civilization is one of the most ancient in the world. It is home to many considerable inventions of the humanity: paper, compass, gunpowder, book printing, and many other things.

Chinese have also succeeded in the field that is now called chemical industry. For instance, they were the first to actively use oil they extracted from tung tree seeds. It comes from China, so it is sometimes called “China tree.” Tung seeds contain 60-65% of valuable technical oil with incomparable properties. The Chinese learned to extract and use tung oil more than 4 thousand years ago. They successfully used it for various purposes including the production of varnishes, paints, enamels and anticorrosion coatings but first of all as wood protection. Chinese have noticed that tung oil penetrates wood very deeply and because of short drying time, forms a weather resistant and stable component to mechanical impact coating. Moreover, this oil does not darken on the wood with the lapse of time, giving surfaces high aesthetic characteristics. Most important, wood treated with tung oil does not develop microorganisms (molds and fungi). It is a well-known fact that Chinese wooden boats (junks) treated with tung oil never rotted, the seal never allowed water to enter, and their bottoms were never overgrown with weeds and shells.

Tung oil is used in China for various purposes and in big quantities. It is used for giving water tightness to tanks, for obtaining synthetic resins and as fuel. It serves for mordant treatment of wood and fabrics, for filling lamps, and in soap production. In electronics, they use tung oil for coating turbo and hydro generators, radars and other instruments.

Thanks to its unique chemical composition, the drying time of tung oil is at least half the drying time of flax oil. It is explained by the fact that unlike flax oil, its polymerization occurs not only from the surface but on the whole wood thickness at once. Due to its unique chemical composition, varnishes made on basis of tung oil are very stable to the influence of air, water, salts and acids. A thin but firm film of tung varnish protects metal against corrosion and wood against moisture and decay from fungi.

Tung varnishes or enamels coat the best grand pianos, highest quality furniture, passenger

cars, aircraft and underwater parts of ships. Special varnishes are used for manufacturing insulation tapes for high voltage cables and transformers. Tung varnish is used for coating cans from the inside. China has long been famous for artworks (paintings, boxes, souvenirs, wooden tableware, etc.) with bright painting on a black background coated with tung varnish. Those are a few of the fields where tung oil and varnish are used.

Chemists' attempts to synthesize tung oil or replace it with some other natural oil have thus far been unsuccessful. Tung oil stands alone, so it is by right called a unique product.

Having appreciated the advantages of tung oil, leading European manufacturers have successfully begun using it in their products. Thus, the holding ESKARO GROUP AB (Sweden) added AURA Terrace, a new protective-decorative compound for finishing exterior wooden surfaces, to its wood protective products AURA and successfully used it in combination of tung and flax oils.

Firstly, this compound is recommended for applying to wood oiled or impregnated under pressure as well as to hard fresh wood. Aura terrace deeply penetrates the wood, creating a water repellent barrier in pores and capillaries. The surface treated with this compound acquires a nice look, is stable, avoids cracking and able to stand through counter adverse weather influences and mold spreading. The AURA Terrace compound can be colorized with a palette of 40 colors and shades, which increases the décor variety.

The AURA Terrace compound is especially efficient for plained wood. In this instance the material consumption is up to 12 m²/l. Remember to prepare the surface before applying the compound. The surface to be treated has to be dry and free of dirt, grease, dust and fungi. If necessary, use the fungicide compounds Biotol and Biotol Spray TM Eskaro for fungi killing and AURA Wood Cleaner for cleaning and bleaching wood.

Using the AURA Terrace compound on previously painted surfaces is not recommended: it will not penetrate the paint film. If treatment of these substrates is required, oil paint should be removed from them. It is recommended to treat new wooden surfaces and those cleaned from old paints with a primer (e.g., AURA Biostop compound) before applying the AURA Terrace compound.

The AURA Terrace compound is very efficient in coating various wooden articles and structures: terraces (terrace boards), verandas, floorings (decking – garden parquet), planked footway and other horizontal surfaces, as well as railings, stairs, fences etc. Stir the compound before use and then apply in 1...2 coats. Edges should be treated with extra care. Remove remaining oil from the surface. Before installing the flooring, it is recommended to treat both the face and reverse side of the boards (in case of contact with the ground, use AURA Protect compound as primer).

Surfaces treated with AURA Terrace dry in 5...10 hours. Processed items can be used after 24 hours, but the ultimate wear resistance is achieved 1 week after applying the compound.

It is recommended to annually process surfaces exposed to weather all year round with the Aura Terrace. However, one should be careful with processing a new terrace made of pressure of impregnated wood. Before applying Aura Terrace, the material should be cured for at least 6 months.

And when the time comes, invite the Chinese "guest"; tung oil and be confident in using all its excellent properties for protecting your terrace. You can believe it: you won't lose, because tung oil paints and varnishes are appreciated in Europe today. The Chinese guest has taken a place of honor in the European market of premium class paints and varnishes.