



World record beater

Roger Beeby

The Guinness Book of Records lists a pair of shoes five metres long as being the world's largest. They were made by a team from the Philippines Footwear Academy (PFA) in Marikina, the main footwear producing city in the Philippines.

In August 2002 the PFA had only just opened and Dan Cotter, a graduate of the International School of Footwear at Leicester College in the UK, had been employed by the UK Voluntary Service Overseas to assist in the new Academy's start-up programme. The college was still waiting for the delivery of most of the equipment, so practical teaching could not begin. Fortunately the CAD system and cutting table had arrived.

To help to publicise the new Academy, the Mayor of Marikina issued a challenge to Dan Cotter and eight local shoe companies to build the world's biggest pair of shoes. The challenge was to produce a pair of shoes five metres long in 88 days in time for the major shoe festival to be held that November. The existing record then stood at a little over three metres. The new PFA building was to be used as the workshop for the project.

Unusual technical problems

Cotter discovered that the Crispin CAD system could grade up

to five metres but, in order to fit the last bottom shape on to the cutting table, it was necessary to break the insole pattern into 25 pieces and then fit them together like a big jigsaw.

The last was created from a series of profiles graded up from a sectioned standard men's last and a framework constructed using steel rods which could easily be bent to shape. This frame was then covered with wire netting and a mixture of car body filler and wood shavings was applied, smoothed and painted. The last was then cut into 35 sections and re-assembled for use using nuts and bolts.

The upper patterns were graded, and the parts cut from locally tanned large imported hides. With the exception of the tongues, two whole skins were needed for each part. Two people were needed for the skiving operation, one to hold the upper section and the other to operate the skiving machine which had also just arrived. Machine stitching the parts together was out of the question. Fortunately, the Philippines has a good number of people skilled in hand-sewing, so every seam was made by hand.

Lasting the shoes proved interesting. The uppers weighed so much that it took five people to carry each one. The lasts were also difficult to move, so a lorry and crane was used to ➤

WORLD FOOTWEAR



Insole attaching



▲ The last in the 1st stage of making



◀ The team from the Philippines Footwear Academy, with the record breaking shoes, the local Mayor and Senator, at the presentation to the local media. The certificate from the Guinness world records is in the centre

transfer the whole project to a purpose-built platform in the middle of Marikina Sports Centre which provided access under the lasts. Once there, the lasts were turned over and the insoles attached. These were made from 150kg of semi-processed sides stapled together and the shanks from sheets of mild steel bent to shape.

The next job was to last the soft cow-leather lining and apply the toe puffs and counters. These were built up from six layers of solvent-activated material applied in sections to allow for drying, with redundant streetlights being used as heaters to hasten the process.

The actual lasting of the uppers proved extremely difficult as they were too thick to last by hand, so a new idea was tried. First, a softening agent was applied to the uppers. Then, using a hand crane, the lasts were anchored to the stage in the position where the last peg would be. Steel cables were then attached to the edge of the uppers and to another hand crane. This provided enough pull to last the uppers in much the style of string lasting.

This operation needed a team of six under the last and three on top directing how much pull was required and keeping the upper straight. When the correct amount of tension was

achieved, adhesive was applied to the uppers and insoles, and the two nailed together using household nails. The crane was then removed and the lasted margin of the uppers hammered as flat as possible on to the insoles.

Roughing was achieved using portable hand drills fitted with wire brushes and abrasive pads. The soles were made up of eight layers of EVA cut into 20cm wide strips and the heels of 16 layers. The bottom of the shoes was completed using 150kg of sole leather. A few repairs were made to minor damage and some finish applied to the uppers.

This extraordinary project brought the industry and the school together, and created valuable publicity both at home and abroad. The academy is now fully equipped with machinery and training students in a syllabus devised by Cotter. Furthermore, it opened up an important debate about the issues facing the footwear industry in the Philippines. The co-operation between academy staff and representatives of the local footwear industry was a particularly valuable experience and taught both sides that both young and old have things to learn and things to teach. Maybe you can, after all, teach old tricks to young dogs and new tricks to old ones. 🌐