

# Reflections digest

An e-newsletter from *Textilmaschinen Thies*

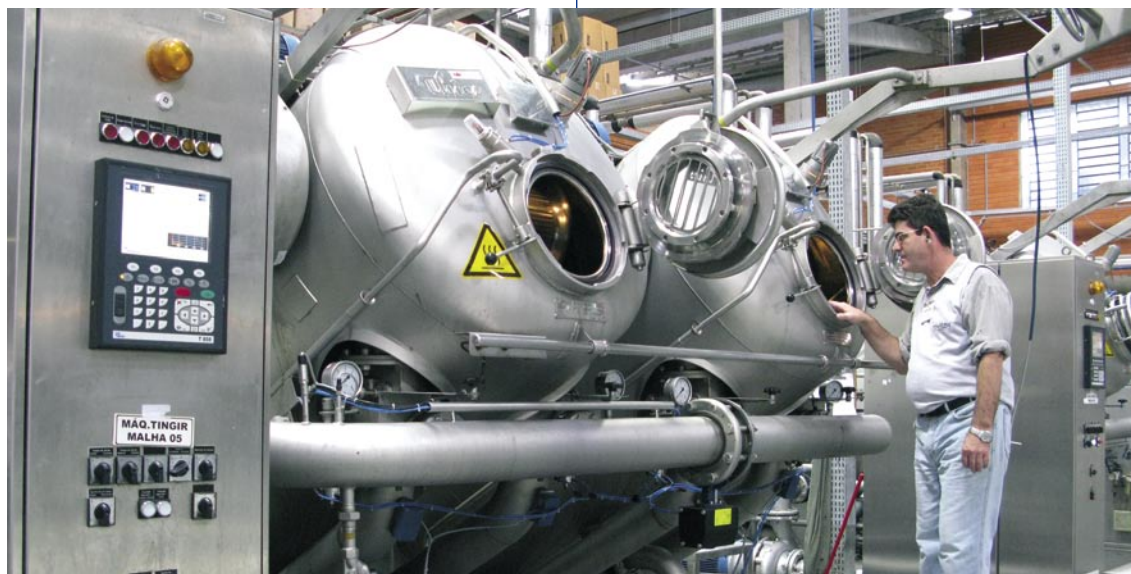
4/2010

## Rovitex helps keep Brazil's 'Bavaria' clean and green

Anyone setting foot in Blumenau for the first time could be forgiven for thinking they were in Germany. The architecture is German, much of it in the charming timber-beam tradition, and most of the people are German. There are German restaurants, German inns and beer gardens, German names above the shop fronts, and every year there is a rumbustious Oktoberfest.

But this is Brazil, and Blumenau is a city in the state of Santa Catarina, in the south of the country. It is one of the communities founded by German immigrants in the first half of the nineteenth century, most of which have gone on to keep their own distinctive culture and traditions alive, although being very much a part of the modern and vibrant Brazil.

Textiles is the number one industry in Blumenau, owing partly to the Itajaí-Açu River which flows through the valley, and has been since the founding of the community in 1850. Given this background it is not surprising to find Thies technology installed in many textiles plants throughout the city and surrounding region, and Thies



distributor PML Petersen Matex Imp e Exp Ltda, which is based in São Paulo, has its own representative office here, headed by local resident Edegar Michel.

One of the biggest textiles and garments producers in Santa Catarina, and in fact one of the biggest in Brazil, is Rovitex Industria e Comercio de Malhas Ltda. The company has its headquarters in the town of Luiz Alves, a suburb of Blumenau.

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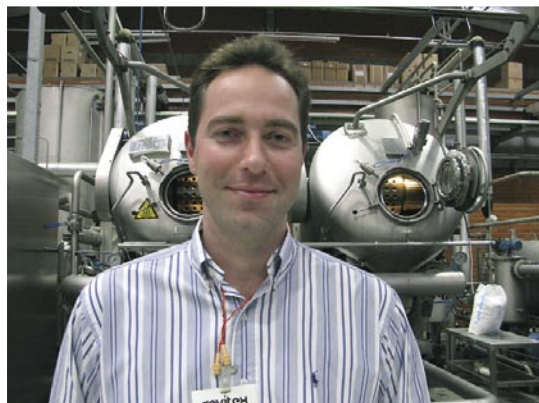
Occupying 40,000m<sup>2</sup> of built-up area in a carefully landscaped industrial park, its modern premises providing a canteen, recreation hall, gym and library for the 1800-strong workforce.

