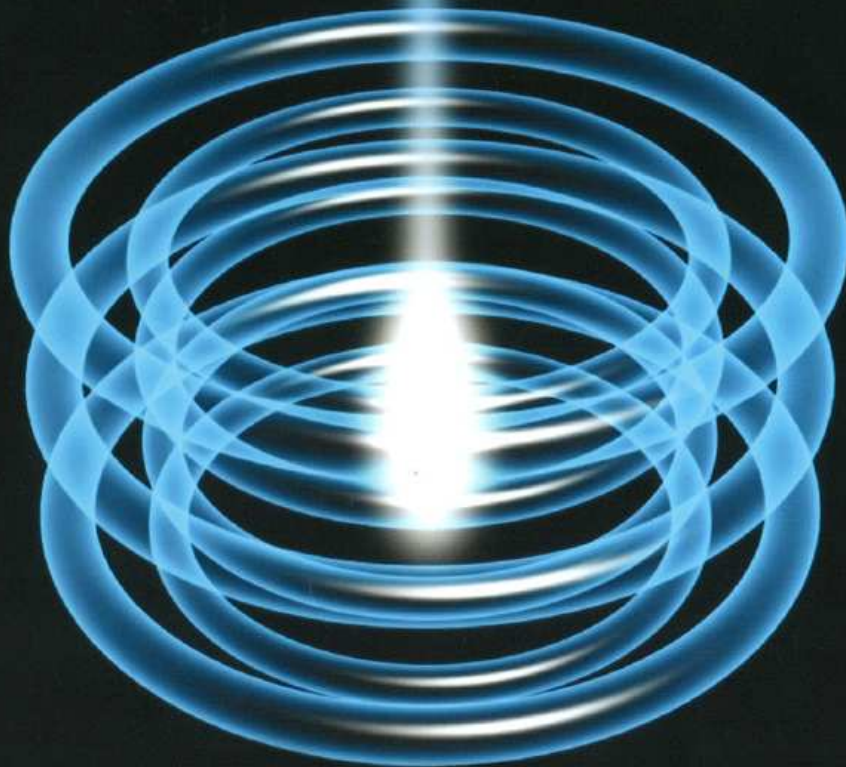


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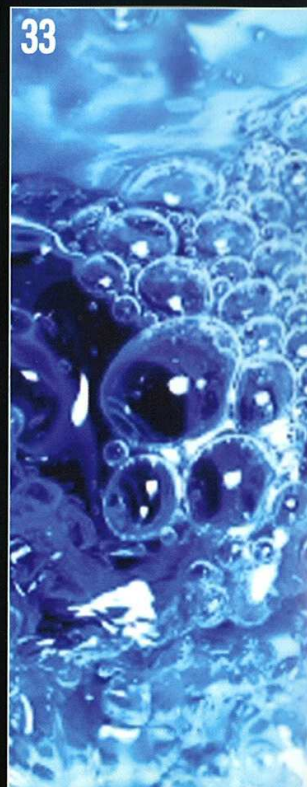
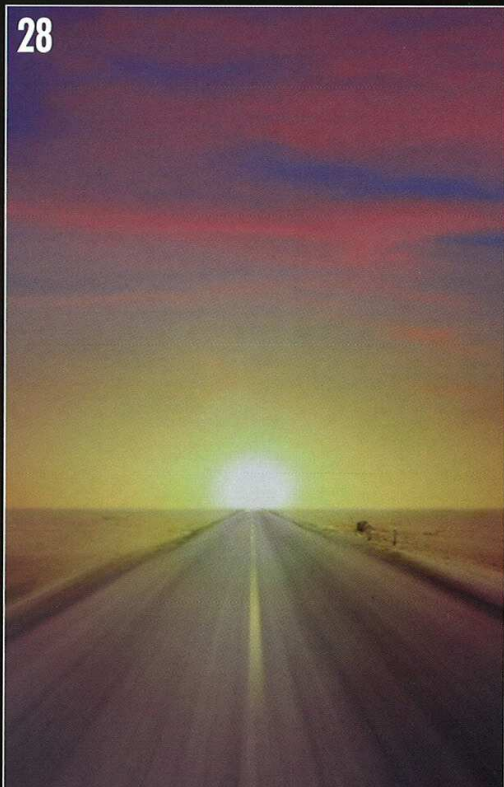
August/September 2008

**Light fantastic:
laser finishing**



The new magazine for fabric specifiers and apparel buyers

THIS MONTH



Editorial

Soiled goods

Many consumers assume that because clothing is billed as 'biodegradable', and because it is made with renewable materials, it will magically disappear – almost overnight – if it's buried in landfill. But this is not the case.

