

REPORT ON OIL ENGINE MACHINERY.

No. 24042

Received at London Office

23 MAR 1950

Date of writing Report 13th MARCH 1950 When handed in at Local Office 17th MARCH 1950 Port of GREENOCK

No. in Survey held at GREENOCK Date, First Survey 25th JANUARY 1949 Last Survey 28th FEBRUARY 1950
 Reg. Book. Number of Visits 75

Single ☒ on the Twin ☒ Triple ☒ Quadruple ☒ Screw vessel BRITISH PATRIOT Tons Gross 8661.19 Net 4975.19

Wuilt at PORT GLASGOW By whom built LITHGOWS L^d Yard No. 1042 When built 1950

Engines made at GREENOCK By whom made JOHN G. KINCAID & CO L^d Engine No. 1208 When made 1950

Monkey Boilers made at do By whom made do Boiler No. 1208 When made 1950

Brake Horse Power 3200 Owners BRITISH TANKER CO L^d Port belonging to LONDON

I.N. Power as per Rule 625 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended OPEN SEA SERVICE OIL TANKER

MAIN ENGINES, &c.—Type of Engines DIESEL (UNDER PISTON SOLE) 2 or 4 stroke cycle 4 Single or double acting 5

Maximum pressure in cylinders 650 lb Diameter of cylinders 740 Length of stroke 59.16 No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 115.4 Ahead Firing Order in Cylinders 1.5.3.6.2.4 Span of bearings, adjacent to the crank, measured from inner edge to inner edge 988.7 Is there a bearing between each crank Yes Revolutions per minute 115

Flywheel dia. 2489.7 Weight 2.5 tons Moment of inertia of flywheel (lbs.in² or Kg.cm²) 23.53x10⁶ Means of ignition Compression Kind of fuel used Diesel

Crank shaft, Solid forged ☒ Semi built ☒ All built ☒ dia. of journals as per Rule 115 as fitted 505.7 Crank pin dia. 505.7 Crank webs Mid. length breadth 980.7 Mid. length thickness 310.7 Thickness parallel to axis 310.7 Thickness around eyehole 292.57

Flywheel Shaft, diameter as per Rule 115 as fitted 115 Intermediate Shafts, diameter as per Rule 115 as fitted 115 Thrust Shaft, diameter at collars as fitted 454.7

Stern Tube Shaft, diameter as per Rule 115 as fitted 115 Screw Shaft, diameter as per Rule 115 as fitted 115 Is the tube shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 115 as fitted 115 Thickness between bushes as per Rule 115 as fitted 115 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 Yes

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 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 end of tube shaft No If so, state type None Length of bearing in Stern Bush next to and supporting propeller 5.4

Propeller, dia. 16.0 Pitch 10.9 No. of blades 4 Material Bronze whether moveable No Total developed surface 88 sq. feet

Moment of inertia of propeller (lbs.in² or Kg.cm²) 106.2x10⁶ Kind of damper, if fitted None

Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Yes Means of lubrication Forced Thickness of cylinder liners 417.6 Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled Yes

Are the exhaust pipes and silencers lagged with non-conducting 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 2 ME down 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. None Diameter 170 tons/hr Stroke 100 tons/hr Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and size One @ 170 tons/hr How driven Steam

Is the 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 arrangements None

Ballast Pumps, No. and size One @ 170 tons/hr Power Driven Lubricating Oil Pumps, including spare pump, No. and size One ME down 100 tons/hr

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

Oil pumps, No. and size:—In machinery spaces Three @ 3 1/2" In pump room Four @ 2 1/2"

Holds, &c. Two @ 2 1/2"

Independent Power Pump Direct Suctions to the engine room bilges, No. and size Two @ 6"

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction pipes 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 Both Are they fixed efficiently 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 Yes

What pipes pass through the bunkers None How are they protected None

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

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 None Is it fitted with a watertight door Yes worked from None

Is the vessel a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork None

Main Air Compressors, No. Two No. of stages Two diameters 9 1/2" x 4" stroke 7 1/2" driven by Steam

Auxiliary Air Compressors, No. Two No. of stages Two diameters 9 1/2" x 4" stroke 7 1/2" driven by Steam

Small Auxiliary Air Compressors, No. Two No. of stages Two diameters 9 1/2" x 4" stroke 7 1/2" driven by Steam

Is provision made for first charging the air receivers Steam driven compressors as above

Exhausting Air Pumps, No. Two diameter 2" stroke 2" driven by Steam

Auxiliary Engines crank shafts, diameter as per Rule Two as fitted Two Position ER platform

Have the auxiliary engines been constructed under special survey Yes Is a report sent hereunder Yes

