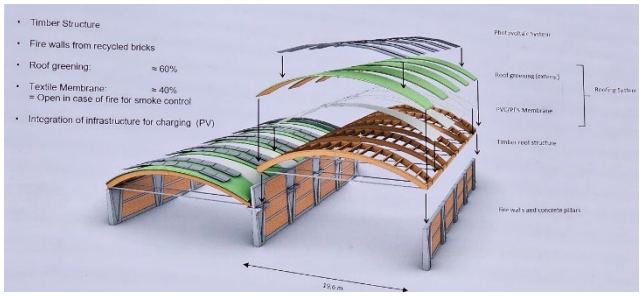
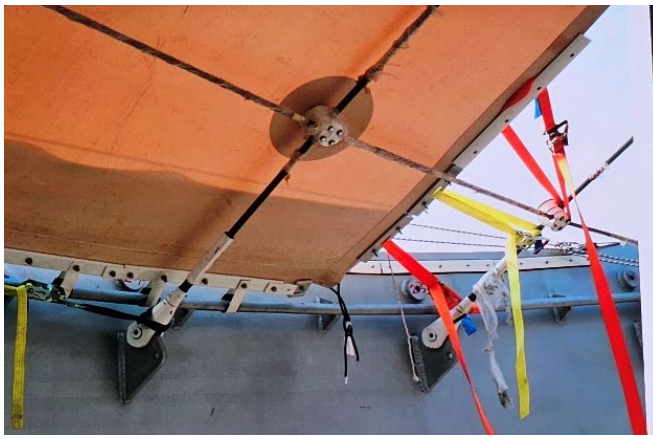
Smart Structural Concepts as Key for Embodied Carbon Reduction in Construction.

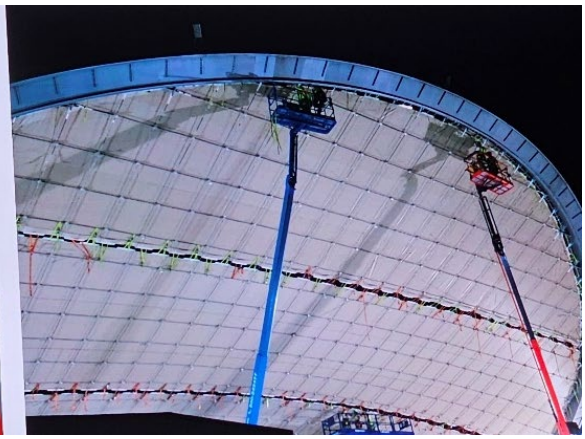
Durability assessment and enhancement of membrane structures.

At the IASS-IWSS 2026 symposium “R-Evolution of Shapes: Sustainability, Re-Use, and New Design Paradigms”, **Christoph Paech from sbp**, gave an interesting plenary lecture: **Smart Structural Concepts as Key for Embodied Carbon Reduction in Construction**.

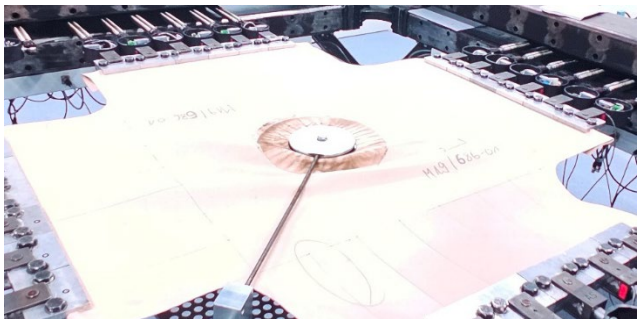


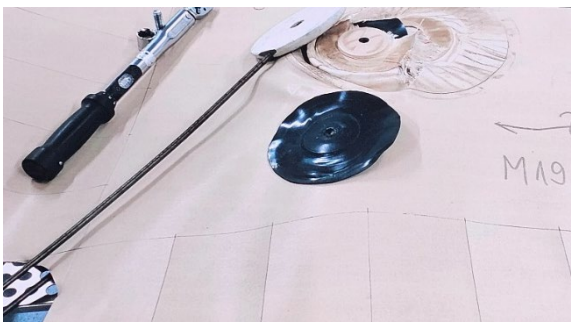






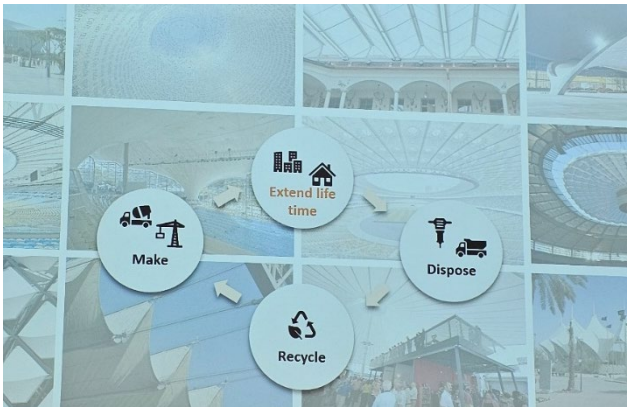
With a general message to verify and test structural interaction between the coated fabric cover and the supporting cable net.





At the 8th TensiNet Symposium 2026 & 7th Essener Membranbau Symposium 2026 “Shaping the pathway to future tensioned membrane design”, **Christoph Paech** also gave a keynote lecture: **Durability assessment and enhancement of membrane structures.**

In practice, the recycling of coated fabrics has not been successful until now. In this case, it is important to extend the lifetime of membrane structures.





The durability of the membrane is crucial for the whole structure. Since suppliers have their own method of producing the coated membrane, it is essential to test samples.

A visual inspection is not enough. A full 'condition survey' is required. Although the membrane is dirty, tests revealed that 90% of its strength remains.



Final remarks: (1) recycling should become possible, and (2) monitoring membrane structures over time is important.