



Westinghouse Turbine Flange Repair

PROBLEM:

During Westinghouse Turbine overhauls, all manway doors and flange are removed for access. When reassembling the units, these flanges and manway doors must be sealed to prevent hydrogen gas leakage during operation. Their existing sealer, a gasket varnish, Westinghouse Part Number S/N 32101, is no longer being manufactured and a replacement product has not proven satisfactory.

SOLUTION:

Any substitute product had to have the ability to remain soft or flexible during assembly and, yet when cured, prevent Hydrogen Gas leakage at pressures up to 75 psi. We recommended **DUROMAR EEU-Fluid** which has a slow curing time but greater than 50% elongation after curing. Added, but significant benefits, are that the 100% solids, "O" VOC elastomeric epoxy urethane is not flammable, has no odor, and is easily mixed for use.

RESULTS:

EEU-Fluid was applied to the flange and door faces at about 120 mil DFT. The unit was assembled and inspected. No evidence of joint cracking or other problems were found. A Hydrogen Gas was performed at pressures up to 90 psi with no leakage or other problems. The system was put into service, and no problems were encountered from the normal vibration of the power plant.

CURRENT STATUS:

The **EEU-Fluid** has not shown any leakage with time. Based on these results, the utility now stocks **EEU-Fluid** for all their Westinghouse Turbine overhauls. It's use has been extended to other plants requiring the same system.

COMMENTS:

We are now evaluating the use of **EEU-Fluid** in other flange areas as a substitute for, or in addition to, the existing gasket materials. It also may be used as a quick fix of a failing gasket when the time required to take out and replace the gasket might be critical.

