



....a dialogue for California's water conservation community

June 2001

Volume 1, No. 6

Sponsored by the California Urban Water Conservation Council

Executive Director: Mary Ann Dickinson

Newsletter Editor: John Koeller

This month.....

- **Interview with Pete DeMarco - American Standard**
Talking about standards, EAct, and how the plumbing industry responded to new Federal requirements.
- **Four-liter (1.0-gallon) toilets are now available in the U.S.**
The first of what may be a series of new, more efficient fixtures from a variety of manufacturers.
- **Download the full Los Angeles Supplementary Purchase Specification (SPS)**
Your Council has posted the Los Angeles SPS for all visitors to download and use.
- **Plumbing Manufacturers Institute endorses the Los Angeles SPS**
PMI issues statement favoring the harmonizing of water agency specifications.
- **Links to manufacturers' websites and product information**
We have posted links to 24 manufacturers' websites.
- **New products**
A urinal for your home a special leak-detecting fill valve and the new vacuum-assisted toilet from Crane.
- **Potty Parity in Chicago!**
Finally redressing to a long-standing inequity.

* * * * *

Full Details

1. Interview with Pete DeMarco, American Standard

I met Pete DeMarco for the first time in October 1993 while visiting the American Standard plant in New Jersey. Later, as the problems with deteriorating toilet flappers became severe, Pete and his company were supportive of the efforts by the water utility industry to identify the causes of those problems. He has been (and is) a well-known part of the codes and standards process within the plumbing industry. As such, he has had contact with many of our colleagues in water conservation over the years, so perhaps you will remember him.....

Pete DeMarco is the Director of Compliance Engineering for American Standard. He attended Rutgers University and has been with American Standard for nearly 26 years, holding various positions in Reliability Engineering, Development Engineering and Marketing. Since 1990, Pete has been the Codes and Standards representative for American Standard, which includes very active participation on the American Society of Mechanical Engineers (ASME) A112.19.2 and 19.6 committees that develop the requirements for all vitreous china plumbing fixtures, including toilets. I had the opportunity to speak with him just recently.

JK: Pete, you have been responsible for dealing with codes and standards for your company for more than 10 years. How did you become involved with this very specialized area and what are some of your current responsibilities?

PD: I became interested in product standards early on in my career. First as a quality control technician, and then later as I worked in product development, I tested many of our products to both our own internal standards and the industry standards and became very familiar the different requirements. When the codes and standards position became available in late 1990 I felt that I could make a contribution in the betterment of the industry standards and accepted the position.

As a Codes and Standards representative my main responsibilities include representing American Standard at all codes and standards hearings and meetings and obtaining all of the pertinent product approvals and listings (such as IAPMO listings) for our plumbing fixtures. Nick Covino also represents American Standard in this capacity for all fixture fittings (faucet) issues.

In addition, I have also worked in recent years assisting our Government Affairs department regarding legislative issues surrounding the implementation of the 1992 National Energy Policy Act (EPAAct) and, more recently, in efforts to defeat the Knollenberg bills in the 105th, 106th, and now, unfortunately, in the 107th Congress.

JK: With regard to plumbing fixtures, and toilets in particular, you have had a very prominent role in the national standards process. Could you give us some background on your involvement with the development and adoption of the 1.6-gallon standard and the leadership of the ASME task team?

PD: The first standard developed for low consumption toilets was issued in 1990, prior to my involvement on the ASME committee. However, I was involved (indirectly, through our Government Affairs department) with the development of the EPA Act language and later on with the discussions between the industry and both the Department of Energy and Federal Trade Commission on the development of the certification and reporting requirements associated with EPA Act.

I have also served as the ASME chair for the A112.19.2 standard and as chair for development of a tri-lateral standard for water closets between Canada, Mexico and the United States. During this time I developed a serious appreciation regarding the amount of work associated with chairing such a committee and the difficulties in trying to build consensus among the various stakeholders. In fact, the amount of work was too much to keep up with when I accepted my marketing responsibilities and I felt that I needed to relinquish the chair in order to ensure that the standard development would continue to move forward. Since that time I feel that Tom Konen of Stevens Institute, who replaced me as the A112.19.2 chair, has done an excellent job in a very difficult environment.

