

Also See Lth Rpt. No. 21386

pt. 4b.

RECEIVED

REPORT ON OIL ENGINE MACHINERY.

No. 68905.
20 OCT 1944

Received at London Office

Date of writing Report 7. 10. 1944 When handed in at Local Office 14 10 1944 Port of Glasgow. 12 APR 1945

No. in Survey held at Date, First Survey 15. 8. 44. Last Survey 19. 9. 1944. Number of Visits 7.

Single on the Motor Triple Screw vessel "STORK" Tons Gross..... Net.....

Builder at Lith By whom built Messrs Henry Robb. Ltd. Yard No. 334. When built 1944.

Engines made at Glasgow. By whom made Messrs British Polar Engine Ltd. Engine No. 510. When made 1944.

Boiler No. ✓ When made ✓

Indicated Horse Power 560 Owners ✓ Port belonging to ✓

Net Horse Power as per Rule 101 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓

Trade for which vessel is intended ✓

TYPE OF ENGINES, &c. — Type of Engines M.4.6.1 Heavy Oil 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 853 lbs/sq. in. approved 13.12.43 Diameter of cylinders 250 Length of stroke 420 No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 97.46/sq. in. Is there a bearing between each crank Yes

Span of bearings, adjacent to the crank, measured from inner edge to inner edge 366

Revolutions per minute 375 Flywheel dia. 900 Weight 828 lbs. 1178 lbs. Means of ignition Compression Kind of fuel used Diesel.

Crankshaft, dia. of journals 159 Crank pin dia. 170 Crank webs Mid. length breadth 215 Kind of fuel used Diesel.

Intermediate Shafts, diameter 159 Thrust Shaft, diameter at collars 205 as fitted 170

Tube Shaft, diameter 170 as fitted 159 as per Rule 159 as fitted 170

Screw Shaft, diameter 170 as fitted 159 as per Rule 159 as fitted 170

Is the tube screw shaft fitted with a continuous liner ✓

Bronze Liners, thickness in way of bushes 19.5 Thickness between bushes 19.5 Is the after end of the liner made watertight in the propeller boss ✓

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓

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 ✓

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 end of tube shaft ✓

If so, state type ✓ Length of bearing in Stern Bush next to and supporting propeller ✓

Propeller, dia. 1945 Pitch 1945 No. of blades ✓ Material ✓ whether moveable ✓ Total developed surface ✓ sq. feet

Method of reversing Engines Diesel Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Lubricated

Thickness of cylinder liners 19.5 Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled Yes

Are they lagged with non-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 ✓

Cooling Water Pumps, No. 2. Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓

Bilge Pumps worked from the Main Engines, No. 2. Diameter 110 Stroke 60 Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line { No. and size ✓ How driven ✓

Is the 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 arrangements ✓

Ballast Pumps, No. and size ✓ Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 off. 2375 Gall./hour.

Are two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected to both main bilge pumps and auxiliary bilge pumps, No. and size:—In machinery spaces ✓ In pump room ✓

In holds, &c. ✓

Independent Power Pump Direct Suctions to the engine room bilges, No. and size ✓

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes ✓ Are the bilge suction 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 ✓

Are all Sea Connections fitted direct on the skin of the Ship ✓ Are they fitted with valves or cocks ✓ Are they fixed efficiently 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 ✓ Are they 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 ✓ What pipes pass through the bunkers ✓ How are they protected ✓

What pipes pass through the deep tanks ✓ Have they been tested as per Rule ✓

Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times ✓

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 ✓ Is the shaft tunnel watertight ✓ Is it fitted with a watertight door ✓ 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. One No. of stages 2. diameters 140 552 stroke 240 driven by Main Engine

Auxiliary Air Compressors, No. ✓ No. of stages ✓ diameters ✓ stroke ✓ driven by ✓

Small Auxiliary Air Compressors, No. ✓ No. of stages ✓ diameters ✓ stroke ✓ driven by ✓

What provision is made for first charging the air receivers ✓

Scavenging Air Pumps, No. One diameter 720 stroke 240 driven by Main Engine

Auxiliary Engines crank shafts, diameter ✓ as per Rule ✓ as fitted ✓ Position ✓

Have the auxiliary engines been constructed under special survey ✓ Is a report sent herewith ✓

21910-202210-361210

© 2020 Lloyd's Register Foundation

AIR RECEIVERS:—Have they been made under survey... *Yes* State No. of report or certificate... *C. 53198*

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.... Cubic capacity of each... Internal diameter... thickness...

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

Starting Air Receivers, No. *Two* Total cubic capacity *28 cu. feet* Internal diameter *1'-9"* thickness *3/32"*

Seamless, lap welded or riveted longitudinal joint... Riveted... Material... *Steel* Range of tensile strength... Working pressure... by Rules... *355* Actual... *355 lb*

IS A DONKEY BOILER FITTED... If so, is a report now forwarded... *Yes*

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

PLANS. Are approved plans forwarded herewith for shafting... *9. 6. 44* Receivers... *16. 5. 33* Separate fuel tanks... *Yes*

Donkey boilers... General pumping arrangements... Pumping arrangements in machinery space...

Oil fuel buring arrangements...

SPARE GEAR.

Has the spare gear required by the Rules been supplied... *Yes*

State the principal additional spare gear supplied... *As per attached list.*

The foregoing is a correct description,
for *BRITISH POLAR ENGINES LIMITED.* Manufacturer.

Dates of Survey while building
During progress of work in shops - - *1944 Aug 15. 18. 21. 25 Sep 5. 11. 19*
During erection on board vessel - - -
Total No. of visits... *9*

Dates of examination of principal parts—Cylinders... *15. 8. 44* Covers... *25. 8. 44* Pistons... *25. 8. 44* Rods... *25. 8. 44* Connecting rods... *25. 8. 44*

Crank shaft... *15. 8. 44* Flywheel shaft... Thrust shaft... *15. 8. 44* 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... *11. 9. 44*

Crank shaft, material... *Steel* Identification mark... *574. P.W. 19. 7. 44* Flywheel shaft, material... *Steel* Identification mark...

Thrust shaft, material... *Steel* Identification mark... *8659. T.A.C. 10. 12. 43* Intermediate shafts, material... Identification marks...

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

Identification marks on air receivers... *20% 44040's*
53198
T.P. 555 lb/10
W.P. 355 lb/10
P.W. 28. 6. 44

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...

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, no* If so, state name of vessel... *N.V. "Ben Harn" Glasgow Rpt. 614*

General Remarks (State quality of workmanship, opinions as to class, &c.) *This engine has been built under special survey in accordance with the Rules and approved plans. The materials used and workmanship are good. On completion the engine was tested on the bench at full load with satisfactory results. The engine is to be used of Messrs Henry Robb, Ltd. and intended for their Duesch No 334, building at Girth when it has now been dispatched.*

The amount of Entry Fee... £ *3. 0. 0*
Glasgow 9/2 16. 17. 0
London 9/2 13. 8. 8. 0 £ *25. 5. 0*

Donkey Boiler Fee... £ : :
Travelling Expenses (if any) £ : :

When applied for... *17 OCT 1944*
When received... *19*

Committee's Minute...
Assigned... *Referred for completion*

Engineer Surveyor to Lloyd's Register of Shipping... *J. E. Machy*
FRI 27 APR 1945
See F.E. machy.rpt.

RJE 14-10-44

Certificate (if required) to be sent to...
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

