

REPORT ON OIL ENGINE MACHINERY.

No 33807

CEIVED

10 OCT 1943

in Survey held at
Book.

When handed in at Local Office 8 Oct 1943 Port of Sunderland.

Received at London Office

18 OCT 1943

Date, First Survey 13 Oct 42 Last Survey 7 Oct 1943
Number of Visits 117

"CHINESE PRINCE"

Tons Gross 9485
Net 5752

on the Twin Screw vessel
Triple
Quadruple

built at Sunderland
engines made at Sunderland
Boilers made at Aman.

By whom built J. L. Thompson & Sons Ld.

Yard No. 625 When built 1943.

By whom made B. Kayford & Sons Ld.

Engine No. 232 When made 1943.

By whom made Cochran & Co (Aman) Ld.

Boiler No. 15610 When made 1943.

Indicated Horse Power 6800

Owners Prince Line, Ltd.

Port belonging to London.

Indicated Horse Power as per Rule 1344

Is Refrigerating Machinery fitted for cargo purposes No.

Is Electric Light fitted Yes.

Use for which vessel is intended

ENGINES, &c.—Type of Engines Approved piston and liner injection 2 or 4 stroke cycle 2 Single or double acting Single.
Maximum pressure in cylinders 640 lbs/sq. in. Diameter of cylinders 600 mm Length of stroke Upper 980 mm Lower 1340 mm No. of cylinders 8 No. of cranks 8 (3 throws)
Indicated Pressure 85 lbs/sq. in. Diameter of crank pin 450 mm Weight 40 cwt. Means of ignition Compression Kind of fuel used —
of bearings, adjacent to the Crank, measured from inner edge to inner edge 940 mm Is there a bearing between each crank (Between each 3 throws)
Revolutions per minute 114 Flywheel dia. 2200 mm Crank pin dia. 450 mm Mid. length breadth 650 mm Thickness parallel to axis 255 mm
Shaft, dia. of journals 432 mm as fitted 450 mm Crank Webs 365 mm Mid. length thickness 255 mm Thickness around eye hole 200 mm
Wheel Shaft, diameter 450 mm Intermediate Shafts, diameter 365 mm Thrust Shaft, diameter at collars 450 mm
Screw Shaft, diameter 360 mm as fitted 389 mm Is the tube shaft fitted with a continuous liner Yes.
Liners, thickness in way of bushes 18.4 mm as per Rule 21.5 mm Thickness between bushes 13.8 mm as per Rule 16.45 mm 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 one length.
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
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
If so, state type 15' 4" (MEAN) Length of Bearing in Stern Bush next to and supporting propeller 4' 11"
Pitch 14' 3" No. of blades 4 Material Bronze whether Moveable No. Total Developed Surface 81 sq. feet
Method of reversing Engines Hand lever Is a governor or other arrangement fitted to prevent racing of the engine when decelerated Yes. Means of lubrication
Thickness of cylinder liners 25 mm Are the cylinders fitted with safety valves Yes. Are the exhaust pipes and silencers water cooled or lagged with
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 —
Lubricating Water Pumps, No. 2 Electrically driven Is the sea suction provided with an efficient strainer which can be cleared within the vessel (F.W. cooling)
Pumps worked from the Main Engines, No. None Diameter — Stroke — Can one be overhauled while the other is at work —
Pumps connected to the Main Bilge Line { No. and Size 2 6" x 6" Vertical Duplex.
How driven Electrically

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 —
Last Pumps, No. and size 1 - 350 tons/hr. (Brydsole Rotary) Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 Stroke & Pitt 40 tons/hr. Elect. driven
Two independent means arranged for circulating water through the Oil Cooler Yes. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
Pumps, No. and size:—In Machinery Spaces 4 @ 3" In Pump Room 1 @ 3" Duct well.
Folds, &c. N°1. 3" prs. N°2. 3 1/2" prs. N°3A (Duplex) 3" prs. N°3B (Duplex) 3" prs. N°4. 3 1/2" prs. N°5. 1 @ 3 1/2" (4 ft.)
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 9" (Ballast.) 1 @ 6" (Bilge & En. Srs.)
All the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes. Are the Bilge Suctions in the Machinery Spaces
from easily accessible mud-boxes, 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 Both
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 Below.
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 None How are they protected —
At pipes pass through the deep tanks None (Auct. Keel) 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 (Blind) intact. 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. Two No. of stages 3 Diameters 12 1/4 - 3, 12 1/4 - 10 1/2, 3" Stroke 4 Driven by Elect. motor
Auxiliary Air Compressors, No. One No. of stages 2 Diameters 6 - 1 1/4, 2 1/4" Stroke 4 1/2 Driven by Steam Eng.
Small Auxiliary Air Compressors, No. — No. of stages — Diameters — Stroke — Driven by —
What provision is made for first Charging the Air Receivers Steam driven auxiliary compressor.
Scavenging Air Pumps, No. One (Back Engine) Diameter 1500 mm Stroke 1200 mm Driven by Engine Crank 84 ft.
Auxiliary Engines crank shafts, diameter — as per Rule — as fitted — No. — Position —
Have the Auxiliary Engines been constructed under special survey — Is a report sent herewith —