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Light fantastic

The authentic, worn, stained and ripped denim look doesn't have to be produced with loads of chemicals, water or energy. John Mowbray reports from Jeanologia in Spain.

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Web tool calculates eco-footprint

A new web-based tool which allows clothing retailers and brands to calculate the environmental footprint of their textile supply chain is now available exclusively through www.ecotextile.com.

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Invista expands its horizons

Invista, the company behind Lycra speaks exclusively to *Ecotextile News* about its core strategies to improve the environmental footprint of its manufacturing processes.

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Low energy fabrics

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China report stresses CSR initiatives

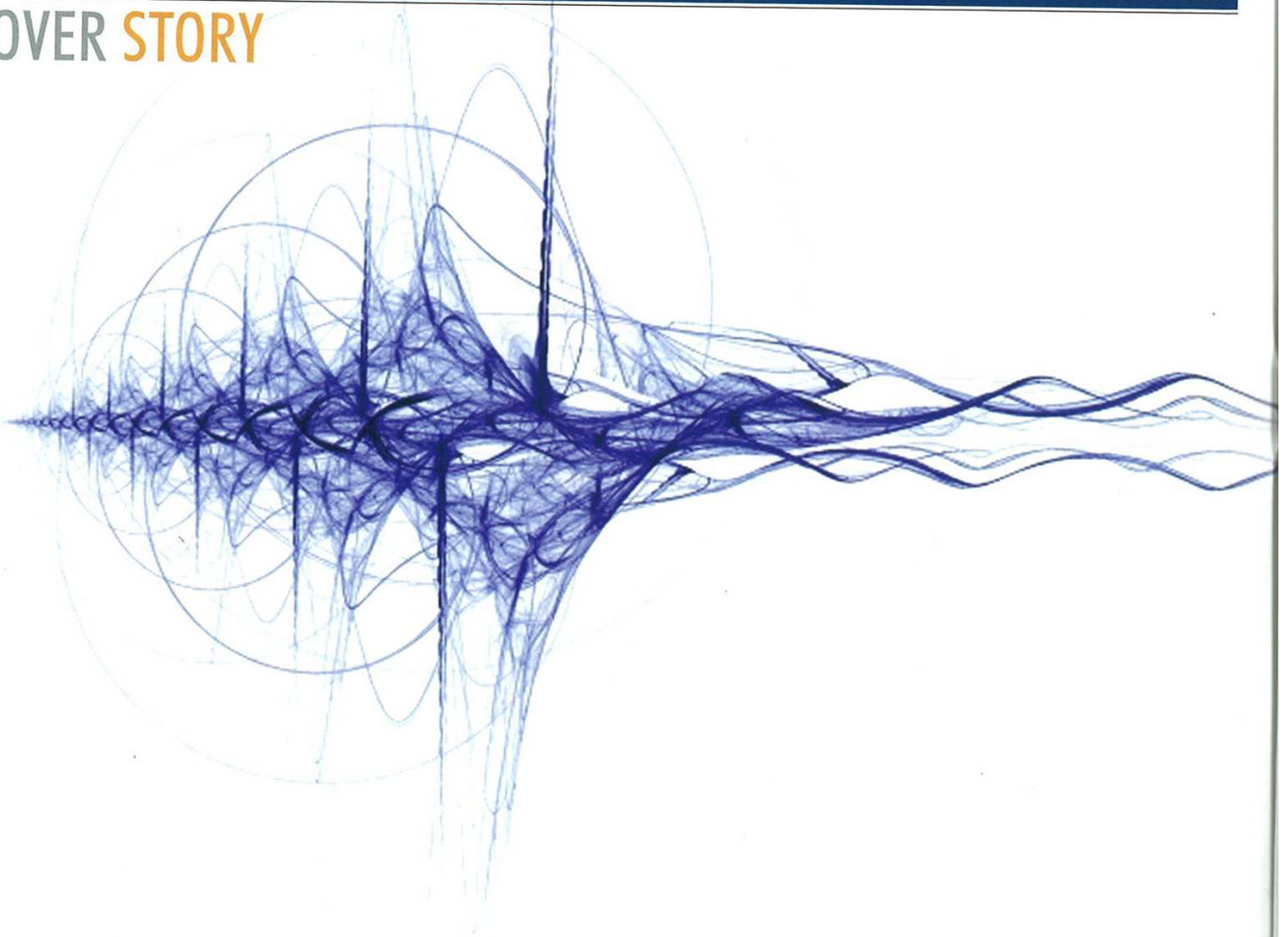
The China National Textile and Apparel Council released its annual report on corporate social responsibility 2007, where it stressed the ethical and economic importance of cracking down on pollution, illegal overtime and child labour in the industry.

