Treading the boards

Dominic Bliss investigates the vital part of the game often taken for granted

Sweat, spit, occasionally blood, and the impact of a trillion rubber balls and shoes… your average squash court floor takes quite a pounding during its lifetime. That is why it is crucial they are built to a high quality.

Chris Herridge is director of the technical committee at the World Squash Federation, so it is his job to test squash courts (particularly court floors) to ensure they pass quality controls before they are accredited for professional play. Over the years he has crawled about on court floors all over the world, examining them close-up.

Most of the ones he sees are tip-top quality since, to be accredited, the materials and construction methods must first be tested by a recognised laboratory. In the UK this is the Centre for Sports Technology in south London; most of the world's advanced nations have their own testing facilities, with the USA and Scandinavia especially well served; developing nations often use foreign laboratories.

Floor samples are sent to these laboratories and tested in a number of areas, including surface friction, shock absorption, vertical deformation, resistance to wear, resistance to load and reaction to fire. The standard they are measured by is known as 'EN 14904 Surfaces for Sports Areas – Indoor Surfaces for Multisports Use – Specification'.

The tests are essential to guarantee the safety of players. As Herridge explains: "If you have a very rigid floor, you don't get any shock absorption or vertical movement, and it can knacker your knees. And when it comes to friction, there's nothing worse than losing your footing when playing a shot."

Physiotherapist Alison Rose, who works with England international James Willstrop and is a director of Coach House Sports Physiotherapy Clinic in Leeds, warns: "When court floors are really rigid, the shock that goes through a player's joints, ligaments, tendons and muscles is much greater. Over a long time this can affect a player's body. If you're trying to make a living out of squash, then you're shortening your career if you're always playing on squash courts without sprung floors. Even if you're just a weekend warrior, you're more likely to injure yourself on floors that aren't sprung."

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Rose often treats Willstrop after his matches. She can notice the effects on his body if he has been playing at a tournament abroad on a rigid floor, particularly if he has had to travel home in a small aeroplane seat immediately afterwards. "On less sprung courts he takes more time to recover. He will be more battered," she says.

Herridge knows all about such unforgiving court floors.

During the 25 years he has been working for the WSF, he has seen some pretty unorthodox ones. There was one in Germany made of cheap fibreboard and covered in a plastic film. "That was pretty disastrous. It was a long time ago and it hasn't been repeated," he recalls.

In South Africa he once saw one made of recycled car tyres. It was not unforgiving – quite the opposite – but rubber on rubber did not allow the ball to bounce very well.

The gravest disaster of all, however, is when a court floor gets damaged by water. This can happen in humid conditions or in a sports club or leisure centre if it is built too close to a swimming pool. Years ago Herridge once saw a British court whose boards had expanded so much from water damage that they pushed the sides of the court outwards, cracking the wall a metre above the ground.

Of course, the better constructed a court floor is, the more forgiving it is for players and the longer it lasts. The timber used must be strong, flexible, splinter-resistant and the correct colour, so that players and spectators can pick out the ball. The sealing of the wood is crucial too. While most clubs opt for unsealed floors, a light coat of sealant can protect the wood from the various liquids and bodily fluids that spill on it – sweat, blood, sports drinks etc. Too much sealant, however, and there is a risk that players will slip when moisture is not absorbed.

Most court floors in the western world are made of maple, ash or beech. In Asian and tropical countries other woods such as eucalyptus, hevea, ramin and bamboo are sometimes used.

So far only a few glass floors have been installed worldwide. Whether they prove popular in the future remains to be seen.

WHAT LIES BENEATH

How squash court floors are constructed, from bottom to top:

- Concrete sub-base
- Moisture-resistant membrane
- Shock-absorbent pads
- Batons (normally spaced 300mm to 400mm apart)
- Plywood (optional)
- Timber boards

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