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IN D.O.

REPORT ON OIL ENGINE MACHINERY.

No. 71816

Received at London Office

27 JUN 1947

of writing Report 21. 6. 1947 When handed in at Local Office 21. 6. 1947 Port of Glasgow.
Survey held at Glasgow. Date, First Survey 4. 3. 46 Last Survey 5. 6. 1947
Book. Number of Visits 8646
on the Twin Screw vessel H.M. SATAGOLA Tons Gross 8750 Net 5053
Glasgow By whom built Barclay Currie & Co. Ltd. Yard No. 707. When built 1947
Glasgow By whom made Barclay Currie & Co. Ltd. Engine No. 707. When made 1947
Glasgow By whom made Barclay Currie & Co. Ltd. Boiler No. 707. When made 1947
Total 72 engines Owners British India Steam Nav. Co. Ltd. Port belonging to London.
Horse Power 5900
n. Horse Power as per Rule 1225 Is Refrigerating Machinery fitted for cargo purposes Yes. Is Electric Light fitted Yes.
de for which vessel is intended NHP = 1200 MN = 1235.

ENGINES, &c. — Type of Engines Barclay Currie & Co. Ltd. 2 stroke cycle. 2 Single or double acting Single.

imum pressure in cylinders 640 lb./sq. in. Diameter of cylinders 56 1/2 Length of stroke 21 1/2 No. of cylinders 4 No. of cranks 12.
m Indicated Pressure 87.5 lb./sq. in. PER ENGINE.

of bearings, adjacent to the crank, measured from inner edge to inner edge 1120 7/8 Is there a bearing between each crank Yes.

utions per minute 118 Flywheel dia. 150 1/2 Weight 3.2 Tons. Kind of fuel used Diesel.

ft. Solid forged dia. of journals as per Rule 420 7/8 Crank pin dia 420 7/8 Mid. length breadth 770 7/8 Thickness parallel to axis 240 7/8
Semi built as fitted 420 7/8 Mid. length thickness 178 7/8 Thickness around eye hole 192 7/8
All built as fitted 420 7/8

Wheel Shaft, diameter as per Rule 12 1/2 Intermediate Shafts, diameter as fitted 14 1/2 Thrust Shaft, diameter at collars as fitted 420 7/8
as fitted 12 1/2 as per Rule 324 7/8

e Shaft, diameter as per Rule 13 1/4 Screw Shaft, diameter as fitted 15 1/8 Is the shaft fitted with a continuous liner Yes.

ize Liners, thickness in way of bushes as per Rule 22 1/2 Thickness between bushes as fitted 5 1/8 Is the after end of the liner made watertight in the

eller boss Yes. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Continuous.

he 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-

osive Yes. If two liners are fitted, is the shaft lapped or protected between the liners Yes. Is an approved Oil Gland or other appliance fitted at the after

of tube shaft No. If so, state type Yes. Length of bearing in Stern Bush next to and supporting propeller 5' 3"

eller, dia. 15' 3" Pitch 14' 3" No. of blades 3 Material 7. Dange whether moveable Yes. Total developed surface 68 sq. feet

hod of reversing Engines Direct air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes. Means of

ication pump. Thickness of cylinder liners 23 1/2 Are the cylinders fitted with safety valves Yes. Are the exhaust pipes and silencers water cooled

pped with non-conducting material Lapped. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

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

e Pumps worked from the Main Engines, No. None. Diameter 130 1/2 Stroke 12 1/2 Can one be overhauled while the other is at work Yes.

ps connected to the Main Bilge Line No. and size 3.0.5 pump 120 T/HR. 1 @ 360 T/HR, 2 @ 150 T/HR. How driven Electric Steam Steam.

e cooling water led to the bilges No. If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

gements 2 BAL. 150 T/HR. EACH. 2 ME. - 30 T/HR. EACH. 1 ST. BY. - 60 T/HR.

ast Pumps, No. and size 2 BAL. - 360 T/HR. Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 ST. BY. - 60 T/HR.

two independent means arranged for circulating water through the Oil Cooler Yes. Suctions, connected to both main bilge pumps and auxiliary

pumps, No. and size: In machinery spaces 3 @ 5" 5 @ 3" 6 @ 2 1/2" In pump room Yes.

olds, &c. 6 @ 3 1/2" 4 @ 3" 3 @ 5"

ependent Power Pump Direct Suctions to the engine room bilges, No. and size 3 @ 5"

e all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes. Are the bilge suction in the machinery spaces led from easily

