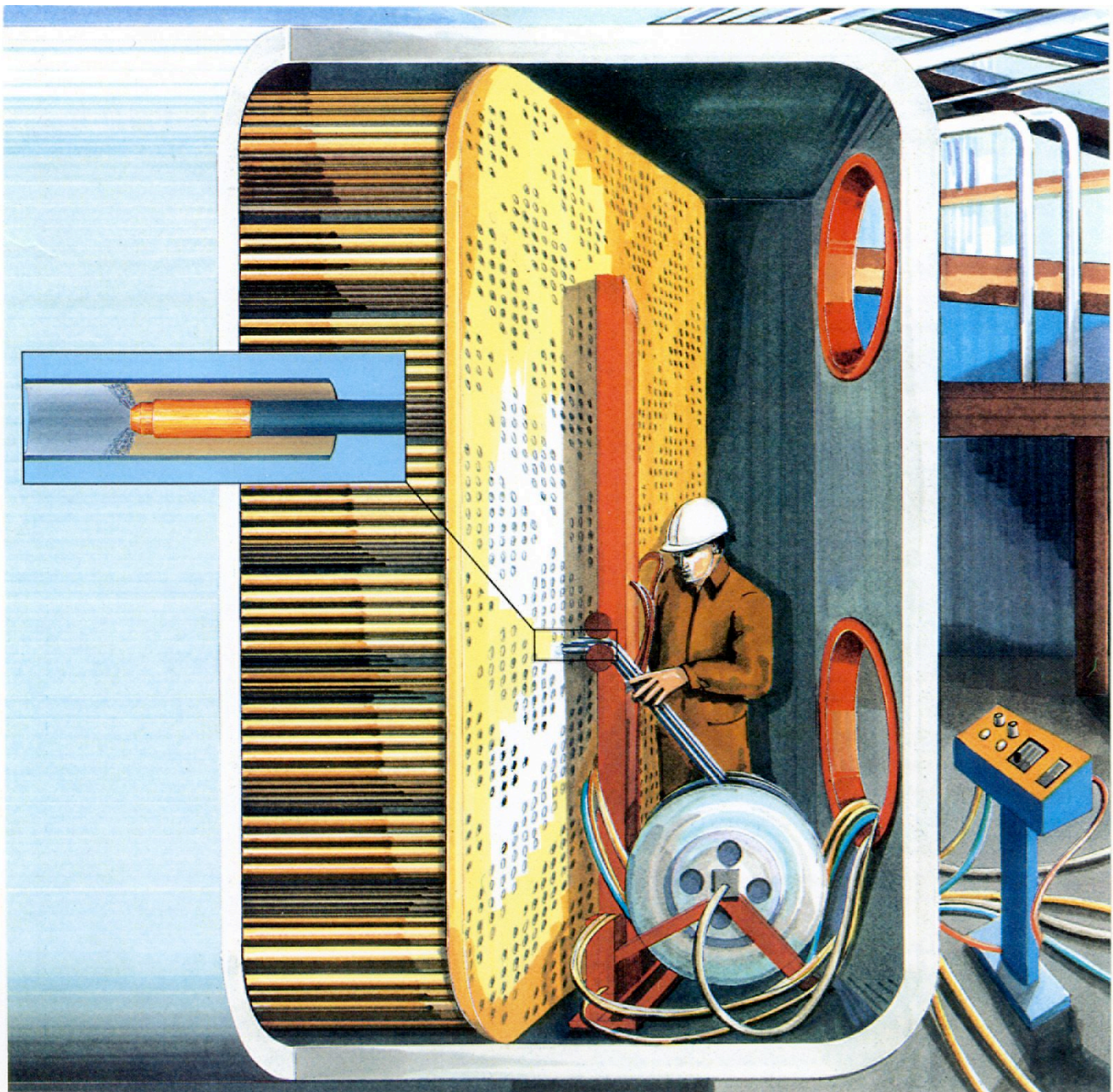
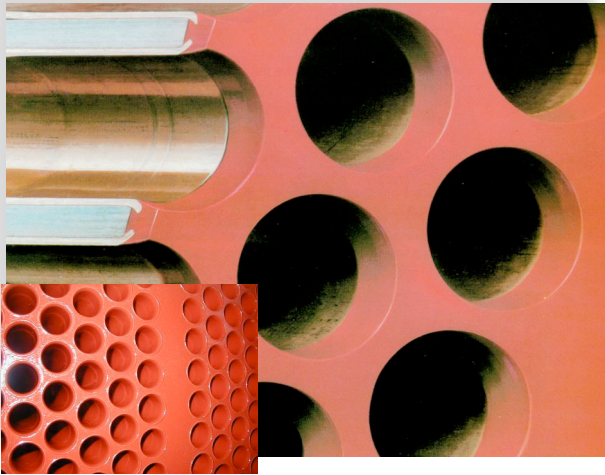


