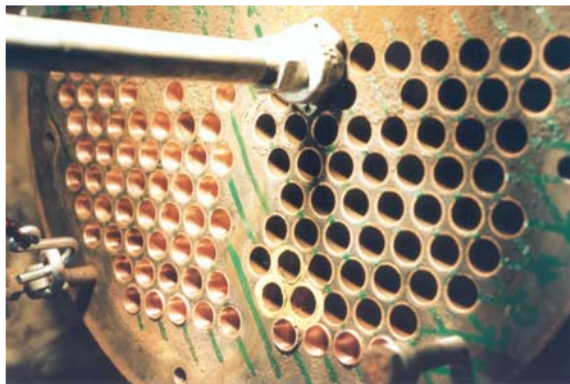


IN PLACE PIPE RESTORATION OF CONDENSER TUBES

Mayflower Park Hotel, Seattle Washington

A non-destructive Eddy Current Tube analysis was completed on a Dunham-Bush model PCWX-180 condenser. The report indicated that of the 132 internal tubes, all had ID pitting from the effects of corrosion. Pitting ranged from a minimum 12% loss of the original wall diameter to in excess of 20% with at least 1 tube where the pitting was thru the wall ie: pinhole leaks.

The condenser tubes, cleaned on the left side and not cleaned on the right side



Tube on upper far left with Red arrow has been cleaned and coated with ACE DuraFlo™ Thermal Conductive Epoxy Coating.

The unit was in operation in a full service hotel and the management determined that either repair or replacement of the condenser unit was necessary. To compound the problem, the unit had originally been installed in a location which can now only be accessed using a crane. The facility is located in the downtown core and since it's original construction the surrounding area had been developed, cutting off any lane or crane lifting access to the location of the condenser. This made removal and installation of a new unit cost very costly.



One recommended alternative to major repair and or replacement was to restore the internal tubes, in place using the ACE DuraFlo® ePIPE® method of pipe restoration.

Using in place pipe restoration techniques combined with barrier coating technologies, ACE DuraFlo was able to clean, prepare and apply a thermal conductive epoxy barrier coating to the inside of the 11/16" ID , copper/nickel tubes. The condenser tubes were restored in place. Of all 132 tubes only one remained out of service owing to severe and large pinholing. The unit was placed back in service after a three day shut down.

ACE DuraFlo – The Repiping Alternative

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