

B. Brinkman Photo; J. Sharrar Collection
Champion Mill in Operation; Freda, MI



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BILL BRINKMAN PHOTO / J. SHARRAR COLLECTION

The Champion Mill at Freda began operations in 1905 and had 6 "heads". In 1935-38 it changed operations to the flotation system and finally closed down in Nov. 27, 1967.

Source: Clarence Monette's book entitled PAINESDALE, MICHIGAN OLD AND NEW; 1983; pp 98-100

The stamp mill was at Freda, on Lake Superior, two miles west of Redridge. Lower-pressure turbine and accessories were installed in 1915. The mill had six stamps, there being four compound stamps, with fifteen and a half inch cylinders, each treating about seven hundred tons daily, and two simple stamps, with twenty-eight inch cylinders of about six hundred and sixty tons daily capacity each, giving the mill a total capacity of fully four thousand tons daily.

The concentration department, remodeled in 1928-1929, was equipped with tables and Dorr classifiers for the removal of fine sand and slime, which went direct to a flotation plant. Results of new installation indicated a saving of seventy-five percent of former tailing losses.

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The boiler house had four 200-horse power Stirling and five Scotch marine boilers. In 1916, a two hundred and thirty-five foot concrete stack, one hundred inches diameter at the top, was constructed, and a new boiler installed. Coal was brought to the boilers by tram, and reduced to uniform size by a grinder before being fed into the grates, and ashes were washed into the lake through a launder. Exhaust steam passed through dry condensers, thence to a hot well, from which water was fed to the boilers. Power for the mill was supplied by a 500 horse power cross-compound engine and turbine, with a 180 horse power engine in reserve.

The steel pump house, with truss roof and traveling crane, had a 20,000,000 gallon triple expansion pump. Water for the mill and boilers came from the lake through a 1,020 foot tunnel, the shore end having a well with bottom eight feet lower than the lake level, this being the longest tunnel ever driven under Lake Superior. The intake crib had an area of forty-five feet and, and with a second crib, the tunnel could furnish water for ten stamps. Water cost was less than one and a half cents per ton of ore stamped. Screens had been installed in the tunnel, obviating the trouble formerly caused by sand and wood pulp in the water. A sand loading plant was erected in 1915.