003147-003153-0083

AIR RECEIVERS:—Have they been made under survey. Yes State No. of report or certificate C 3406
Is each receiver, which can be isolated, fitted with a safety valve as per Rule. Relly valve on supply line
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, welded or riveted longitudinal joint. ✓ Material. ✓ Range of tensile strength. ✓ Working pressure. ✓
Starting Air Receivers, No. Two Total cubic capacity. 900 cu ft Internal diameter. 6-0/8-5-10/4 thickness. 3/32-1/16
Seamless, welded or riveted longitudinal joint. riveted Material. SM S Range of tensile strength. 29/33 tons Working pressure. 3.5
by Rules. 3.5
Actual. 3.5

IS A DONKEY BOILER FITTED Yes If 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. 20-8-48 Receivers. 9-3-48 Separate fuel tanks. ✓
(If not, state date of approval)
Donkey boilers. 26-2-48 General pumping arrangements. 7-2-50 Pumping arrangements in machinery space. 1-9-49
Oil fuel burning arrangements. 11-8-49
Have Torsional Vibration characteristics been approved. Yes for 115 rpm Date of approval. 20-8-48 Gls letter
LON 17-9-48

SPARE GEAR.

Has the spare gear required by the Rules been supplied. Yes
State the principal additional spare gear supplied. Screw shaft 110405 17788 F16320 CNH 20/10/49
C.I. propeller
Service BHP 3200 @ 115 rpm
MAX BHP 3520 @ 119 rpm

The foregoing is a correct description
FOR JOHN R. KINCAID & CO., LTD.

Manufacturer.

Chief Draughtsman.
Dates of Survey while building
During progress of work in shops - (1949) JAN 25 MAR 16 17 18 21 31 JUNE 17 JULY 15 18 25 27 AUG 5 23 26 29 SEPT 8 21 OCT 3 5 6 10 11 12 19 20
During erection on board vessel - 26 27 NOV 2 3 11 15 17 18 21 24 25 30 DEC 1 5 8 12 13 15 16 22 23 27 29 (1950) JAN 5 6 9 10 11 13 16 19 20 23 24 25 26 27 31 FEB 10
Total No. of visits. 45
Dates of examination of principal parts—Cylinders 18/7/49 Covers 18/7/49 Pistons 21-9-49 Rods 18-11-49 Connecting rods 18-11-49
Crank shaft 18-11-49 Flywheel shaft ✓ Thrust shaft 18-11-49 Intermediate shafts 26-10-49 Tube shaft ✓
Screw shaft 20-10-49 Propeller 20-10-49 Stern tube 18-7-49 Engine seatings 25-11-49 Engine holding down bolts 19-1-49
Completion of fitting sea connections 27-10-49 Completion of pumping arrangements 28-2-50 Engines tried under working conditions 28/2/50
Crank shaft, material S Identification mark 17788 CNH 18/11/49 Flywheel shaft, material ✓ Identification mark ✓
Thrust shaft, material S Identification mark 17788 CNH 18/11/49 Intermediate shafts, material S Identification marks 17788 CNH
Tube shaft, material ✓ Identification mark ✓ Screw shaft, material S Identification mark 17788 CNH 20/10/49
Identification marks on air receivers. 110405 TEST N°3
584 41/10/49 19/ C 3406
356 41/10/49 19/ C 3406
Welded receivers, state Makers' Name. CNH 15/11/49
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 under boilers, OF unit & transfer pump, 10-2 gln portable, 81-10 gln with h
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo. Oil Tanker If so, have the requirements of the Rules been complied with. Yes
If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with. No
Is this machinery duplicate of a previous case. Yes If so, state name of vessel. British Providence Gt R N 338

General Remarks (State quality of workmanship, opinions as to class, &c.)
This machinery has been constructed under Special survey in accordance with the Rules & approved plans
The materials & workmanship are sound & good. The engine & boiler have been efficiently
installed in the vessel and tested on a sea trial under full working conditions with
satisfactory results
The installation is eligible in my opinion to be Classed in the Society's Register book
with record + LMC 2-50 & Notations Screw shaft C.L. 2 DB 150 lb/ft fitted for
oil fuel FP above 150°F.

Certificates & Logging reports common to this engine and K 209/11/13 to follow will be forwarded
on completion of the Contract.

The amount of Entry Fee ... £ 200 : 0
Special ... £ :
Donkey Boiler Fee... £ 59 : 10
Air Receiver ... £ 16 : 0
Travelling Expenses (if any) £ :
When applied for 17th MARCH 1950
When received 19
Assigned + LMC 2,50
Oil Eng. 2 DB - 150 lb.
Committee's Minute GLASGOW 22 MAR 1950 HC
Charles J. Hunter
Engineer Surveyor to Lloyd's Register of Shipping
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Foundation