

REPORT ON OIL ENGINE MACHINERY.

No. 5719

18

Date of writing Report 31st Oct. 1929 When handed in at Local Office 1st Nov. 1929 Port of Hobe
 No. in Survey held at Jama Date, First Survey 13.6.29 Last Survey 31st Oct. 1929
 Reg. Book. Number of Visits 20

on the Single Screw vessel "NONAI MARU" Tons Gross
 Built at Jama By whom built Mitsui Bussan Kaisha Yard No. 164 When built 1929
 Engines made at Amsterdam By whom made Messrs. Kromhout Motoren Fabriek Engine No. 4943 When made 1929
 Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
 Brake Horse Power 350 Owners The Rising Sun Petroleum Co Port belonging to Yokohama
 Nom. Horse Power as per Rule 100 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which vessel is intended Coasting

OIL ENGINES, &c. Type of Engines Kromhout 4 M 6 2 stroke cycle Single ~~double~~ acting
 Maximum pressure in cylinders 18 kg/cm² Diameter of cylinders 420 m/m Length of stroke 480 m/m No. of cylinders 4 No. of cranks 4
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge ✓ Is there a bearing between each crank ✓
 Revolutions per minute 240 Flywheel dia. ✓ Weight ✓ Means of ignition Hot Bulb Kind of fuel used heavy oil
Crank Shaft, dia. of journals as per Rule ✓ as fitted ✓ Crank pin dia. ✓ Crank Webs Mid. length breadth shrink Thickness parallel to axis ✓
Flywheel Shaft, diameter as per Rule ✓ as fitted ✓ Intermediate Shafts, diameter as per Rule approved as fitted 8 7/8" + 12 5/8" Thrust Shaft, diameter at collars as per Rule ✓ as fitted ✓
Tube Shaft, diameter as per Rule ✓ as fitted ✓ Screw Shaft, diameter as per Rule approved as fitted 8 1/4" Is the tube screw shaft fitted with a continuous liner yes
Bronze Liners, thickness in way of bushes as per Rule approved as fitted 5/8" Thickness between bushes as per rule approved as fitted 5/8" 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 junctions made by fusion through the whole thickness of the liner ✓
 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 no Length of Bearing in Stern Bush next to and supporting propeller 38 1/2"
Propeller, dia. 6'-6 1/4" Pitch 4'-9" No. of blades 4 Material Mn. Br. whether Moveable no Total Developed Surface 19 sq. feet
Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication forced
 Thickness of cylinder liners ✓ Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine ✓
Cooling Water Pumps, No. two Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
Bilge Pumps worked from the Main Engines, No. two Diameter 125 m/m Stroke 100 m/m Can one be overhauled while the other is at work yes
Pumps connected to the Main Bilge Line No. and Size two - Main Engine one Gen. Ser. Pump How driven Main Engine E.R.O. Dynamometer Engine two Friedmann
Ballast Pumps, No. and size One - Gen. Ser. Lubricating Oil Pumps, including Spare Pump, No. and size (5) two plungers, one hand
 Are 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 1-2" port, 1-2" starb, 1-2 1/2" aft, 1-2 1/2" Ind.
 In Holds, &c. ✓

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-2 1/2"
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes ✓ Are the Bilge Suctions in the Machinery Spaces led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes
 Are all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks yes
 Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates yes Are the Overboard Discharges 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 ✓
 What pipes pass through the bunkers ✓ How are they protected ✓
 What 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 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 Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓
 If a wood vessel, 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 2 Diameters 3 1/2" x 4 1/2" Stroke 4" Driven by Main Engine
Auxiliary Air Compressors, No. one No. of stages 2 Diameters " x " Stroke " Driven by E.R.O. Aux. Eng.
Small Auxiliary Air Compressors, No. one No. of stages 1 Diameters 3" Stroke 3" Driven by hand
Scavenging Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓
Auxiliary Engines crank shafts, diameter as per Rule ✓ as fitted ✓ Aux. E.R.I. = 85 m/m No 4944
 " E.R.O. = 75 m/m No 4945

