

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
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CEMP-R

Public Works Technical Bulletin
No. 420-49-34

15 June 2001

FACILITIES ENGINEERING
UTILITIES

MAGNETIC WATER TREATMENT

1. Purpose. The purpose of this Public Works Technical Bulletin (PWTB) is to transmit information on a demonstration of magnetic and electronic devices marketed as effective alternatives for scale prevention in water systems.
2. Applicability. This PWTB applies to all U.S. Army Public Works activities involving the use of water systems.
3. References.
 - a. AR 420-49-02, Facilities Engineering Utility Services, 28 May 1997.
 - b. TM 5-660, Maintenance and Operation of Water Supply, Treatment, and Distribution Systems, Mar 1997.
4. Discussion.
 - a. There is a long history of controversy regarding the effectiveness of magnetic water treatment for preventing scale in water systems. Magnetic "treatment" consists of passing potentially scaling water through a magnetic field. Promoters of magnetic devices claim that this simple operation provides a scale-control method, even for water having a high tendency for scaling. It is also often claimed that magnetic exposure can inhibit corrosion.
 - b. The attached document provides an evaluation of current magnetic water treatment technology. Scientific literature is reviewed and summarized and several devices are tested for scale prevention. In summary the magnetic water treatment devices were not effective for scale control.
 - c. Although the devices were not effective, it is still very important that Army public works personnel use this information to avoid unnecessary expenditure of manpower and funds to purchase and install these devices.

PWTB 420-49-36

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5. Point of Contact. Questions and/or comments regarding this subject should be directed to the technical POC:

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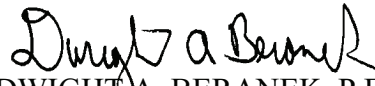
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