

CROSS TALK

QUARTERLY BULLETIN

FOUNDATION FOR CROSS-CONNECTION CONTROL
AND HYDRAULIC RESEARCH
UNIVERSITY OF SOUTHERN CALIFORNIA
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Cross Talk Reinstated

We are proud to present the first issue of Cross Talk in over ten years. We have found that it is becoming more necessary for the Membership of the Foundation to be informed on a constant basis of the current events in cross-connection control. Therefore, we have reinstated our quarterly bulletin, **Cross Talk**.

Cross Talk will contain articles to in-

form the Members of the Foundation of such topics as: New developments in cross-connection control, problems in different aspects of cross-connection control and how to solve them. Cross Talk will also include developments of the Foundation itself. We are looking forward to developing closer ties with the Membership through this quarterly bulletin.

Charter Members

The Foundation wishes to recognize the agencies listed below for their dedication to cross-connection control. These agencies have been Members of the Foundation since the inception of the Membership Program in 1967 and have continued with their participation in the Membership Program since that time. Their continued support of the Foundation is greatly appreciated!

- City of Buena Park
- California Domestic Water Co.
- Carpinteria County Water District
- Central Basin Municipal Water District
- Coachella Valley County Water District
- City of Covina
- Desert Hot Springs County Water District
- East Valley Water District
- City of El Monte
- City of El Segundo
- Fallbrook Public Utility District
- City of Hawthorne
- Helix Water District
- Hi Desert Water District
- City of Huntington Beach
- Indian Wells County Valley Water District
- Irvine Ranch Water District
- Las Virgenes Municipal Water District
- City of Lynwood
- Mesa Consolidated Water District
- City of Milpitas
- City of Monterey Park
- Newhall County Water District
- City of Oxnard
- Palmdale Water District
- City of Pasadena
- City of Pomona
- City of Poway Public Services Dept.
- City of Redlands Water Dept.
- City of San Bernardino Water Dept.
- City of San Diego Water Utilities
- San Diego County Water Authority
- San Gabriel County Water District
- City of Santa Ana
- City of Santa Barbara
- Somerset Mutual Water Company
- Valley County Water District
- City of Vernon
- Victor Valley County Water District
- Walnut Valley Water District
- West Basin Municipal Water District
- Yorba Linda County Water District

New Members 1987

The Foundation would like to welcome the agencies listed below as recent new Members of the Foundation. These Members have initiated Membership in the Foundation in the first Quarter of 1987. Welcome to the Membership of the Foundation!

Arapahoe Water and Sanitation
District, Colorado
Avery Plumbing Co., California
Dennie L. Byram Co., Washington
Town of Gilbert, Arizona
Illinois Environmental Protection
Agency, Illinois
Joshua Basin Water District,
California
June Lake Public Utility Division,
California
City of Kingman, Arizona
Joseph Losket Co., California

City of Madera, California
Oroville Pump Company, California
Philidelphia Water Department,
Pennsylvania
Saint John's Seminary, California
City of Savannah, Georgia
Sohl Plumbing, California
Truckee Donner Public Utility District,
California
Vaughn Environmental Service
Maintenance and Engineering
Corporation, Florida

News at the Foundation

For our Members who are not aware of the internal changes at the Foundation over the past few years, this is an update.

As many of you know, Emeritus Professor E. Kent Springer, P.E. has retired from the position of Director of the Foundation, a position he held for 20 years. Professor Springer is still very much involved in the cross-connection control field and he is active at the Foundation as a Special Consultant.

Professor Springer's successor is Dr. J. J. Lee, P.E., a Professor of Civil and Environmental Engineering at the University. He has been a member of the Civil Engineering Faculty at USC since 1970, specializing in hydraulics and water resources, and has done extensive research in fluid flow with applications in water-

ways, harbors, and Coastal engineering.

The Engineering Staff of the Foundation consists of Mr. Paul H. Schwartz, P.E., Chief Engineer; Mr. Henry W. Chang, Mechanical Engineer; and Mr. Patrick A. Sylvester, Mechanical Engineer. Mrs. Arlene Tom is the Foundation's Secretary. Our Engineering Staff will be pleased to help you with any questions.

