

111 Years Design Life...



Installation of lined and coated Ductile Iron Pipe in San Diego.

In 1991, the City of San Diego, CA embarked on Phase I of the Fiesta Island Replacement Project. The project involved six miles of polyurethane coated ductile iron pipe. Two years later, DeC Consultants Inc. tested the pipeline's corrosion protection system.

25 mils (625 microns) of Madison's Corropipe II TX-15 polyurethane coating and sacrificial magnesium anodes were used to protect the 12 inch diameter ductile iron pipeline from corrosion.

DeC's analysis showed the coating system to have an installed efficiency of 99.66% and the pipe an actual current requirement (for corrosion protection) three times less than the design value. Mr. DeCarlo of DeC noted that in his opinion, "this is outstanding performance for a coating on bell and spigot ductile iron pipe."

The analysis goes on to report that, given the excellent condition of the polyurethane coating and the corresponding low anode consumption rate, the system will last 111 years.

The pipeline conveys digested sludge at high pressure from the

Point Loma Wastewater Treatment Facility to a new biosolids processing plant 19 miles away. The balance of the pipeline (Phase II) is scheduled for completion in 1997.

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The success of Phase I is critical as the pipeline route travels through a military base, a popular park and a residential neighbourhood. It also runs through an earthquake fault line and beneath several heavily traveled business corridors. Corrosion

survey reports indicate the soil in the area is very corrosive and any failure could mean political and functional disaster.

In addition to offering excellent resistance to corrosion and abrasion, Madison's Corropipe II TX-15 was chosen over conventional coal tar epoxies and tape due to its many handling advantages. Corropipe II TX-15 contains no coal tar and the coating cures in minutes. Using plural component spray equipment and a pipe conveyor, the applicator sprayed a single coat (25 mils) of Corropipe II TX-15 directly on to the blasted ductile iron surface at a rate of 20 feet of pipe per minute (6 meters/min). These production rates are 5 to 10 times faster than those of coal tar epoxy.

The pipe installers and on-site inspectors reported the pipe survived the 2000 mile trip and the installation with very little coating damage: an "unheard-of" feat when using coal tar epoxy or tape coatings.

The City of San Diego has specified Madison's polyurethanes for all of their ductile iron wastewater pipe coating requirements (internal and external), with over 70 miles of piping either in service or on the drawing boards.

Contact Madison to learn how polyurethane technology can fit your long term requirements.



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