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Levy on clothes to boost recycling

France's proposed eco-levy on new clothes is designed to improve textile recycling volumes

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Light fantastic

The authentic, worn, stained and ripped denim look that seems set to remain in fashion doesn't have to be made with loads of chemicals, water or energy. John Mowbray reports from Jeanologia in Spain.

Visitors to Jeanologia should be careful not to trip over the piles of denim on the floor of its trendy showroom in Valencia – especially when visiting textile experts are scratching their heads trying to spot the difference between original 40 year old jeans and brand new vintage looking denims.

"This one, this one, this one ... and this one ..." said a leading expert from the Colombian laundry business as he tried to pick out the half a dozen true original denims from around 30 pairs of jeans arranged across the showroom floor by Jeanologia's creative director Michelle

Branch. "They got about half of them right and half of them wrong," she told *Ecotextile News* as we stood watching the experiment.

Jeanologia is a Spanish company based in Valencia – on the hot, sunny Costa de Valencia – and is a very unlikely spot for leading denim brands and mills to focus their attention when it comes to innovative new, and eco-friendly denim processing. But a short visit to the company last month by *Ecotextile News* found that apart from the abundance of sun, sea and Sangria in Valencia, the place is also becoming a growing destination for 'indigo heads' wanting

authentic but sustainably made new denim that is treated with far fewer chemicals and consumes less resources.

"Coloured denim was everywhere at the Bread & Butter show this week," said Branch, referring to the influential jeans wear show held twice a year in nearby Barcelona. "This ties in perfectly with our new Colour Denim System, which allows brands to process coloured denim garments in a more environmentally friendly manner without the over-use of dye chemistry or auxiliary chemicals," she said. Jeanologia presented its first 'ecology and ethics' collection

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Vagabundo process – which is more environmentally friendly – there is a limited range of shades and you cannot do bright colours but with the CDS system this is straightforward.

"This process is not limited to woven cotton garments either, and it can be applied to knits and other cellulosic fibres. We can use CDS for any cellulosic blend," she said, "even moleskin."

The company notes that its proprietary know-how behind CDS ensures that dyeing takes place at room temperature eliminating the need for high energy costs and it claims the process can be done at less than 30% of the normal time depending on the colour of the garment," claimed Branch.

The big thing about CDS, according to Jeanologia, is that there are no dyeing auxiliaries required to get coloured denim with garments that look like indigo. It's also possible to reproduce an aged or 'rusty' look similar to the real air oxidation of metals using a combination of dyes and abrasion. Contrasting tonal two-tone effects that enhance seams without the need to double dye are also possible.

CDS was a long-time in development but was finally launched last year. LA-based brand AG Jeans are now working with CDS and showed



With the CDS no dyeing auxiliaries are needed to get bright coloured denim garments that have an indigo-dyed look.

these garments at Bread & butter; Tommy Hilfiger is running with it and Diesel is currently working on development.

Air conditioned

Branch, a former creative director at Swift Denim in the US, laughs that herself, fabric technologist Begoña Garcia and owner Enrique Silla, whose family have been in the denim business for generations, are outnumbered by chemical engineers, scientists and other 'brain-boxes' at the company.

"But the combination of our merchandising, design skills and textile knowledge works well with our engineers and has led to the development of our latest G2 waterless bleaching system," she said. This system is said to be a much safer and more cost-effective solution than other gas-type systems.

"G2 is completely safe because its design allows for the complete recovery and breakdown of the gas used in the process so that only oxygen is emitted. It also saves on the time and energy required during other finishing processes, which in turn affects the bottom line and encourages manufacturers to think even more seriously about worker safety and environmental issues," said Vicente Albert.

Gas technology has already been used in the denim industry – typically for cleaning up back staining on the reverse of jean pockets. But because G2 allows users to tightly control how the gas is applied to a garment, which frees G2



for Fall 2009 at the event and in the days after the show it welcomed a steady stream of visitors to its premises to take the 'authentic denim challenge'.

With CDS, the company offers an interesting option for laundries to give coloured heavyweight cotton garments the true look and feel of indigo-dyed denim including the characteristic deep dyed warp and white cotton weft. "Normally, to get the indigo effect, manufacturers will use pigment dyeing but the problem with this is the wide shade variation between batches," said Branch, "if they use sulphurs in the



Jeanologia presented its first 'ecology and ethics' collection for Fall 2009 at Bread & Butter in Barcelona.