Rovitex is a vertically integrated company, covering all the processes including knits, dyeing, cutting, printing, embroidery and sewing, along with a development sector that analyses international trends and seeks inspiration from street fashions to create collections that are sold throughout Brazil's huge domestic market.

The company went through a major expansion starting from 2007, with the Brazilian economy expanding at a healthy pace and the demand for textiles and garments growing. Brazil did not suffer as much as other parts of the world during the international crisis, and as most of the nation's output of textiles and garments

is for the home market, with only a small percentage going overseas, the Brazilian textiles sector continued to perform well.

Rovitex has five production units all within easy reach of each other, with the dyeing plant located on the outskirts of Blumenau. Here is a range of Thies dyeing



technology that has been carefully specified to help Rovitex comply with the stringent environmental demands of Santa Catarina, and its own extremely exacting safeguards.

“Our concerns for the environment cover every possible aspect,” says Rovitex's industrial director Vitor Luiz Rambo Junior. “Here at the dyeing plant our responsibilities focus on the effluent treatment system, water reclamation, and recovery and heat treatment of sludge.

“For us, responsibility for the environment is not a fad, it is the essence of the company. We pride ourselves on being a textbook example of environmental protection.”

Vitor says that Thies was selected because of the quality of production and the service support, and also because the technology is the most advanced of its kind

in terms of environmental compliance.

“We were very much aware of this when we were planning the upgrades to our dyeing plant and were evaluating Thies. The subsequent discussions we had with Thies and PML Petersen engineers convinced us that with this technology we

could do everything we set ourselves to do.”

The installation has taken place over a three-year period and was completed this year. Rovitex now has a total of 13 Luft-rotol plus SII fabric dyeing machines, technology that represents a significant development in short liquor ratio dyeing methods while at



the same time meeting today's demands for environmentally friendly and cost effective production.

Practical liquor ratios as low as 1:2 can be achieved. These machines are all either one- or two-chamber design, with the exception of the most recent unit, installed this year with five chambers.

The installation includes seven ecoMaster fabric dyeing machines, designed for processing a wide range of knit articles, and combining safe fabric transport and flexibility with innovations in liquor transfer, liquor penetration and process technology along with reduced energy consumption and shorter process times. Optimised configuration of the dyeing kier and liquor pump combined with a new heat exchanger make it possible, depending on the fabric properties, to dye synthetics starting at a liquor ratio of 1:3 and cotton articles at 1:4. Two soft-TRD DS XL units are used for dyeing knits. With its short fabric circulation times and flooded fabric transport system the machine is especially suitable for crease-sensitive fabrics made from polyester and polyester blends, polyamide, micro fibres and Lycra blends as well as pile or wool fabrics.

The total volume of material passing through the dyeing plant is approximately 400t/month or 4800t/year.

"Using this integrated Thies system allows us to optimise the retrieval of water and energy," says Vitor. "Our system reuses the water used in cooling, dyeing, and the energy of the hot effluent before it is sent to the treatment plant. The system is fully automated and allows cost reductions as well as environmental conservation.



"All wastewater generated in the manufacturing plant is sent to the sewage treatment plant, which is designed to a biological system. Approximately 55 m<sup>3</sup>/h of wastewater generated from the dyeing is treated with an efficiency above 93 % reduction in organic load. The sludge goes through a modern system of drying, which reduces the moisture content by about 95%.

This minimises the volume of waste sent to landfill. Even the fuel for this dryer is part of the energy-saving process as we use briquettes of cotton waste recycled from the process that produces cotton yarn."

For a city that counts textiles production as being the basis of its prosperity, Blumenau is remarkably clean and green, a showpiece to what can be achieved by companies, such as Rovitex, who take their environmental responsibilities with the utmost in seriousness.

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