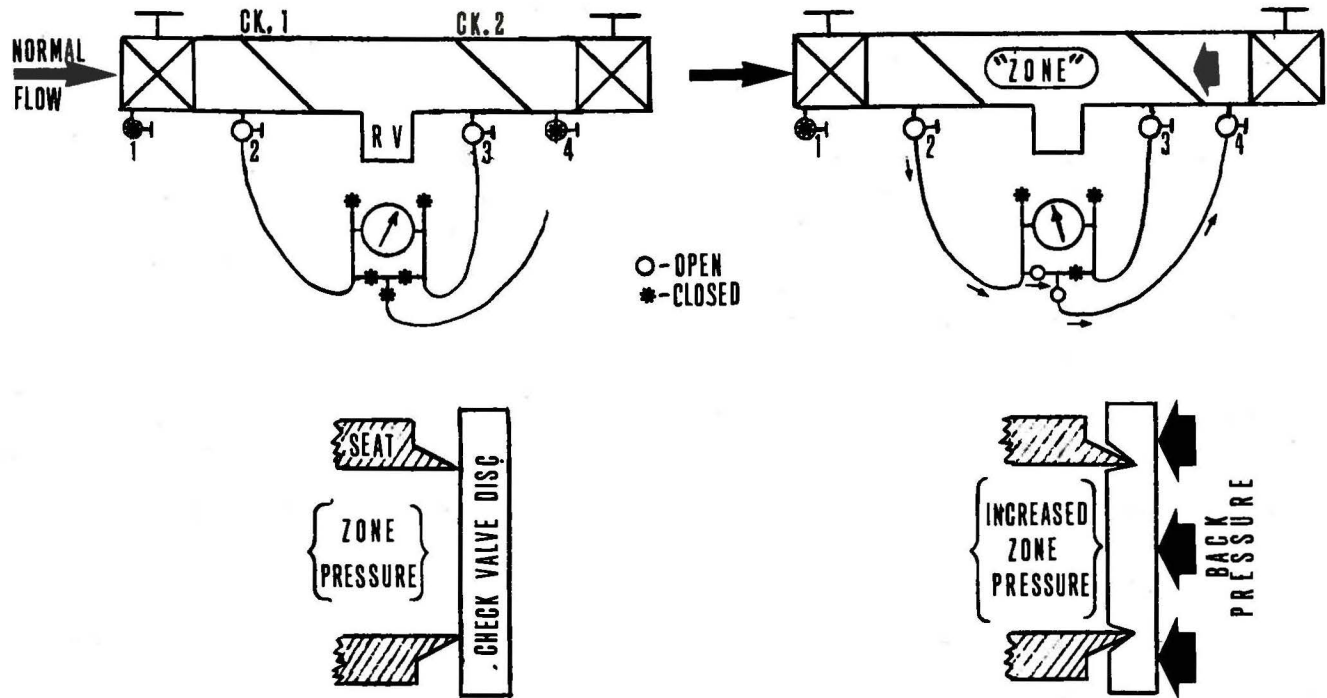
The Foundation has recently published a 16 page colour brochure explaining the work of the Foundation. The brochure is ideal for introducing other agencies/colleagues to cross-connection control. A copy of this brochure has been sent to each Member of the Foundation. If you did not receive it or would like additional copies, please contact the Foundation office at (213) 743-2032.

Resilient Seated Shut-Off Valves and Testcocks

Many Members have asked about the requirement of June of 1986 which requires all Approved backflow prevention assemblies to be equipped with resilient seated shut-off valves and testcocks. This requirement is not for assemblies that were already installed in the field before June of 1986. This requirement does, however, apply to all assemblies being sold after that date. Therefore, if a backflow prevention assembly is listed on the Foundation's "List of

Approved Backflow Prevention Assemblies" and is currently being sold, the units coming from the factory should be equipped with the resilient seated shut-off valves and testcocks. If an assembly is being sold without resilient seated shut-off valves and testcocks it is **NOT APPROVED** by the Foundation even though the model number on the unit may appear on the Foundation's "List of Approved Backflow Prevention Assemblies."

Field Testing: Disc Compression



How many times during the field testing of a backflow prevention assembly has the gage given you unexplainable results? During the field test of a reduced pressure principle backflow prevention assembly (i.e. RP) there are reasons for the dropping of the 1st check valve differential pressure reading while testing the 2nd check valve (see Section 9.2, Test No. 2, step 'e'; MANUAL OF CROSS-CONNECTION CONTROL-7th Edition). Often the tester experiences a change in the gage reading between the apparent reading across the 1st check valve (Test No. 1, step 'g') and the actual reading (Test No. 3, step 'a'.) Some testers might record this drop of the gage as a failure in the 2nd check valve, or record a false 1st check valve differential. However, the drop in the gage reading may be due to the seat imbedding further into the elastomer disc of the 2nd check valve. This is actual disc compression.

When there is no flow going through the backflow preventer the check valve disc is just touching the seat to create a seal (see above left). As pressure is introduced from the gage into the No. 4 testcock to determine if the 2nd check valve is holding, a small backpressure is being created against the 2nd check valve. This

backpressure causes the seat to imbed more deeply into the disc (see above right.) This decreases the volume between the two check valves (i.e. the zone of reduced pressure) and, in turn, increases the pressure in the "zone". An increase of the "zone" pressure will lower the differential pressure across the 1st check valve, and the tester may incorrectly record this value. What the tester should do is bleed some pressure from the zone by means of the low pressure bleed valve on the gage. This will re-establish the normal pressure gradient across the first check valve and give an accurate reading for the pressure drop across the first check valve.

Should the 2nd check valve be leaking, then the gage will continue to drop until the relief valve opens.

The tester must be fully aware of "disc compression" so that proper values are recorded on the test forms.

Disc compression also occurs when testing the double check valve assemblies. A discussion of how it is recognized during the test of a DC will be covered in a future issue of **CROSS TALK**.

The USC Short Course

The Foundation has been offering an increased number of Short Courses each year as interest in cross-connection control increases. The Short Course is offered four times each year at the Laboratory of the Foundation and several times at other locations sponsored by a local hosting agency. On the average the Foundation has been offering a total of ten (10) to twelve (12) Short Courses each year. If you or someone you know of is interested in hosting a Short Course please contact the Foundation office at (213) 743-2032. The Short Course is a five (5) day intensive training course covering information on cross-connection control such as: How to set up a cross-connection control program, how to keep the

program up-to-date and active, how to train personnel and how to test each type backflow prevention assembly. Once student completes the USC Short Course for the Training of Backflow Prevention Assembly Testers, the student receives a certificate of completion. Of course, each student must take the required test to become **certified** in their particular area of jurisdiction. The Short Course at the Foundation Laboratory will be offered 13-17 July and 27-31 July 1987. A complete listing of the upcoming training courses is given below. If you would like information regarding the Short Course please contact the Foundation office. (Members receive a 20% discount on Short Courses.)

Upcoming Short Courses

11-15 May 1987; Dublin, CA

22-26 June 1987; San Diego, CA

13-17 July 1987; USC Laboratory

27-31 July 1987; USC Laboratory

10-14 August 1987; Los Alamos, NM

14-18 September 1987; Northern California

9-13 November 1987; Tempe, AZ

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