



DEPARTMENT OF THE AIR FORCE  
HEADQUARTERS UNITED STATES AIR FORCE  
WASHINGTON 25, D. C.

INSTALLATIONS ENGINEER MAINTENANCE MEMORANDA

85-13(1-55)

AFC IE-MUS

5 August 1955

SUBJECT: Unauthorized Use of Catalytic and Electric Units for Water Treatment

Purpose and Scope:

To establish a current policy on the unauthorized use of catalytic and electric units for water treatment in boilers, utility systems, air conditioning and similar types of installations. This is applicable Air Force wide.

This IEMM supersedes letter, this headquarters, dated 21 November 1952, subject: "Unauthorized Use of Catalytic and Electric Units for Water Treatment."

Policy:

1. Active measures are being taken to sell to Air Force installations certain catalytic and electric type water treatment units for controlling scale and/or corrosion in boilers and domestic water systems. Generally, the manufacturers of such equipment claim that these units will do everything from eliminating scale and corrosion to destroying bacteria through some mysterious catalytic agent or by the application of a small amount of galvanic current between two dissimilar metals. Since approved methods of water treatment are stopped during the experimental period in which these units are utilized, much harm can result to boilers and water systems by discontinuing chemical treatment methods authorized under existing Air Force regulations and manuals.

2. A special committee of Government engineers specializing in water treatment have been evaluating certain catalytic and electric type water treatment units for controlling scale and/or corrosion in boilers and domestic water systems. Additional studies on the use of these units have been made by noted authorities in this field. In this connection you are referred to articles by Eliassen and Uhlig entitled: "So-Called Boiler Water Treatment" which appears in the Journal of The American Water Works Association, July 1952, and "Practical Performance of Water-Conditioning Gadgets" by B. Q. Welder and E. P. Partridge, page 954 of Industrial and Engineering Chemistry for May 1954. Based upon the findings of the special committee and information contained in referenced articles there appears to be sufficient evidence that there is little or no merit to the claims for this

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type of equipment. Accordingly, this headquarters has neither approved the use of this type of treatment nor authorized the expenditure of Government funds or use of Air Force personnel for test installations.

3. Until such time that this headquarters has evaluated and approved the use of such equipment on an individual basis, no other form of water treatment for scale and corrosion will be used except that authorized by existing regulations, manuals and letters from this headquarters. However, this decision should not be interpreted to require discontinuance of the use of previously approved cathodic protection in large water storage tanks and underground utility systems to control corrosion and for the installation of magnesium anodes to protect hot water tanks against rusting.

BY ORDER OF THE CHIEF OF STAFF:

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Directorate of Facilities Support,  
ACS/I