

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 31814

12 MAY 1936

Received at London Office

Date of writing Report

When handed in at Local Office

7 May 1936 Port of Sunderland.

No. in Survey held at
Reg. Book.

Sunderland.

Date, First Survey 18th Nov. '35 Last Survey 5th May 1936
Number of Visits 52

on the Single
Triple
Quadruple Screw vessel

"PEEBLES."

Tons Gross 4982
Net 3068

Built at Sunderland

By whom built Wm. Bayford & Sons Ltd. Yard No. 625 When built 1936.

Engines made at Sunderland

By whom made Wm. Bayford & Sons Ltd. Engine No. 620 When made 1936.

Donkey Boilers made at Stockton on Tees

By whom made Stockton Chem. & Eng. Co. & Riley Bros. Boiler No. 6163 When made 1936.

Brake Horse Power 1800

Owners B. J. Sutherland & Co. Ltd. Port belonging to Newcastle.

Nom. Horse Power as per Rule 388.

Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.

Trade for which vessel is intended

L. ENGINES, &c. Type of Engines Opposed Piston Airless injection 2 or 4 stroke cycle 2. Single or double acting Single

Maximum pressure in cylinders 540 lb/sq. in. Diameter of cylinders 520 mm. Length of stroke Lower 1200 mm. No. of cylinders 3 No. of cranks 3 (3 throw)

Mean Indicated Pressure 88 lb/sq. in. Upper 880 mm. Is there a bearing between each crank 3 Throw.

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 820 mm. Kind of fuel used Compression

Revolutions per minute 115 Flywheel dia. 1950 mm. Weight FOR 49 cwt. Means of ignition AFT. 34 cwt. Temperature 3 Throw.

Crank Shaft, dia. of journals as per Rule 356 mm. Crank pin dia. 410 mm. Crank Webs Mid. length breadth 580 mm. Thickness parallel to axis 230 mm.

as fitted 410 mm. Intermediate Shafts, diameter as per Rule 286 mm. Mid. length thickness 230 mm. Thickness around eye hole 190 mm.

as fitted 356 mm. Flywheel Shaft, diameter as per Rule 305 mm. Thrust Shaft, diameter at collars as per Rule 300 mm.

as fitted 410 mm. Is the { screw } shaft fitted with a continuous liner { Yes.

as per Rule 16.4 mm. Screw Shaft, diameter as fitted 314 mm. Is the { screw } shaft fitted with a continuous liner { Yes.

as fitted 18 mm. Thickness between bushes as per Rule 12.5 mm. 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.

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.

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 the tube

ft. No. If so, state type Length of Bearing in Stern Bush next to and supporting propeller 5'-0"

propeller, dia. 14'-0" Pitch 10'-6" No. of blades 4. Material Brass whether Moveable No. Total Developed Surface 80. sq. feet

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

and Thickens of cylinder liners 20 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 Yes.

Working Water Pumps, No. 2 1 Engine Driven 1 Steam Driven Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes.

ge Pumps worked from the Main Engines, No. none Diameter Stroke Can one be overhauled while the other is at work Yes.

pumps connected to the Main Bilge Line { No. and Size Two 6" x 5 1/2" x 15" Lewis Simplex. How driven Steam Driven.

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 Simplex. last Pumps, No. and size 1 @ 12" x 10 1/2" x 24" Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size one (main eng.) 80 mm x 520 mm.

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 E.R. 1 @ 3" Tunnel well. In Pump Room one 5 1/2" x 6" x 15" Simplex

holds, &c. N°1 3 1/2" p.s. N°2 3 1/2" p.s. N°3 3" p.s. N°4 3 1/2" p.s. Deep Tank 3 1/2" p.s.

dependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 1 @ 8" 1 @ 5"

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. Both.

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 above.

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.

pipes pass through the bunkers none. How are they protected Yes.

pipes pass through the deep tanks Forward bilge suction Have they been tested as per Rule Yes.

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes.

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

partment to another Yes. Is the Shaft Tunnel watertight Yes. Is it fitted with a watertight door Yes. worked from E.R. top

wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Yes.

an Air Compressors, No. Two No. of stages 3. Diameters 10 1/2"-8 1/2"-2 1/2" Stroke 6" Driven by Steam 11 1/2" x 6" Stroke

liary Air Compressors, No. none No. of stages 1 Diameters Stroke Driven by Yes.

liary Air Compressors, No. none No. of stages 1 Diameters Stroke Driven by Yes.

enging Air Pumps, No. one Diameter 1510 mm. Stroke 520 mm. Driven by Yes.

liary Engines crank shafts, diameter as per Rule No. Position

as fitted Yes.

