

REPORT ON OIL ENGINE MACHINERY.

LIVERPOOL FE. 117946

No 10,848.

13 JAN 1942 24 JUN 1942

Date of writing Report 7 JAN 1942 When handed in at Local Office 12/1/1942 Port of MANCHESTER.  
No. in Survey held at KEIGHLEY. Date, First Survey 23 JUNE 1941 Last Survey 6 JAN 1942  
Reg. Book. Number of Visits 10.  
Single on the Twin Triple Quadruple Screw vessel RN 2A  
Built at NORTHWICH. By whom built K. J. ARNOLD & SONS (1938) LTD Yard No 669 When built Should this be 668  
Engines made at KEIGHLEY. By whom made H. WINDOP & CO LTD Engine No 4064 When made 1941  
Donkey Boilers made at - By whom made - Boiler No. - When made -  
Brake Horse Power 300. Owners Port belonging to -  
Nom. Horse Power as per Rule 138. 140 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted YES  
Trade for which vessel is intended

OIL ENGINES, &c. Type of Engines VERTICAL SOLID INJECTION. 2 or 4 stroke cycle 2 Single or double acting SINGLE  
Maximum pressure in cylinders 650 LBS. Diameter of cylinders 11.5" Length of stroke 13.5" No. of cylinders 6 No. of cranks 6  
Mean Indicated Pressure 53.5 LBS/SQ IN. Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 16.75" Is there a bearing between each crank YES  
Revolutions per minute 330. Flywheel dia. 32.75" Weight 14.5 CWTs Means of ignition COMPRESSION Kind of fuel used HEAVY OIL  
Crank Shaft, { Solid forged as per Rule APPROVED dia. of journals 6.75" Crank pin dia. 6.75" Crank Webs Mid. length breadth 9" Thickness parallel to axis SOLID.  
{ Semi built dia. as fitted 6.75" Mid. length thickness 3.75" shrunk Thickness around eyehole  
{ All built as fitted  
Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule APPROVED  
as fitted as fitted as fitted 4.75"  
Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the { tube { shaft fitted with a continuous liner {  
as fitted as fitted as fitted  
Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the  
as fitted as fitted as fitted  
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 the tube  
shaft If so, state type Length of Bearing in Stern Bush next to and supporting propeller  
Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet  
Method of reversing Engines DIRECT Is a governor or other arrangement fitted to prevent racing of the engine when decoupled YES Means of lubrication  
FORCED. Thickness of cylinder liners 1/8" 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  
Cooling Water Pumps, No. ONE Is the sea suction provided with an efficient strainer which can be cleared within the vessel  
Bilge Pumps worked from the Main Engines, No. ONE Diameter 4.25" Stroke 3" Can one be overhauled while the other is at work  
Pumps connected to the Main Bilge Line { No. and Size  
{ How driven  
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 3. 1.75" DIA. & 3" STROKE  
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  
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 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  
Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks  
Are they fixed sufficiently 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  
At pipes pass through the bunkers How are they protected  
At 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 the vessel is 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 TWO Diameters 6" & 2.75" Stroke 3" Driven by MAIN ENGINE  
Auxiliary Air Compressors, No. ONE No. of stages ONE Diameters 4.5" Stroke 2.75" Driven by AUX. ENGINE  
All Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by  
Is provision is made for first Charging the Air Receivers INDEPENDENT AIR COMPRESSOR  
Suctioning Air Pumps, No. - Diameter - Stroke - Driven by  
Auxiliary Engines crank shafts, diameter as per Rule APPROVED No. 2 Position  
as fitted 2.25" & 3.25"  
Have the Auxiliary Engines been constructed under special survey YES



AIR RECEIVERS: - Have they been made under survey

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

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. THREE. Total cubic capacity 18.4 C.U. FT. Internal diameter 2. 12.5" thickness 2. 1/4" Working pressure 28-32 TONS  
Seamless, lap welded or riveted longitudinal joint SEAMLESS Material OH STEEL Range of tensile strength 28-32 TONS Working pressure 300 LBS

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 13.11.1940 Receivers - Separate Fuel Tanks -  
(If not, state date of approval)

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

The foregoing is a correct description.

Dates of Survey while building { During progress of work in shops - 1941. JUNE. 23. AUG. 13. 18. OCT. 9. 15. NOV. 19. DEC. 4. 10. 16. 1942 JAN  
During erection on board vessel - - -  
Total No. of visits 10

Dates of Examination of principal parts - Cylinders 13.8.41. Covers 28.8.41. 9.10.41. Pistons 13.8.41. Rods - Connecting rods 23.6.41  
Crank shaft 13.8.41. Flywheel shaft - Thrust shaft 15.10.41. Intermediate shafts - Tube shaft -  
Screw shaft - Propeller - Stern tube - Engine sealings - Engines holding down bolts -  
Completion of fitting sea connections - Completion of pumping arrangements - Engines tried under working conditions -  
Crank shaft, Material OH. STEEL. Identification Mark LLOYDS 118 JMB. Flywheel shaft, Material - Identification Mark -  
Thrust shaft, Material OH. STEEL. Identification Mark LLOYDS 286 JMB. Intermediate shafts, Material - Identification Marks -  
Tube shaft, Material - Identification Mark - Screw shaft, Material - Identification Mark -  
Identification Marks on Air Receivers CTCO. CT CO RUSTON  
NO 54600. NP. 350 LBS. NO 54588. NP. 350 LBS. D. 808. H. 81. 16  
LLOYDS TEST. 1000 LBS. 15.9.41. LT. LLOYDS TEST 1000 LBS. 18.3.41. LT. LLOYDS TEST 1000 LBS. 17.6.41

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 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

If so, have the requirements of the Rules been complied with  
If so, state name of vessel J. POLLACK & SONS 1494.

General Remarks (State quality of workmanship, opinions as to class, &c.)

THIS ENGINE HAS BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF TESTED MATERIALS AND IS IN ACCORDANCE WITH THE SECRETARY'S LETTERS, APPROVED PLANS AND RULE REQUIREMENTS. THE MATERIALS AND WORKMANSHIP ARE OF A GOOD QUALITY AND THE ENGINE WHEN TESTED UNDER FULL LOAD CONDITIONS IN SHOP SHOWN SATISFACTORY. IN MY OPINION THIS ENGINE IS SUITABLE FOR THE PURPOSE INTENDED AND WHEN SATISFACTORILY INSTALLED ON BOARD AND REPORTED UPON BY THE SOCIETY'S SURVEYOR WILL BE ELIGIBLE TO HAVE THE NOTATION OF LLOYDS MACHINERY CERTIFICATE (WITH DATA)

The amount of Entry Fee .. £ 3 : 0 : 0 When applied for, 31.12.41  
Special ... £ 31 : 3 : 6  
Donkey Boiler Fee ... £ : : : When received, 31/11/42  
Travelling Expenses (if any) £ 4 : 10 : 0

Committee's Minute LIVERPOOL  
Assigned See Minute on Liverpool J.P. Machinery Rpts.

Signature of J. Pollack & Sons



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