

Polytrimethylene Terephthalate (PTT) technology

A proven process for carpet, textiles and engineering plastics

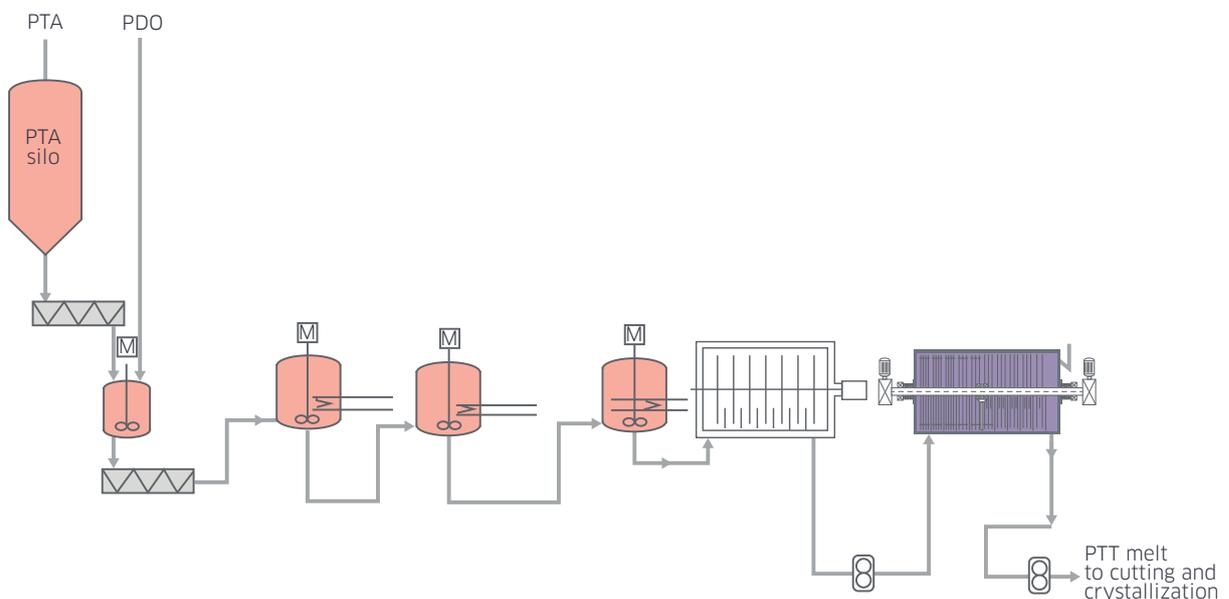


First PTT plant by Zimmer in Montreal, Canada

Zimmer's PTT technology is a proprietary process developed in the late 1990's in our pilot facilities to satisfy market demand for textile properties. PTT has new characteristics, including producing a resin that is stain and static resistant and excellent performance. It is mainly used for carpet, textiles and engineering plastics. Our first commercial scale continuous PTT plant started up in 2004 in Canada.

Efficient reactor design

Our reactors for the PTT process are proven and ensure a plant longevity with low maintenance.



Paste Preparation

Esterification

Pre-polycondensation

Polycondensation

PTT polycondensation process for high intrinsic viscosity polymer production

The PTT production process

Our PTT process is based on 1,3 Propanediol (PDO) and terephthalic acid (PTA) as feedstock. The raw materials are esterified. The final reaction step to reach the desired high viscosity is done in Zimmer's® Double Drive Reactor (DDR). Our robust disc ring reactor design is the result of our extensive experience, in-depth research and development and technological expertise. This proprietary double-drive reactor system guarantees a smooth and reliable operation at high viscosity and large capacities.

We build plants with a standard capacity of 300 tons per day and various sizes according to our customers' needs.

TechnipFMC Zimmer Polymers Technology

We provide technology, engineering, project management and procurement services for polyesters (PET, PBT, PTT, PBS) and polyamide (PA6, PA6.6) production plants. We are focused on our customers' needs. Over the last 60 years, our engineers have worked to enhance our portfolio of well-proven technologies using in-house research and development facilities. This dedication to quality has helped us to build an outstanding track record of placing our technologies in more than 800 plants.

As part of a global network of centers which manages the company's expanding portfolio of onshore process technologies in petrochemicals, refining, hydrogen and syngas, polymers, gas monetization and renewables, we have access to TechnipFMC's leading global engineering, procurement, project management and construction network. TechnipFMC operates in 48 countries around the world with more than 37,000 employees.



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