



EXECUTIVE OVERVIEW

Wood must be cared for properly, and when neglected, it will deteriorate. Stuart Dean Wood Technicians are highly skilled in restoring neglected wood, and transforming it back into its original state. Replacement of wood is very expensive, but can be avoided by regular maintenance and proper restoration.

BASIC WOOD REVIEW

To most in the commercial industry, wood's durability, aesthetics and curb appeal make it a valuable "brand" investment. Designers know that wood tends to bring a warm, rich and natural feel to any room. Wood is known for its unique beauty, and the properties that make wood beautiful also make it fragile.

There is a strong relationship between the properties of wood and the properties of the particular tree that yielded it. For every tree species there is a range of density for the wood it yields. There is also a rough correlation between density of a wood and its strength (mechanical properties). For example, while mahogany is a medium-dense hardwood which is excellent for fine furniture crafting, balsa is light, making it useful for model building. It is common to classify wood as either softwood or hardwood – the wood from conifers (e.g. pine) is called softwood, and the wood from dicotyledons (usually broad-leaved trees, e.g. oak) is called hardwood.¹ These names are a bit misleading, as hardwoods are not necessarily hard, and softwoods are not necessarily soft.

Wood can be shaped, carved and finished in a multitude of ways. With proper design and maintenance, wood structures and ornamental wood will last for centuries. The ease of use and versatility proves to be a good investment over time, and its appeal has stood the test of time.

ELIMINATING UNNECESSARY EXPENSES

Time spent designing and maintaining wood is economically smart. Close attention to environmental stresses should be paid when designing with wood.

Like all building materials, wood has unique design properties. By understanding the nature of these properties, designers are able to maximize the positive attributes of materials, and account for their effects.

For builders and designers, one of the unique properties that affects wood is its "hygroscopicity." This is the wood's ability to absorb moisture, and it can affect both dimensional stability and strength. Wood construction maintained at a moisture content of 20 percent or less will not decay, and decay doesn't generally occur until the moisture content reaches 25 percent or more.²

In construction, wood also has a greater capacity to carry short-term loads than sustained loads, which enhances its performance in seismic and high-wind zones. Research has shown that smaller wood members are stronger per unit area than larger members. And wood's "system effect" is its ability to distribute and mutually support loads, increasing its efficiency, but only if properly maintained. That's our specialty.

CAUSES OF WOOD FINISH BREAKDOWN

If you can see the breakdown, it's already well underway. Here's a quick initial test. The AWI (American Wood Institute) recommends a simple standard visual test for exposed surfaces on new woodwork. Think of it as the "3-foot, "3-5 second rule." ³ At eye level, can you see any breakdown from that distance within that time?

If so, there are three major causes for finish breakdown you should consider.

First, every wood finish will eventually wear down if not maintained. Look for worn corners, chipping, wax build-up, and other signs of deterioration. Stuart Dean Wood Technicians pay close attention to these signs and can repair specific problems in a timely manner. Over the long term, you need a critical eye to know when to refresh the wood's finish in time to avoid the high expense of complete refinishing.

The second reason for wood finish breakdown is "poor maintenance." There is a saying, "No maintenance is better than poor maintenance." Heavy polishes on top of wood attract dust and dirt, especially in frequently used high-traffic areas. Heavy polishes may look good after being first applied, but that just temporarily conceals the real maintenance issues that should be addressed. Delayed maintenance multiplies eventual costs.

And finally, the absolute worst possible cause of finish breakdown is "no maintenance." Although your doors, trim or pews may be brand new, they still require maintenance. ***It is a misconception that anything new does not need to be maintained until signs of wear appear.***

Wood that is touched often forms a build-up of body oils, including the body's naturally salty oil, and the finish underneath begins to breakdown. The area begins to turn dark as the salty oil attracts dirt. At this point, the body oils have already compromised the coating. Regular maintenance would have caught and eliminated the build-up and expense.

TAKE CONTROL AND PROTECT YOUR ASSET

Your building has no escape from the elements. When exterior airborne pollutants, rain water, and other contaminants are allowed to dwell on a wood surface they break down the wood's protective finish. In fact, they break it down three times faster than the normal wear and tear caused by body oils and abrasion. Keep your protective finish refreshed against the elements.

Abrasions – caused by scratches, chips, and dents – often penetrate through the protective finish and allow moisture to become trapped under the finish. If you see a new scratch in your wood, a clear coat of finish should be applied as soon as possible. If moisture penetrates into the wood, it will darken the scratch, and penetrate your finish from the unprotected inside out.

Also, don't let anyone put a finish on your building's wood without professionally cleaning the surface. And don't let them use "mineral spirits" to clean the wood. The finish will not fully adhere, and it will eventually begin to chip off.

SOLUTIONS TO PRESERVE YOUR WOOD'S PROTECTIVE FINISH

Stuart Dean Wood Technicians have a deep understanding of the complete American Woodworkers Institution standards for refinishing. We can protect and preserve the value of your asset.

The Stuart Dean Company has been providing cost-effective methods to **Touch-up, Recondition, and Refinish** wood for over 76 years. We can ensure the wood throughout your buildings remains in the best possible condition through regularly scheduled inspection and cleaning.

WHAT WE CAN DO FOR YOU

Performing touch-up work consists of addressing light scratches or small amounts of heavier scratches on an otherwise pristine area of wood. This is best addressed with routine touch-up. Damaged areas and surrounding areas are cleaned, removing any contaminants such as wax or oil. The scratch is next filled with a soft wood fill, color-blended to match, and a matching finish is applied over the treated wood surface.

Reconditioning wood is a technique used when the original finish is intact, but the surface of the wood has accumulated dirt, wax and contaminants, giving its finish a deteriorated appearance. The process of reconditioning involves commercially cleaning all surfaces, toning in light areas, applying two coats of a premium-grade finish, and sanding between each coat of finish. This process can only be performed after the area is professionally cleaned.

Refinishing wood is costly and labor intensive. But it can be avoided by regular maintenance. The process of refinishing involves stripping the wood of all surface coatings and stain, down to the bare wood. Damaged areas are repaired with an epoxy or soft wood fill, sanded, stained and sealed. Proper drying time is required. Afterwards, the area is sand-sealed with fine abrasive sandpaper and two coats of a protective top coat applied.

Meanwhile, **abrasives or harsh chemicals** should never be applied to wood. Always clean in the direction of the grain for a more uniform appearance. Rinse with clear water and towel dry in order to eliminate spots and streaking. This method will keep

wood clean between scheduled maintenance services.

Stuart Dean Wood Technicians are backed by many years of expertise and excellence. The Stuart Dean Company is a pioneer in the field of wood maintenance and restoration – a leader in delivering critical services that extend the life, increase the value, and enhance the beauty of architectural assets. We're a national team of specialized experts managed through a single point of contact, delivering both customized ongoing contracts and project-based work. Whether you have a single or multiple locations, if you need restoration or preventative solutions that deliver consistent outcomes, call Stuart Dean.

References

- ¹ Wikipedia, 2009: Wood <http://en.wikipedia.org/wiki/Wood>
- ² Wikipedia, 2009: Wood <http://en.wikipedia.org/wiki/Wood>
- ³ Woodworks for non-residential construction – 2006