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

e all Sea Connections fitted direct on the skin of the Ship YES. Are they fitted with valves or cocks. Both. Are they fixed

iciently 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. Both.

e 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.

at pipes pass through the bunkers. Oil heating pipes. How are they protected. Yes.

at pipes pass through the deep tanks. None. Have they been tested as per Rule. Yes.

e 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

ices, or from one compartment to another. Yes. Is the shaft tunnel watertight. Yes. Is it fitted with a watertight door. Yes. worked from forward deck.

a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork. Yes.

in Air Compressors, No. 2 No. of stages 3 diameters 14 1/2 stroke 11 1/2 driven by Steam.

uxiliary Air Compressors, No. 1 No. of stages 1 diameters 14 1/2 stroke 11 1/2 driven by Steam.

all Auxiliary Air Compressors, No. 1 No. of stages 1 diameters 14 1/2 stroke 11 1/2 driven by Steam.

That provision is made for first charging the air receivers. Steam driven compressors.

avenging Air Pumps, No. 1 diameters 14 1/2 stroke 11 1/2 driven by Steam.

uxiliary Engines crank shafts, diameter as per Rule. None. Position. Yes.

ave the auxiliary engines been constructed under special survey. Yes. Is a report sent herewith. Yes.

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AIR RECEIVERS:—Have they been made under survey Yes State No. of report or certificate 445
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 and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes
Injection Air Receivers, No. None Cubic capacity of each ✓ Internal diameter ✓ thickness ✓
Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure ✓
Starting Air Receivers, No. 3 Total cubic capacity 5250/10 Internal diameter 5'0" thickness 1 1/2"
Seamless, lap welded or riveted longitudinal joint ✓ Material Steel Range of tensile strength 29500 Working pressure 60
IS A DONKEY BOILER FITTED Yes so, is a report now forwarded Yes
Is the donkey boiler intended to be used for domestic purposes only No
PLANS. Are approved plans forwarded herewith for shafting ✓ Receivers ✓ Separate fuel tanks ✓
Donkey boilers ✓ General pumping arrangements ✓ Pumping arrangements in machinery space ✓
Oil fuel burning arrangements ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes
State the principal additional spare gear supplied ✓



The foregoing is a correct description G. Macneil Manufacturer.

Dates of Survey while building
During progress of work in shops - 19th Jan 47 to 15th Feb 47
During erection on board vessel - 11.12.46 to 18.2.47
Total No. of visits 62

Dates of examination of principal parts—Cylinders 15.10.46 Covers ✓ Pistons 18.12.46 Rods 12.11.46 Connecting rods 12.11.46
Crank shaft 12.11.46 Flywheel shaft ✓ Thrust shaft 12.11.46 Intermediate shafts 12.11.46 Tube shaft ✓
Screw shaft 19.11.46 Propeller 19.11.46 Stern tube 12.11.46 Engine seatings 18.1.47 Engine holding down bolts 11.3.47
Completion of fitting sea connections 11.12.47 Completion of pumping arrangements 15.4.47 Engines tried under working conditions 5.6.47
Crank shaft, material O.H. Steel Identification mark 12/19.11.46 Flywheel shaft, material ✓ Identification mark ✓
Thrust shaft, material O.H. Steel Identification mark 12.11.46 Intermediate shafts, material O.H. Steel Identification marks ✓
Tube shaft, material ✓ Identification mark ✓ Screw shaft, material O.H. Steel Identification mark ✓
Identification marks on air receivers 707 LLOYDS TEST 950 LBS/EL W.P. 600 LBS/EL 30.10.46

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
Description of fire extinguishing apparatus fitted Steam & Chemical
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.) The Machinery of this vessel has been constructed under Special Survey & in accordance with the approved plans of the Rules of the Society. The materials and workmanship are good. The Machinery has been efficiently installed on board the vessel & after running trials under full working conditions with satisfactory results. The Machinery is in good condition in our opinion, to be classed in The Register Book with notation of 1st LMC 6.47 & The notation CL 6.47, 2 DB 12.12.46. The Torsional vibration characteristics were approved in our letter of the 25th April, 1947. Further work has been fitted at the Control Station stating that the engines are fit to be run continuously.

The amount of Entry Fee ... £ ✓ When applied for 26 JUN 1947
Special ... 223 10 0
E.W. BEDPLATE CR. 15 5 0
Donkey Boiler Fee... 9 0 0
AIR RECEIVERS 9 0 0
Travelling Expenses (if any) £ ✓
When received 19
Committee's Minute 1- LMC 6.47 Air Eng.
Assigned 2 DB 120 lb

