



CASE HISTORY ~ CH-031

BIO-DUR 560 EPOXY COATING APPLIED BY HEATED, PLURAL COMPONENT AIRLESS SPRAY TO GAS PIPELINE.

THE CHALLENGE: A 36" gas pipeline showed excessive current flow during routine electrical testing for corrosion resistance. In order to maintain the integrity of the pipeline it was necessary to remove the old paint and recoat. The short time available for repair work eliminated coal tar epoxy products from consideration because of their long cure time before becoming strong enough to resist rock penetration.

THE SOLUTION: The site of application was heavily wooded, very hilly terrain subject to frequent thundershowers. BIO-DUR 560 was chosen for the new external coating because of its excellent resistance to cathodic disbondment, rapid cure and ease of application by heated, plural component airless spray. In addition to these attributes BIO-DUR 560 has extreme tolerance for exposure to water during application and curing. BIO-DUR 560 is a 1/1 volume ratio, 100% solids epoxy coating reinforced with Kevlar™ fiber for increased toughness and chip resistance. Colors of the components are chosen so that poor mixing resulting from improper operation of the equipment is immediately obvious, in this case the epoxy base was supplied in bright Red Oxide with a Snow White curing agent which blended to a dark pink just before the spray gun.

The repair areas were typically about 50' sections of pipe which were excavated then abrasive blasted to White Metal, (SSPC-SP-10, SA3) standard. Immediately after blasting a single coat of BIO-DUR 560 was applied at nominal 22 mils film thickness with an extra pass along all welds and other discontinuities. Thin Film Technology provided a technician for initial start up since the repair crew had never used plural airless spray before. Within a couple of days the applicators were thoroughly familiar with the equipment and turning out extremely professional work. It was



found that the wet film was smooth and impervious at 22 mils, (550 microns), yet could easily be sprayed to over 80 mils, (2,000 microns) without sagging on vertical surfaces. Occasional porosity from, for example, insects, was easily repaired by simple application of fresh BIO-DUR 560 without any additional surface preparation.

In one section a heavy thunderstorm drenched the freshly applied BIO-DUR 560 only minutes after application. When "jeeped" for pinholes at 2,000 volts the next morning only one (1) jeep – caused by an insect in the film – was found in the 50 foot section.

RESULT: In spite of frequent inclement weather the pipeline coating was repaired on schedule. Once the initial steep "learning curve" was over the coating operation was remarkably trouble free.

For more information regarding this project, contact: Jeff Longmore, TFT Technical Director
Email: Jeff@thinfilmtech.net

PRODUCT: BIO-DUR 560

YEAR: 2003

LOCATION: WEST VIRGINIA

We go where others fear to spread!

Thin Film Technology, Inc.
802 Utah Street
South Houston TX 77017
USA

PHONE (713) 910-6200
FAX (713) 910-6210
E-MAIL Answers@thinfilmtech.net
WEB SITE <http://www.thinfilmtech.net>

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