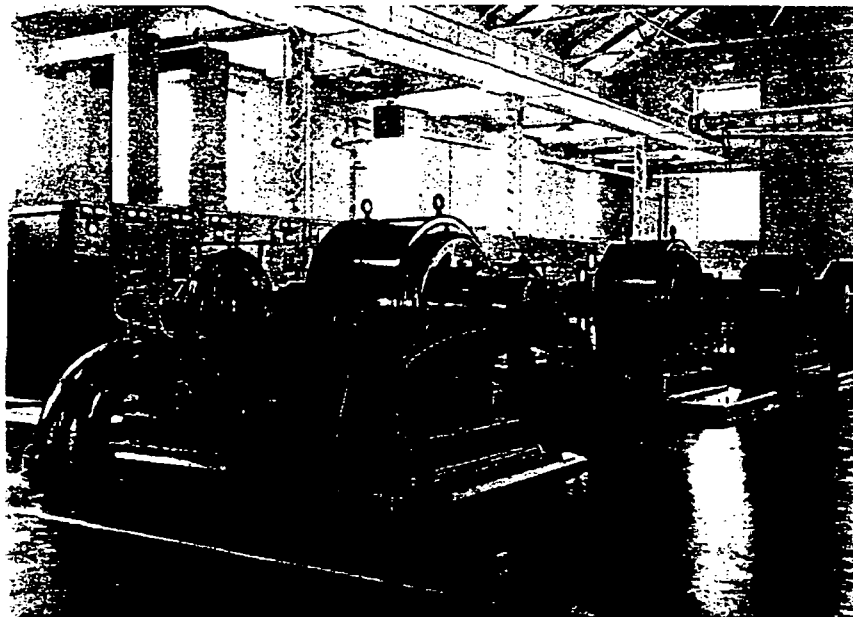


In the remodeled high-service pumping room, the two Elliott 600-hp, 1200-rpm motors are driving the 10-mgd pumps. The next two in line are Elliott 500-hp, 1200-rpm motors driving the 8-mgd pumps. The 5-kw overhung exciters protrude like noses from each motor.



Elliott motors in modernization program at Decatur Water Works

by Gerald L. Davis

*Plant Superintendent
Decatur, Illinois, Water Works*

THE city of Decatur, located about 175 miles southwest of Chicago in the midst of Illinois' famous corn belt, has a population of approximately 66,000. Its citizens together with its industrial plants, consume an average of 10 million gallons of water daily, which is supplied by the Decatur Water Works.

The city has had its own steam-generating plant and water works station since 1871. Following the trend of modernizing facilities for more efficient plant operation, in 1950 the water works was fully electrified using purchased power. This meant the end of the large old steam-driven reciprocating pumping equipment which had been in operation for 40 years. Installed in its stead were two 8-mgd and two 10-mgd high-service Ingersoll-Rand centrifugal pumps driven respectively by two 500-hp and two 600-hp, 1200-rpm Elliott synchronous motors. For low-service pumping two 12-mgd I-R pumps were installed, each driven by Elliott 75-hp 600-rpm motors. An emergency stand-by diesel generator was purchased.

This new equipment has been in operation approximately four years and has shown a great saving in pumping costs. Manpower needed for plant operation has been more than halved, and the cost of purchased power, plus fuel oil for heating the buildings, is still less than the plant's former coal bill. The motor-driven pumps have now been in use more than 25,000 hours with no repairs necessary to the motors and only replacement of packing in the pumps.