

Dynamic Winding Machine

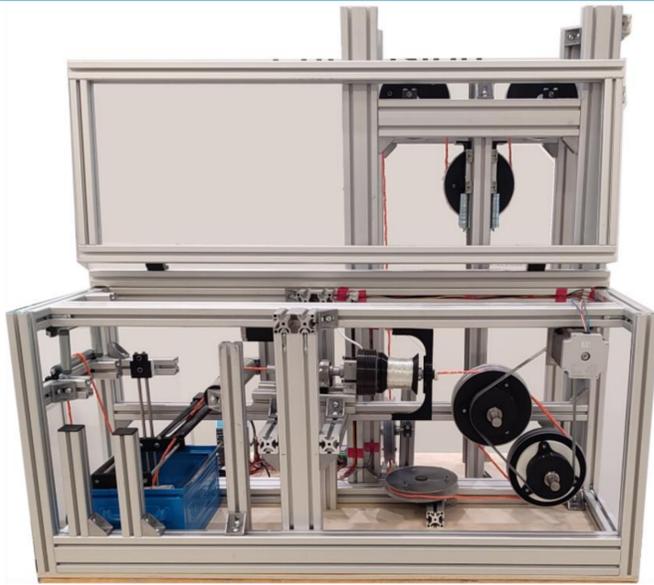
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General objective

The Dynamic Winding Machine (DWM) is used to manufacture free-formable fiber composite reinforcements with an adaptable surface profiling.



Use case

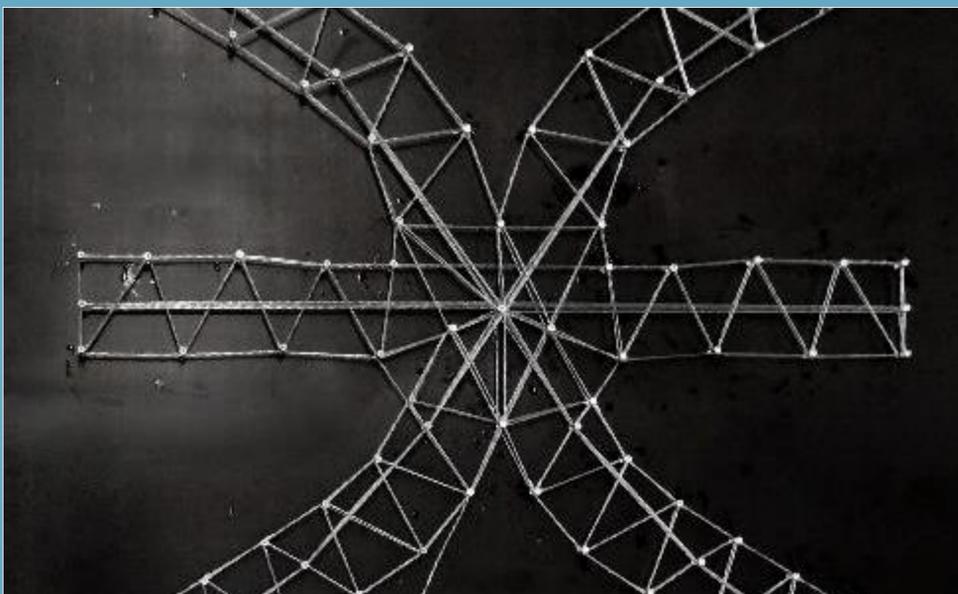
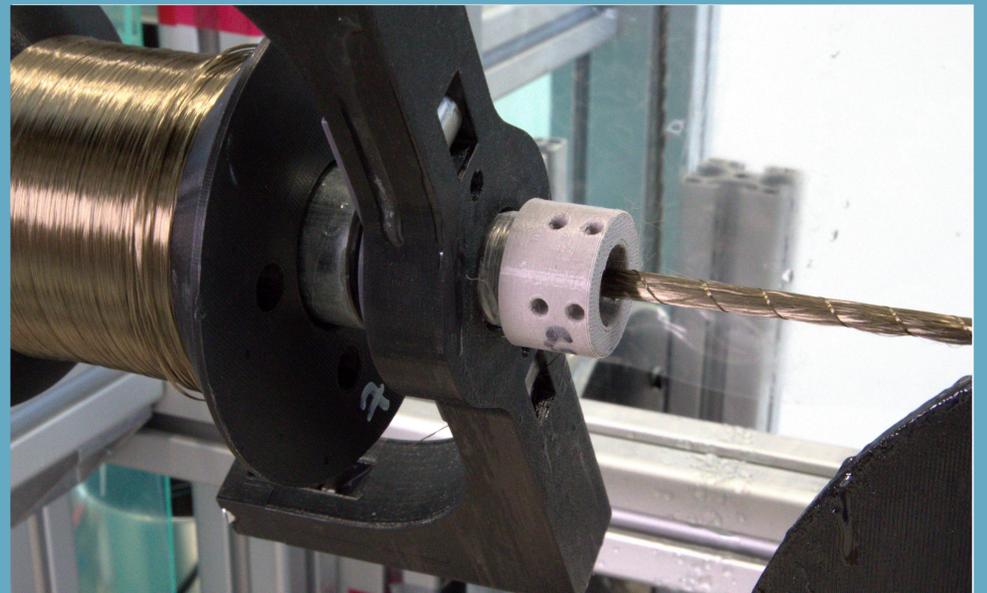
The DWM enables the on-demand production of fiber composite reinforcement strands, overcoming the geometric constraints of prefabricated pultruded rebars. The reinforcement layout is directly adaptable to specific requirements and is used for reinforcing additively manufactured concrete components

Facility capabilities

Reinforcement diameter: up to 8 mm

Fiber material: Glass (E, E-CR), Basalt, Carbon

Matrix material: Epoxy resin



Results

Reinforcement mesh made of E-CR-glass.

Publications

- [Rothe et al. 2023a](#)
- [Rothe et al. 2023b](#)



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