

750-Ton Load Test.

WESTINGHOUSE CHOOSES TELEMOTIVE RADIO CONTROLS FOR GIANT CRANE

TELEMOTIVE.

***The safest move you
can make.***

Photo courtesy
of Troy Starr



When the Turbine-Generator plant of Westinghouse needed a large capacity crane for expansion of their Charlotte North Carolina facility, they had to look no further than another Westinghouse facility in Tampa, Florida where once nuclear reactor vessels had been manufactured.

This plant has been de-commissioned for some time and that made a SHAW BOX 700-ton capacity crane available. The crane had been in service at the Tampa facility since 1967 and needed extensive rework before removal and reconstruction in the new location. The crane consists of two 350-ton



trolleys with 25 ton auxiliary hoists mounted on two main girders with a span of 70 feet. The combined weight of the girders, trolleys, cab and bogie trucks is 273 tons. The formidable task of refurbishing and moving the crane was contracted to Crane-Pro 21 Inc. of Houston. The massive crane had to be completely disassembled and

each component cleaned, inspected and repaired or replaced. This included all the motors, gear cases, wheel assemblies, cable drums, trolleys, control panels, main and auxiliary hoists, hooks, cables and the box girders. In addition all lead based paint and any asbestos had to be removed and disposed of according to environmental regulations and the entire assembly repainted in a non-lead bright safety yellow scheme.

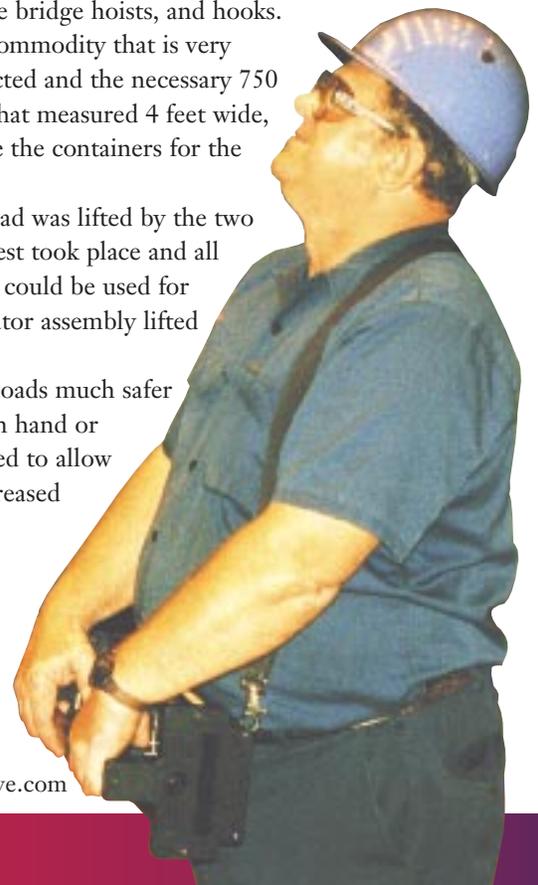
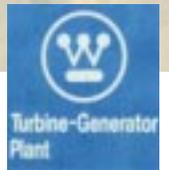
Once all the components were disassembled and rebuilt they were trucked to the Charlotte location where a new building had been constructed to house the crane. This facility is the generator stator assembly bay and has a sloping roof 104 feet high and a length of 202 feet. The crane, with a span of 90 feet, was mounted on rails 70 feet above the floor, which necessitated lengthening the hoist cables by 11 feet.

The crane was an addition to an already large population of 24 overhead cranes at the Charlotte plant. Of these, 23 are operated by Telemotive radio controls and Westinghouse specified Telemotive for the new crane. According to Bill Carriker, Jr., the Facilities Manager for the plant, "We have had years of good experience with the Telemotive radios and we naturally wanted to continue with their radio on the new crane." Working with Crane Pro, Telemotive Applications Engineers designed a custom radio system based on the highly successful Telemotive Model 8000. The system controls all the functions of the cranes including the bridge, two trolleys, four hoists and auxiliary warning horns and lights. Sixty-four outputs are provided by the Telemotive system all controlled by a lever style transmitter.

Once the crane was installed Westinghouse required a full load test of the bridge hoists, and hooks. Finding enough material to lift for the test was not difficult. They used a commodity that is very common-rocks, or more specifically gravel. A local stone quarry was contacted and the necessary 750 tons of gravel was rented and then delivered to the plant in 38 containers that measured 4 feet wide, 5 feet high and 20 feet long. A special rig was devised to stack and combine the containers for the test.

Motors growled, cables strained, and the building vibrated as the huge load was lifted by the two 350 ton hoists. Both Westinghouse and Crane Pro people watched as the test took place and all held their breath until the crane completed the test requirements. While it could be used for up to 700 tons, the crane was de-rated to 600 tons, as the maximum generator assembly lifted is 577 tons.

The Telemotive Model 8000 Radio Controls make handling those huge loads much safer and more efficient as the operator is not 70 feet up in the cab dependent on hand or audio signals for load direction. The crane has added the lift capacity needed to allow Westinghouse to offer customers any size generator or turbine and has increased their competitiveness in the global economy.



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