



**STRUCTURAL STRENGTH OF DANBY PROCESS  
CONFIRMED BY D-LOAD TESTS**



**TEST SUPERVISED BY  
COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY**

**RIALTO, CA  
FEBRUARY 1994**



**Danby 360° Lining D-Load Test**

# D-Load Tests of Lined and Unlined Deteriorated 24" RCP

At Rialto Concrete Pipe Company of Rialto, California

Supervised by

County Sanitation Districts of Los Angeles County

February 16, 1994

<u>D-Load</u>	<u>Unlined</u>	<u>Danby Lined</u>
		(270° lining)
First Crack	--	--
.01" Crack	2375	4563 (193%)*
Ultimate	2375	4563 (193%)
		(360° lining)
First Crack	--	4250
.01" Crack	2188	4750 (217%)
Ultimate	2313	5250 (227%)

\* Percentage of unlined test value

Two 8 foot sections of 24" ID, corroded, single steel ring reinforced concrete pipe were cut into four 4 foot sections; one 4 foot section from each 8 foot section was lined with the Danby system. The other 4 foot section from each of the 8 foot sections was tested as the control for the corresponding lined section. The new wall thickness was 3" and the wall thickness lost to corrosion averaged about 1.25" in the top half of the pipe, with maximum loss at the springlines. There was evidence that the steel cage had begun corroding and was exposed in spots. The Danby system was used to line two of these 4 foot sections; one with lining covering approximately 270° of the interior wall, leaving the 90° in the invert of the pipe unlined and resulting in an internal diameter of 23". The other Danby liner covered the entire inside of the host pipe and had an internal diameter of 20.75". The D-Load figures given above were calculated by dividing the total load on the pipe by 8 (= length x diameter of test pipe).