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A newsletter for California's water conservation community

Sponsored by the California Urban Water Conservation Council

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This month.....

- **"Name the Newsletter" Contest**
From around the world (well...not really) came suggestions for changing the name of *The Toilet Paper* that better reflects the wide range of water conservation technologies, fixtures, and programs.
- **ULF toilets qualified for the Los Angeles program**
A fourth toilet is tested and approved.
- **Proposed ASME/ANSI flush performance standard**
New standard is now being balloted...and it includes the adjustability requirement.
- **Progress on flapper durability standards**
The bowl cleaning tablet manufacturers are "at the table"....testing continues.
- **Who is Pat Higgins???**
An interview gives us some answers.
- **New Products**
Vacuum-assisted gravity toilet from Crane and a polypropylene tank from Caroma.

Full Details

1. Re-naming The Toilet Paper

In response to our request in the last issue, 12 individuals have submitted 36 different names for the water conservation newsletter, some quite colorful! In February, we will announce the winning name to replace *The Toilet Paper!*

2. ULFTs approved under the Los Angeles SPS

In the last issue, we reported that three ULF toilets had so far been tested and found to meet the requirements of the City of Los Angeles Supplementary Purchase Specification (SPS). Since then, one additional product has met the requirements, the Legend Eco-Star 9001/9002. The four products that currently comply with the specification are:

Mansfield Alto 130/160
Vitromex/St. Thomas Creations Malibu
Niagara Flapperless 2216
Legend Eco-Star 9001/9002

Other toilet models are being tested as part of the certification process. Tom Gackstetter expects that at least six more models will be certified by June 30, 2001. In addition, we hear reports that the SPS will soon become the specification of choice for other water agencies' toilet replacement programs. For further information on the Los Angeles SPS, contact: Tom Gackstetter at Thomas.Gackstetter@water.ladwp.com .

3. New Flush Performance Standard

After some administrative delays in the process, the proposed new flush performance standard is now being balloted among the members of the ASME/ANSI project team that developed it. The good news is that the adjustability section is now included as a part of this balloted standard (refer back to The Toilet Paper, Vol. 1, No. 1 for further information on adjustability and maximum flush volume). Whether the adjustability standard survives the comment and balloting process is uncertain at this point, since a few manufacturers have been unhappy with this part of the proposed new standard.

The balloting process is scheduled to conclude on February 7. At this time, there is some doubt as to whether the entire balloted standard will attain the two-thirds majority vote needed to pass it along for final approval and adoption by the ASME/ANSI Main Committee. However, once the ballots are counted, comments and objections may be addressed by the project team and decisions made as to what actions are necessary to move forward. For more information on the proposal and the process, refer to Vol. 1, No. 1, or contact John Koeller at: koeller@earthlink.net .

4. Progress on flapper durability standards

As reported previously, flapper durability standards are of high priority both to the water conservation community and to the plumbing fixture manufacturers. The cooperation of the manufacturers of the drop-in bowl cleaning products is aiding the standards team to finally make progress in this area. Currently, flappers are being tested by the cleaning products manufacturers in their own product solutions. These tests are designed to determine the type and magnitude of the chemical interactions taking place between the flapper compounds and the chemical solutions. More information in future issues.....

5. Interview with Pat Higgins

This month, we are including the first in a series of interviews with individuals who have had (and, in some cases, continue to have) a notable effect on water conservation products and programs.

To some in water conservation, Patrick Higgins represents the entire plumbing industry -- and, of course, he does have a number of manufacturers as his clients. Pat graduated from the University of Maryland and is a Registered Master Plumber. In 1981, he established his firm, P. J. Higgins & Associates, through which he provides consulting services in the area of codes and standards to a variety of organizations. In addition, he serves and participates in codes and standards activities with 12 different associations, including several that deal with plumbing fixtures. I was interested in Pat's early involvement with low-consumption toilets and the adoption of the 1.6-gallons-per-flush (gpf) standard.

JK: Pat, you are known as the person who knows how to get things done in plumbing codes and standards. How long have you been involved in the standards process for plumbing fixtures? About how many committees and groups of this type do you participate in?