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes. On discharge from Compressor* Rpt. 5a.

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

High Pressure Air Receivers, No. *None.* Cubic capacity of each *180 cuft.* Internal diameter *3'-6"* thickness *1"*

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 *180 cuft.* Internal diameter *3'-6"* thickness *1"*

Seamless, lap welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *28/32.* Working pressure *603* by Rules *600* Actual *600*

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 *as "Sutherland"* Receivers *as "Sutherland"* Separate Fuel Tanks *as "Sutherland"*

Donkey Boilers *Yes.* General Pumping Arrangements *as "Sutherland"* Pumping Arrangements in Machinery Space *as "Sutherland"*

Oil Fuel Burning Arrangements *as "Sutherland"* SPARE GEAR.

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

State the principal additional spare gear supplied *1 Cast iron propeller, 1 propeller shaft, 2 front fuel valves complete, 2 Back fuel valves complete, 8 Spray plugs, 1 Starting air valve complete, 1 Cylinder relief valve complete, 4 Scavenge pump Suction & delivery valve discs, 1 Fuel pump body complete with ram, guide, Suction & delivery valve Chamber, intermediate Crankshaft with strut & nuts, 1 Fuel pump bell crank lever & suction tappet, 1 roller chain for Camshaft drive, 1 Cylinder liner & jacket complete.*

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

W. Keller 9th April 1936 Manufacturer.

Manager.

Dates of Survey while building
During progress of work in shops-- 1935. 7. 10. 18. 19. 21. 22. 26. 27. Dec. 4. 9. 11. 14. 18. 19. 20. 23. 24. 27. 30. 31. Jan. 3. 7. 10. 21. 22. 23. 28. 29. 30. 31.
During erection on board vessel-- Feb. 3. 4. 5. 10. 11. 12. 14. 17. 21. Mar. 2. 4. 5. 17. 18. 23. 24. 26. 27. Apr. 3. 7. 9. 15. 17. 23. May 5.
Total No. of visits 52 23/12/35 24/12/35 10/1/36 10/1/36 29/1/36.

Dates of Examination of principal parts—Cylinders 24/12/35 Covers *✓* Pistons 22/1/36 Rods 22/1/36 Connecting rods 29/1/36.

Crank shaft (G.S.) 27/12/35 Flywheel shaft *as crank* Thrust shaft *as crank.* Intermediate shafts 31/2/36. Tube shaft *✓*

Screw shaft 2/3/36, 14/3/36 Propeller 14/3/36 Stern tube 2/3/36 Engine seatings *Yank tops* Engines holding down bolts 3/4/36.

Completion of fitting sea connections 4/3/36. Completion of pumping arrangements 5/5/36 Engines tried under working conditions 5/5/36.

Crank shaft, Material *Sm. Ingot Steel* Identification Mark *N° 3946 G.O.C. 27. 12. 35.* Flywheel shaft, Material *as crank* Identification Mark *N° 3062, 3055, 3060, 3051.*

Thrust shaft, Material *as crank.* Identification Mark *✓* Intermediate shafts, Material *Sm. Ingot Steel* Identification Marks *3067, 3061, 3054. W.H.F.*

Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *Sm. Ingot Steel* Identification Mark *N° 3065 W.H.F. 17. 3. 36*

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.*

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 *Yes.* If so, state name of vessel *M/V "SUTHERLAND".*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been built under Special Survey in accordance with the Rules of the Society & the Secretary's letter E 25/4/34.*

The materials & workmanship are good. The machinery has been securely fitted on board the vessel & tried under full working conditions at sea, including full requirements for starting, with satisfactory results. The two donkey boilers have also been securely fixed on board the vessel & fitted to burn oil fuel (F.P. above 150°F). Section 20 of the Rules has been complied with, safety valves of boilers adjusted to working pressure & accumulation test carried out satisfactorily. The machinery is eligible in my opinion to have notation L.M.C. 5.36 oil eng., T.S(C-) 2DB 120 lbs/o"

The amount of Entry Fee .. £ 5 : : When applied for, 11 MAY 1936

Special £ 83 : 4 : 12.5 1936

Donkey Boiler Fee £ 12 : 12 : 12.5 1936

Travelling Expenses (if any) £ : : 13/5

Committee's Minute TUE. 19 MAY 1936

Assigned + L.M.C. 5.36 oil engines C.L. 2DB 120 lbs.

Engine Surveyor to Lloyd's Register of Shipping.



© 2020

Lloyd's Register Foundation