

## Report of Survey for Repairs, &amp;c., of Engines and Boilers.

SEP -6 1937

(Received at London Office)

Writing Report	31/7/1937	When handed in at Local Office	31/7/1937	Port of SYDNEY, N.S.W.
Survey held at	Sydney N.S.W.	Date. First Survey	24 <sup>th</sup> May	Last Survey 28 <sup>th</sup> July 1937. (No. of Visits 25.)
on the Machinery of the Wood, Iron and Steel T.S.S. "AWATEA"				
Gross	13482	Vessel built at	Barron	By whom Vickers-Armstrongs Ltd When 1936 7
Ton	7929	Engines made at	Barron	By whom Vickers-Armstrongs Ltd When 1936
Net	4608	Boilers, when made (Main)	1936	(Donkey)
Boilers	6	Owners Union S.S. Co. of N.Z. Ltd	Managers	Port Wellington N.Z. Voyage Auckland
Boilers	4608	If Surveyed Afloat or in Dry Dock Both	(State name of Dock.)	Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).
Boilers				

Report No. Port

## Details of Examination and Repairs (if any) (See NEW GEARING)

*I Surveyors, when held, must be reported in detail and verbatim in the terms of the Rules. State clearly the Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and being detailed in the body of the report, should be briefly summarised at the end of the report. State also the initials of any letters respecting this case.* M 2/3/37.

In cases where the Surveyor has not made a special damage report he is required to state whether he declined his services for this purpose, and why they were declined?

Damages report made by anyone else? If so, by whom?

Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time?

*Starboard Fore 14/6/37, Starboard Centre 24/6/37, Starboard aft 1/7/37  
Port 7/6/37, Port 2/6/37 Port 27/5/37*

not done, state for what reasons?

parts of the Boilers could not be thus thoroughly examined?

special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler?

Surveyor examine the Safety Valves of the Main Boiler?

*Yes*

To what pressure were they afterwards adjusted under steam?

450 lbs.

Surveyor examine the Safety Valves of Donkey Boiler?

*Yes*

To what pressure were they afterwards adjusted under steam?

Surveyor examine all the manholes, doors and their fastenings of the Main Boilers?

*Yes*

, and of the Donkey Boilers?

Surveyor examine the drain plugs of the Main Boilers?

, and of the Donkey Boiler?

Surveyor examine all the mountings of the Main Boilers?

*Yes*

, and of the Donkey Boiler?

Shaft now been drawn and examined?

*No*

Is it fitted with continuous liner?

Is an approved appliance fitted at the after end of the shaft to permit of its being efficiently lubricated?

Shaft now been changed? If so, state reasons.

Shaft now fitted been previously used?

Has it a continuous liner?

Is an approved appliance fitted at the after end of the shaft to permit of its being efficiently lubricated?

Distance between lignum vita or bearing metal of stern bush and top of after bearing of screw shaft.

*Port & Starboard - close working fit.  
Complete.*

Survey is not complete, state what arrangements have been made for its completion and what remains to be done.

The Vessel in dry dock, propellers, after end of stern bushes & sea connections with their fastenings now in good condition.

S. The six main W.T. boilers examined externally & internally with their superheaters, steam pipes, safety valves & mountings, afterwards examined under steam & their safety valves adjusted as above. Superheater safety valves adjusted to 425 lbs. (28/7/37)

Machinery: In order to install the new gearing, all turbines were removed from their seatings, the H.P. & I.P. turbines were removed to the repair shop & by Owner's instructions all turbines (main engines) were opened up for examination. The labyrinth packing at the forward end of both H.P. Turbines was found slack in the grooves of the C.I. sleeves in stator casings. By arrangement with the Builder's Representative, these sleeves have now been renewed in mild steel.

General Observations, Opinion, and Recommendation: - The Machinery of this Vessel, as

it is clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, B.S. 0.11, B&M.S. 0.11, or + L.M.C. 0.11, 140 lb. F.D., &c.)

as seen, is now in good & efficient condition - eligible in our opinion to remain as classed with fresh record of B.S. 7.37

Fee (per Section 28).....

£ 50 8 0

Fees applied for

30/7/1937

Received by me,

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and new labyrinth packing fitted to them. In both I.P. & h.p. turbines, a number of binding wires in the blading of rotors & casings were found broken, these have now been renewed & rebrayed as necessary.

New Gearing, (see Sect<sup>r</sup> letter M 2/3/37) :-

In accordance with arrangements made by the Owners & the Builders, the Vessel was laid up at Cockatoo Island Dockyard for the installation of a complete set of new gearing<sup>(including gear casings & intermediate shafts)</sup> for each of the main engines. The original gearing was removed from the Vessel and the seatings for gearings & thrust blocks of both engines have now been altered in conformity with the Builder's plan No 74 A (approved 18/1/37) forwarded by the Secretary M. 2/3/37. All rivet-holes, in the modifications & additions to seatings, were reamed & seen "fair" before riveting commenced, all rivets were hammer-tested & found tight. The bulkhead at frame N° 65 was recessed one frame space back in way of intermediate shafting, to suit the modifications in connection with the gearing & thrust-blocks (as shown on Builders plan N° 850). All electric cables & fittings which were removed for access in carrying out these alterations have now been satisfactorily replaced, afterwards megger-tested & found in order.

The new gearing which was supplied complete from the Builders, (Messrs Vickers-Armstrong Ltd) has now been satisfactorily installed in the Vessel & this work was carried out under the supervision of the Builder's Representatives.

On completion of the above, a basin trial was carried out on the 24<sup>th</sup> inst & full power sea trials were carried out on the 27<sup>th</sup> inst, during which, the main engines were manoeuvred ahead & astern at various speeds, auxiliary machinery electrical installation & steering gear were examined & tested under working conditions & all found in good & efficient condition.