

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY

No. 8194

NOV 14 1938

Received at London Office

Date of writing Report 14 Nov 38 When handed in at Local Office 14 Nov 38 Port of Hongkong
No. in Survey held at Hongkong Date, First Survey March 26th Last Survey Oct 10th 1938
Reg. Book. Number of Visits

on the Single Screw vessel Motorship "SURIGAO" Tons { Gross 790.04
Net 490.89
Built at Hongkong By whom built The M. & W. Langford Dock Co. Yard No. 782 When built 1938
Engines made at Stockholm By whom made A-B. Atlas Diesel Engine No. 85271 When made 1937
Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
Brake Horse Power 960 Owners La Naviera Filipina Inc. Port belonging to Cebu

Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

which vessel is intended Philippine Islands Coasting Service.

GINES, &c.—Type of Engines Polar Diesel oil engine, Type M 46 M 2 or 4 stroke cycle 2 Single or double acting Single

pressure in cylinders 55 kg/cm² Diameter of cylinders 340 mm Length of stroke 570 mm No. of cylinders 6 No. of cranks 6

rings, adjacent to the Crank, measured from inner edge to inner edge 484 mm Is there a bearing between each crank Yes

per minute 250 Flywheel dia. 1200 mm Weight 570 kgs Means of ignition Compression Kind of fuel used Diesel oil

ft. dia. of journals as per Rule as approved Crank pin dia. 220 mm Crank Webs Mid. length breadth 308 mm Thickness parallel to axis ✓

Shaft, diameter as per Rule as approved Intermediate Shafts, diameter as fitted 6 7/16 Thrust Shaft, diameter at collars as per Rule as approved

ft. diameter as fitted Screw Shaft, diameter as per Rule as approved Is the tube screw shaft fitted with a continuous liner Yes

liners, thickness in way of bushes as per Rule as approved Thickness between bushes as fitted 9/16" 5/8" Is the after end of the liner made watertight in the

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

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 fits tightly

ers 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

✓ If so, state type ✓ Length of Bearing in Stern Bush next to and supporting propeller 2'-9 1/4"

dia. 7'-10" Pitch 5'-3" No. of blades 4 Material Cast Iron whether Moveable Fixed Total Developed Surface 33.5 sq. feet

of reversing Engines By 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 25.5 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

ing material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine led up funnel

Water Pumps, No. Two Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

al arrangements are made for dealing with cooling water if discharged into bilges Discharged overboard.

umps worked from the Main Engines, No. one Diameter 100 mm Stroke 140 mm Can one be overhauled while the other is at work ✓

connected to the Main Bilge Line { No. and Size 1-100 mm x 140 mm 2- Worthington Rotary Pumps, each 125 U.S. galls. per min.

How driven Main engine 10-HP Electric Motors

pumps, No. and size 1- Rotary 125 galls/min. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2-350 litres/min each

dependent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

o. and size:—In Machinery Spaces 3-2" dia. x 1-2" to tunnel. In Pump Room ✓

dec. 3-2 1/2" in Forehold, 1-2" in Fore Cofferdam, 3-2 1/4" in aft hold + 1-2" in aft cofferdam.

lent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2-2 3/4" dia.

o Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces

asily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

a Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Valves

ed 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 at water line

ch 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 ✓

s pass through the bunkers None How are they protected ✓

s pass through the deep tanks None Have they been tested as per Rule ✓

pes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

ngement 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

nt to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper deck.

vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ✓

Compressors, No. one No. of stages 2 Diameters 175/70 mm Stroke 350 mm Driven by Main Engine

y Air Compressors, No. one No. of stages 2 Diameters 5" x 4 3/8" Stroke 5" Driven by Elec. Motor

uxiliary Air Compressors, No. one No. of stages 2 Diameters 4" + 1 3/4" Stroke 3" Driven by Hand Starting oil engine.

ng Air Pumps, No. one Diameter 940 mm Stroke 350 mm Driven by Main Engine

Engines crank shafts, diameter as per Rule as approved See Dunseldorf Reports 718 253 + 254 No. — Two Position — One Port + one Stbd. side of engine room

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes

internal surfaces of the receivers be examined and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes

essure Air Receivers, No. None Cubic capacity of each ✓ Internal diameter ✓ thickness ✓

lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules Actual 2020

Starting Air Receivers, No. 2 Total cubic capacity 2000 litres Internal diameter 650 mm thickness 14 mm

Stockholm Certif. 14-11-37 Seamless, lap welded or riveted longitudinal joint riveted Material Steel Range of tensile strength 42-50 kg/cm² Working pressure by Rules as approved. Actual 25 kg/cm²

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IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded? ✓

Is the donkey boiler intended to be used for domestic purposes only? ✓

PLANS.

Are approved plans forwarded herewith for Shafting ^{E. 23/12/36} ~~Habe~~ 25/10/37 Receivers E-6-8-30 Separate Tanks 11/4/38 ~~Habe~~
(If not, state date of approval)
Donkey Boilers ✓ General Pumping Arrangements 14/10/37 + 20/9/38 Oil Fuel Burning Arrangements ~~Habe~~ 11/4/38

SPARE GEAR.

Has the spare gear required by the Rules been supplied? Yes. List enclosed with Stockholm Report. ✓

State the principal additional spare gear supplied ✓

The foregoing is a correct description,

ELHorse

Manufacturer.

Dates of Survey while building
During progress of work in shops - in Hongkong. 1938 Mar. 26, July 12, 23, 29, Aug. 9, 11.
During erection on board vessel - Aug. 13, 20, 24, 26, Sept 1, 2, 6, 7, 14, 20, 23, 24, 27, 29, Oct. 1, 6, 7 + 10. 1938.
Total No. of visits 24

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods
Crank shaft Flywheel shaft Thrust shaft Intermediate shafts Tube shaft ✓
Screw shaft July 12 to Sept 2 Propeller 5-9-38 Stern tube 11-8-38 Engine seatings 1-8-38 Engines holding down bolts 9-9-38
Completion of fitting sea connections 13-8-38 Completion of pumping arrangements Engines tried under working conditions

Crank shaft, Material Identification Report Flywheel shaft, Material Identification Mark
Thrust shaft, Material see Stockholm Report Identification Mark Intermediate shafts, Material O.H. Steel Identification Marks
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? ✓

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with? ✓

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.) This engine has been built under special survey at Stockholm (See Stockholm Report N° 4557) + together with the auxiliary machinery, have been installed in the vessel in accordance with the Rules and instructions + satisfactorily tried under working conditions.

Plan of piping arrangements as fitted enclosed.

Forging report for intermediate + screw shafts enclosed.

See Dusseldorf reports dated 14th June + 31st May 1938 for Auxiliary oil engines.

See New York reports dated 29th Oct. 1937, March 21st 1938, for air compressors + essential pumps. No certificate supplied for small auxiliary air compressor, driven by Ailsa Craig oil engine N° 3808. but this engine + compressor were opened up + examined + found satisfactory.

It is recommended that the vessel be classed with Lloyd's Machinery Certificate + the record LMC 10-38 C.L. be made in the Register Book.

The amount of Entry Fee .. £6 88 97

1/2nd Special £18-14-8 203

Donkey Boiler Fee £

Travelling Expenses (if any) £ 15 475

Committee's Minute

Assigned

When applied for,

12th Oct 1938

When received,

12/12 1938

TUE 22 NOV 1938

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



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Foundation