



# CASE HISTORY ~ CH-047

## BIO-DUR 561 PROTECTS BURIED 24" STEEL FUEL OIL PIPELINE IN TIDAL SALT FLATS

**THE CHALLENGE:** A 24" steel fuel oil pipeline buried in a tidal shrimp producing area had developed leaks in some of its welded joints. The pipeline was encased in a 3" thick concrete weight coat which had to be removed at each joint to allow inspection and repairs. Inspection, remediation and recoating had to be undertaken within short intervals at low tide, immersion of the repaired areas before curing was inevitable as the next tide came in. A completely "field-friendly" coating that could withstand immersion in salt water shortly after application was required to allow the work to be performed.

**THE SOLUTION:** TFT Kevlar® reinforced BIO-DUR 561 epoxy coating was chosen for this project. This product is specifically designed for wet surface and underwater application to steel in either salt or fresh water.

BIO-DUR 561 is a 1/1 volume mix product; this is the ideal mix ratio from a practical point of view since minor mixing errors in mixing have the minimum effect on performance. The components were supplied in contrasting colors of Red Oxide epoxy base and White curing agent to yield a uniform Red mixture.

The steel surfaces were prepared for coating by high pressure water blasting with entrained sand abrasive. The blasting equipment used consisted of an 18HP water jet producing about 4,000 psi through a hand held nozzle equipped with a venturi type abrasive delivery system mounted at the gun. This simple equipment easily removed an existing coal tar based anticorrosive coating to yield a "white metal" surface.

The freshly blasted surface was rinsed with clean fresh water to remove sand and debris then immediately coated while still wet using BIO-DUR 561 applied by brush and pads.

Work proceeded along the length of pipe in excavations 40' apart. Because of the dangerous mobile nature of the tidal flats it was necessary to stabilize the holes using trench supports, even so the work area around the pipe was a challenging quicksand which quickly engulfed the freshly coated pipe once pumps were removed.

**RESULT:** Application by brush and pressure pad was effective and yielded an excellent, tightly adherent film. The **BIO-DUR 561** applications cured well overnight and formed a tough, tightly adherent protective coating over the pipeline. The freshly applied coating was resistant to removal by wave action from the moment of application and suffered no damage before curing hard

For more information regarding this project, contact:

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PRODUCT: BIO-DUR 561

YEAR: 2008

LOCATION: SAN CARLOS BAJA, CA

*We go where others fear to spread!*

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