

The Traditional practice of using wood in Furniture Design

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ABSTRACT:

Wood is generally identified as the most accepted material for designing furniture. It has been playing a very significant role in establishing variations of designs in the furniture industry since the Pre-historic or Neolithic era. Throughout history, various types of wood such as oak, maple, willow, mahogany, cypress, lime, and olive were used to create stylish and functional furniture for kings and others. Indications from the early period of the design concepts of promoting legacy in the living standard through multiple uses of wooden furniture in all interior spaces. However, protecting nature & focusing on the related environmental aspects the use of wood in furniture is decreasing day by day by using alternative materials. In spite of all the design methods using wood as the main element for furniture is still very popular. The purpose of the article is to figure out the ideal reasons for using wood as the primary material for designing furniture and clear the logical points through this editorial. Then the analyzing fact for using the traditional practice of using wood in furniture design with effective examples. At last, the consistent design ethics and ornamentation methods will be combined with the authentic condition of furniture design.

Keywords: Wood, Furniture design, Using aspects, Traditional practice & Interior design.

I. INTRODUCTION:

In recent design practices & formulas, most people are living in a nuclear family with specific space to control the cost of standard living in metro cities. Also, paying close attention to resource waste and environmental difficulties. The sustainable economy has become one of the warmest topics worldwide, and then under the background of this era, the philosophical trend of "wooden furniture" has had deep influences on the perception of modern & contemporary furniture design. People not only require a functional and attractive design in any interior space but also

need an interior solution with a reasonable value. Wood is the oldest renewable natural resource which is mostly used in all types of furniture, and also the most environmentally-friendly green ecological material. As a kind of cultural form, various wood art and wood products have rich cultural connotations and have become the important carrier of highlighting art taste and improving space cultural implications in both furniture design and interior space. So, the use of various forms of "wood" has become the common design method in furniture design. The exploration and research on the combination of wood and furniture design are very necessary. A close combination of both is of great significance to explore the cultural connotation of traditional practice.

II. WOODEN FURNITURE IN EARLY CIVILIZATIONS

The first evidence of wood used in furniture can be traced back to this ancient society. During this period, furniture mainly consisted of chairs, boxes, storage chests, and beds. Many communities were based on agriculture, and people cleared the land of trees to grow crops. During this time, people realized the value of creating their furniture from the wood they were removing. A booming trade industry began to take shape, and ash, beech, cedar, elm, fir, lime maple, oak, pine, plum, and yew wood was imported into Egypt. The Egyptians found that wood was easy to work with and could be highly polished. Craftsmen could also begin to show their talents by carving images and designs into the wood.

Wealthy Egyptians lived in very large, comfortable houses with many rooms. The wealthy could paint their walls and use colored tiles for their floors. Typically, the types of furniture found in the homes of wealthy Egyptians would include beds, chairs, tables, and chests for storage. The nobility and royalty of ancient Egypt had more furniture than commoners, and it was of a higher

quality. The quality and design of the furniture indicated wealth and status for upper-class Egyptians. Lower-class Egyptians lived in simpler homes, often made of mud. The poor had

functional furniture, with only a few wooden pieces such as reed chests or wooden pegs to store things on the walls.



Fig: Examples of Neolithic era & Ancient Egyptian furniture.

In Mesopotamia, furniture specifically designed for royalty made an appearance. An example of this royal furniture is the throne. A throne is an ornate chair or stool representative of a divine status akin to a god. Only those of royal blood could sit on the throne. This royal status of a chair was more dominant in Mesopotamia than in Egypt, leading to an abundance of chairs and stools in this region.

III. TRADITIONAL METHODS OF USING WOOD IN INTERIOR DESIGN

At present, modern interior furniture design covers the original meaning of functionality, including good material, lightweight, durability, portability, and other physical environment and atmosphere conception. From the ethical level of understanding, wood can more directly explore the role of its aesthetic involvement in modern furniture design as well as the application form. In

the historical process of human civilization, wood is not only a kind of material that exists but also a civilization symbol with the natural ecological material as the carrier. It has survived thousands of years and has been condensed as a unique wood value with the advancement of human living standards. There are main two aspects that can help us understand the condition of wood in furniture design: firstly, for the culture, the basic conditions of any things being culture include two: firstly, mental activity and material carrier, and the attribute of wood conforms to the conditions. Secondly, in terms of cultural ecology, wood culture is a secondary cultural system-using wood is the tie to connects social culture, aesthetic culture, architecture culture, and living culture together, forming a mesh natural material culture system, with other cultural systems of wood as a wrap and the wood material properties and spiritual attributes as weft.



