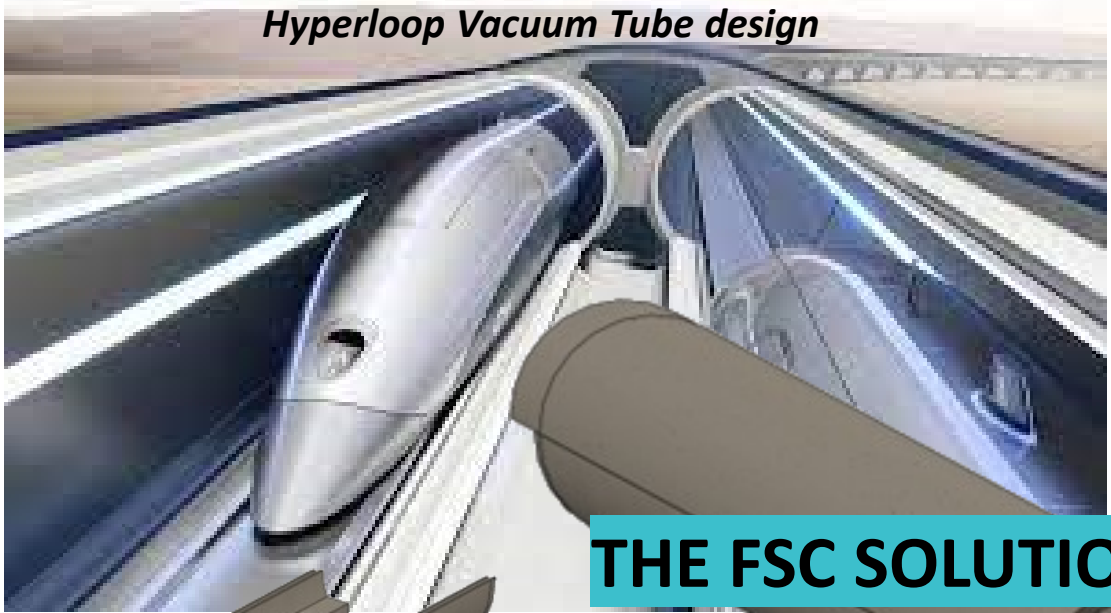


FSC Hyperloop Vacuum Tube

FSC Structural Tech is the most cost effective and structurally significant Hyperloop Vacuum Tube design

