

2013

Global
Hydro-Thermal
FORUM



**Global Spa &
Wellness Summit**
JOINING TOGETHER. SHAPING THE FUTURE.



Global Hydro-Thermal Forum

Breakout Discussion Forums: Global Hydro-Thermal
Monday, October 7, 2013
Godavari/Kaveri, The Trident

Facilitators:

Don Genders, Managing Director, Design for Leisure, U.S. & U.K.

Rolf Longrée, Managing Director, Lux Elements GmbH & Co. KG,
Germany

The following topics were discussed and debated:

1. There is a significant lack of knowledge even within the spa community and, more significantly, within the architectural and interior design community on the design principles for hydrothermal spa areas.
2. From recognition of basic principles such as allowing greater personal space for guests when they are naked or semi-naked in bathing clothes, to more complex details such as understanding drainage, ventilation and mechanical equipment location and space requirements, the needs of a wet spa are almost always considered too late in a project, frequently forcing compromises.
3. The knowledge is held by the manufacturers, suppliers and specialist designers in this field and there are no general guidelines or standards available anywhere in the world.
4. Individual vendors of equipment and services are viewed with suspicion, with many owners and developers believing provision of design services by vendors will take them down a route of single source purchasing options.
5. This is not actually the case and there are independent design resources available that will provide generic specifications enabling multiple bidders for a project.
6. The problem is that without an independent set of design standards, even independent designers have no reference point or standards to base their designs on; for example, a buyer of services cannot advise his design team to work to something such as 'ISO 123456 - Standards for the design of hydrothermal spa areas.
7. It was debated that both LEED and the US Green Building Council have been approached on the topics of establishing standards in these areas, but

declined on the basis that spas form such a small part of the global construction industry.

8. The forum accepted that any standards have to have an independent body as their author and challenged the GSWS to take this initiative.
9. Health and hygiene within wet spa areas have been an element of concern for many years, but once again, there are no independent standards on which to base designs and all operators have different standards.
10. There was also considerable debate on the need for spas to be constructed in 'healthy buildings' to match the health and wellness messages being promoted by operators and manufacturers of treatment products and cosmetics.
11. The recent decision by Sweden to outlaw the use of gypsum boards in the construction of any wet areas from residential bathrooms through public restrooms to hotel bathrooms and spas is of particular significance. The decision is supported by World Health Organization papers and University studies, all of which were made available to attendees via USB stick. The main problem being the black mould that forms on the paper of damp gypsum board which is blamed for the significant increases in asthma and respiratory infections, but is so often concealed behind bath tubs, kitchen cabinetry and most commonly, behind tiles and stone finishes, particularly when they are affixed with dabs of adhesive rather than continuous adhesive beds.
12. There is a constant battle between capital expenditure and revenue expenditure when projects are being planned, with owners and developers seeking to minimize capital expenditure, which in the absence of any design standards, is very easy to compromise in the hydrothermal spa area, which is why there is an even greater need for independent standards. Operators, even the organized ones who have written or commissioned their own hydrothermal standards, have issued guidelines that are not independently verified or based on independent standards, and consequently they frequently become viewed as a mere 'wish list' of the operator.
13. There was some debate on the needs of hydrothermal spa areas in a modern spa, but as was pointed out, with staffing costs rising in so many parts of the world, offering guests truly therapeutic treatments in a DIY environment gave developers and operators the ability to offer significantly impressive and relaxing environments with very little operational overheads for the entire life of the spa. There are numerous examples of there being ROI's in the region of 3-5 years on hydrothermal spas of significantly large proportions where they can justify an independent usage fee. The debate overwhelmingly supported the need for hydrothermal spas to have a continuing and increasing importance in the modern spa.
14. The defining lesson of the forum was undoubtedly the need for an independent standards document and, in the absence of any interest from outside bodies, it was universally felt that the GSWS should take on this

responsibility and produce the first ever 'Global Hydrothermal Spa Standards' document.

Don Genders
October 2013

Please note that about a month after the India Summit, Don Genders and I met in New York at the GSWS offices to discuss a possible plan to make the "Global Hyrdo-Thermal Spa Standards" document a reality. We both agreed it was worth forging ahead. Don subsequently put together a beginning outline that I am sharing here (see below). Next steps in early 2014 will be to attract both the expertise to gather the information and write the guidelines as well as attract the finances necessary to make this a reality. The goal is complete this project so that it can be presented at the 2014 GSWS in Morocco.

We welcome everyone's help. Please get in touch with Don Genders (dgers@designforleisure.com) or Susie Ellis (susie@gsws.org) if you are interested in helping with this project.

