

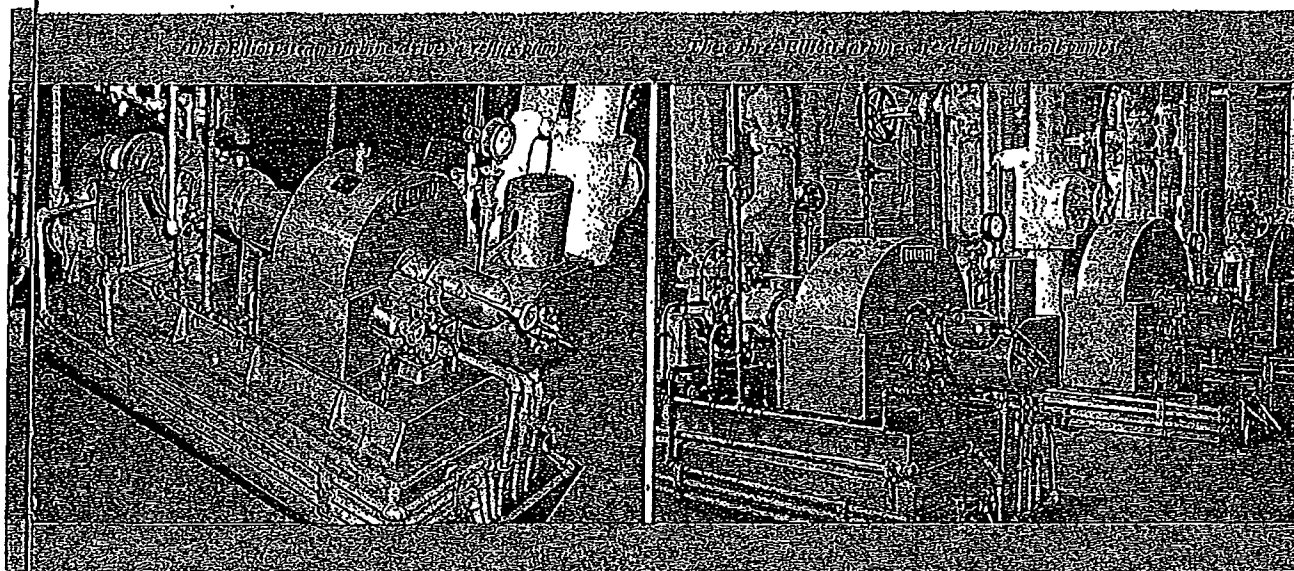
blending system where tetra-ethyl lead is added to give a finished motor fuel, meeting vapor pressure, distillation, and octane specifications.

The new water-circulating pump house and cooling tower provide a closed system to furnish water to the unit for condensing and cooling service. There are nine cells in the induced-draft type cooling tower, which has a total circulating water capacity of 49,500 gpm. Each processing unit has its own water supply pumps and cooling tower cells. Approximately 65 per cent of the

condensate pumps, and the boiler-feed pumps.

An oil refinery requires the movement of oils, water, and other fluids in great quantities and consequently many hundreds of pumps are used. Electric motors are commonly used for drivers but where loss of electric power may create hazards, steam turbines are usually installed. This plant has 52 Elliott mechanical drive turbines (6 to 310 hp) in operation, providing dependable power.

The Ohio Oil Company purchased the site



total circulating water is supplied by electric-driven pumps and the remainder by pumps driven by Elliott steam turbines. This arrangement insures an ample water supply to the process units in the event of an electric power failure.

To provide the necessary additional processing steam and electric power required by the new facilities, two 100,000-lb.-per-hr steam generators, producing 650 psig steam at 750 F total temperature and two Elliott 5000-kva condensing turbine-generators were added to the existing power plant. Steam at 650 psig from the steam generator is reduced to 150 psig for distribution to the processing units. Elliott motors drive the forced- and induced-draft fans, condenser circulating water pumps (see illustration on page 9),

of the present refinery in 1924 from the Lincoln Oil & Refining Co., at which time the refining capacity was about 1000 barrels per day. The crude at this time was processed in small horizontal shell stills. In 1926 the capacity of the refinery was increased to 5000 barrels per day by the addition of a pipe still and thermal cracking facilities. The crude capacity was then gradually increased over the intervening years to 15,000 barrels per day by alterations and modifications of the equipment. The recent expansion and modernization program represents the second major expansion for the Robinson refinery and results in a completely modern plant, capable of producing petroleum products of the highest quality.