Tube lining system

- For the internal protective coating of heat exchanger and condenser tubes along their entire length
- 100% solids; no solvents; no odour materials
- On-site application





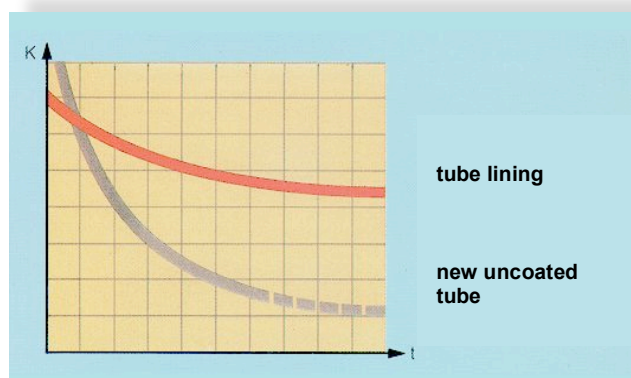
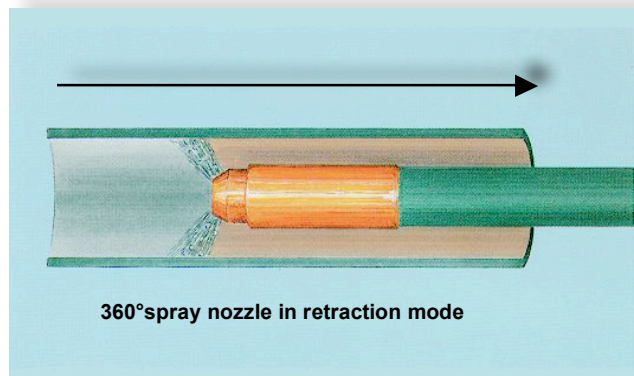
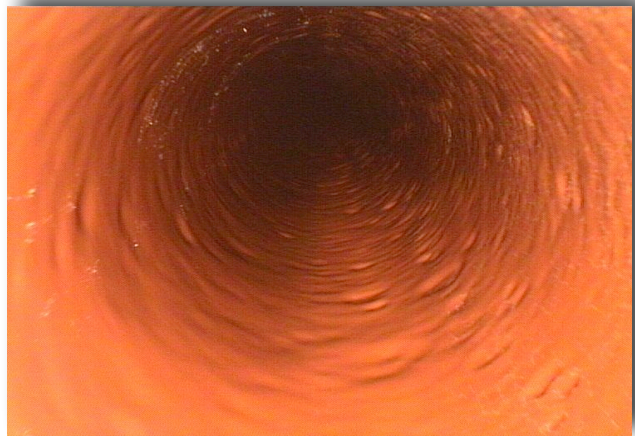
Unique system for on-site application

Why line tubes?*

While coatings on condenser or exchanger tubes will not last as long as retubing (5-10 years vs. 20 years), they have their place in the overall operations and maintenance schedule and options portfolio.

- First the coating operations can be done in a typical outage turnaround cycle and the costs run in the range of ca. 30 - 40% of those of retubing. (For a 750 MW unit, 40'000 12 m tubes, lead time 45 days, implementation ca. 3 weeks).
- If your plant or units tubing does not have 20 years remaining life, the down tube coatings option becomes the most viable economically.
- If your unit does need and warrants a full retube but you need to buy time to budget, engineer, or make it to a turbine outage four years away; full or partial down tube coatings may be an option to avoid operation unavailability and leaks.
- If one water box of two or four is limiting your performance capabilities, the tubes in this box can be coated to extend life to a full retube opportunity.
- If fouling is a problem requiring large maintenance expenditures, coating tubes should be considered as a viable alternative to continued high operating costs.
- Often, we are driven by discharge permit limits. Copper has become a source of problems for many industries. Down tube coatings eliminates almost all Copper discharge. (About 3kg/yr/MW).

The technology and services to conduct full-length tube coatings are available.



Tendency for reduction in heat transfer values for coated and uncoated tubes

*Reference: Article in JPCL Magazine Nov. 2005 "Coatings in Power Plants" by Bruce Woodroff CorrCoat Consulting former Senior Coatings Expert with FPL and Progress Energy, USA