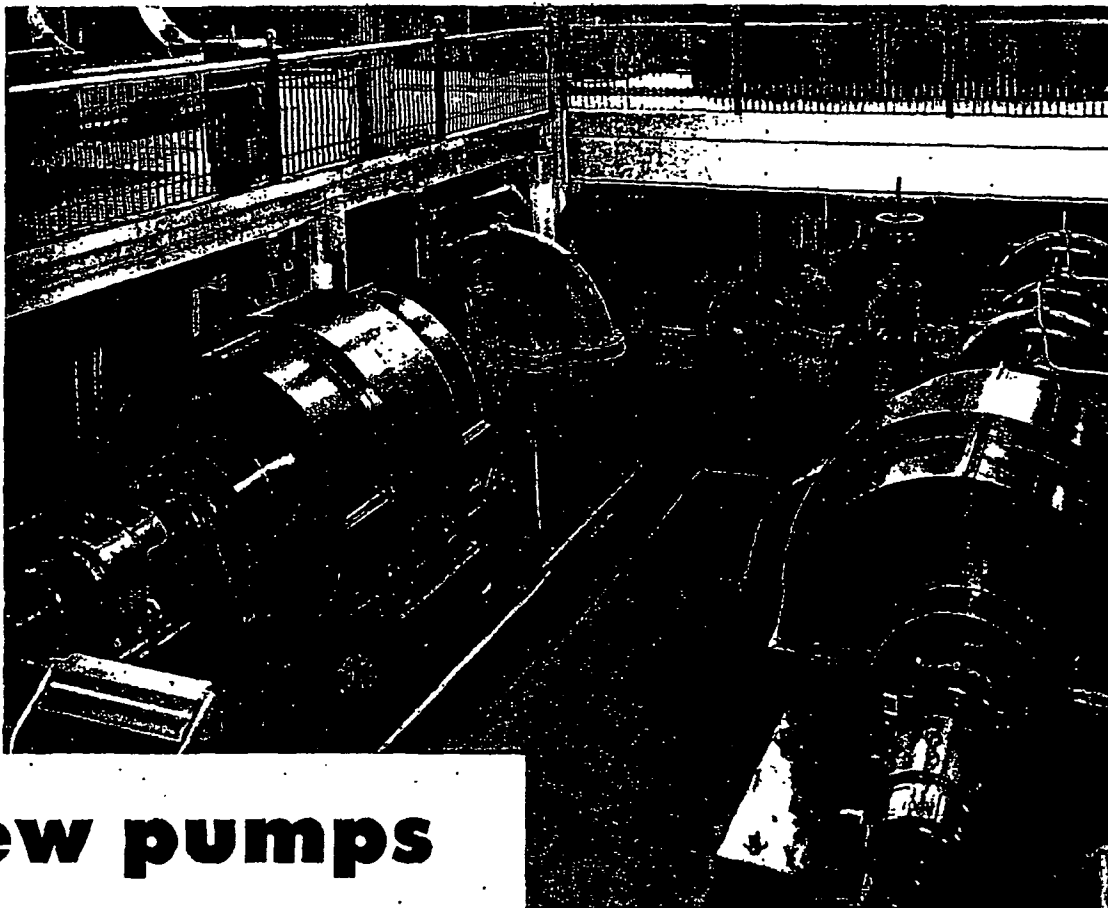




new pumps for Cleveland's Water System

Two motor-driven pumps in the Division Avenue Station. The motor at the left is rated 2000 hp, 720 rpm, and drives a 40-mgd pump at heads from 150 to 250 ft. This pump takes filtered water from a clear well and pumps it into the low-service district. At the right is a 1750-hp, 900-rpm motor driving a 25-mgd pump at heads from 270 to 400 ft. This pump takes water from the clear well and pumps it into the first high-service district. Division Avenue Station is on the west side of Cleveland and most of this water is used on that side of the City.

● The photographs show five large Elliott motors which have recently been installed on new DeLaval pumps, as a part of the continuous improvement program of the Cleveland water works system. These motor-driven pumps represent additions to the pumping capacities of the Division Avenue, Kirtland, and Fairmount Stations. Prior to the installation of these electrically-driven pumps, all pumping at these stations was done either by triple expansion engines or geared turbine-driven pumps. The new, electrically driven pumps were placed in service in September and October of 1945 and have operated continuously since that time. These installations have helped keep pace

with Cleveland's rapidly increasing water demands.

The motors are all of the synchronous type, unity power factor, of horizontal, dripproof construction, with direct-connected exciters. They operate on 3-phase, 60-cycle, 11,000-volt current, and all motors are equipped with bearing temperature relays.

S. C. Simmermacher, chief mechanical engineer, Water Department, City of Cleveland, was kind enough to supply the information regarding the use of these motor-driven pumps which is given here. The installations of the equipment were made under the direction of Frank Schwemler, co-ordinator of engineering for the City of Cleveland.