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# Lloyd's Register of Shipping.



Port

FREMANTLE. W.A.

8th September, 1939.

## This is to Certify that

Wm. G. Davies,

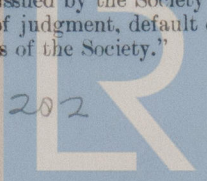
the undersigned Surveyor to this Society did at the request of the Master and Agents (Messrs. Wigmores Ltd.) Survey the Machinery of the Steel Screw Steamer "HOPESTAR" of Newcastle 5267 Gross Registered tons for the purpose of noting the reasons for unusual vibration and grinding noise in the vicinity of the secondary pinion and shaft. It is stated that this vibration and grinding noise appeared to develop prior to the vessel arriving at Sydney on the present voyage. It is also stated that the Main Shaft had a slight fore and aft travel when in motion as felt and noticed by the poker gauge. For further particulars see Log Books.

UPON EXAMINATION with the gear casing and the secondary shaft after bearing cover and main shaft after bearing cover removed found:-

- (1) thick deposit in Oil Sump. This deposit was of a plastic nature and contained considerable quantities of metallic particles similar in every respect to a sample of deposit taken from the previous batch of oil which had been removed approximately three weeks ago and a new batch of oil substituted.
- (2) the ahead side of the secondary pinion teeth were seen to be worn very bright and a sharp ragged edge produced along the top of each tooth.
- (3) the ahead side of the main wheel teeth were seen to be pitted where small flakes of metal had been removed by "chatter" and these indents or pits corresponded in size to the metallic particles found in thick oil deposit.
- (4) the extreme after end of the secondary pinion shaft appeared to be bearing very hard on the bottom of the after ring bearing of the thrust and when the lower half was removed it was found that the top readings of the bridge gauge over the after journal of the secondary pinion shaft had increased from .036 to .038.
- (5) when the after faces of the secondary pinion and main wheel were exactly in line and both the secondary pinion shaft and main shaft hard aft against their respective astern thrust pads the measured clearances between the forward (ahead) thrust pads and thrust collar were found to be as follows:- Secondary pinion shaft .045. Main Wheel Shaft .055" and the poker gauge readings in that position were .062 and .056 respectively.

This Certificate is issued upon the terms of the Rules and Regulations of the Society, which provide that:-

While the Committees of the Society use their best endeavours to ensure that the functions of the Society are properly performed, it is to be understood that neither the Society nor any Member of any of its Committees is under any circumstances to be held responsible for any inaccuracy in any report or certificate issued by the Society or its Surveyors, or in any of the Register Book or other publication of the Society, or for any error of judgment, default or negligence of any of its officers or any Member thereof, or the Surveyors, or other Officers or Agents of the Society."





S.S. "HOPESTAR" at Fremantle 8-9-39.

RECOMMENDED that:-

- (1) all oil be removed from the system and main gear case sump and all pockets cleaned of deposit and metallic particles and a new charge of clean oil admitted.
- (2) the ahead side at tips of the secondary pinion teeth be "honed" to remove all ragged edges and the teeth also dressed.
- (3) the main wheel be cleaned of all metallic dust and/or particles.
- (4) the after ring bearing (aft of the thrust collar) be eased on the bottom half to accommodate itself to the .002 (two thousandths) difference in the bridge gauge readings of the secondary pinion shaft after bearing.
- (5) a new forward liner .010 (ten thousandths) thicker than the present liner be fitted to the main wheel thrust block to ensure the same fore and aft clearance namely .045 in both the secondary pinion shaft and main shaft thrusts.

The whole of the recommended work has now been satisfactorily completed and an Interim Certificate issued.

*Wm. G. Davies,*

SHIP & ENGINEER SURVEYOR  
TO LLOYD'S REGISTER OF SHIPPING.

ADDITIONAL.

A further recommendation was made to the effect that the Propeller and vicinity be examined by a competent Marine Diver in order to ensure that no faults existed there which might cause the slight fore and aft drift of the main shaft which was referred to at the commencement of this Report.

This examination has been made and the attached report from the Diver shows the Propeller and vicinity to be in good condition.

*Wm. G. Davies,*

SHIP & ENGINEER SURVEYOR  
TO LLOYD'S REGISTER OF SHIPPING.

Attach to Report No 1202.



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Foundation  
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