

Extract from *Falmouth* Report No. 5962, dated 24-9-20, on the
S/S "TROLLTIND".

To complete the survey for damage, the crank shaft of the port air compressor requires to be renewed. The Chief Engineer states that this will be done on arrival at a home port, when the engines will also be opened out for survey, the donkey boiler will be repaired and permanent repairs effected to the windlass (Newcastle Report).

Now done: Repairs to damage stated to have been sustained between the dates of the 10th & 12th August 1920, whilst on a voyage from the Tyne to Houston, Texas, and believed to have been caused by the suction valve in the 3rd stage of the air compressor breaking and being forced through the discharge port, thus damaging the third stage cover. - For particulars please see log books. The starboard air compressor was disconnected, taken ashore to shops, stripped for examination & the following repairs carried out:-

The third stage chamber bored out, suction valve, plunger & rings renewed & spare cover fitted (this cover had previously been in use & on account of the discharge valve seat being too deeply machined, the discharge valve projected through into chamber & prevented clearances being adjusted as finely as desirable).

Second stage rings made workable, one ring renewed & new suction valve fitted.

First stage piston, chamber, and connecting rod top end bush filed up and hand dressed: crank pin brasses remetalled and refitted.

All reassembled & tried under working conditions, but the boring out of the third stage chamber was not satisfactory, & overloads were set up in the second & first stages owing to the third stage leaking, with the result that the crank pin became overheated & the white metal ran out.

After this trial & the third stage chamber having worked somewhat smoother, new rings were fitted to the third stage plunger, & the crank pin bearing was remetalled, all reassembled & the engines again tried under working conditions, with the former result, viz : that owing to excessive pressures in the first & second stages, the crank pin bearing again became badly overheated.

A floating reamer of proper size was then made & the ~~third~~ third stage chamber reamed out in a large vertical drilling machine; new third stage rings fitted, all reassembled & tried under working conditions, when during this trial the third stage suction valve again broke, further damaging the already defective cover fitted. This cover was removed & the former somewhat

P.T.O.



© 2020

Lloyd's Register
Foundation

"Trolittind"

- 2 -

damaged cover refitted with new suction valve, and a further trial of the engines made with the result that excessive pressures in the first & second stages again ~~wasmadxt~~ caused the white metal in the crank pin bearing to become overheated & run out.

An entirely new air compressor, complete, was then obtained from the makers, fitted in place, tried under working conditions with satisfactory results, and also a complete new air compressor has been placed on board as spare.

In the port engine the forward end of the air compressor crank shaft was found to be broken off, but as the fracture was clear of the forward bearing & the broken off part only carries the the worm wheel of the hand turning gear, this does not in my opinion interfere with the safe working of the engines for the present voyage.

Recommendation &c.

This machinery is now so far as seen in safe working condition and eligible, ~~tm~~ in my opinion, to remain as classed without fresh record of survey and subject to the engines being opened out for examination & the survey being completed as above on arrival at a home port.

W695-0152(2-1-1)



© 2020

Lloyd's Register
Foundation

erstood
report or
error of