

has been out of service for replacement of linings, we have run two weeks at a time on straight 26-mesh battery-pulp. On two or three occasions, by reason of neglect on the part of the Mexican in charge of the de-watering cones, the thickness of the pulp has been considerably increased over the normal four to one proportion and on such occasions a slight deposit of coarse sand in the pipe has occurred, which always gives notice by a whistling noise at a blow-hole intentionally placed in the pipe about 1,000 ft. from its head. This notice always occurs in plenty of time for the error in the thickness of the pulp to be corrected; on two occasions this occurred on night-shift and the line filled approximately half-full with coarse sand, but an hour's time was sufficient to clear the line (by the introduction of more water at the head) with no expense beyond the momentary delay. As soon as riffles of sand are formed so as to cause an obstruction in the flow, the pipe develops hydrostatic head above the point of obstruction sufficient to force the sand through. Delays from this source have not caused more than four hours' loss of time in the entire 13 months, and even then they were due to carelessness at the cones, as mentioned above. Normally, month after month, there was not the slightest tendency of the pulp to deposit any sand whatever in the line and when, due to electric shut-downs or any other stoppage at the mill, pulp ceases to flow into the head of the pipe, the line keeps itself entirely clear without the introduction of water.

At the present capacity of 250 tons per day the pulp runs only $1\frac{1}{4}$ in. deep on the bottom of the 8-in. pipe, running at such speed that the distance between the ends of the line is traversed in about 12 minutes. The additional 80 stamps to be started in September will double the amount of pulp, but the pipe can carry 1,000 tons as easily as the present 250.

The wear is so slight as to be invisible up to date, but in any case, the pulp running only in the lower part of the pipe would allow of the turning of the entire line five times before it was entirely worn out, and we figure that if the line were to become worn out every two years it would only mean two cents per ton carried. The present appearance is that it will last 50 years.

C. W. VAN LAW.

Guanajuato, July 2.