

## **NPC Rejects APSP Standard**

*onBalance – Que Hales, Doug Latta and Kim Skinner*

Are you aware that the National Plasterers Council (NPC) has rejected APSP's long-time Saturation Index (SI) standard of -0.3 to +0.5 for water balance? The NPC decreed in 2008 that pool water must be maintained within a Saturation Index (SI) range of 0.0 and +0.3. Negative index values are not allowed.

Interestingly, the NPC claims that they include other industry groups for input and consensus, yet, as far as we know, the NPC did not receive agreement from the APSP Recreational Water Quality committee (RWQ), APSP's Technical committee, APSP's Service Council, or pool service associations such as IPSSA and the UPA.

The NPC has also stated that they would "abide by the results obtained" from the research performed by the NPIRC at Cal Poly before policy changes are made. Yet, the NPIRC studies have not proven this new position of the NPC.

This type of thing also happened in 2003 when the NPC made changes to their Technical Manual, blaming improper water chemistry for several different plaster defects. Several pool industry members (including IPSSA) asked the NPC for supporting evidence for the Tech manual changes. The NPC did not provide any documentation.

When balancing water, is it not reasonable to allow for occasional negative indices to offset maintaining pool water with a positive SI? Is it not reasonable to allow for occasional negative indices in hard water areas of the country, or where calcium hypochlorite or bleach is used for sanitizing? Where is the proof that an occasional and slightly negative Saturation Index is detrimental to pool plaster?

In addition to their decree on the SI standard, the NPC narrowed other water balance parameters for service techs to follow. Instead of adopting APSP's minimum and maximum values, the NPC wants to restrict all pool chemistry to only the ideal ranges – so instead of a calcium hardness standard of 150 to 1000 ppm, the NPC claims that 200 to 400 ppm of calcium hardness must be maintained. Instead of APSP's total alkalinity standard of 60 to 180 ppm, the NPC requires that alkalinity of 80 to 120 ppm be maintained, and it must be "carbonate" alkalinity rather than "total alkalinity" as established by the APSP, making it even more restrictive. Also the pH is limited to a maximum of 7.6 instead of 7.8, and cyanuric acid is limited to 50 ppm instead of the maximum of 100 ppm.

So why has the NPC narrowed the chemistry parameters to a point where it is nearly impossible to maintain pool water within that standard, and to never allow for a negative SI? This especially coming from a trade association that stonewalls establishing standards for their own product... be it water:cement ratios, calcium chloride content, incompatible admixtures, etc. etc.

Consider this: NPC consultants are often called in to inspect a pool when a plastering job has developed some plaster problems, and the pool customer is complaining about it. The focus will likely be on water balance, and not on possible improper plastering workmanship issues.

Often, a water pool test (and also a tap water test) is performed and compared only with APSP's National "Ideal" water balance standard as the required parameters to maintain, completely disregarding APSP's "minimum and maximum" guidelines. If any water balance parameter is found to be outside the "Ideal" range, then consultants have been known to suggest that the "improper" water balance must have led to the plaster problem.

And in a stark contradiction, following the NPC's official chemical startup procedure likely results in making new pool water aggressive (from -0.2 to -0.6 LSI according to their Start-up Card) during the first few weeks after initial fill... the most vulnerable time period for new plaster. This puts service techs in an awkward position.

More and more, it has come to our attention that pool plaster inspectors are (incorrectly) associating aggressive water (which, to them, means any negative SI, or any single low parameter) with plaster defects such as gray mottling discoloration, white streaking, soft spots, spalling or flaking, craze cracking, calcium nodules, delamination/bond failure, and even rebar rust stains. There are no plaster studies that support these claims. And this is not without consequence – pool owners and/or service techs are being made liable for replastering pools that the plastering company itself ruined!

Is it possible that the NPC adopted this new standard specifically to enable plaster consultants to blame "out-of-balance" water chemistry for various plaster defects, which then provides "cover" for their plastering members? Is this how the NPC "solves plaster issues?"

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