PH: I have been involved in standards development for plumbing products for over 25 years. I participate in all phases of plumbing, from codes and standards development, to product listings and approvals to product and system design. I became involved with plumbing standards while working for the Plumbing Heating Cooling Contractors-National Association (PHCC-NA) in the mid-1970s. Our firm, P. J. Higgins & Associates, Inc., provides a consulting service that specializes in codes, standards, legislative and product listing/approval assistance for all types of plumbing products. Of course, I am especially honored to be the chairman of the ASME A112 Committee, which oversees standards development for a number of plumbing products, including water closets, faucets, and related components. I also serve on standards development committees for the American Society of Testing and Materials, the American Society of Sanitary Engineering, the Canadian Standards Association and the International Association of Plumbing and Mechanical Officials. All together, it comes to about 70+ standards activities per year. We also submit and testify for over 200 code changes each year.

JK: What prompted you to take on this very important area in the first place?

PH: Back in 1977, when I was employed with PHCC-NA, I volunteered to serve as the secretary for the ASME A112 Panel 19 committee, whose chairman was Mr. Stan Backner. When Stan passed away in 1980, I was asked to take the reins of this important task and I accepted this challenge. I have enjoyed these past 25 years of standards development, and I hope to be able to commit to many more years of service to the plumbing industry.

JK: As I understand it, when first proposed, the 1.6-gpf toilet standard was not well received by the industry. Could you tell me a little about what was going on at that time and what the industry response was?

PH: At first, the industry was not in favor of the complete conversion to 1.6-gpf. Remember, the first 1.6-gpf products were a only small proportion of the total product lines from the industry. The industry had a only a few products to offer when a number of states began to adopt 1.6-gpf ordinances (starting first with the Commonwealth of Massachusetts). As the number of state ordinances began to grow, so grew the product offerings.

JK: Pat, there are stories that you were one of those opposed to reducing the standard from 3.5 to 1.6-gpf.

PH: I was not opposed to the concept of 1.6-gpf, provided there was sufficient time for the industry to phase-in and verify the performance of the technology. The passage of the EPAAct in 1992 seemed to give the industry enough time to develop and distribute product, and I supported the bill when testimony and support was required. Actually, I have had 1.6-gpf water closets in my home for 13 years. I have been committed to this technology for years, and I will continue to promote this cause.

JK: At what point did the industry support the new regulations of the EPAAct?

PH: You must realize that the water conservation regulations were not limited to water closets; state regulations also included fixture fitting requirements, which frankly were all over the spectrum. A number of states were enacting faucet regulations that were not even practical. When the phase-in dates were proposed, coupled with the preemption requirements that would force all states to comply with the Federal law, the industry extended its support for the uniform regulations.

JK: Much progress has been made by the fixture manufacturers in the last 6 years on toilet design and performance. Was this a natural evolution of competition in the marketplace?

PH: I believe that the improvements are a natural occurrence with any manufactured product. The plumbing fixture industry has a special challenge with water closets and other chinaware products. Manufacturers are creating product from a mixture of materials from the earth, which are poured into a mold, allowed

to dry, removed from the mold to be glazed, and fired. The product shrinks about 14 percent during this production process and, of course, it still must look and perform to exacting standards. With each new model, the product continues to be improved. Manufacturers are not satisfied just to make a product---they want to make the best product that meets the customers' requirements.

JK: Now we are seeing more foreign companies attempting to break into the U.S. market with their own products. Many begin with the commodity market where they try to sell into the water conservation programs. How this might affect the entire marketplace?

PH: Of course, the first products in the 1.6-gpf market were actually introduced by foreign manufacturers. This activity is healthy for the marketplace and invites creativity in product offerings.

JK: As you know, the City of Los Angeles recently introduced its Supplementary Purchase Specification, which was reasonably well received by the industry, but not necessarily by everyone in the industry. Do you see any trends or cautions that should be considered by the water conservation community? What do you see as the longer-term effects of this type of approach by the utilities?

PH: I would suggest that when any specifying agency plans to prepare and issue a new specification for a product, they first determine how likely it is that the product will actually be available on the market. For example, one water closet specification that I recently examined required a Teflon flapper, which does not exist. If the utilities have needs for special products or features, they should take the time to contact the manufacturers or the standards-setting committee (ASME in the case of water closets) with their needs. The industry would like to be able to anticipate future demands. As a means to that end, the utilities, like all interested industry members, are encouraged to participate in the standards development processes.

