

COPY

Bombay 4th March 1909
T. W. Fish Eyr.

Lloyd's Register. Calcutta.

Dear Sir

S. S. "Sangu"

In acknowledging your letter re this vessel, she was placed in dry dock and I had all the vertical suction bends taken off (20) and carefully surveyed the conditions of the iron below the suction after all the cement in the vicinity of same was taken away.

I found the iron pitted more or less some of the pit holes being say $\frac{1}{4}$ " deep and covering an area about the size of a man's hand.

Over the worst pitted places I had doubling plates varying in size from 12" to 20" inches square $\frac{1}{2}$ " thick fitted and riveted on and then cemented over.

This doubling was done in Tanks 2, 3 & 5 the others I simply recemented over again mixing the cement with crude brown sugar (which from experience I found to be a capital thing to give gripping power to the

cement).

All the vertical suction pipes were then cut and shortened $1\frac{1}{2}$ ".

The original cement at other parts of the bottom I found in good condition with the exception of an odd place here which I treated in the same manner as over the doubling patches.

The hole which was eaten through the hull bottom in No 2 tank I fitted with a screwed rivet and over this part a doubling plate similar to the others.

Regarding the cementing of the bottom (internally) of the oil tanks the idea is good enough provided absolute soundness can be depended upon, but unfortunately the cement at times shrinks and cracks and, even though the cracks be trifling still, sooner or later the oil or water which may be in it gets below and the remedy is worse than the evil.

I sounded the cement in many places and all appeared sound enough excepting just at the turn of the bilge of the extreme ends of the cement, here, on

account of the cement being tapered to a fine edge, the sound when tapped with a hammer was hollow & drumming.

In my opinion had it been possible to fit fore & aft angle irons between floors at these extreme ends of cement the cementing would be a complete success but as it now stands I am inclined to think that, on account of the vertical height of the oil, the vibration of the hull through the water, and the thinness of the cement at the extreme edges, the oil will sooner or later find its way behind the cement and gradually work down.

