

McGuire Nuclear Station

Customer Comments: "SIMSITE® guide bearings were found to be more dimensionally stable when subjected to temperature change. As a result, six (6) additional pumps on Lake Norman will be fitted with SIMSITE® bearings."

~ Mr. John Sigmon, Maintenance Department, Duke Power.

Problem:

The pumps were originally fitted with cutlass rubber bearing. These were found to have a short bearing life. Then, Thordon bearings were tried, but found to be too soft and the lubricating slots in the bearing tended to dose up. The Thomson bearings were held in position with glue. Temperature change (heated workshop due to outside winter temperature) tended to shrink the Thordon bearing, break the glue and loosen the bearing.

Results:

The Allis Chalmers condensate pumps each with a capacity of 254,000 galls/min are located on Lake Norman NC. The 40 Ft. high x 10" shaft, vertical pump fitted with a 236 RPM x1500 HP motor pumps water from Lake Norman into the RC (river circulating) system, supplying water to the nuclear power stations main turbine, and several take-offs for feed water pumps. The 96" pump discharge is low at 8 to 7 pounds. Duke Power technicians were pleased with the dimensions to which the bearings were machined at 37" long x 10" bore. The lower 37" long bearing is held with lock screws. The middle and upper bearing have a press fit with no locking screws. No priming of the pump is required.



Company Location: Hager's Feny, Huntersville NC.

Company Background: The McGuire Nuclear Station is a nuclear power plant located about 17 miles (27 km) northwest of Charlotte, North Carolina, on the state's largest lake, Lake Norman. It is a 32,500- acre (13,200 ha) lake created in 1963 by Duke Power for the Cowan's Ford Hydroelectric Station. The lake provides cooling water for both McGuire Nuclear Station and Marshall Steam Station.

Simsite® Guide Bearings