Susie Ellis
December 2013

Hydro-Thermal Spa Standards

The Case for Standards

There are no International Standards for the Design, Construction or Operation of Hydro-Thermal spa areas and there are very few countries who have any standards at all relating to the thermal bathing elements and while there are numerous and rigorous standards for the design, construction and operation of the Hydro or pool elements, these are country specific and completely incompatible with one another, but we feel there is a need for any standards documentation to at least cover these as suggested below.

Thermal Bathing

This relates to a considerable number of experiences, normally created within individual spaces or cabins with many different names, some branded or patented but generally they are based on the principles of ancient practices from a range of different cultures around the world, most commonly referred to as saunas and steam rooms with cold dips or plunge pools. There is a need for a glossary of terms and explanation of the many types of thermal experiences that exist to be printed at the start of any document.

Hydro Bathing

Given the highly regulated design/construction and operation of pools in a great many countries, the document cannot begin to reproduce all of these, but a glossary of the regulations and where they can be found would be a hugely beneficial element, together with a description of the principal areas that these regulations cover to enable professionals consulting this document to be able to understand the areas requiring specific reference to pool design codes and specialists.

Design and Construction Guidelines – need to address these issues:

- Health and Hygiene – the climate in these areas is perfect for the incubation and growth of many forms of harmful bacteria and mould, so these issues need to be addressed from the first principles of design and do not just relate to the ease of cleaning by the operator, but the use of the correct type of materials from base build upwards, right through to selection of finishes to operational best practices. Concrete blocks, gypsum and cement boards are used extensively to construct these areas around the world, but the products are porous, will therefore harbour bacteria and in the case of gypsum boards, now banned in Sweden for any form of wet room construction, can promote asthma.
- Design for Human Interaction – Humans react completely differently when wearing minimal or no clothing at all, therefore the design of spaces in which people will be interacting with strangers in minimal or fabric free areas requires a special set of design criteria.
- Construction Standards – moving forward from good design practices, good construction using the correct materials to build safe, hygienic and operationally successful facilities suitable for the commercial operation of modern spas are essential, but none exist. This section needs to address the correct use of drainage, ventilation, water treatment and lighting.

Currently the design and spa community in general rely in many cases on local 'specialists' who have no other interest than financial gain and even specialist international companies are treated with suspicion because information provided is treated as commercially biased towards their own products or services, so independently collated and verified standards are essential to the promotion of best practice in our industry.

Hydro-Thermal Spa Standards Table of Contents

Possible Contents Page

1. Introduction
 - 1.1 What is a hydro-thermal spa
 - 1.2 Origins of hydro-thermal bathing
 - 1.3 Glossary of terms used to describe hydro-thermal experiences
 - 1.4 Grouping of hydro-thermal areas used in the standards book
2. Thermal Bathing Areas - Design
 - 2.1 General guidelines to human interaction in thermal bathing areas
 - 2.2 Saunas and Banyas
 - 2.3 Caldaria and Steam Rooms
 - 2.4 Laconia
 - 2.5 Tepidaria
 - 2.6 Frigidaria
 - 2.7 Wet treatment rooms
 - 2.8 Wet treatment room equipment
 - 2.9 Surface finishes in thermal cabins and circulation areas
 - 2.10 Access and use of thermal bathing areas by the disabled
3. Hydro Bathing Areas – Design
 - 3.1 General guidelines to human interaction in thermal bathing areas
 - 3.2 How pools work - general introduction to pools, operating systems, filtration and water sanitising
 - 3.3 Resources and Standards around the world - glossary
 - 3.4 General topics covered by most standards – summary and evaluation
 - 3.5 Surface finishes in pools and pool areas
 - 3.6 Access to pools by the disabled
4. Building Services
 - 4.1 Typical operating climates for circulation, relaxation and pool areas
 - 4.2 Ventilation of thermal cabins

- 4.3 Drainage
- 4.4 Lighting
- 4.5 Electrical Services
- 4.6 Audio Visual
- 4.7 Building Management Systems
 - Dedicated spa systems
 - Integration with main BMS systems
- 4.8 Plant/Mechanical Room design, location and sizing

5. Health, Safety and Hygiene

- 5.1 – In design
- 5.2 – In construction
- 5.3 – In operation
- 5.4 The use of alarm/emergency call systems

6. Sustainability, Ecology and Economy

- 6.1 – The use of sustainable materials in hydro-thermal spa areas
- 6.2 – Ecologically friendly solutions for modern spa construction
- 6.3 – How sustainable materials and ecological solutions can contribute to the financial and operational success of a hydro-thermal spa