

Application Bulletin

Induction Heat Treating: LAKOS Eliminates Solids Build-Up Problem

System Identification: Induction Heat Treating Machines

Solids/Liquid: Slag residue and metal fines in quench water

Problem: In the systems manufactured and sold by Industrial Electric Heating Company of Columbus, Ohio, metal parts and components are hardened by heating to temperatures of 1600-1800°F. Quench water is used for post-treatment cool-down, creating slag particles which can foul the system's heat exchangers and accumulate in their quench tanks, piping and spray nozzles.

Solution: Their single-cell system (See Photo A) features a LAKOS In-Line Separator, removing troublesome solids from the continuously recirculated water and thereby protecting the integral heat exchanger and spray nozzles. Temperature control for two or more cells is accomplished with a "remote" system (See Photo B) involving a larger quench tank with a weir/wall to isolate the "dirty" incoming water (from the cells) and the "clean" water (ready to return to the individual cells via the heat exchanger). Experiencing an unacceptable overflow of solids into the "clean" water, "dirty" water is now, instead, pumped through a LAKOS In-Line Separator to the "clean" side, resulting in much-improved water quality and protection of the overall system.

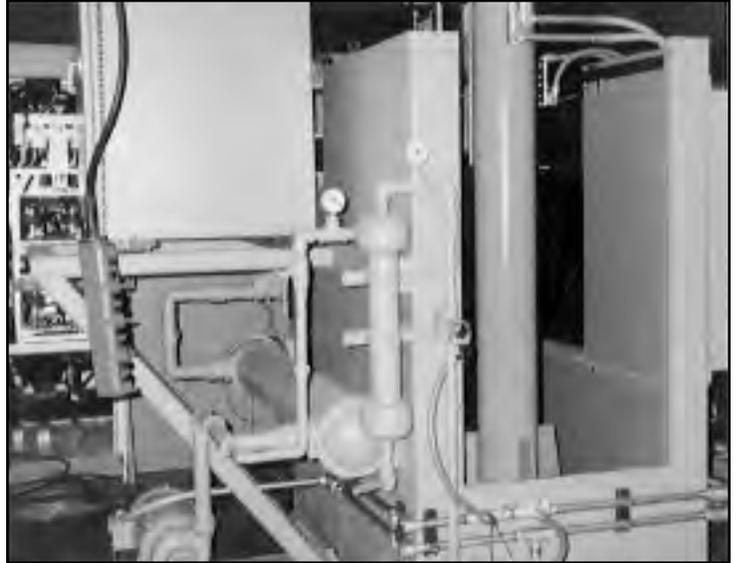


Photo A: Single Cell Heating Treating System

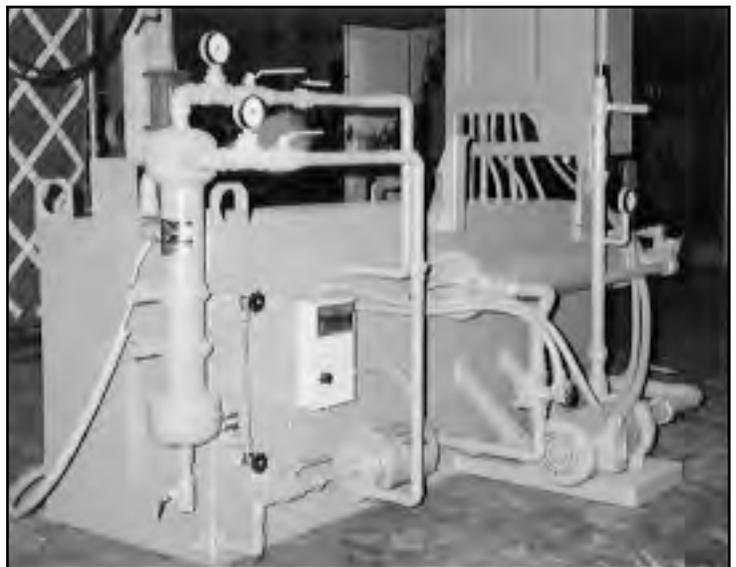


Photo B: Remote Quench Tank for Multiple Cells

CLAUDE LAVAL CORPORATION

Not connected with The DeLaval Separator Company

1365 N. Clovis Avenue • Fresno, California 93727 USA

Telephone: (559) 255-1601 • Fax: (559) 255-8093

Toll-Free: (800) 344-7205 (USA, Canada & Mexico)

www.lakos.com • E-Mail: info@lakos.com