



Q: “What Is Filament Winding?”

A:

Filament winding is a batch process that takes individual fibers from a creel system and pulls each filament package through a resin impregnation bath. This bath thoroughly impregnates each filament package with a resin system (typically an epoxy resin matrix) and then places the filament package on a rotating mandrel. The mandrel rotates at a rotational speed that, combined with the transverse speed of the placement device, determines the wind angle of the finished composite.

Filament winding allows a design engineer to perform a comprehensive structural analysis whereby specific mechanical properties can be achieved by specifying resin, fiber reinforcement, wind angle, and basic structural composition.

