

Bamboo as a Building Material

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ABSTRACT

Bamboo is one of the oldest traditional building materials used by mankind. They are the largest members of the grass family and are the fastest-growing in the world. In fact, within a 24 hour period, bamboo can grow four feet. Bamboos are of notable economic and cultural significance in South Asia, Southeast Asia and East Asia, being used for building materials, as a food source, and as a versatile raw product. Bamboo has a higher compressive strength than wood, brick or concrete and a tensile strength that rivals steel. This is a substitute building material, which is renewable, environment friendly and widely available, as the wood resources are diminishing and restrictions are imposed on felling the natural forests. Due to its rapid growth, its adaptability to most climatic conditions and due its properties, bamboo emerges as a very suitable alternative.

Timber demand is increasing worldwide at a rapid rate but the timber supply is depleting. Due to its properties bamboo can suitably replace timber and other materials in construction and other works. Industrially treated bamboo has shown great potential for production of composite materials and components which are cost-effective and can be successfully utilized for structural and non-structural applications in construction. Bamboo has several unique advantages like ability to grow fast with a high yield and also it matures quickly. Additionally, bamboo can be grown abundantly and that too at a lower cost which makes it more economical. This article deals with why and how bamboo is used as a building material, some of the main properties, construction details and the major uses of bamboo etc. Also to inspire all for saving nature and to suggest them to use eco-friendly materials and techniques, which are cost-effective and grown abundantly and focuses on sustainable buildings to fit into natural surroundings. Key words: Bamboo, Renewable, Environment, Cost-Effective, Economical, Building Material