

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

19 MAR 1934

Date of writing Report 6-2-1934 When handed in at Local Office 6-2-1934 Port of Sydney, N.S.W.  
 No. in Survey held at Sydney, N.S.W. Date, First Survey 18-1-34 Last Survey 30-1-1934  
 Reg. Book. 31571 on the S.S. "NALPA" (Number of Visits 6)  
 Tons { Gross 685  
 Net 365  
 Built at DELFTZIJL By whom built WORTELBOER & Co. Yard No. 10 When built 1918  
 Engines made at DELFTZIJL By whom made WORTELBOER & Co. Engine No. when made 1918  
 Boilers made at DORDRECHT By whom made H. P. KOOPMAN Boiler No. when made 1918  
 Registered Horse Power 84.2 Owners The Adelaide Steamship Co. Ltd. Port belonging to Port Adelaide  
 Nom. Horse Power as per Rule 108 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES

**ENGINES, &c.**—Description of Engines Three cylinders - Triple Expansion  
 Dia. of Cylinders 14.75, 23.4, 38.6 Length of Stroke 26.8 Revs. per minute 26 1/2 No. of Cylinders 3 No. of Cranks 3  
 Dia. of Crank shaft journals as per rule 7.6" Dia. of Crank pin 7 1/16" Crank webs Mid. length breadth 11 1/4" Thickness parallel to axis 5 1/4"  
as fitted 7 1/16" Mid. length thickness 5 1/4" If shrunk Thickness around eye-hole 3 5/8"  
 Diameter of Thrust shaft under collars as per rule 7.6" Diameter of Tunnel shaft as per rule 7 1/4" Diameter of Screw shaft as per rule 8.07" Is the Screw shaft  
as fitted 7 1/16" as fitted 7 5/16" as fitted 8 1/8"  
 fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made watertight in the propeller boss Yes  
 If the liner is in more than one length are the joints burned Lines in one length If the liner does not fit tightly at the part  
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓  
 If two liners are fitted, is the shaft lapped or protected between the liners ✓ Is an approved appliance fitted at the after end of the shaft to permit  
 of it being efficiently lubricated No Length of Stern Bush 3'-0" Diameter of Propeller 10'-2"  
 Pitch of Propeller 10 feet No. of Blades 4 State whether Moveable No Total Surface 33 sq. feet square feet.  
 No. of Feed Pumps fitted to the Main Engines 2 Diameter of ditto 2 5/8" Stroke 1'-1 3/8" Can one be overhauled while the other is at work Yes  
 No. of Bilge Pumps fitted to the Main Engines 2 Diameter of ditto 2 1/16" Stroke 1'-1 3/8" Can one be overhauled while the other is at work Yes  
 Total number and size of power driven Feed and Bilge Auxiliary Pumps ONE GENERAL SERVICE - DUPLEX 6" x 4" x 6" STROKE  
 No. and size of Pumps connected to the Main Bilge Line 2 MAIN ENGINE 2 1/16" DIA. 1 GENERAL SERVICE 6" x 4" x 6" STROKE. 1 BALLAST 6" x 8 1/2" x 6" STROKE  
 No. and size of Ballast Pumps DUPLEX 6" x 8 1/2" x 6" STROKE No. and size of Lubricating Oil Pumps, including Spare Pump ✓  
 Are two independent means arranged for circulating water through the Oil Cooler ✓ No. and size of suction connected to both Main Bilge Pumps and Auxiliary  
 Bilge Pumps;—In Engine and Boiler Room Three 2" suction and in Holds, Two 2" suction, in hold

No. and size of Main Water Circulating Pump Bilge Suctions 1 - 4" suction No. and size of Donkey Pump Direct Suctions  
 to the Engine Room Bilges 1 - 2" suction Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes  
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes  
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves and cocks  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line Above  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes  
 What Pipes are carried through the bunkers Two hold bilge suction pipes How are they protected In bilge, under timbers  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
 Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one  
 compartment to another Yes Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door worked from

