

Panel v Plaster

Dominic Bliss looks back at how squash courts have been manufactured over the years and at how they may be developed in the future

Here in the UK we drive on the left. We wrap our fish in newspaper. We use funny-shaped plugs. We eschew the euro. And we build our squash courts using walls of plaster. Pretty much everyone else – certainly on the Continent and across North America – uses panelled walls.

“The game of squash is a British invention, so it’s natural that squash courts have traditionally been built using British construction techniques,” explains Mick Ashworth, sales and technical manager at CourtCare, one of Europe’s



but ones that are painted after they have been installed. The panels for these tend to be large, meaning there are fewer joints. In any case, the joints are filled so that they are not actually visible. The cavities between the panels (or the masonry behind the panels) are filled with sand or aggregate so that they play just like plaster courts – with similar acoustics and ball response. Since the panels are produced in a factory, the walls are much more uniform than most plaster courts.

The great benefit of panelled courts is that they do not need

A GUIDE TO COURT CONSTRUCTION

Planning a new court at your club? Confused whether you should opt for plaster or panelled walls? Let us guide you.

Plaster courts

Plaster courts need masonry walls behind them. If you are constructing a court from scratch, you will need a builder to build the blockwork and foundations of the court too. Once this has dried out, you will then need a skilled plasterer to apply the plaster. For this reason plaster courts take much longer to build than panelled courts. However, if you have an existing court, re-plastering the walls is almost always the cheapest and easiest option.

Panelled courts

Panelled courts do not require foundations, just a concrete slab to support the panels. For this reason they can be constructed quickly and they do not require highly specialist techniques. That is why architects often recommend panelled courts if you are building the squash facility from scratch. Panels are manufactured in a factory and are therefore accurately finished. However, installation does require heavy machinery, such as forklift trucks. Some panel systems allow the court size to be reconfigured, which is convenient if other sports are played on the court.

[Thanks to Mick Ashworth, sales and technical manager at CourtCare, one of Europe’s biggest squash court contractors.]

Panel courts allow moveable side walls for doubles or new recreational spaces

biggest squash court contractors.

“And plaster is very much an indigenous technique to the British construction industry.”

Although there are different types and qualities of plaster, modified gypsum-based plaster is generally considered the best for squash courts. It has the strength of sand-and-cement renders, but it is also smooth and durable.

However, Ashworth points out: “The skilled tradesmen and craftsmen capable of plastering squash courts to high standards aren’t getting any younger.”

Across the entire construction industry, dry plasterboards are often used instead of traditional plasterwork and apprentices are no longer being trained in the traditional methods. Ashworth believes plastering is a trade that is in danger of dying out.

It was in the 1970s, when squash enjoyed a global boom, that an alternative court construction method became popular, namely panelled courts. France and Germany especially embraced this new technology. In North America, too, early squash and racketball courts were lined with wood panels.

There are two basic systems of panelling squash courts. As Ashworth explains, the first (earlier) type uses high-density fibre board panels with a laminate surface on top. “It was a bit like playing squash in a fitted kitchen,” he remembers. “The acoustics were really loud. And there were lots of joints between the panels. After a while the laminate was prone to peeling off at the joints.”

The second more popular system also features high-density fibre-board panels –

as much maintenance as plaster courts. They do not peel or crack like plaster is prone to do over time. They can also be constructed much faster.

“You don’t need to wait for the masonry or the plaster to dry out before installing the floors, so installation time is much shorter and costs reduced,” says Ashworth, who went on to explain how his own company, CourtCare, built four panel-system squash courts at Edgbaston Priory Club in just two weeks.

Another reason panelled courts are popular is thanks to the development of movable side walls. These types of courts are often constructed in a row of three (with lighter interior walls) so that you can

COURT MANUFACTURERS

ASB SquashCourts
www.asbsquash.com

Courtwall
www.courtwall.com

CourtTech
www.courttech.biz

McWIL Squash Inc
www.mcwilsquash.com
Fiberesin
www.fiberesin.com

The Court Company
www.squashcourts.com

Armourcoat Surface Finishes
www.armourcoat.com

Harrison Industries
www.harrisonsport.com

WHAT THE MANUFACTURERS SAY

When it comes to court manufacturers, the products and construction methods vary enormously.

Germany-based **ASB**

SquashCourts are one of the world's leading court manufacturers, with over 6,000 courts built worldwide since they started in 1976. They supply only panelled and glass walls. Their panel systems have cavities filled with fire-dried silica sand. "This sand filling and the even, smooth surface of all walls help to have a uniform ball rebound," says founder and owner Horst Babinsky.

