

New spinning process may revolutionize textile industry

A Canadian company, The Bobtex Corporation Limited of Montreal, has developed a new manufacturing process with a machine that they claim can produce a simulated spun yarn at speeds of up to 2,000 feet a minute.

The method, known as the Integrated Composite Spinning (ICS) system, was invented a number of years ago by Emilian Bobkowicz, who has worked in Canada with his son, Dr. Andrew Bobkowicz, to simplify and commercialize the process.

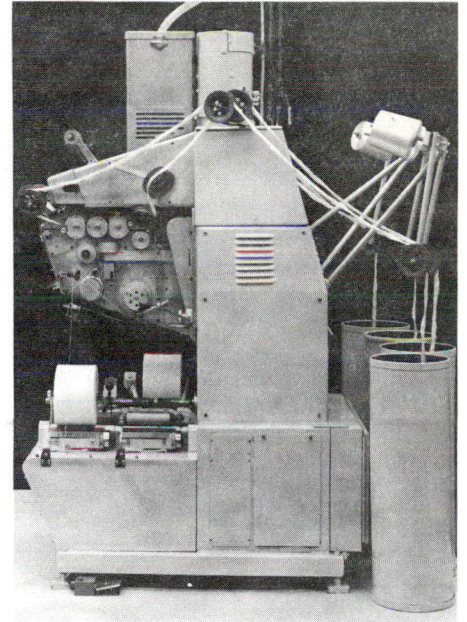
ICS is unique in that it applies polymer resin to bind fibres together. Unlike twistless yarns, in which the fibres are temporarily glued together, the binder used in the ICS remains permanently in the yarn and the fabric. The machine is capable of producing spun-like yarn from a composite of two or three components. Three processes

are combined into one: extrusion of a polymer resin to function as a bonding agent; incorporation of a filament yarn of the desired shape to provide continuity and strength; and the addition of staple fibres of any type (natural or man-made) and of short or medium length to provide the desirable spun texture to the yarn.

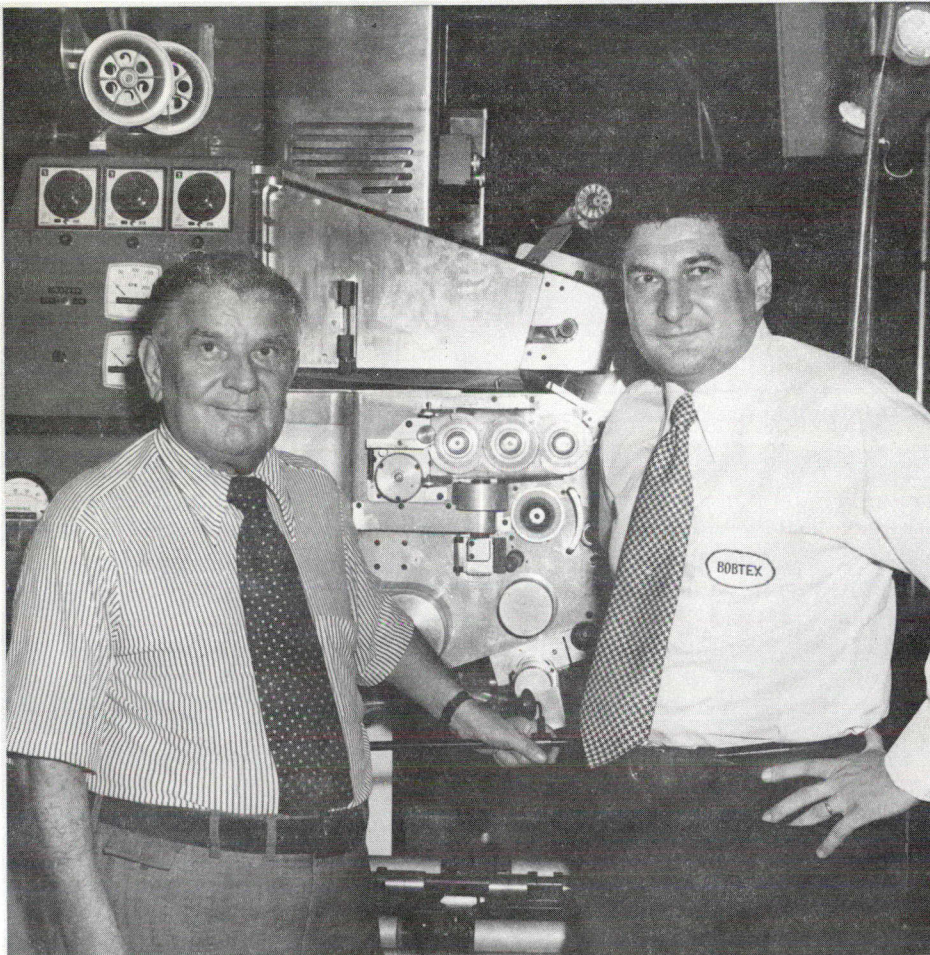
Simple technique

A recent issue of *Textile Manufacturer* describes the technique as follows:

"The idea is simplicity itself. A core strand of almost any 'carrier' is introduced at the top of the machine. The fine core is taken down through the extruder head, where a sheath of molten polymer is applied to the yarn core. Almost simultaneously, fibres are taken from an input sliver and merged with the molten sheath in a manner



The Bobtex Integrated Composite Spinning (ICS) machine can produce spun yarn at speeds of 2,000 feet a minute.



Emilian Bobkowicz (left) and his son, Dr. Andrew Bobkowicz, inventors of the new machine and manufacturing

process that is said to be a "challenge to conventional and even open-end spinning".

that has been described by some textile men as 'resembling flock printing'. The result is a complex inner structure round which there is a coating of the fibre that gives the resultant yarn its ultimate appearance and, to a lesser extent, its handle, but clearly this latter property will be affected by the inner components and their proportion in the total structure.

"Dr. Bobkowicz stresses that his new process offers the yarn-producer a means of producing a tonnage of yarn far greater than existing fibre supplies would normally allow. 'Imagine,' he says, 'you have 1,000 tons of staple and our equipment. You can produce say 2,000 tons of yarn because the core yarn and polymer content will enable you to double the total weight of fibre used...we can produce a yarn with only 33 percent fibre content, so that your fibre is extended to three times the original potential'."

The machine, says the magazine, is "so new in its approach to yarn-making that it is almost impossible to make a direct comparison with any other method of yarn production".

According to Bobtex Corporation the method saves 10 to 20 cents a pound on raw materials and an estimated cost in labour of 50 per cent. The machine is built in Canada and will be exported throughout the world.