

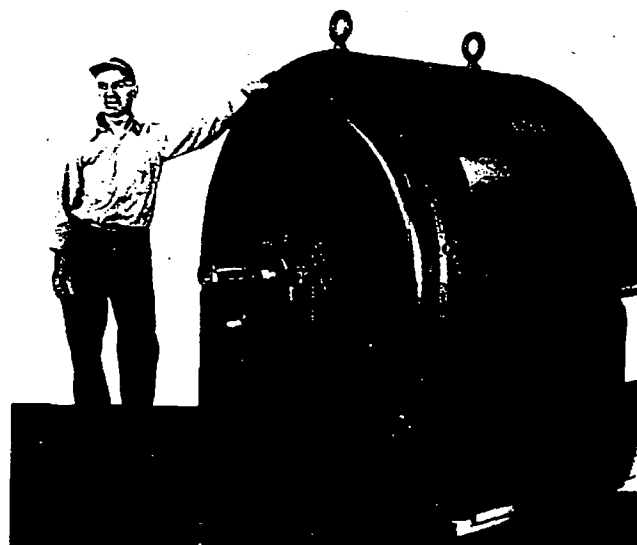
Old motors and new in a modern cement plant

IN the winter of 1926, an article in *Powerfax* stated that eight Elliott synchronous motors had recently been installed in Peerless Cement Corporation's Detroit plant. These included four 500-hp motors driving wet ball mills and four 650-hp motors driving dry ball mills.

Recently, while additional Elliott equipment was being installed in the plant, photographs of these old motors shown here were taken. It can easily be seen from the appearance of these 30-year-old motors that they have been well maintained, and their service record shows that this maintenance has paid dividends. Since 1925, when these motors went into service, only one 500-hp motor has needed any major electrical repairs, even under this difficult service.

The Peerless Cement Corporation was founded in 1897 and has plants in Detroit and Port Huron, Michigan. These two plants produce 4,000,000 barrels of cement clinker annually, approximately half at each plant. Also, the company has just recently purchased land for a new plant in Detroit to produce an additional 1,000,000 barrels. It is interesting to note that while most cement plants are in remote locations because of the difficulty of dust control, one Peerless plant is now located within the city limits of Detroit, and the new plant will also be within the city limits. The plant is subject to a city air pollution ordinance which allows no more than .3 of a grain of dust per cubic foot of exhaust gas from the kilns. An electric precipitator between the kiln exhaust fans and the stack, operating at 95 percent efficiency, is reducing the grain loading well below .3 of a grain per cubic foot.

The kilns, of course, are not the only source of air pollution in a cement plant. Since Peerless uses the wet process in making cement, they do not have any dust problems until the ingredients reach the kilns. However,



A view of the most recent Elliott 350-hp synchronous motor to be purchased by Peerless, taken in our Ridgway shop prior to shipment. It is the drive for a Bradley Hercules pulverizer mill. Due to the crowded location of this motor in the Peerless plant an installation photograph could not be taken.

from this point on until the cement is finally processed, they have numerous dust collectors to keep dust to a minimum. Today the largest source of dust in the plant is in the storage silos where dust is raised every time cement is put in storage or taken out to the packhouse where bagging machines package the cement for shipment. However, the fact that the city of Detroit has given a permit to the company to build a new plant inside the city limits is proof that Peerless has its dust problem under control.

The largest piece of Elliott equipment to be installed in a Peerless plant recently is a 350-hp, 400-rpm high-torque synchronous motor driving a Bradley Hercules pulverizer mill at Port Huron. There are also a large number of smaller Elliott C-W motors on equipment in the Peerless Detroit and Port Huron plants as well as a surface condenser and deaerating heater.

This line of four Elliott 500-hp, 180-rpm synchronous motors driving the wet ball mills has been in operation since 1925. At right is one of the four 650-hp, 180-rpm synchronous motors that drive the dry ball mills, installed at the same time.