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes
 Can the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces manhole
 Is there a drain arrangement fitted at the lowest part of each receiver yes
High Pressure Air Receivers, No. ✓ Cubic capacity of each ✓ Internal diameter ✓ thickness ✓
 Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓
Starting Air Receivers, No. two Total cubic capacity 74.6 cu. ft. Internal diameter 2'-3 1/2" thickness Shell 1" end plate 5/8"
 Seamless, lap welded or riveted longitudinal joint ✓ Material steel Range of tensile strength 28/32 Working pressure by Rules 300

008049 . 008060 . 0235

SEE AMSTERDAM RPT. 11287 (a) ON KROMHOUT ENG. TYPE 4 M 6

SEE AMSTERDAM RPT. 11287 (b) & (c) KROMHOUT ENGINES 4944-5

SEE AMS. RPT. 11287 (a)



IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting *5.3.29*
(If not, state date of approval)

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements *16.1.29*

Oil Fuel Burning Arrangements

SPARE GEAR

See separate list attached

The foregoing is a correct description.

Manufacturer.

J. McKay

Dates of Survey while building	{ During progress of work in shops -- } { During erection on board vessel -- } Total No. of visits	1929 June 13, 20, 24, 26 July 1, 9, 18, 25, 26 Aug 2, 6, 16 Sept 4, 27 Oct 1, 7, 8, 10, 28, 31 20
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Dates of Examination of principal parts—Cylinders	<input checked="" type="checkbox"/>	Covers	<input checked="" type="checkbox"/>	Pistons	<input checked="" type="checkbox"/>	Rods	<input checked="" type="checkbox"/>	Connecting rods	<input checked="" type="checkbox"/>
Crank shaft	<input checked="" type="checkbox"/>	Flywheel shaft	<input checked="" type="checkbox"/>	Thrust shaft	<input checked="" type="checkbox"/>	Intermediate shafts	<i>19.3.29</i>	Tube shaft	<input checked="" type="checkbox"/>
Screw shaft	<i>19.3.29</i>	Propeller	<i>19.3.29</i>	Stern tube	<i>3.6.29</i>	Engine seatings	<i>3.6.29</i>	Engines holding down bolts	<i>1.7.29</i>
Completion of fitting sea connections	<i>8.6.29</i>	Completion of pumping arrangements	<i>25.6.29</i>	Engines tried under working conditions	<i>28.10.29</i>				
Crank shaft, Material	<input checked="" type="checkbox"/>	Identification Mark	<input checked="" type="checkbox"/>	Flywheel shaft, Material	<input checked="" type="checkbox"/>	Identification Mark	<input checked="" type="checkbox"/>		
Thrust shaft, Material	<i>steel</i>	Identification Mark	<i>1847(MK)25.10.28</i>	Intermediate shafts, Material	<i>Steel</i>	Identification Marks	<i>1974 MK. 19.3.</i>		
Tube shaft, Material	<input checked="" type="checkbox"/>	Identification Mark	<input checked="" type="checkbox"/>	Screw shaft, Material	"	Identification Mark	"		
Is the flash point of the oil to be used over 150° F.	<i>yes</i>	SPARE	"	"	"	"	"	<i>1976 L.R.C.A. 4.</i>	

Is this machinery duplicate of a previous case *no* If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel has been installed under Special Survey, examined under working conditions & found satisfactory. In my opinion the vessel is now entitled to the notation in the Register Book of + L.M.C. - 10.29 T.S.C.L & the record of "OIL ENG."

Copies of forging certificates for tail & intermediate shafts forwarded

The amount of Entry Fee ...	¥ 30	When applied for,	
Special ...	¥ 76	When received,	<i>Nov. 12 1929</i>
Donkey Boiler Fee ...	£ <input checked="" type="checkbox"/>		
Travelling Expenses (if any)	£ <i>see hull rept.</i>		<i>Nov. 5 1929</i>

Clive Bell

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 27 FEB 1930

Assigned

+ L.M.C. 10.29 C.L.

Oil Eng.
CERTIFICATE WRITTEN.



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