

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

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Date of writing Report 19 When handed in at Local Office 19 Port of **SYDNEY, N.S.W.**

No. in Survey held at **SYDNEY, N.S.W.** Date, First Survey **11/9/40** Last Survey **29/5/1941**
 Reg. Book. **48768** on the **S.S. "MAIWARA"** (Number of Visits **2**) Tons { Gross **621**
 Net **331**
 Built at **Danzig** By whom built **International S.S. & E. Co. Ltd** Yard No. **41** When built **1924**
 Engines made at **Danzig** By whom made **International S.B. & E. Co. Ltd** Engine No. **206** when made **1924**
 Boilers made at **Danzig** By whom made **International S.B. & E. Co. Ltd** Boiler No. **513** when made **1924**
 Registered Horse Power **69** Owners **Auleo Pty Ltd** Port belonging to **Glasgow**
 Nom. Horse Power as per Rule **55 85** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **Yes**

ENGINES, &c.—Description of Engines **Inverted Triple Expansion**

Dia. of Cylinders $14\frac{3}{16}$ $22\frac{13}{16}$ $36\frac{5}{8}$ Length of Stroke $22\frac{7}{8}$ Revs. per minute **120** No. of Cylinders **3** No. of Cranks **3**

Dia. of Crank shaft journals as per rule 7.06 as fitted $7\frac{5}{16}$ Dia. of Crank pin $7\frac{5}{32}$ Crank webs Mid. length breadth $1.3\frac{3}{4}$ shrunk Thickness parallel to axis $4\frac{3}{4}$
 Mid. length thickness $4\frac{3}{4}$ Thickness around eye-hole $3\frac{1}{32}$

Diameter of Thrust shaft under collars as per rule 7.06 as fitted $7\frac{3}{32}$ Diameter of Tunnel shaft as per rule 6.72 as fitted $6\frac{15}{16}$ Diameter of Screw shaft as per rule 7.63 as fitted $7\frac{31}{32}$ Is the Screw shaft fitted with a continuous liner the whole length of the stern tube **No lines** 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 **Yes** If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with plastic material insoluble in water and non-corrosive **Yes**

If two liners are fitted, is the shaft lapped or protected between the liners **Yes** Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated **Yes** "Egler's" approved oil gland Length of Stern Bush $2'-6\frac{3}{4}"$ C.I. Diameter of Propeller **8'-0"**

Pitch of Propeller **9'-0"** No. of Blades **4** State whether Moveable **No** Total Surface **30** square feet.

No. of Feed Pumps fitted to the Main Engines **1** Diameter of ditto $2\frac{19}{32}$ Stroke $11\frac{3}{8}$ Can one be overhauled while the other is at work **Yes**

No. of Bilge Pumps fitted to the Main Engines **1** Diameter of ditto $2\frac{14}{32}$ Stroke $11\frac{3}{8}$ Can one be overhauled while the other is at work **Yes**

Total number and size of power driven Feed and Bilge Auxiliary Pumps **Two Feed $6" \times 4" \times 6"$ Duplex, 2 Bilge $6" \times 4" \times 6"$, & $5\frac{13}{16} \times 6 \times 10$ Duplex**

No. and size of Pumps connected to the Main Bilge Line **One $2\frac{19}{32} \times 11\frac{3}{8}$ M.E. One $6" \times 4" \times 6"$ Duplex, One $5\frac{13}{16} \times 6 \times 10$ Duplex**

No. and size of Ballast Pumps **Two Duplex $5\frac{13}{16} \times 6 \times 10$ & $6" \times 4" \times 6"$** No. and size of Lubricating Oil Pumps, including Spare Pump **Yes**

Are two independent means arranged for circulating water through the Oil Cooler **Yes** No. and size of suction connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room **Three 2" diam** and in Holds, &c. **2 Forward Hold, 2 After Hold**

No. and size of Main Water Circulating Pump Bilge Suctions **One $4\frac{1}{2}"$ diam** No. and size of Donkey Pump Direct Suctions to the Engine Room Bilges **One $3\frac{1}{2}"$ Two 2"** 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 **On main injection valve** Are they Valves or Cocks **Valves**

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 **Below**

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 **Bilge suction to forward hold** How are they protected **Under timber boards**

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 **Yes** worked from **Top ER Grating**

MAIN BOILERS, &c.—(Letter for record (S)) Total Heating Surface of Boilers **1507** sq. ft.

Is Forced Draft fitted **No** No. and Description of Boilers **One Multitubular** Working Pressure **185 lb. sq. in.**

IS A REPORT ON MAIN BOILERS NOW FORWARDED? **Yes**

IS A DONKEY BOILER FITTED? **Yes** If so, is a report now forwarded? **Yes**

PLANS. Are approved plans forwarded herewith for Shafting **Yes** Main Boilers **Approved** Auxiliary Boilers **Yes** Donkey Boilers **Now sent for approval**

General Pumping Arrangements **Yes** Oil fuel Burning Piping Arrangements **Yes**

SPARE GEAR. State the articles supplied:—

One cast iron propeller. 1 Top end brass complete. 1 bottom end brass complete. 2 sets of metallic packing for piston rods. 2 sets coupling bolts. 1 set of feed & bilge pump valves & seats on main engines. Complete sets valves for water ends of donkey pumps. Set of air and circulating pump valves. Main & donkey feed check valves. 1 main feed check valve core & spindle. 1 set of rings for HP piston and valve. 12 tube stoppers. Set of firebars for 3 furnaces. A quantity of assorted bolts, studs, nuts, steel bars & plates of various sizes.

The foregoing is a correct description,

Manufacturer.



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During progress of work in shops - - } ✓
 Dates of Survey while building }
 During erection on board vessel - - - } ✓
 Total No. of visits ✓

Dates of Examination of principal parts - Cylinders 11/9/40 Slides 11/9/40
 Covers 11/9/40 Pistons 11/9/40 Rods 11/9/40
 Connecting rods Crank shaft 11/9/40 Thrust shaft 15/10/40
 Tunnel shafts 1/11/40 Screw shaft 1/11/40 Propeller 1/11/40
 Stern tube 31/10/40 Engine and boiler seatings 3/2/41 Engines holding down bolts 3/2/41
 Completion of pumping arrangements ✓ Boilers fixed ✓ Engines tried under steam 29/5/41
 Completion of fitting sea connections ✓ Stern tube ✓ Screw shaft and propeller 1/11/40
 Main boiler safety valves adjusted 22/4/41 Thickness of adjusting washers $\frac{9}{32}$ "
 Material of Crank shaft Steel Identification Mark on Do. ✓
 Material of Thrust shaft Steel Identification Mark on Do. ✓
 Material of Tunnel shafts Steel Identification Marks on Do. ✓
 Material of Screw shafts Steel Identification Marks on Do. ✓
 Material of Steam Pipes Steel ✓ Test pressure 370 lbs. Date of Test 30/10/40
 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 built by the International S. B. & E. Co. Ltd. Danzig, in 1924, to the Germanischer Lloyd Class, now opened up, examined, & now in good condition. The sizes of shafting taken & found to be in accordance with the rules, and the material and workmanship good. The pumping arrangements found to be satisfactory and seen working in order, and in my opinion this vessel's machinery is eligible for record of L.M.C. subject to the Committee's approval.

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 :-	When applied for,
Special ...	£ 26 : 5 :-	11/6/1941
Donkey Boiler Fee ...	£ : ✓ :-	When received,
Travelling Expenses (if any) £	: ✓ :-	19

E. L. Cartwright,
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned *Limb. 5.41*
O.G.

TUE. 23 SEP 1941



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