



InnovaWood



Berner
Fachhochschule

Indoor Wooden Surfaces – Increasing Service Life

PARTNERS: Bosshard-Farben AG, Blumer-Lehmann AG, neue Holzbau AG, Nägeli AG

COUNTRY: Switzerland

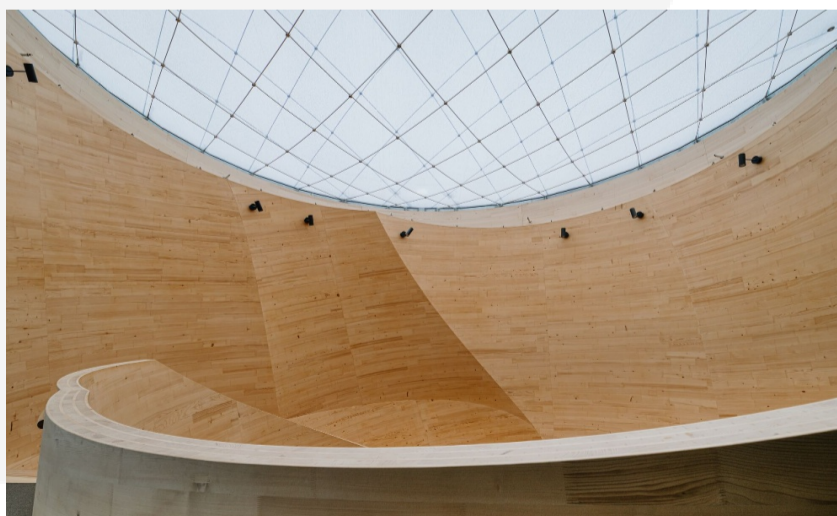
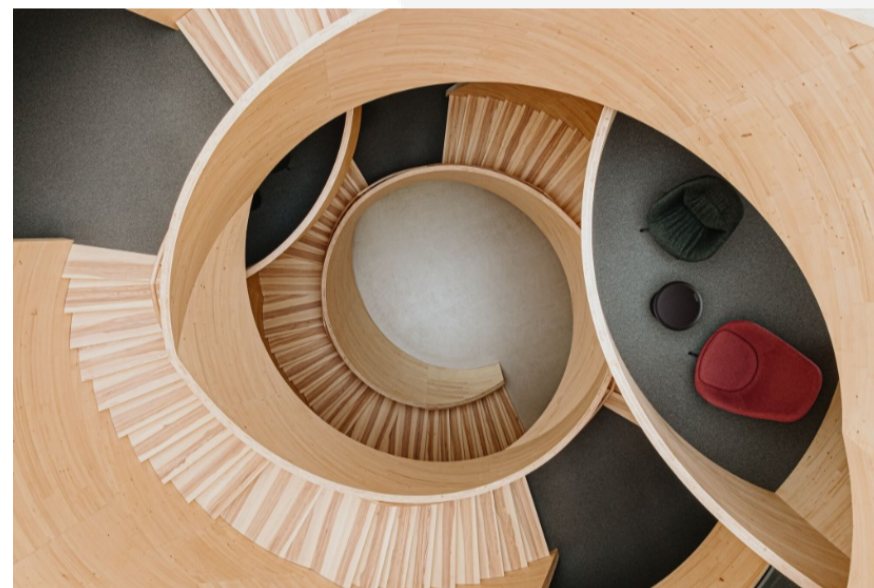
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DESCRIPTION/OBJECTIVE: Indoor wooden surfaces (cladding, glulam, CLT) in Switzerland have increased significantly over the past 15 years. They require protection during the construction phase against weather exposure and mechanical damage, and during use they undergo functional degradation (cracking and delamination) as well as aesthetic changes (yellowing) due to air circulation, fluctuations in relative humidity and temperature, and solar radiation, leading to premature invasive maintenance or replacement.

RESULTS & CHALLENGES

These challenges were addressed in an Innosuisse project, resulting in the development of a new innovative coating system.

ArboShield UV is a coating system based on a unique combination of flexible binders, UV absorbers, and pigments. It forms a high-matte, optically unobtrusive film and is free from VOC emissions.



The system stabilizes the initial wood colour, exhibiting a colour change of ΔE 3–4 after 22,000 hours of natural weathering.

Furthermore, it is characterized by low water vapour diffusion resistance (S_d WC \approx 0.05 m; S_d DC \approx 0.3 m) at a functional layer thickness of \leq 40 μ m, reducing cracks by 80%.

Extension of Service Life – Surface Treatment and Wood Modification – Wood in Out- and Indoor use – Bio Based Coating for Wood

INTERESTING LINKS

<https://www.bosshard-farben.ch/kategorien/arboshield-uv>

<https://www.bfh.ch/de/forschung/forschungsprojekte/2019-344-627-191/>

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