

September 20, 2013

STEER's Innovative Excellence through Vertical Integration.

STEER continues to develop proprietary "task specific" processing technology, where energy and functionality target specific attributes such as improving conveying efficiency for difficult-to-handle materials, or providing the precise nature of work/energy input for specific melting or mixing requirements. This allows for more efficient utilization of the process section of an extruder, which in turn results in lower process temperatures, higher throughput, and improved quality. It can also enable the extruder to operate at high screw speeds and higher throughput rates for heat and shear sensitive compounds than cannot be attained by using conventional conveying elements and kneading blocks.

STEER's technological progress has been very evident in the processing of bio-composites. This year STEER has provided production extruders for the compounding of Cellulosic Fibers, Feather Fiber and Jute Fiber supporting the growing bio-composites market. STEER low energy Dynamic Stir Element (DSE) and "Shovel" style side feeder conveying elements enable the achievement of high capacity with these materials. DSEs are also finding new uses for low energy melting of thermoplastics and improved devolatilization performance through enhanced surface renewal.

In the K 2013, STEER is introducing a new line of extruders that would offer the best power utilization making it truly a mixing vessel that can operate at full power at different speeds. STEER displays a versatile 50mm MEGA SPECIAL PLUS extruder with new technology to utilize full motor power of 160 kW at screw speeds of 625 rpm, 750 rpm, 1000 rpm and 1200 rpm. The "MEGA SPECIAL PLUS" shares the "General Purpose" Do/Di of 1.55 with earlier MEGA models, with the added features of a Continua® shaft for improved safety and reliability apart from the availability of STEER proprietary line of conveying and mixing elements.

STEER's OMEGA line of extruders features a process section with a Do/Di of 1.71 with the tightest and most optimized screw to screw gaps in the industry. This is made possible through the use of quality machining and assembly methods not utilized by other major extruder manufactures. The result is a lower shear signature during processing and enhanced product quality due to narrowed residence time distribution. Our successes in bio-composite processing are evidence of these characteristics.

Most people are not aware that STEER is perhaps the most vertically integrated manufacturing company in the extruder industry. STEER has an in-house crucible, forging shop and metallurgical laboratory, where proprietary alloys and manufacturing technologies are developed. This gives STEER advantages in the supply and cost of the highest performing tool steels / super alloys used in the equipment. New technology has been developed to produce "nano-carbide structures" during process, which make the material stronger with enhanced wear properties. Drop forging technologies have also been developed for tool steels further enhancing part strength and performance.

STEER utilizes all of its capability to supply the largest number makes and models of extruders in the industry, with over 35 models to choose from. Stop by the STEER Booth and see what makes STEER different as a major and growing supplier to the plastics industry – LEAD, INNOVATE, MAXIMIZE!!



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