JK: Pat, you represent a number of fixture manufacturers. How do you balance loyalty to them against your stated support for water conservation; that is, are the two compatible?

PH: The manufacturer's interests and the interests of the water conservation community are compatible. The manufacturers are interested in selling product that saves water and satisfies the needs of the consumer. These interests are similar to those of the water community. The manufacturers are also interested in making a profit, and the "profit" to the water conservation industry is saved water. Personally, I try to make every effort to bring the differing positions and attitudes to the table in order to find common ground for the ideas of all these interests. We have already seen the benefit to the plumbing industry and to the water community as the manufacturers worked closely with the Metropolitan Water District on flapper issues. This cooperative effort to improve flapper performance has progressed even further. We now have the chemical manufacturers at the standards table to address the problems with chemical degradation of flapper and fill valve products. Working together, we can grow -- working separately, we can only stall growth.

JK: What do you see as the future with fixture manufacturers, toilets, and water conservation over the next 5-10 years?

PH: The future can only mean improvement in product, improvement in components, improvement in communication and improvement in our cooperation. As far as water closets are concerned, we will see greater reduction in water use with pressurized and gravity products. Hopefully, we will see the chemical industry move back to 'toilet bowl cleaners' instead of 'toilet tank additives'. We will also see improvements in plumbing drainage system design which will reflect better a marriage of products to the plumbing systems. Finally, I envision improved communication of needs between the water agencies and the plumbing industry. If this communication does not continue to improve, we have failed in our jobs, my friends.

Pat Higgins may be contacted at: phiggins@pjhiggins.com .

6. New Products

Synthetic materials replace porcelain to reduce costs

Some years ago, the plumbing industry attempted to introduce into the U.S. market toilet tanks made from synthetic materials, namely plastic. The consuming public did not readily accept these products, primarily because they were viewed as a poor substitute for the "real thing." In addition, it was much easier to permanently damage the plastic materials than it was with the chinaware (e.g., cigarette burns, scrapes, and other discolorations). However, some materials today are better able to withstand abuse, more easily repaired if damaged, and more authentically reproduce the look of chinaware.

The latest U.S. attempt at the widespread reintroduction of synthetics to replace chinaware is being made by Caroma U.S.A. with certain model tanks being made of polypropylene. Because Caroma ships product to the U.S. from Australia, shipping costs and breakage are reduced as a result of the lighter weight and durability of the tank. Costs for these tank models are reported to have been reduced by as much as 30 percent with the use of polypropylene.

For more information on this product, go to:

<http://www.caromausa.com/products/caravelletasman.htm>

Crane introduces vacuum-assist toilet

In December, Crane Plumbing introduced its new VIP Flush (Vacuum-Induced Power Flush) toilet into the marketplace. It uses the vacuum created above the water discharging into the bowl from a sealed chamber within the toilet tank to assist the evacuation of waste through the trapway. The vacuum (or negative air pressure) is "transmitted" to the upper leg of the trapway via a tube running from the sealed chamber inside the toilet tank to the trapway. Like the Briggs Vacuity, the vacuum technology is licensed from Fluidmaster Inc.

The Crane VIP Flush is available in both floor outlet and back outlet models.

Contact the distributor of Crane Plumbing products in your area for further information or e-mail John Koeller at: koeller@earthlink.net

And, finally, the "product of the month" can be found at:
<http://www.bumperdumper.com/>

7. Other stuff of interest-----

Here are two upcoming conferences/trade shows that you might want to attend.
The Kitchen-Bath Industry Show in Orlando: <http://www.kbis.com/>
The World Toilet Summit: (*link no longer active – no replacement*)

Upcoming issues: Look for...

- Results of mechanical durability testing
- A report on waterless urinals
- An interview with a water conservation "pioneer"
- Links to websites of special interest
- ...and more

*Quote of the Month: "Today you can go to a gas station and find the cash register open and the toilets locked. They must think toilet paper is worth more than money."
Joey Bishop*