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Biodegradation of woods used for roof construction as one of the causes of roof failure in Nigeria: An overview

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Statement of Problem: This overview focuses on the biological degradation of woods utilized for the purpose of roof construction as one of the causes of the rising incidences of roof failure in Nigeria. Understanding the degradation of wood by biological agents, the factors that influence the rate of degradation and the consequences of such effects is important for developing protection strategies to curtail these occurrences.

Methodology & Theoretical orientation: The information used for this write up was obtained from published articles and the internet. Wood is defined as the hard fibrous material that forms the main substances of the trunk or branches of a tree. It occupies a unique position as the world's most important raw material for construction purposes. The roof is one of the most important components of a building. It is that part of the building that offers protection against sun and rain; hence without it, the content of the building would be damaged. The rising incidences of roof failures in recent times in many parts of Nigeria have become a matter of concern. A roof is said to have failed if is no longer capable of performing any of the desired functions. The consequences of roof failures include damage to personal belongings and the exposure of inhabitants and livestock to bad weather conditions. Wood can be degraded or decomposed by a variety of biological agents such as fungi, bacteria, and insects. Fungi are can colonize wood and degrade the cell wall component to form brown, soft or white rot. Bacterial species can directly attack wood to cause erosion cavities and tunneling patterns of deterioration. Damage caused by insects such as termites and carpenter ants is one of the most serious types of damage to wood in service. In general, the activities of these biological agents would weaken the structural integrity of wood and make it easier for enzymes to access cellulose chains.

Conclusion & Significance: To avoid biodegradation of wood, possible failure and collapse of roofs, it is necessary to subject woods utilized for building construction to some prophylactic treatments, which may be in form of seasoning and application of chemical preservatives.

Biography

Kalada Itelima qualified as an Architect. He is presently the Director of Kalite Associate Jos, Nigeria. He is also involved in designing, building construction and consultancy services. He has very keen interest in attending conferences. He is into community services in Jos, Plateau State, Nigeria, where he is residing and to other parts of the country

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