



PROJECT PROFILE: PIPE REHABILITATION LOCTITE TYFO SYSTEM NUCLEAR POWER PLANT PIPE REHABILITATION

LOCATION: NORTH CAROLINA, UNITED STATES

OVERVIEW

The client determined that they needed to structurally strengthen their 84-inch diameter discharge headers on four 84-inch diameter pipelines after many spot repairs to re-mediate leaking issues which were becoming structural concerns. Fyfe products were installed by Fibrwrap Construction during an outage in 2013 to provide standalone rehabilitation on two circulating cooling discharge header pipes.

The scope of work included removal of the cement mortar liner so that the fiber wrap could achieve a structural bond with the steel substrate. Also, chlorides were removed from the steel pipe walls by means of blasting, and chemical treatment prior to bonding. Finally, the LOCTITE TYFO systems were applied in the longitudinal and hoop direction, as dictated by the structural design which was completed using finite element analysis. The fiber wrap design was standalone throughout the straight pipe segments and designed as a composite section at the bends and at the supports; this allowed for the remaining steel section to provide the stiffness required in resisting thrust forces at those locations. Once the fiber installation was completed, compression rings were applied at the fiber terminations for improved detailing and to prevent shear slipping due to longitudinal forces.



LOCTITE TYFO
application



Steel substrate prepped
for application

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