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up to be used for design purposes. Garments can be processed either wet or dry and certain pastes (which resists the gas) may also be applied to the denim prior to treatment to give a variety of different effects such as stains.

"There's no need to use water, enzymes or bleach – just oxygen from the ambient atmosphere," said Albert, who noted that the only energy needed for a typical G2 system load of 50 kg is 10kw "that is half the energy needed for a normal washing machine load."

Jeanologia says its G2 saves around 80% of the chemicals used in the finishing process for denim – all that is needed is a softener. A pair of Abercrombie & Fitch cargo pants in its showroom had used G2 to give an abrasion finish to show how it can be more than just about denim.

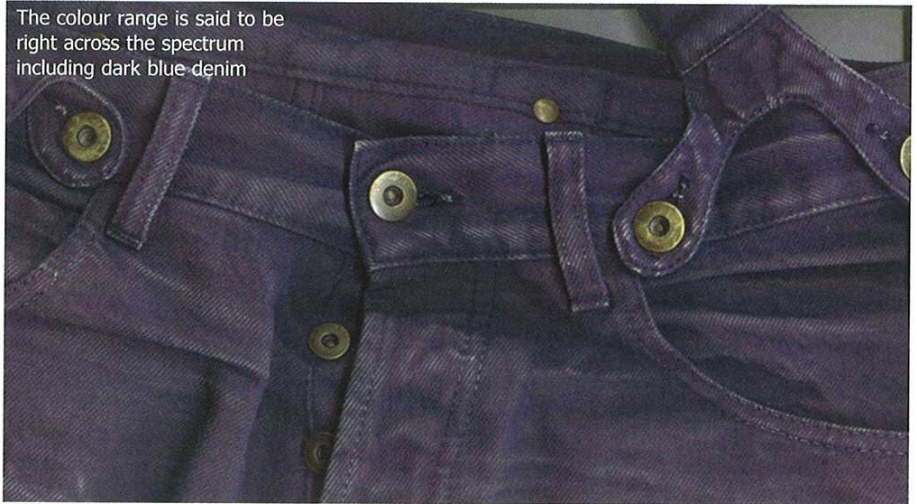
Trick of the light

Perhaps the most spectacular demonstration of Jeanologia's new finishing technology was its laser 'Light' technology, which burns away the surface of the dyed denim fabric or a pair of jeans on a mannequin to replicate an authentic worn look. Originally used by brands for logo's or prints, the G2 laser works as a printing system to give the much sought-after whiskers, starbursts or holes to denim without the need for repetitive hand labour; sandblasting, abrasive stone-washing treatments or the use of toxic permanganate sprays.

"It has the effect of reducing the use of chemicals and improving water quality in production regions and looks real. It is also a highly productive design tool," noted Begoña Garcia. The laser system is very quick and a pair of jeans can take as little as 15 seconds to



This ripped, stained and laser finished garment combines all Jeanologia's dry finishing technology.



The colour range is said to be right across the spectrum including dark blue denim

A range of vintage effects can be achieved with laser technology.



process. This rises to a maximum of about 4 minutes for a double-marked specialty jean. Typically it can do 50 – 60 garments per hour. "Previously, it was easy to tell the difference between lasered garments and authentically worn and washed denim," explained Branch, "but new advances in laser technology – and especially software – means it is now much more difficult to tell the difference."

Jeanologia says its 'Light' system also helps to address the ethical nature of the denim supply chain through improved worker safety. "Manually processing denim often requires the use of permanganate sprays, sodium hypochlorite and hard repetitive labour in poorly ventilated working conditions," noted Branch.

The company finds that using a combination of one or all the above technologies can give a great deal of design flexibility while at the same time improving the environment and the

bottom line. It is these three points that are the key to Jeanologia making new in-roads into the estimated 200 million denim garments being produced every year – even if the most obvious hurdle to overcome is the traditional way of finishing textiles and clothing.

Having said that, the shift towards a more sustainable way of sourcing textiles is good news for Jeanologia. So is the likely medium- to long-term cost savings for mills and laundries associated with lower water, energy and chemical use.

"We can't do anything about organics as that's an agricultural issue," said Branch on our way back to the airport, "where we can have a positive impact on the environment and worker safety is by showing brands, retailers and mills that there are other cleaner alternatives which still create stylish authentic garments that can sell."