

REPORT ON OIL ENGINE MACHINERY.

No. 6712

20 JUL 1931

Received at London Office

Date of writing Report June 15th 1931 When handed in at Local Office June 16th 1931 Port of Hong Kong
 No. in Survey held at Hong Kong Date, First Survey April 17th Last Survey June 13th 1931
 Date Book. Number of Visits 17

on the Single Triple Quadruple Screw vessel "MANAPLA"
 Built at Hong Kong By whom built H.K. Whampoa Dock Co. Ltd Yard No. 691 When built 1931
 Engines made at Stockholm By whom made A.G. Atlas Diesel Engine No. 85170 When made 1931
 Key Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
 Horse Power 200 Owners North Borneo Sugar Co. Inc. Port belonging to Manila
 m. Horse Power as per Rule 68 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes
 Use for which vessel is intended Coastal Trade, Philippine Islands.

ENGINES, &c. Type of Engines Polar Diesel oil engine 2 or 4 stroke cycle Single or double acting
 Maximum pressure in cylinders 35 kg/cm² Diameter of cylinders 250 mm Length of stroke 420 mm No. of cylinders 4 No. of cranks 4
 No. of bearings, adjacent to the Cranks, measured from inner edge to inner edge 368 mm Is there a bearing between each crank yes
 Revolutions per minute 300 Flywheel dia. 1150 mm Weight 1200 kg Means of ignition Compression Kind of fuel used Crude oil
 Crank pin dia. 160 mm Crank Webs Mid. length breadth 214 mm Thickness parallel to axis ✓
 Thrust Shaft, dia. of journals as per Rule 156 mm as fitted 160 mm Mid. length thickness 90 mm Thickness around eyehole ✓
 Wheel Shaft, diameter as per Rule on Thrust Shaft Intermediate Shafts, diameter as per Rule 342 mm Thrust Shaft, diameter at collars as per Rule
 Main Shaft, diameter as fitted 410 mm as fitted 412 mm Is the ✓ shaft fitted with a continuous liner yes
 Liners, thickness in way of bushes as per Rule 1/2" Thickness between bushes as per rule 3/8" Is the after end of the liner made watertight in the
 after boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓
 The liner does not fit tightly on the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓
 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 19 1/4"
 Propeller, dia. 59" Pitch 47" No. of blades Four Material Brass whether Moveable fixed Total Developed Surface 9 sq. feet
 Method of reversing Engines Compressed air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication
 Thickness of cylinder liners None Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with
 conducting material Water cooled If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine up funnel
 Bilge Water Pumps, No. Two Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
 Pumps worked from the Main Engines, No. 1 Diameter 90 mm Stroke 100 mm Can one be overhauled while the other is at work ✓
 Pumps connected to the Main Bilge Line { No. and Size 12 90 mm x 100 mm | one 4" Rotary
 How driven Main engines | 5-B.H.P. Skandia Motor
 Bilge Pumps, No. and size None Lubricating Oil Pumps, including Spare Pump, No. and size Two of gear wheel type, (cross connected) also one worked by hand.
 Are independent means arranged for circulating water through the Oil Cooler None Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 Pumps, No. and size:—In Machinery Spaces 3 at 2", and 1 at 2" in tunnel well.
 Holds, &c. 3-2" in Fore hold & 3-2" in aft hold.
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-2 1/4"
 All the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces
 easily accessible mud-boss, placed above the level of the working floor, with straight tail pipes to the bilges yes
 All Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks Valves
 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 ✓
 Pipes pass through the bunkers None How are they protected ✓
 Pipes pass through the deep tanks None Have they been tested as per Rule ✓
 All Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

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 yes Is it fitted with a watertight door yes worked from Upper deck.

