

FOURNÉ Polymertechnik

Laboratory and Pilot Machines and Components for Synthetic Fibers and Plastics



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NEW LABORATORY MELT SPINTESTER FOR FLAT YARN AND CARPET YARN PRODUCTION

Laboratory melt spinning machines are used worldwide for testing of raw materials like thermoplastic polymers, masterbatches, additives, spin finish products and others.

These laboratory spinning machines must reproduce the corresponding commercial scale melt spinning process of FDY or BCF carpet yarn production process, but in a very limited space and with a reduced raw material consumption.

Therefore, FOURNÉ Polymertechnik has developed the Melt Spintester for spinning of one end of FDY filament yarn and BCF carpet yarn. The Melt Spintester is delivered in a framework as a compact, modular system for installation. This prevents the quite often protracted installation and wiring work at customer's site.

This Melt Spintester, as shown in Fig. 1, is designed for easy operation and maintenance. One person can operate the spin tester. The compact design allows it to fit into laboratory rooms.

The spinning system comprises the same important machine components - selectable and respectively exchangeable - as a large production plant. The spinning system is completely electrically heated with multiple zones. It is equipped with spinning extruder, filter system, static mixing elements, spin pump and spin pack for one spinneret. The mixing torpedo at the end of the extruder screw is exchangeable.

Upon request, the spinning head and the spin pack can be adaptable to multiple spinneret types, which are used in production.

Various spin pack filter systems are used, depending on product.

A complete quench air system provides laminar cooling of the filament in the quench chamber. Spin finish is applied in either the lower part of the quench chamber or at the inlet of the draw texturizing winding machine. Various arrangements and a number of induction heated godets allow drawing and relaxation of the filament yarn in the draw-take-up machine.

The easy operable, hinged hot air-texturizing jet enables threading of the filament yarn in the texturizing jet by hand aspirator, identical to the process in production plants.

At take-up speeds up to 2000 m/min mostly tension-controlled winders are used in the BCF process. These types can also be used in the FDY process.

If Melt Spintester for production of only flat (untextured) yarn at high spinning speeds is requested, the Spintester is equipped with a friction driven winder for up to 4000 m/min or 6000 m/min, as it is installed in production plants as well.



Figure 1

For more information or to request a quote, please contact:

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