

# REPORT ON OIL ENGINE MACHINERY.

No. 10655

15 JUL 1927  
26 OCT 1927

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No. in Survey held at AMSTERDAM Date, First Survey 11th Aug. 1926 Last Survey 20th June 1927. Reg. Book. "KATOORA" Number of Visits 22

Single on the ~~Twin~~ ~~Triple~~ ~~Quadruple~~ ~~SCROUX CASEXX~~ KROMHOUT OIL ENGINE NO. 3773, type 4-M-6 Tons Gross - Net -

Built at Greenock By whom built Messrs G. Brown & Co Ltd Yard No. 155 When built 1924  
Engines made at Amsterdam By whom made NV. Kromhout Motoren Fabriek Engine No 3773 When made 1927  
Monkey Boilers made at - By whom made - Boiler No. - When made -  
Indicated Horse Power 350 Owners Adelaide Steamship Co. Port belonging to Melbourne  
Nom. Horse Power as per Rule 100 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

**ENGINES, &c.**—Type of Engines *Horizontal Oil Engine* ✓ 2 or 4 stroke cycle ✓ Single or double acting ✓  
Maximum pressure in cylinders *11 1/2 lbs. p.c.m.* Diameter of cylinders *16 1/2" 420 mm* Length of stroke *18 3/4" 480 mm* No. of cylinders 4 No. of cranks 4 ✓  
Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 500 mm Is there a bearing between each crank *Yes* ✓  
Revolutions per minute 225 Flywheel dia. 1000 mm Weight 2800 ~~kg~~ Means of ignition *ignition plug* Kind of fuel used *crude oil*  
Crank Shaft, dia. of journals as per Rule *approved* as fitted 200 mm Crank pin dia. 100 mm Crank Webs Mid. length breadth 240 mm Thickness parallel to axis *solid* shrunk Mid. length thickness 115 mm Thickness around eyehole  
Flywheel Shaft, diameter as per Rule *approved* as fitted 190 mm Intermediate Shafts, diameter as per Rule *approved* as fitted 126 mm Thrust Shaft, diameter at collars as per Rule *approved* as fitted 165 mm  
Main Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 181 mm Is the *tube* shaft fitted with a continuous liner *Yes* ✓

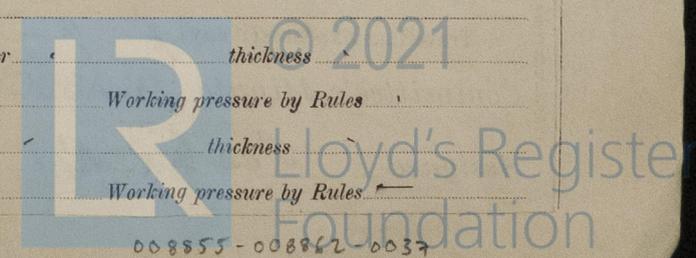
Oil Liners, thickness in way of bushes as per Rule *approved* as fitted 19 mm Thickness between bushes as per rule *approved* as fitted 19 mm Is the after end of the liner made watertight in the boiler boss *Yes* ✓  
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner *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 Oil Gland or other appliance fitted at the after end of the tube shaft *Yes* ✓  
Length of Bearing in Stern Bush next to and supporting propeller 690 mm ✓  
Propeller, dia. *11 1/2" 6 3/4"* Pitch *4 1/2" 5 1/4"* No. of blades 4 Material *Brass* whether Moveable *No* ✓ Total Developed Surface *4 x 4.59* sq. feet  
Method of reversing Engines *air reverse* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *Yes* ✓ Means of lubrication *oil lubricated*  
Thickness of cylinder liners ✓ Are the cylinders fitted with safety valves *Yes* ✓ Are the exhaust pipes and silencers water cooled or lagged with conducting material *No* ✓ If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine ✓

Boiling Water Pumps, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓  
Bilge Pumps worked from the Main Engines, No. 2 ✓ Diameter *4.93" 125 mm* Stroke *3.94" 100 mm* Can one be overhauled while the other is at work *Yes* ✓  
Pumps connected to the Main Bilge Line { No. and Size ✓ How driven ✓  
Main Pumps, No. and size ✓ Lubricating Oil Pumps, including Spare Pump, No. and size *2/2 (See Friedmann)*  
Two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces ✓  
Tolds, &c. ✓

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size ✓  
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes ✓ Are the Bilge Suctions in the Machinery Spaces from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges ✓  
Are all Sea Connections fitted direct on the skin of the ship ✓ Are they fitted with Valves or Cocks ✓  
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates ✓ Are the Overboard Discharges above or below the deep water line ✓  
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel ✓ Are the Blow Off Cocks fitted with a spigot and brass covering plate ✓  
Do all pipes pass through the bunkers ✓ How are they protected ✓  
Do all pipes pass through the deep tanks ✓ Have they been tested as per Rule ✓  
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times ✓  
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 ✓ Is the Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from