**MAIN BOILERS, &c.**—(Letter for record S) Total Heating Surface of Boilers 2002 sq. feet  
 Is Forced Draft fitted No No. and Description of Boilers Two single ended multitubular Working Pressure 180 lb/sq. in.  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes 25B  
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? ✓

**PLANS.** Are approved plans forwarded herewith for Shafting ✓ Main Boilers Yes Auxiliary Boilers ✓ Donkey Boilers ✓  
 (If not state date of approval)  
 General Pumping Arrangements Yes Oil and Burning Piping Arrangements ✓

**SPARE GEAR.** State the articles supplied:— One spare propeller. One spare propeller shaft.  
One pair of bottom end brasses with bolts and nuts. One pair of top end brasses  
with bolts and nuts. Two main bearing bolts and nuts. Twelve coupling bolts.  
One air pump rod. One circulating pump rod. One feed pump ram. Two sets  
of feed pump valves. One set of bilge pump valves. A quantity of assorted bolts  
and nuts. Iron of various sizes.

The foregoing is a correct description,

Manufacturer.



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Lloyd's Register  
Foundation

005518-005528-0137



During progress of work in shops - - -  
Dates of Survey while building 18<sup>th</sup>, 19<sup>th</sup>, 22<sup>nd</sup>, 23<sup>rd</sup>, 24<sup>th</sup>, 30<sup>th</sup> January 1934  
During erection on board vessel - - -  
Total No. of visits 6

Dates of Examination of principal parts - Cylinders 18-1-34. Slides 18-1-34.  
Covers 18-1-34. Pistons 18-1-34. Rods 18-1-34.  
Connecting rods 18-1-34. Crank shaft 18<sup>th</sup> & 19<sup>th</sup> January 1934. Thrust shaft 19-1-34.  
Tunnel shafts 19-1-34. Screw shaft 24-1-34. Propeller 24-1-34.  
Stern tube 24-1-34. Engine and boiler seatings 18<sup>th</sup> & 22<sup>nd</sup> January 1934. Engines holding down bolts 22-1-34.  
Completion of pumping arrangements 30-1-34. Boilers fixed. Engines tried under steam 30-1-34.  
Completion of fitting sea connections 24-1-34. Stern tube. Screw shaft and propeller.  
Main boiler safety valves adjusted 29-1-33. Thickness of adjusting washers Port: 7/16" Aft: 25/32" Starboard: 23/32" Aft: 13/16"  
Material of Crank shaft Mild Steel. Identification Mark on Do.  
Material of Thrust shaft Mild Steel. Identification Mark on Do.  
Material of Tunnel shafts Mild Steel. Identification Marks on Do.  
Material of Screw shafts Mild Steel. Identification Marks on Do.  
Material of Steam Pipes Mild Steel. Test pressure. Date of Test.  
Is an installation fitted for burning oil fuel No. Is the flash point of the oil to be used over 150°F.  
Have the requirements of the Rules for carrying and burning oil fuel been complied with.  
Is this machinery duplicate of a previous case. If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c.)  
This vessel's machinery was constructed under the survey of Norske Veritas.  
The machinery has now been carefully surveyed, found in good condition, and the material and workmanship appear to be of the highest class.  
The main engine H.P. cylinder which was originally 14.4 inches diameter, has since been bored out and is now 14.75 inches diameter.  
The engines and boilers are securely and satisfactorily fitted on board and have been seen working under a full head of steam, ahead and astern.  
The pumping arrangement has been examined and found in order.  
This vessel's machinery is, in our opinion, eligible for the Society's class and to have records of L.M.C. 1.34 and Propeller Shaft seen 1.34 (continuous lines) noted in the Register Book.

Certificate to be sent to  
The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for,  
Special ... £ 15 : 0 : 0 31.1.1934  
Donkey Boiler Fee ... £ ✓ : : When received,  
Travelling Expenses (if any) £ ✓ : : 8.2.1934  
FRI. 4 MAY 1934

Committee's Minute  
Assigned See other Rpt

Just C. Brskwi  
Barton P. Fielden.  
Engineer Surveyor to Lloyd's Register of Shipping.

TUE. 6 NOV 1934  
FRI. 15 FEB 1935  
TUE. 12 MAR 1935

