

Flownex Modeling of Fusion Reactor Balance of Plant

Christian Chesser

TTU Mechanical Engineering

The balance of plant of any power plant is made up of the components that remove heat, transport energy, and convert energy in the system. For a fusion reactor that would include components like the coolant through the blanket and the power conversion system. Modeling fusion reactor balance of plant is important as the next step in fusion energy. This will allow us to be able to see if our current balance of plant can handle the pulsed operation of the tokamak design, and if there are failures in components, will the system still be able to run.