Fig: Use basic hand tools to build fine furniture

In the divine dimension of wood culture, the connection between human and nature is the aesthetic core and the natural and material

characteristic of wood is the basic implication of aesthetics. The former has the typical ecological features while the final has the characteristics of

unity of heaven and man and personalization. Since ancient times, indoor and outdoor spaces of modern buildings are saturated with the concept of the unity of heaven and man in all aspects and follow the concept of nature, which matches the aesthetic implication of wood culture and provides theoretical support to find the spirit of wood as the main material for designing furniture & interior based treatments as well as common decorative elements in interior design.

IV. PRIMARY REASONS OF SELECTING WOOD FOR MAKING FURNITURE

The application of wood is increasing in most modern designs, especially in the context of the recent furniture industry. The accepted and exclusive possessions of wood inspire inventors all over the world. This predictable material combined with innovative design ideas and advanced production techniques, as a result, wood has interesting design resolutions and goods of a high level of quality. There are some probable uses & applications which is truly devoted to the present furniture industry. Diversified wood has a wide range of usage of wood products in furniture design.

I. Furniture framework by using wood: In terms of developing strong furniture, a wood framework requires for making the structure. There are several usages of wood in the framework for giving basic strength and durability. Especially in the Asian subcontinent most of the furniture still build in its framework through wood. Besides the exposed framing of Chinese windows has the typical use of wood. Sliding doors and partitions are also famous side by side. There are some traditional ceiling designs where a wooden framework is must require material.

II. Relive & Engrave treatments by wood: At the present time most modern apartments & flats have many functions and space planning has no additional space for providing individual space and privacy. So for that reason and by default, the visual barrier is required to make sure that some privacy matter resolves by using a partition wall. Modern houses are designed with an open floor plan, meaning spaces look more extensive and are

more interconnected. However, the same characteristics that are advantages are also disadvantages. Sometimes, it needs to put the fork down and define spaces and the functions they perform.

III. Fiber & textured finished by wood: After using the wood in furniture and other treatment mostly we can get the desirable textured based finished through the base fiber of any wood. Individually each wood has its own pure way of textures and fibers. Wood fibers can be used as a substrate in hydroponics. Wood wool (i.e. wood slivers) has been a substrate of choice since the earliest days of hydroponics research. However, more recent research suggests that wood fiber can have detrimental effects on "plant growth regulators".

IV. Waste wood pieces reuse & resize: In most wood-crafting cases, the minimum or maximum amount of wood is wasted or found in different uneven shapes. But still, the use of wood in this way is found in many plywood & board-making companies. They make it chorused in various times and bring it into the 2mm or 3mm layers which are supportively used for making plywood and particle boards. At present time in Bangladesh, there are many companies those who are manufacturing wood-based boards and these boards are directly used in making furniture as well as interior treatments.

V. BENEFITS OF WOOD IN EARLY STRUCTURAL & CONSTRUCTION PRACTICE

Wood carries several benefits that make it an excellent candidate for use in a wide array of construction projects. One such benefit is its thermal properties, which give it an advantage in terms of its resistance to high temperatures. Unlike steel, which can expand or even collapse in high heat, wood actually dries out and becomes stronger as the heat increases. In addition, the heat conductivity of wood is relatively low in comparison to other materials such as aluminum, marble, steel, or glass. This gives the wood an advantage in terms of being used in various applications such as matches, hardware equipment handles, wall coverings, and ceilings.

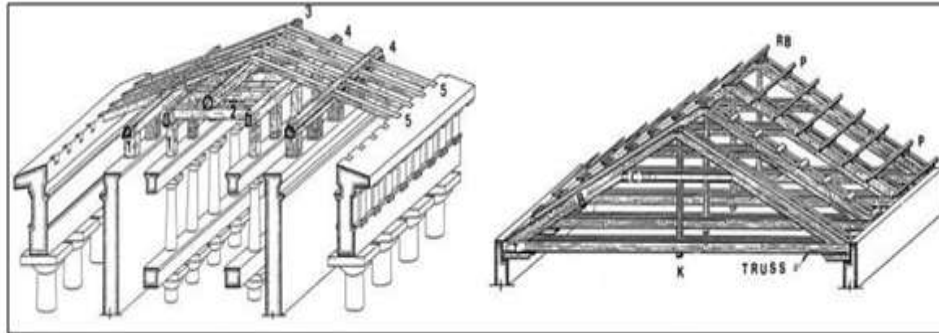


Fig. Some Wooden logs& construction used framing by using wood.

Wood also contains highly sought-after acoustic properties. It can absorb sound and echoes and is a favorite material of choice for the construction of structures where proper acoustics is important, such as concert halls. Wood is resistant to electrical currents, making it an optimal material for electrical insulation. Another important characteristic of wood is its tensile strength, which is its ability to bend under pressure without breaking. Wood is exceptionally light in proportion to its tensile strength, making it the preferred construction choice for surfaces that take a constant beating such as basketball courts and bowling lanes. Tensile strength is also one of the main reasons for choosing timber as a building material; its remarkably strong qualities make it the perfect

choice for heavy-duty building materials such as structural beams.

