

Falmouth

27<sup>th</sup> September 1920

A. T. Graham

Messrs G. C. Fox and Co attend on board the wood  
twin screw motor vessel "Troltind" 2175 tons gross  
register, of New York; P. Berghord. Master: as she lay  
afloat in Falmouth harbour on the 10<sup>th</sup> August 1920  
and subsequent dates: in order to ascertain the  
nature and extent of damage stated to have been  
sustained between the dates of the 10<sup>th</sup> and 12<sup>th</sup> of  
August 1920, whilst on a voyage from the Tyne to  
Houston, Texas, and believed to have been caused by  
the suction valve in the third stage of the starboard 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 having been disconnected  
taken ashore to shops, and there stripped for  
inspection

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W695-0154 (10/4)

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tion of machinery damage report on Motor Vessel "Trolldind"  
On examination found in the starboard air compressor the end of the third stage plunger broken, the third stage chamber cover bruised and deformed from being fouled by broken pieces of suction valve. Suction valve broken and the chamber scored.

The second stage piston rings set fast in piston, one piston ring and second stage suction valve broken.

The first stage piston and chamber slightly scored and connecting rod top end bearing cut in bush. The white metal in the crank pin brasses fused and run out.

In the port Air Compressor, the forward end of the crank shaft-taking worm wheel of hand turning gear was found to be broken off.

Recommended in the starboard air compressor the third stage chamber to be bored out; suction valve, plunger and packing, rings to be renewed and the spare cover fitted.

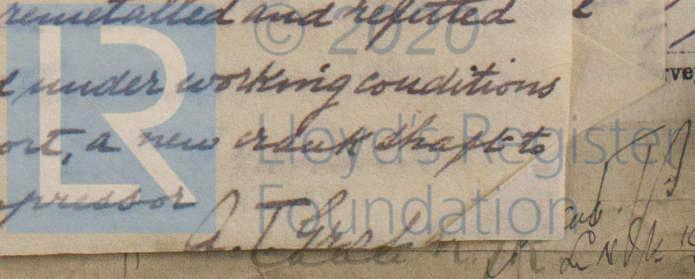
(This cover had previously been in use, and on account of the discharge valve seat having been too deeply machined, the discharge valve projected through and prevented clearances being adjusted as finely as desirable.)

The second stage piston rings to be made workable one new ring and new suction valve to be fitted.

The first stage piston, chamber, and connecting rod top end bush to be filed up and hand dressed.

The crank pin brasses to be reinstalled and refitted.

All to be reassembled and tried under working conditions also on arrival at a home port, a new crank shaft to be fitted to the port air compressor.





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action of machinery damage report on Motor Vessel "Trolind"

These recommendations were carried out, but the boring of the third stage chamber of the starboard air compressor was not satisfactory and on running the engine the overload in the first and second stages owing to the first stage leaking, caused the metal in the crank pin bearing to become overheated and run.

Further recommended a new set of piston rings to be fitted to the third stage of the starboard air compressor, the crank pin brasses to be remetalled, reassembled and tried under working conditions.

This was done, the engine again tried and similar excessive pressures observed in the first and second stages with the result that the metal in the crank pin brasses again became overheated and ran out.

Further recommended that a floating reamer of the proper size should be made, the third stage chamber of the starboard air compressor reamed out by it in a large vertical drilling machine, new rings to be fitted to the third stage plunger all to be reassembled and tried under working conditions.

In this being done, during the trial of the engines the third stage suction valve of the starboard air compressor again broke, further damaging the already defective cover already fitted.

This cover was then removed and the former and somewhat damaged cover refitted, a further trial of the engines made, with the result that excessive pressures in the first and second stages of the starboard air compressor again caused the white metal to become overheated in the crank pin bearing.

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tion of machinery damage report on Motor Vessel "Trolletina" and it was therefore recommended that a new air compressor complete, be obtained from the makers and fitted on board, and tried under working conditions.

A new compressor was placed on board the vessel on the 22<sup>nd</sup> Sept 1920, fitted up and tried with satisfactory results on the 24<sup>th</sup> Sept 1920

The foregoing recommendations have been made with a view to enabling this vessel to prosecute her voyages and ultimately placing the machinery in the same state of efficiency as before having sustained the damage in question.

See £21.

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