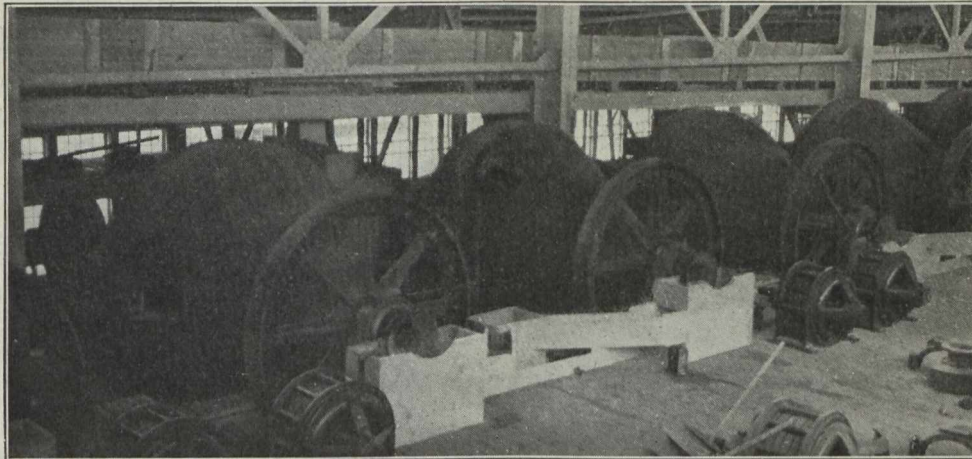


CALUMET AND HECLA REGRINDING PLANT

During the many years of operation of the Calumet & Hecla stamp mills, there has accumulated an enormous tonnage of tailings, which it is now proposed to retreat. A few years ago it was estimated that the 30,000,000 tons of sand could be profitably treated to yield about 150,000,000 lb. of copper. It is now estimated that a considerably larger recovery can be profitably made by a combined concentration and leaching process. The concentration will be effected

The mills being installed are 8 ft. in diameter and have a cylindrical length of 18 in. Various lengths of cylinder have been tried in and the short cylinder, after long trial, was selected as the most economical. Each mill is driven direct by a separate motor.

The accompanying photographs show general view of the regrinding floor as it appeared in January and a view of a completed section as it appeared in April. The second photograph shows the discharge end of the



Hardinge Mills in Calumet and Hecla Regrinding Plant

on Wilfley tables after regrinding of the sands in Hardinge pebble mills. The leaching process devised has not yet been made public.

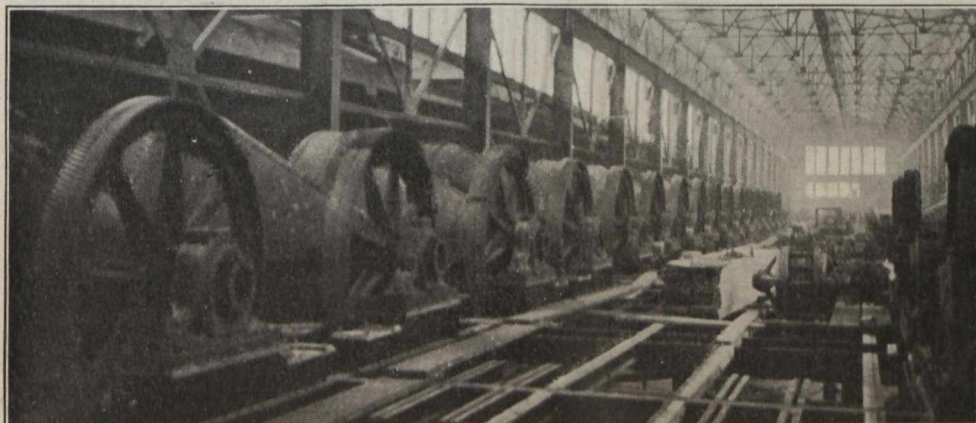
The recrushing process has been satisfactorily demonstrated and a large plant has been recently erected and will soon be in operation. To raise the sands from the lake a steel dredge has been built. Centrifugal pumps will be used to raise the sand and deliver it at a "shore plant." Thence, after draining, the sand will be elevated on a belt conveyor to the regrinding plant.

This plant is housed in a steel building 123 by 432 ft. in size. On the upper floor are, or will be, 64 Hardinge conical pebble. On the lower floor are the Wilfley tables.

mills, the launders, and the individual motors which drive the mills.

In addition to the Wilfley tables on which the re-ground material is treated, the building houses several Wilfley tables which will be used to treat the fine material separated from the coarser sand in settling boxes at the shore plant.

Assuming a recovery of 5 lb. copper per ton at a profit of 5 cents per pound, the profit from the treatment of the Calumet and Hecla sands by regrinding and concentration should be \$7,500,000. A further large profit will be obtained by the leaching process if it proves as successful as the experiments indicate.



Calumet and Hecla Regrinding Plant, Lake Linden, Mich.