

## **Review of Demiriz Report By John Koeller**

Here are some important points to consider when reviewing Dr Demiriz study:

1) A question came up at a recent meeting about peer review of the Demiriz report. Two of the top, most respected people in plumbing and drainage systems have reviewed this document (that includes Larry Galowin and Prof John Swaffield). However, their review did not, to my knowledge, consider the findings in the context of the U.S. plumbing codes.

2) I made it a point to visit Dr Demiriz' lab and spend a day with him discussing this study and other studies he has undertaken at Gelsenkirchen Technical University. His laboratory and the work he does is probably the most comprehensive that I have ever heard about or seen. There is no question that that the professor does credible, independent work that is based on science and which is well-respected all over the world.

3) When you read the paper, you will soon discover that Dr Demiriz is NOT condemning non-water urinals. In fact, in the first paragraph he deals with hygiene and odors and dismisses those as non-issues.

4) His study was based upon a 1 percent slope in the drainline. The code in the U.S. is 2 percent. The condition that I am concerned about (and which is addressed by Dr Demiriz) is the drainline buildup of crystallized (hard) solids here in the U.S. when the drainlines are NOT AT CODE, either due to incorrect installation OR damage OR changes in slope due to age. Danny Gleiberman clearly states in the interview in World Plumbing Review that: "However, with retrofits, many of the old piping systems installed in the past don't meet today's Code." (page 16, Volume 1, World Plumbing Review<sup>1</sup>)

5) In the same magazine (and in the Demiriz report) the following is noted: "It was also particularly relevant in relation to retrofit situations, where existing drain lines have been previously installed with the expectation of regular high-volume flushing. The connection line to the sewer in this study had a 1% slope. Prof Demiriz noted a slow but steady build-up of urine crystals in the dry urinal drain line over the two-year period." (page 17, Volume 1, WPR) A further description of this phenomena may be found beginning at the top of the fourth page of the Demiriz report.

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<sup>1</sup> Download World Plumbing Review:

[www.cuwcc.org/uploads/tech\\_docs/world\\_plumbing\\_review\\_06-01-01.pdf](http://www.cuwcc.org/uploads/tech_docs/world_plumbing_review_06-01-01.pdf)

6) Some of the test urinals in the study had "mechanical working traps" which are not permitted in the U.S. plumbing codes, while others used liquid seals similar to what you see here. However, regardless of the technology used, the issue is the drainline AFTER the trap, NOT the trap or the urinal technology itself.

7) In our independent North American urinal study that is now underway at its very beginning stages, this particular item (among many others) will be examined for flushing AND non-water urinals. That report will be publicly available on the CUWCC website when completed.

I continue to maintain that this is an issue that should NOT prohibit the installation of non-water urinals. However, end-users, purchasers, and specifiers should be made fully aware of this particular concern (relating to drain line build-up) by the professional recommending these products, and doing so BEFORE the purchase or specifying decision is made.