

A pioneer of recycling

We have all suddenly been made aware of the fragility of the earth we live upon and the damage that has been inflicted on it by over exploitation by industry and farming during the last century. While there remain some pockets of denial regarding global warming and climate change, the overwhelming majority are concerned,

if not for themselves, for their children and grandchildren. Indeed, 'going green' has become a lifestyle fashion and wherever fashion goes, manufacturers are quick to follow.

The footwear industry is witnessing great changes in this regard with chrome-free tannages, sustainable raw materials and new environmentally responsible manufacturing methods

appearing all the time. One has to wonder, however, whether all this would have come about without a need to conserve dwindling oil reserves, find an answer to the hexavalent chrome problem or cut down on emissions. Some within the industry, however, saw the light many years ago and one of these was American company Jones & Vining.



Rice terraces in China; Jones & Vining uses recycled rice husks in its RR soling material.

PHOTO CREDIT: WILSON CHAN/SHUTTERSTOCK

J&V has been producing shoe lasts for some 80 years. Back then, all lasts were made from hard woods which would vary from country to country depending on what was most readily available. Today, they are all made from polyethylene which is consistent, does not split and turns easily during manufacture. Unlike wood lasts, however, the waste generated during turning cannot be burnt in the factory boiler.

J&V introduced its revolutionary Compu-Last last system in 1984. It was the first fully integrated, computer-controlled last production system that numerically defined the last, precisely graded and reproduced it and, at the same time, guaranteed consistency of both quality and fit no matter where the footwear was to be produced. The system remains at the forefront of last manufacture to this day.

STARTING TO RECYCLE

With four last factories located in the U.S.A., China, Vietnam and Thailand, the company was producing a great deal of non-biodegradable plastic waste. Fortunately, being a thermoplastic polymer, it could be mixed with new material to mould the basic blanks from which the lasts were turned. Although it could only form a relatively small proportion of the whole and still produce a strong and durable last, it was enough to use up all the scrap generated. This led the company to use recycled materials wherever possible, a policy it has followed ever since.

THE NEXT STAGE

In 1992, J & V formed a partnership with the manufacturers of Poliyou open cell polyurethane, to offer a cushioning system that would provide the extra foot comfort that wearers increasingly demanded and, at the same time, a built-in moisture management system to reduce perspiration build-up inside the shoe. At that time, the uppers of most sports shoes produced in Asian factories were glued together prior to stitching in order to ensure accuracy. This in turn reduced the upper's ability to breathe to such an extent that perspiration became a major problem. The new product offered the perfect solution.

It has also proved able to include a significant proportion of recycled



A polyethylene Compu-Last containing recycled material.

PHOTO CREDIT: JONES & VINING

content and of the eleven products now available, no less than seven contain recycled material. Poliyou contains approximately 70% recycled material, Bamboo-Poliyou the same plus bamboo active carbon to improve moisture wicking and odour absorption and Poly-Cork Poliyou also the same but with additional natural cork granules. Winpad is an unprocessed Poliyou with recycled PU foam clearly visible and Polisport, a high-tensile strength Poliyou with 10% recycled rubber from used car tyres. And, finally, the new BioBased Polisport and BioBased Poliyou

products have a 30% and 10% respectively soya bean content from renewable feedstock, in addition to the recycled PU foam.

Besides providing the company with a good marketing profile, the use of recycled open-cell PU foam scrap that would normally end up as landfill greatly reduced the volume of virgin raw material it needed. To give some idea of just how important this is, millions of pairs of Poliyou footbeds are sold every year. So, an approximately 70% recycled content means big savings all round.

RECYCLING AS MUCH AS POSSIBLE

Other products were introduced that used recycled materials. Among these were BiFit insole boards and Double R outsoles. Bi-Fit contains approximately 80% used polyethylene or polypropylene plastic bottles and containers that would normally go into landfill. Rice is one of the most plentiful food sources in the world. When harvested, the plant's husks are normally discarded. Double R uses them mixed with natural rubber to produce a sustainable soling compound. A new version called Triple R goes a stage further and includes a blend of recycled rubber particles as well as natural rubber and rice husks.

Making these products in China was a sound decision in more ways than one. Not only are they produced in the largest available market, but the country's rapid industrial growth has also made it a huge source of recycled materials. Indeed, the company is constantly on the look out for new eco-friendly materials and processes to satisfy customer demand for greener products and, at the same time, stay competitive.

The recycled material in Poliyou is waste PU scrap from various industrial



The recycled content in Winpad foam is clearly visible. PHOTO CREDIT: JONES & VINING

SOME DEFINING POINTS

Sustainable

Sustainability is the best way to go as no waste is created that needs to be recycled at a later stage. Use is being made of products that grow naturally and have by-products that can be exploited without damaging the environment.

Recycled

Recycling remains important so that companies don't waste materials that can be used again. It has the benefit of reducing the amount of virgin material consumed in order to meet production demands and of harbouring valuable resources.

manufacturing processes that has been ground down by specialist recycling companies. Ground material for BiFit is obtained in the same way, then blended with virgin material and extruded as sheets to be die-cut or moulded to produce finished insoles.

Most additives are usually introduced in order to enhance performance. The recycled content in J&V's products neither improves nor detracts from the performance of the virgin material used. Instead, it adds the unique benefit of creating predominantly recycled products that help to sustain the environment in a way that is visibly eco-friendly to the consumer.

IT'S NOT ALWAYS EASY

The use of recycled material calls for a careful balance between eco-friendly

and performance parameters. As with recycled paper and recycled glass bottles, the correct balance must be struck in order to achieve the required specification. As an early proponent of recycling J&V was something of a pioneer. Frank Roppolo, VP International Sales, says that: "J&V was promoting recycled products when almost no one else was. Now, eco-friendly products are finally seen as good for the environment and that has been great for our business."

Heightened consumer awareness concerning recycling and sustainability has forced the major brands to address it in their products and manufacturers to rethink their business strategies. Industry material shows now feature ever more green products as everyone tries to outdo

everyone else in shouting about their eco-friendly credentials. No doubt we will all soon take it as a matter of course. J&V, however, addressed this long ago and has reaped the reward of increased business where others have struggled by not adapting fast enough.

Michel Ohayon, chairman and CEO sums up by saying: "In today's market where green is the latest trend it's great to have had over 20 years of experience both manufacturing and marketing eco-friendly products. We are enjoying the rewards that come from our long-standing environmental ethics matching up with today's market demand for such products." The fact that over 50% of J&V's products are now environmentally friendly would tend to bear him out. 🌱



Extruded Bi-Fit insole board contains 80% recycled material – light / hard, dark / soft.

PHOTO CREDIT: JONES & VINING