Austria-based manufacturer

Courtwall offer both plaster and panelled courts. The panelled ones feature "high-density composite panels with a multi-layer melamine surface". CEO Wolfgang Denk says the benefits of his product are that it lasts much longer than plaster courts. His courts are covered by a 10-year warranty, they are maintenance-free and they are easy to clean. While most Courtwall customers opt for their pre-fabricated panel system, he also offers a product called Courtwall Dual Court, which features a panelled front wall (where most of the impact takes place) and plaster side walls.

German manufacturer **CourtTech** sell only panel systems. Last year they constructed 130 courts worldwide, including the Hasta La Vista sports centre in the Polish city of Wroclaw. They claim it is "the biggest squash facility in the world now".

American manufacturer **McWIL Squash Inc** are based in Washington DC. They mainly build courts using panels made of a "thermally-fused melamine surface" called Fiberesin. Then for their hardball doubles squash courts - the North American doubles court is 45 feet long (14m) and 25 feet (7.6m) wide - they use edge-grain

hardwood panels. Panelled courts, they claim, are the easiest to maintain.

The Court Company are another US manufacturer. Based in Tennessee, they offer a wood-panel system. "The high-density wood panels are made to take the abuse of players, balls and rackets, and are basically maintenance-free," explains regional sales manager Erika Milligan. "This system has its advantages due to its durability, as well as not having to clean the plaster chips up from the floor once the wall starts to deteriorate." Milligan says her company's wood panels are perfectly suited to the US, where most courts are climate-controlled. However, she admits that in some countries climate control is not available, in which case "plaster would have an advantage".

Armourcoat Surface Finishes are a British company, based in Kent, who produce surfaces across the entire construction industry, including for squash, rackets, real tennis and fives courts. "I believe that squash players in the main prefer the feel and the sound of plastered courts," says founder Duncan Mackellar. It is the bounce consistency and the avoidance of condensation that Mackellar sees as the principal benefits of plaster courts. "With a plaster court you generally have a concrete block construction and a totally consistent ball response because there is no movement in the wall whatsoever," he adds. "But with panel courts it's not uncommon to get a different bounce from the front wall depending upon where the ball hits." He explains that if the ball rebounds off an area of the wall with a support behind it, then the bounce is normal. But if it rebounds in between the supports, it affects "how far and fast the ball comes back". Even if the cavities behind the wall are filled with sand, this sand can settle over time, "creating a quite different response between the top and bottom of the wall".

Harrison Industries are an Indian court manufacturer based in New Delhi. They offer both plaster (a system called

Combatwall) and panelled courts. CEO Ashu Aggarwal says that virtually every request he gets is for a plaster court, however. In India, where labour is cheaper, plaster courts are less expensive than panelled courts. "Plaster in India costs around US\$3,900 for three sides, whereas panel costs \$300,000 or more, since they are imported," he explains. Much of his work involves refurbishing an existing court rather than building a new one from scratch.

The future

Ask the world's leading court manufacturers what kind of courts they see us all playing on in the future and you get a mixed response.

"Pre-fabricated panel systems covered by a long warranty is the only way to go," says Courtwall's Wolfgang Denk. "This guarantees zero maintenance."

CourtTech's Markus Gaebel concurs. He believes that in the future 90 per cent of new courts will be built using panel systems.

Armourcoat's Duncan Mackellar suggests that both plaster and panel courts will continue to thrive, with existing plaster courts refurbished with plaster rather than replaced by panels.

In India, Harrison Industries' Ashu Aggarwal says plasters courts are sure to remain popular across the sub-continent.

David Carr, from McWIL Squash Inc, stresses the need for court walls that bear up in changing temperatures and humidities, but that do not cost the earth to construct.

Look far enough into the future and perhaps plaster and panel courts will disappear altogether. Glass technology is certainly advancing meteorically.

Who knows? In years to come some bright spark might invent a synthetic glass material that is cheap, strong, scratch-resistant, reflection-free and simple to construct. That is the Holy Grail.



New plaster courts (here Armourcoat courts at Bangor Aurora Leisure Complex, Co. Down installed by CourtCare) are an old favourite for playability

reconfigure them to create a larger sports court. It is perfect for squash clubs that also want to accommodate a fitness studio, a badminton court or a five-a-side football pitch. It is good for doubles squash too.

Ashworth estimates that 60 per cent of new squash courts built in the UK are still made of plaster and the other 40 per cent of panels, but he believes that percentage split will soon reverse.

"Architects these days tend to go for panel systems because they're more convenient and economical, and there's the option of flexible usage," he says. "Panelled courts are ready-made, almost like a giant version of flat-packed furniture."



Panel courts (here ASB courts being installed at the University of Nottingham) allow versatile and quick construction