AIR RECEIVERS: - Have they been made under survey

Is each receiver, which can be isolated, fitted with a safety valve as per Rule 10
Can the internal surfaces of the receivers be examined and cleaned

Injection 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.

Total cubic capacity

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

IS A DONKEY BOILER FITTED?

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

PLANS. Are approved plans forwarded herewith for Shafting

(If not, state date of approval)

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

Receivers

Separate Fuel Tanks

Pumping Arrangements in Machinery Space

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

2 C.I. Propellers, 1 Cyl. liner & packet Complete, 1 main piston head & 24 rings, 2 Side & Centre top shaft and bearing bolts & nuts, 2 main bearing bolts & nuts, 1 set. Complete bolts for crank shaft & 1 ditto for intermediate shafting, 4 front & 4 back fuel valves Complete, 16 Spray Pumps, 1 N.R. Starting air valve, 1 Cyl. relief valve, 8 Scavenge pumps 1/2 discs, 2 Fuel pump bodies Comp, 1 set. Thrust pads, 3 pads for inter. shaft bearings, 3 ditto for tail shaft bearing, 16 rubber hoses for Cooling System, 6 links of roller chain for Camshaft drive.

The foregoing is a correct description
WILLIAM DOXFORD & SONS, Limited.

Wm. Doxford & Sons, Limited

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1942. Oct. 13, 14, 21, 23, 28, 29. Nov. 3, 4, 5. Dec. 11, 15, 16, 23, 29. 1943. Jan. 5, 6, 8, 12, 18, 21, 25, 27, 28, 29. Feb. 1, 2, 5, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Mar. 2, 3, 4, 5, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Apr. 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. May 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Jun. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Jul. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Aug. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Sep. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Oct. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Nov. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Dec. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31.

Dates of Examination of principal parts - Cylinders 1942. Oct. 13, 14, 21, 23, 28, 29. Nov. 3, 4, 5. Dec. 11, 15, 16, 23, 29. 1943. Jan. 5, 6, 8, 12, 18, 21, 25, 27, 28, 29. Feb. 1, 2, 5, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Mar. 2, 3, 4, 5, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Apr. 1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. May 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Jun. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Jul. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Aug. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Sep. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Oct. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Nov. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Dec. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31.

Crane shaft, Material Infot. Steel Identification Mark N232 W.H.F. Flywheel shaft, Material as crank Identification Mark as crank. Thrust shaft, Material as crank Identification Mark as crank. Intermediate shafts, Material Infot. Steel Identification Marks N2362 F. 838/9/40/1/2/3/4. Tube shaft, Material - Identification Mark - Screw shafts, Material Infot. Steel Identification Marks W.H.F. 16/4/43.

Identification Marks on Air Receivers. K. 1498/9/1500 L.R. 21342 L.C.D. 11/3/43

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 1 1/2 in. perforated pipe for steam heated around E.R. 4 1/2 lb. Co2 delivered in 3 min. train in E.R. 4 8-2 Gall. container

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 Not desired.

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 machinery has been built under Special Survey in accordance with the approved plans & the rule requirements of the Rules.

The materials & workmanship are good. It has been securely fitted on board the vessel tried under working conditions alongside quay with Satis factory results.

The 3-horse Gas "blanket" boiler & the oil fired Cochran boiler have been securely fixed on board. The Cochran boiler has been fitted to burn oil fuel (F.P. above 150° F.).

Section 20 of the Rules has been complied with & the Safety valves of both boilers adjusted under steam.

The machinery is now shiftable, in our opinion, to have notation

L.M.C. 10.43 (oil Eng.) T.S. (C), 2 D.B. 120 lbs.

The amount of Entry Fee .. £ 6

Special ... £ 134

Donkey Boiler Fee ... £ 25

Travelling Expenses (if any) £ 18

When applied for

7 OCT 1943

When received

6 OCT 1943

Committee's Minute

Assigned

L.M.C. 10.43 C.I.
2 D.B. - 120 lbs. rating

J. H. Fraser

L. R. Horne

Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation