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# Finishes for pool tanks and other wet areas

Jim Gordon explores and explains why pool finishes are an essential aspect of pool design and management.

In this article we will cover the finishes for pool tanks and other wet areas, such as pool surrounds, pool halls, changing rooms and toilets. Mention will be made, where relevant, of specific items relating to floors, walls and ceilings.

First, it is critically important that the substrate to all types of finishes has to be well constructed and prepared; you cannot expect screeds, renders and the finishes to be of a good quality if the base is not right. However, whatever material is used, it must be compatible for use in swimming pools.

In an earlier article on pool tanks, it was recommended that all commercial swimming pool structural tanks are in accordance with BS EN 1992-3:2006 and NA to BS EN 1992-3:2006 liquid retaining and retainment structures; this advice is repeated in this article. Please also note that the render, screed and finishes should be carried out in accordance with the relevant British Standards and the Tile Association publication, Design and Construction Process for Swimming Pools, including the movement joints.

It is possible to construct the structural swimming pool tank in such a way that the tiles and finishes can be adhered straight onto the structural concrete tank. The pool tank can be finished without the use of a render or screed but it is critical that the construction of the pool tank is carried out with the utmost care if this method is going to be used, as there will be no room for adjustment of the dimensions except for costly remedial work. The advantage of this method is that potential problems with the render and screed are alleviated. However, the cost of doing it this way could be prohibitive.

It is normal practice at present to apply a fully bonded modified screed and render to the base and walls of the structural swimming pool tank, including the beach area and the deck-level channel. However, in the case of competition pools, one of the end walls of the pool will be used before the render is applied to make sure that the pool is the correct length. This is achieved by varying the thickness of the render before rendering the last end wall.

In the case of competition swimming pools it is also important that the pool tank is constructed to the correct length, width and depth in accordance with the ASA and FINA recommendations.

## Finishes for pool tanks

It is useful to distinguish the finishes for competition pools from other commercial pools, such as leisure pools, teaching pools and hydrotherapy pools, as there are some important differences.

#### **Competition pools**

Generally speaking, the tiled finishes to competition swimming pools will consist of large-format white tiles together with contrasting coloured tiles for the racing lanes and wall targets, plus a finger-grip pool perimeter edge tile. Other coloured tiles might be introduced into the design in connection with water polo pools. At each end wall of a competition pool the turning areas for swimmers will have a special turning tile to reduce the possibility of slipping when swimmers change direction. If movable floors are to be installed it is important from a hygiene viewpoint that the area of the pool base underneath the movable floor is tiled. "The pool hall in its entirety, including any suspended ceilings if appropriate, is classed as a wet area and, as far as the materials and decorations are concerned, is classed as a high-risk area."

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## Other commercial pools

The finishes for this type of pools are many and varied, and may include a commercial pool vinyl liner (either plain or patterned), mosaic tiles, large-format tiles, natural stone, or screed and render with the introduction of pebble-type finishes. In the case of natural stone, it is important that this is provided with a water-impermeable treatment. For pools of this nature we would not recommend the use of specialist pool paints but appreciate that in light of cost limitations this type of finish might have to be considered.

#### Grouting

Finally, the pool will be grouted and then cleaned down thoroughly before the pool is filled with water at the maximum recommended rate of 750mm depth over a 24-hour period and heated at a rate of no greater than 0.25 degrees C per hour. The pool water should then be disinfected and balanced.

#### Finishes for other wet areas

This section includes information on pool hall, wet change and toilet areas.

#### Pool hall

The pool hall in its entirety, including any suspended ceilings if appropriate, is classed as a wet area and, as far as the materials and decorations are concerned, is classed as a high-risk area. The relevant Standard is BS EN ISO 12944 Part 2 and careful thought must be given to the materials used in this area.

The surround finishes need to be either tiles or a special vinyl-type material for wet areas and both require an anti-slip finish as the surrounds will become wet because of drag out water, ie clients depositing water as they exit the pool. It would also be advisable to have a tile skirting against the walls in order to protect the junction between the floor and the pool hall walls. On large commercial pools that are very heavily used it is recommended in accordance with the new European standards for safety and operation (BS EN 15288:2008) that the surround to the pool slopes away from the deck level channel and will therefore require a pool hall perimeter channel to take any water away to drainage.

The finishes for the pool hall walls themselves will need to be suitable for the environment and for regular cleaning; they could be either specialist paint or wet boards.

Any suspended ceilings in the pool hall and/or the underside of the roof itself will also need special consideration regarding the protection that is used for the materials in the roof construction; the pool roof itself will need to be of warm-roof construction with all the necessary insulation and vapour barriers. However, it must be pointed out that whether or not there is a suspended ceiling, it is still classed as a high-risk wet area in accordance with the standards previously mentioned.

If suspended ceilings are used in either the pool hall or wet change/toilet areas careful consideration needs to be given not only to the decoration to the suspended ceiling but also the actual suspended ceiling and the supports.

#### Wet change and toilet areas

It must be pointed out that these areas are still the same high-risk areas and should be dealt with in exactly the same way as the pool hall as far as the floor and wall finishes are concerned. This is also applicable to the suspended ceilings and the void above them.

## In summary

Dealing with the above items sufficiently early in the design process will ensure that enough time is given to these very critical areas.

This article has outlined the main requirements for water treatment systems and it has been authored by Jim Gordon, from Jim Gordon Associates. Jim is a member of the SPATA Technical Committee.

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