Are wood vessels, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓  
Main Air Compressors, No. *One* ✓ No. of stages *two* ✓ Diameters *4 1/2" 5 1/2"* Stroke 4" ✓ Driven by *main engine* ✓  
Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓  
Main Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓  
Engining Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓  
Main Auxiliary Engines crank shafts, diameter as per Rule as fitted *E.R. No 3775. Diameter 110 mm 2 E.R. II No 3774. 95 mm*

**RECEIVERS:**—Is each receiver, which can be isolated, fitted with a safety valve as per Rule ✓  
Are the internal surfaces of the receivers be examined ✓ What means are provided for cleaning their inner surfaces ✓  
Are there a drain arrangement fitted at the lowest part of each receiver ✓  
Pressure Air Receivers, No. ✓ Cubic capacity of each ✓ Internal diameter ✓ thickness ✓  
Are they ess, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓  
Main Air Receivers, No. ✓ Total cubic capacity ✓ Internal diameter ✓ thickness ✓  
Are they ess, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting *Reboursal*  
(If not, state date of approval) *18.1.27*

Receivers *London* Separate Tanks *Office*

Donkey Boilers  General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR 3 gudgeon pins, 4 sets for gear, 2 bottom end bolts, nuts, 2 main bearing bolts, nuts, 1 set of coupling bolts, one combustion chamber complete, 1 piston with rings complete, 40 piston rings, 1 set of crank pin brass, 2 crankshaft bearing brasses, 4 steel rollers for crankshaft, 1 fuel pump, pipes and connections of various sizes, 2 sets of valve springs for side and cooling pumps, 2 sets of valves and springs for compressors, 2 fuel jets, 2 gudgeon springs, 1 cast iron propeller.

The foregoing is a correct description,  
N.V. KROMHOUT MOTOREN FABRIEK

D. GOEDKOOP Jr.

Manufacturer.

Dates of Survey while building  
 During progress of work in shops - *11/8, 23/8, 2/9, 14/9, 24/9, 2/10, 5/10, 15/10, 4/11, 7/11, 23/11, 4/12, 11/12, 22/12, 1926*  
 During erection on board vessel - *11/11, 11/12, 22/12, 1/1, 5/1, 8/1, 10/1, 20/1, 27.*  
 Total No. of visits *22*

Dates of Examination of principal parts - Cylinders *11/8, 5/10* Covers *11/8, 15/10* Pistons *11/8, 24/12* Rods *11/8, 20/1* Connecting rods *11/8, 20/1*  
 Crank shaft *8/9, 23/11* Flywheel shaft *22/12, 22/1, 27* Thrust shaft *22/12, 22/1, 27* Intermediate shafts *24/12, 11/1* Tube shaft *11/8*  
 Screw shaft *14/1, 20/1* Propeller *20/1* Stern tube *20/1* Engine seatings *11/8* Engines holding down bolts *11/8*  
 Completion of fitting sea connections *11/8* Completion of pumping arrangements *11/8* Engines tried under working conditions *8/1, 27*  
 Crank shaft, Material *Steel* Identification Mark *Lloyd's No. K. 1115* Flywheel shaft, Material *Steel* Identification Mark *Lloyd's No. K. 1115*  
 Thrust shaft, Material *Steel* Identification Mark *Lloyd's No. K. 1115* Intermediate shafts, Material *Steel* Identification Marks *Lloyd's No. K. 1115*  
 Tube shaft, Material *Steel* Identification Mark *Lloyd's No. K. 1115* Screw shaft, Material *Steel* Identification Mark *Lloyd's No. K. 1115*

Is the flash point of the oil to be used over 150° F. *ye*  
 Is this machinery duplicate of a previous case *ye* If so, state name of vessel *Bel ingon No. 5025 Reg. 9724.*

General Remarks (State quality of workmanship, opinions as to class, &c.)  
*The machinery has been made in accordance with the approved plan, Secretary's letter and Rules; all matters have been required, workmanship good. Machinery tested in full working condition on test bed and good.*

Certificate (if required) 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	... £ 300.-	When applied for,	19
Special	... £ :	When received,	
Donkey Boiler Fee	... £ :		
Travelling Expenses (if any)	£ 2.-		

*P. V. Kemmer*  
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute *GLASGOW 25 OCT 1927*  
 Assigned *See Gen. Rph. No. 18783*

