

RECEIVED
Oct. 4b.
D.O.

Spool F.E. Rpt No. 126744.

REPORT ON OIL ENGINE MACHINERY.

No. 18877

10 NOV 1947

Received at London Office

Report of writing Report 7-11-1947 When handed in at Local Office 7-11-1947 Port of West Hartlepool
Survey held at West Hartlepool Date, First Survey 15th February, 1946 Last Survey 3rd November, 1947
g. Book. Number of Visits 89
on the Single Screw vessel "BRITISH DUKE" Tons Gross.....
Triple Net.....
Quadruple
Built at Birkenhead By whom built Cammell Laird & Co. Yard No. 1178 When built 1947
Engines made at West Hartlepool By whom made Richardson Hartnoll & Co. Engine No. 3137 When made 1947
Boilers made at Birkenhead By whom made Cammell Laird & Co. Ltd. Boiler No. 1148 When made 1948
Horse Power 3100 Owners British Tanker Co. Ltd. Port belonging to London
Horse Power as per Rule 687 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
For which vessel is intended

ENGINES, &c. — Type of Engines Opposed piston airless injection 2 or 4 stroke cycle 2 Single or double acting single
Maximum pressure in cylinders 640 lb/sq. in. Diameter of cylinders 600% Length of stroke 1140% No. of cylinders 4 No. of cranks 4-314
Indicated Pressure 85 lb/sq. in. Centers of Piston Rods 1200 M.M. Is there a bearing between each crank Yes
of bearings, adjacent to the crank, measured from inner edge to inner edge 1890% Means of ignition Comp. Ignition Kind of fuel used Diesel
Revolutions per minute 105 Flywheel dia. A. 2050% Weight F. 309 lb. Kind of fuel used Diesel
ank Solid forged dia. of journals as fitted 431% Crank pin dia. 450% Crank webs Mid. length breadth 650% Thickness parallel to axis 255%
ft, Semi built as fitted 450% as fitted 450% Mid. length thickness 255% shrunk Thickness around eye hole 200%
Wheel Shaft, diameter as fitted 431% Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as fitted 450%
e Shaft, diameter as fitted 450% as fitted 431%
Is the { tube } shaft fitted with a continuous liner {
screw }
Liners, thickness in way of bushes as per Rule Thickness between bushes as fitted Is the after end of the liner made watertight in the
peller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner
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 If 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
of tube shaft If so, state type Length of bearing in Stern Bush next to and supporting propeller
eller, dia. Pitch No. of blades Material whether moveable Total developed surface sq. feet
hod of reversing Engines Hand lever Is a governor or other arrangement fitted to prevent racing of the engine when detached Yes Means of
ication Hand lever Thickness of cylinder liners 25% Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled
ugged with non-conducting material lagged Is the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned
to the engine Yes Cooling Water Pumps, No. Eng. driven Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work
ps connected to the Main Bilge Line { No. and size
How driven
e cooling water led to the bilges If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping
gements
st Pumps, No. and size Power Driven Lubricating Oil Pumps, including spare pump, No. and size One engine driven
two independent means arranged for circulating water through the Oil Cooler 100% = 600% Suctions, connected to both main bilge pumps and auxiliary
pumps, No. and size:—In machinery spaces In pump room
lds, &c.
pendent Power Pump Direct Suctions to the engine room bilges, No. and size
ll the bilge suction pipes in holds and tunnel well fitted with strum-boxes Are the bilge suction in the machinery spaces led from easily
ible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges
l Sea Connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed
ently high on the ship's side to be seen without lifting the platform plates Are the overboard discharges above or below the deep water line
ey each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate
pipes pass through the bunkers How are they protected
pipes pass through the deep tanks Have they been tested as per Rule
ll pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times
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
or from one compartment to another Is the shaft tunnel watertight Is it fitted with a watertight door worked from
ood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
Air Compressors, No. No. of stages diameters stroke driven by
ary Air Compressors, No. No. of stages diameters stroke driven by
of Auxiliary Air Compressors, No. No. of stages diameters stroke driven by
provision is made for first charging the air receivers
ging Air Pumps, No. One diameter 1960% stroke 600% driven by hand from M. Engine
ary Engines crank shafts, diameter as per Rule No. Position
as fitted
e auxiliary engines been constructed under special survey Is a report sent herewith

18.11.47

02745-002735-0180

AIR RECEIVERS:—Have they been made under survey.....State No. of report or certificate.....

Is each receiver, which can be isolated, fitted with a safety valve as per Rule.....

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

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.....

Starting Air Receivers, No.....Total cubic capacity.....Internal diameter.....thickness.....

Seamless, lap welded or riveted longitudinal joint.....Material.....Range of tensile strength.....Working pressure.....

IS A DONKEY BOILER FITTED.....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.....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.....

State the principal additional spare gear supplied.....

F. H. HARDSONS, WESTGARTH & CO. LIMITED.

The foregoing is a correct description.....Manufacturer.....

Dates of Survey while building.....During progress of work in shops - - - - -
During erection on board vessel - - - - -
Total No. of visits.....89.....

Dates of examination of principal parts—Cylinders.....8-10-47.....Covers.....✓.....Pistons.....8-10-47.....Rods.....8-10-47.....Connecting rods.....8-10-47.....

Crank shaft.....22-7-47.....Flywheel shaft.....Thrust shaft.....Intermediate shafts.....Tube shaft.....

Screw shaft.....Propeller.....Stern tube.....Engine seatings.....Engine holding down bolts.....

Completion of fitting sea connections.....Completion of pumping arrangements.....Engines tried under working conditions.....

Crank shaft, material.....O.H. Steel.....Identification mark.....14274 B.....Flywheel shaft, material.....O.H. Steel.....Identification mark.....14274 B.....

Thrust shaft, material.....O.H. Steel.....Identification mark.....14274 B.....Intermediate shafts, material.....Identification marks.....

Tube shaft, material.....Identification mark.....Screw shaft, material.....Identification mark.....

Identification marks on air receivers.....

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

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

Description of fire extinguishing apparatus fitted.....

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo.....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.....Yes.....If so, state name of vessel.....BRITISH BARON.....HPL 1879.....

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 & to the Rules of the Society

The Materials & workmanship are good. On completion, it has been tried

under full load conditions on the test bed, with satisfactory results.

It has now been despatched to Birkenhead for installation on board.

vessel & upon this being satisfactorily completed, the Machinery will be

eligible, in my opinion, to have notation of + LMC (with date). oil engine

The amount of Entry Fee ... £ : : When applied for 7-11-1947

43 Special ... £ 95 : 16 : When received 19

Welded Construction £ 12 : 12 : Travelling Expenses (if any) £ :

Donkey Boiler Fee... £ : : Committee's Minute

Assigned Lee Minute or Liverpool &c. Mech Reports