JK: Some professionals in the water conservation field hold the view that the plumbing industry was quite unreasonable in resisting the adoption of the 1.6-gallon standard for toilets nearly 10 years ago. Is this an accurate perspective? Looking back, how do you now view the change in the standard that took place?

PD: Well, I guess that I really need to stand up on behalf of the industry on this question. It's easy for people who do not work in the industry to lack appreciation for the difficulties associated with the development of vitreous china fixtures, especially toilets. From my perspective, there was a prevailing opinion that making the transition to 1.6-gpf toilets would be an easy one because 6-liter toilets were in use in various countries in Europe for years. Without going into extensive detail on this point, the difficulties in developing toilets to meet the expectations of US consumers were underestimated. In my opinion, the problems associated with consumer acceptance of some of the earlier 1.6-gpf models was a byproduct of moving forward a little too quickly, especially at some of the State and local levels.

It is important to note, however, that once a reasonable approach was worked out between the industry, the environmental community, and government in the form of the EPA Act regulations, the industry did support adoption of the Federal requirements.

JK: We all know that some of the toilets that were produced and sold immediately after the 1.6-gallon standard became effective did not live up to some consumers' expectations. How do you explain that?

PD: See above. However, it should be pointed out that some companies did a much better job than other companies did early on. As for American Standard, I believe that

the great majority of our offerings in the early 1990's were among the best products available (see...the marketing side of me still exists!).

JK: How have products evolved since then?

PD: In general, the industry has learned how to incorporate attributes such as larger diameter trapways and larger water surface areas into our designs. This requires a much more efficiently designed product in order to build these attributes into our designs while still being able to generate a strong enough siphon to evacuate the bowl. New development tools such as computer aided design and improved control over manufacturing processes have allowed us to introduce increasingly efficient designs. It is apparent to all that these newer products are now meeting consumer expectations, and have been for quite some time.

JK: The A112.19.2/19.6 standards for toilets seem to be under continuous review and evaluation. Is this part of the normal process?

PD: Absolutely. All product standards are subject to continuous development. This is especially true where technology is still emerging or where health and safety concerns are prevalent.

JK: There has been a great deal of manufacturer testing and discussion related to proposed changes in the toilet performance requirements. In fact, some of us expected that a new standard would be successfully balloted last year, but that did not occur. What are the prospects for including more rigorous performance requirements in the standard this year?

PD: I believe that the prospects are very good. I must say, however, that getting to this point in the development of the new requirements has been extremely difficult. This is another subject where underestimating the complexities associated with this development is very easy to do. Correctly measuring the chaotic flush of a toilet, and using re-usable and repeatable test materials, is very tricky business. This has resulted in some frustration among stakeholders, including manufacturers. However, representing the world largest manufacturer of these products, I will continue to take the position that, first and foremost, any changes to the standard must be based on good science, and test protocols can be relied upon to yield repeatable and predictable results.

JK: On another subject, we know that when consumers replace the flappers in their toilets, there is a real possibility of the flush volume of that toilet increasing well beyond 1.6 gallons. Limiting the holding capacity of the toilet tank is one way to address that problem. What is your opinion of that approach? Are there other approaches to solving this flapper problem that we all should be examining?

PD: I support the City of Los Angeles Supplementary Purchase Specification as a means to limit adjustability. This specification allows manufacturers to introduce products that curtail adjustability while not dictating design. A more draconian approach

of merely dictating tank capacity would be short sighted and would result in more complaints of poor performance. Allowing manufacturers the ability to meet the requirements while still being able to take advantage of the potential energy afforded through gravity or other means is clearly a better approach. So to answer your question, while there are numerous other approaches, and others that have not yet been thought of, I feel it's best to leave the "how" up to the manufacturers.

JK: We are starting to see a few 1.0-gallon toilets appear in the marketplace. Do you see lower flush volumes as an evolutionary step with toilets in the U.S. market?

PD: I think we need to proceed cautiously on this front. Obviously, we will get to a point where there just isn't enough water to provide for drain-line carry of solid waste in buildings' plumbing systems. Extensive field testing, while employing as many plumbing system variables as possible, is required to determine if we can further reduce consumption values for toilets on a large scale without getting into some serious problems. If testing finds that we can safely further reduce consumption on toilets, then yes, inevitably we would go in that direction.



1. Four-liter (1-gallon) toilet fixtures are now available in the U.S.

St. Thomas Creations, in conjunction with Sloan Flushmate, have officially announced that they recently completed development and extensive testing of a 1.0-gpf pressure-assisted toilet for their Mariner line of fixtures. This new product, marketed as the Mariner II (Model 6207.020), has undergone extensive testing by both Sloan Flushmate and by St. Thomas and is in production. According to Jim King, Chief Executive Officer of St. Thomas, "...availability will be in approximately six to eight weeks (from May 22) for the Mariner II elongated, and the Mariner II roundfront should be available in limited production by the end of August (2001)." Cost information is not yet available.

The St. Thomas/Sloan 1.0-gpf fixture is now being field evaluated by several water utilities and their customers in California, where 36 of the units are being installed under the watchful eye of water conservation professionals. Customer surveys will be conducted by those water utilities (East Bay Municipal Utility District, Santa Clara Valley Municipal Water District, City of San Jose). The current plan is for approximately one-third of the fixtures to be subjected to measurement of water consumption before and after installation.

(Note: Having just completed a very short series of performance tests on the 1.0-gpf fixture, we found that it out-performed many of the standard 1.6-gpf gravity-fed units tested alongside. In addition, although noise levels were not measured in the test, the fixture appeared to be much quieter than earlier pressure-assisted units. - JK)

At least three other manufacturers are currently offering or about to offer fixtures that perform at 1.0-gpf to 1.2-gpf, some of which are gravity-fed units. Stay tuned.

For further information on the St. Thomas fixture, contact them directly:

St. Thomas Creations
Telephone: (626) 405-0800

2. Los Angeles Supplementary Purchase Specification (SPS)

Now you can view and download the Los Angeles SPS from our website. Be sure to read all four documents:

http://www.cuwcc.com/Uploads/product/LADWP_SPS_Memo.pdf

http://www.cuwcc.com/Uploads/product/LADWP_SPS_ULFTReqs.pdf

http://www.cuwcc.org/Uploads/product/SPS_approved.pdf

http://www.cuwcc.org/Uploads/product/LADWP_SPS_QA.pdf

For a listing of officially certified toilet fixtures and flappers, go to the last two pages of:

http://www.cuwcc.org/Uploads/product/Water_Logue_Volume_1_No_4.pdf

Of particular note, the Plumbing Manufacturers Institute (PMI), at its September 2000 meeting in Washington D.C., "agreed that the water closet purchase specification currently under draft by the Los Angeles Department of Water & Power (LADWP) should be used by PMI as a suggested basis for harmonizing requirements generated by other water agencies. Currently, several agencies have come forward with separate purchase specifications, and the product group members agreed that proactively working to suggest standard requirements contained within such specifications, rather than working with individual agencies on a case-by-case basis, would best serve the industry." (Press Release, November 2, 2000)

3. Links and More Links

Check our new manufacturers' links page in the Product News Section of the Council's Web Site. Most of these firms post their full line of products (with specifications) on their websites:

http://www.cuwcc.org/Uploads/product/Industry_Links.pdf

4. New products.....

- *Very low consumption urinal*

American Standard presents its new low-consumption urinal, flushing at only 0.5 gallons per flush, one-half the current national standard. Stylishly designed with an integral flush valve and, believe it or not, very suitable for residential installations! Go here:

<http://www.americanstandard-us.com/ProductNew.asp?prodID=187>

- *The Leak-Sentry™ from Fluidmaster*

Not a new product (been around a couple of years) but certainly one that water conservation professionals need to consider for residential survey and toilet replacement programs. This unique device will detect a leak in the toilet and prevent the toilet tank from refilling until the resident actuates the flush lever or the leak is repaired a product particularly suited to rental apartments, where the resident with a leaking toilet would definitely be motivated to notify the apartment manager when his/her toilet is leaking.

This product could also be specified as the OEM fill valve-of-choice in your bulk toilet purchases. (Remember, however, that this would likely increase the purchase lead-time.)

Contact your local Fluidmaster distributor for a product sample. Go here for product information:

http://www.fluidmaster.com/fill_products_400ls.html

Upcoming Issues: Look for.....

- An update on flapper durability and toilet performance standards
- Connections between water and energy savings
- Information on hot water demand systems
-and more