In Air Compressors, No. one No. of stages two Diameters 175/70 mm Stroke 150 mm Driven by main engine
 Auxiliary Air Compressors, No. one No. of stages two Diameters 19 1/16 x 3 3/4" Stroke 4 13/16" Driven by 6 B.H.P. diesel engine (can be started by hand)
 All Auxiliary Air Compressors, No. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓
 Ventilating Air Pumps, No. 2 Diameter 390 mm Stroke 120 mm Driven by main engines

Auxiliary Engines crank shafts diameter as per Rule 2 1/2" dia.
as fitted

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes
 Are the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces Mudhole

Is there a drain arrangement fitted at the lowest part of each receiver yes
 High Pressure Air Receivers, No. None Cubic capacity of each ✓ Internal diameter ✓ thickness 2020
 Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓
 Starting Air Receivers, No. 2 Total cubic capacity 800 Litres Internal diameter 500 mm thickness 11.5 mm
 Seamless, lap welded or riveted longitudinal joint Lap welded Material Steel Range of tensile strength 38 kg/mm² min. Working pressure by Rules 256 kg/cm²

IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded? ✓

PLANS. Are approved plans forwarded herewith for Shafting Inter- & tail Shafts Receivers ✓ Separate Tanks Kobe, Dec. 30th 1930
(If not, state date of approval) Kobe Jan 29th 1931
Donkey Boilers ✓ General Pumping Arrangements Kobe, Dec. 30th 1930 Oil Fuel Burning Arrangements Kobe, Dec. 30th 1930

SPARE GEAR Supplied as per rule.

Auxiliary Machinery :- one 6 B.H.P. Atlas Polar diesel engine N^o 34388 driving a two stage air compressor N^o 24214.
one 5-B.H.P. "Skandia" diesel engine, Type 21, N^o 18000, driving a 2.5 K.W. Generator
one 5-B.H.P. "Skandia" diesel engine Type 21, N^o 18005, driving a rotary general service pump + small forcing pump, capacity of pump 910 lit/min. with 4" suction

The foregoing is a correct description,

R. H. Dyer Manufacturer.

Dates of Survey while building { During progress of work in shops - - } See Stockholm report N^o 3378.
{ During erection on board vessel - - } April 17, 23, May 2, 5, 16, 18, 20, 22, 26, 28, June 1, 2, 4, 6, 8, 11 + 13, 1931
Total No. of visits 17

Dates of Examination of principal parts - Cylinders 9-13, 31 Covers 9-13, 31 Pistons 13, 31 Rods ✓ Connecting rods 6, 28, 30
Crank shaft 12, 30, 13, 13, 31 Flywheel shaft ✓ Thrust shaft ✓ Intermediate shafts 18-5-31 Tube shaft ✓
Screw shaft 18-5-31 Propeller 20-5-31 Stern tube 18-5-31 Engine seatings 17-4-31 Engines holding down bolts 1-6-31
Completion of fitting sea connections 16-5-31 Completion of pumping arrangements 4-6-31 Engines tried under working conditions 6-6-31

Crank shaft, Material Steel Identification Mark LLOYDS N^o 6034 KA. 13-2-31 Flywheel shaft, Material ✓ Identification Mark ✓
Thrust shaft, Material ✓ Identification Mark ✓ Intermediate shafts, Material O.H. Steel Identification Marks LLOYDS N^o 691 T.S.M. 18-5-31
Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material O.H. Steel Identification Mark ✓

Is the flash point of the oil to be used over 150° F. yes.

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with yes

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No If so, have the requirements of the Rules been complied with ✓

Is this machinery duplicate of a previous case yes If so, state name of vessel Stockholm report 3273.

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

These engines have been built under special survey (See Stockholm report N^o 3378) & have now been installed in this vessel in accordance with the Rules & instructions & satisfactorily tried under working conditions. Forging report for intermediate & tail shafts enclosed.

A mean speed of 8.6 knots was maintained at 300 revolutions the slow ahead & astern revols. were 96 + 102 respectively.

These engines are in my opinion of good quality & the workman is good & it is recommended that the vessel be classed with Lloyd's Machinery Certificate & the record of + L M C 6-31, C.L. be made in the Register Book.

The amount of Entry Fee ... £4 = 8 86
Installation & Forgings Special ... £11-7/- = 242
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) \$ 50
Total \$ 278

When applied for,

June 13th 1931

When received,

9. 9. 1931

Committee's Minute

TUE. 28th JUL 1931

Assigned

+ L.M.C. 6-31

CERTIFICATE WRITTEN.

Oil Eng.

C.L.

W. S. Morrison
Engineer Surveyor to Lloyd's Register of Shipping.



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