VI. BASIC METHODS OF USING WOOD AS AN IDEAL MATERIAL FOR FURNITURE:

Furniture designers select wood for their design as it is an individual part of a group of products. The furniture set characterizes a group of separate parts, each fulfills a different task and all of them are mutually combined. They are all designed with aesthetic features that are compatible. Some examples of methods for residential, office & other furniture sets in the home.



Another type of group furniture is System furniture. They present a range of parts in standard, the modular dimension with the possibility to create a composition (dimension, functional solution...) in line to the needs and requirements of the user. These components have portability and

can easily get assembled, disassembled, and reassembled in different ways as needs change. Examples of this type are:

- a. Storage systems,
- b. Modular systems,
- c. Libraries systems etc.



VII. WOOD IS USER-FRIENDLY FOR CLIMATE CONSIDERATIONS:

Wood products are healthy for our climate and prevent climate change. First, trees absorb carbon throughout their life. They take it out of the atmosphere and store it in their trunks as they grow. But it doesn't end there. When trees are turned into wood products they continue to store that carbon. By using solid hardwood furniture, we are preventing climate change and the greenhouse effect. But it doesn't stop there. Eventually, we can reclaim the solar energy stored in wood at the end of the product life cycle by burning wood for energy. Re-using wood for energy like this is a great way to displace dirty, non-renewable, and carbon-emitting energy sources like coal, oil, and natural gas. Compared to oil, coal, and natural gas, burning wood creates clean energy and no waste.

VIII. OBSERVATION & FINDINGS:

There are multiple side effects & common factors for choosing wood for designing anything by using wood in interior solutions and furniture. The major advantages & disadvantages are discussed below this statement for providing more relevant information for deciding the exact reasons & queries.

Advantages:

- Natural resistance: to termites and insects: As mentioned Teak has a Natural Oil content within it, It resists the damage of wood by termites and other fungal insects.
- Density: The density is much higher in teak which resists the Rot and decay of wood.
- Moisture resistant: Can be easily hand-carved for any wood curvature work.
- Heat moderation: This kind of wood won't become too hot in summer and too hot in winter.

- No need for painting: Self-Finished material and soft material.
- Maintenance: Less maintenance and requires less polishing.
- Teak wood: It is easy to handle, polish, and work with so a lot of carved designs are made using this. They can be easily available in longer lengths.
- Availability: Easily available in the local market
- Insulation: Plywood has a property of Insulation, as it acts as an insulation for rain, high humidity, etc. properties possess good thermal and Sound Insulation properties.
- Strength: Plywood can easily bear heavy objects. As mentioned, it is glued on top of one another with alternating grains. Areas of this nature transfer the load easier to all areas of Plywood
- Flexibility: As it's an engineered product it can be modified to any desired shape as per client requirement. It can be easily modified to take on any piece of construction

Disadvantages:

- Price: The major disadvantage is it very expensive.
- Limitation: Limited unavailability
- Long-time quality: Hard to find good quality wood.
- Woodworking: Tools get blunted: As the wood itself is very strong it often makes wooden tools too blunt and it requires frequent sharpening of tools.
- It requires termite control. Direct sunlight is avoided on Sal wood as this may lead to forming Cracks in Wood.
- Sal wood Surface has small cracks and these are filled by Paint. Finishing requires paint.
- It is found that plywood emits Volatile Organic Compounds.

- h. Plywood becomes heavy in contact with water and it should be covered when left outside to avoid the risk of absorption.
- i. Light grade Nova-pan may swell when in contact with water.
- j. It may shrink in low atmospheric conditions.
- k. Harmful to health according to research studies rubber wood is the most harmful to wood which may cause severe allergies.
- l. Easily prone to fungus when in contact with water. (Types of Woods used in construction)

IX. CONCLUSION:

Trees, and their derivative products, have been used by societies around the world for thousands of years. Contemporary construction of tall buildings from timber, in whole or in part, suggests a growing interest in the potential for building with wood at a scale not previously attainable. As wood is the only significant building material that is grown, we have a natural inclination that building in wood is good for the environment. But under what conditions is this really the case? The environmental benefits of using timber are not straightforward; although it is a natural product, a large amount of energy is used to dry and process it. Much of this can come from the biomass of the tree itself, but that requires investment in plants, which is not always possible in an industry that is widely distributed among many small producers. And what should we build with wood? Are skyscrapers in timber a good use of this natural resource, or are there other aspects of civil and structural engineering, or large-scale infrastructure, that would be a better use of wood? Here, we consider a holistic picture ranging in scale from the science of the cell wall to the engineering and global policies that could maximize forestry and timber construction as a boon to both people and the planet.

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