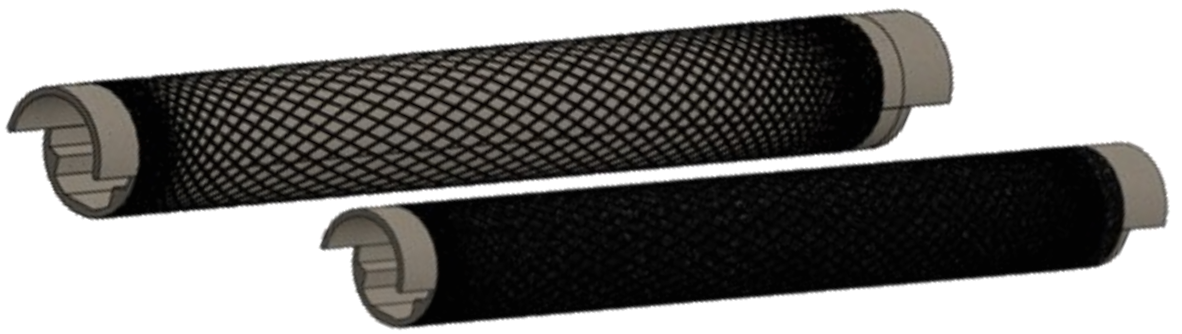


THE FSC SOLUTION



2 HALF CONCRETE TUBES

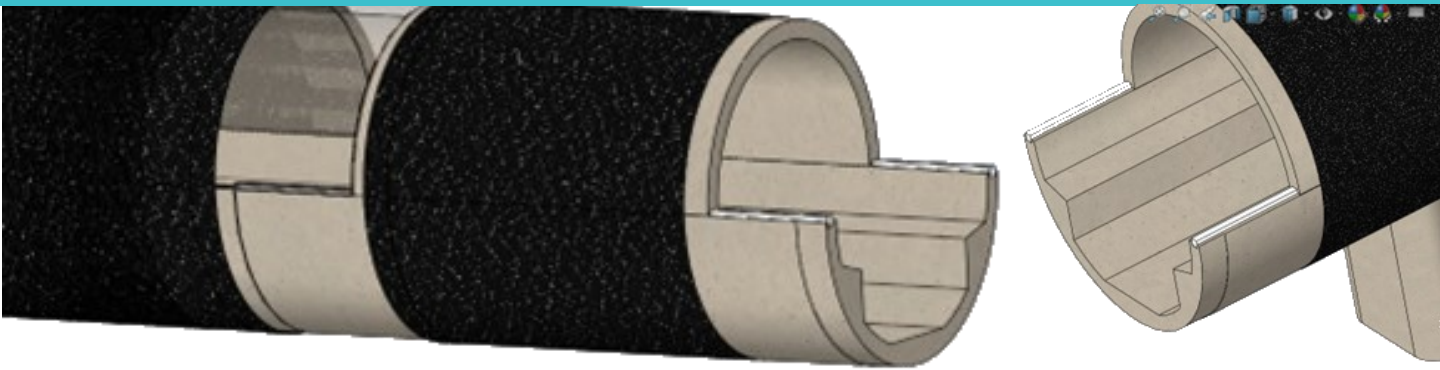
The Tube is built by assembling two half concrete tubes that will be joined together using polyurethane. In this way, the design will strongly facilitate the element production and the installation of the various rails and coils.



THE 2 HALVES ARE WRAPPED IN TENSION WITH IMPREGNATED FRP

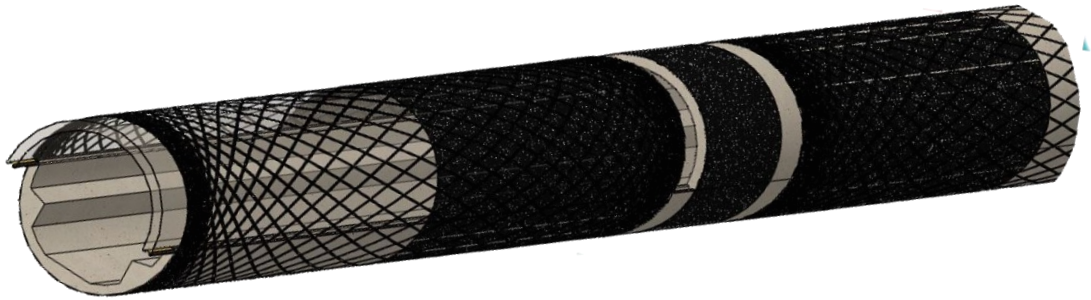
Once the two halves will be glued together, they will be wrapped “in tension” with a resin impregnated FRP roving. The wrapping will happen with multiple layers. The helix angle and the roving tensioning force can be customized to the local stresses.

Thermal Expansion Joints



The Joint is a separate section connecting the beam sections.

- **CONCRETE TUBES UTILIZING FSC TECHNOLOGY SOLUTION** is the Solution for the Hyperloop Vacuum Tube.
- **The Required Dynamics and Permeability can be met with the FSC Tech.**



What the FSC Tech brings to the world of concrete products is:

1. **Increased Strength** - a massive increase in flexural strength is provided, not achievable with current technologies.
2. **Reduced Cost** – the FRP system is substantially less costly than traditional steel reinforcement and allows for reduced product thicknesses.
3. **Longer Service Life** – the FRP is corrosion resistant and has higher operating service temperatures than steel.
4. **Drastic Reduction in CO2 footprint** – eliminate steel, reduce concrete sections, replace or reduce OPC with low CO2 binders, enables a large reduction in environmental footprint compared to the current steel reinforced concrete practice.

FSC TECHNOLOGIES

FSC is a US company with R&D in Italy. Its core business is to help Customers develop solutions based on its Innovation in Structural Engineering by replacing embedded steel reinforcement with a system of wrapping concrete elements with pretensioned FRP and a small amount of resin.