

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No 19.

Received at London Office 5 JAN 1942

Date of writing Report 19 When handed in at Local Office 19 Port of NOTTINGHAM

No. in Survey held at LINCOLN Date, First Survey 24.7.41 Last Survey 23.12.1941

Reg. Book. 6d. 5.5.38 00 1/29. on the Single Screw vessel "Port Natal" NOW NAMED "Promise" Number of Visits 14

Built at LISBON By whom built COMPANHIA UNIAO FABRIL Yard No. 111 When built 1941

Engines made at LINCOLN By whom made RUSTON & HORNSBY LTD. Engine No. 206512 When made 1941

Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓

Brake Horse Power 560 Owners LOCH FISHING CO. [DIRECTOR OF NAVY CONTRACTS] belonging to ✓

Nom. Horse Power as per Rule 107 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted YES

Trade for which vessel is intended ✓

Tons: Gross Net

OIL ENGINES, &c.—Type of Engines VERTICAL SOLID INJECTION TVGBM 2 or 4 stroke cycle 4 Single or double acting SINGLE

Maximum pressure in cylinders 675 LB. Mean Indicated Pressure 100.5 LB. Diameter of cylinders 12 1/2" Length of stroke 15" No. of cylinders 7 No. of cranks 7

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 13 13/16" Is there a bearing between each crank YES

Revolutions per minute 430 Flywheel dia. 51" Weight 37 CWT Means of ignition COMPRESSION Kind of fuel used HEAVY OIL

Crank Shaft, Solid forged dia. of journals 9" as per Rule APPD. 4.8.39 as fitted 9" Crank pin dia. 7" Crank Webs Mid. length breadth 12" Mid. length thickness 3 15/16" Thickness parallel to axis ✓ Thickness around eyehole ✓

Flywheel Shaft, diameter as per Rule ✓ as fitted ✓ Intermediate Shafts, diameter as per Rule APPD. 7.2.41 as fitted 6/8" Thrust Shaft, diameter at collars as per Rule ✓ as fitted ✓

Tube Shaft, diameter as per Rule ✓ as fitted ✓ Screw Shaft, diameter as per Rule APPD. 7.2.41 as fitted 7/8" Is the ✓ shaft fitted with a continuous liner No

Bronze Liners, thickness in way of bushes as per Rule ✓ as fitted ✓ Thickness between bushes as per Rule ✓ as fitted ✓ 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 the tube shaft ✓

Propeller, dia. 8'3" Pitch 8'-1" No. of blades 3 Material BRONZE whether Moveable No Total Developed Surface 26 sq. feet

Method of reversing Engines REVERSE & REDUCTION GEAR a governor or other arrangement fitted to prevent racing of the engine when declutched YES Means of lubrication FORCED

Thickness of cylinder liners 1" Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled or 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. 1 PLUNGER PUMP 4 3/4" x 4 3/4" Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓

Bilge Pumps worked from the Main Engines, No. 1 Diameter 4 3/4" Stroke 4 3/4" Can one be overhauled while the other is at work ✓

Pumps connected to the Main Bilge Line { No. and Size 1 - 2 1/2" No. 5 TRUSLOVE "CONQUEST" Q.S. & BILGE PUMP - 20 TON/HR. How driven 4 VROZ Aux. Eng.

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 FOR ENGINE 1 1/2" RUSTON GEAR PUMP FOR GEARS 1 1/2" RUSTON GEAR PUMP SPARE: 2-2" HARTWORTHY ROTOFOL PUMPS.

Are 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 ✓ 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 Suctions 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 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 ✓

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. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Auxiliary Air Compressors, No. 1 No. of stages 1 Diameters 3" Stroke 3 1/2" Driven by BELT FROM MAIN ENG.

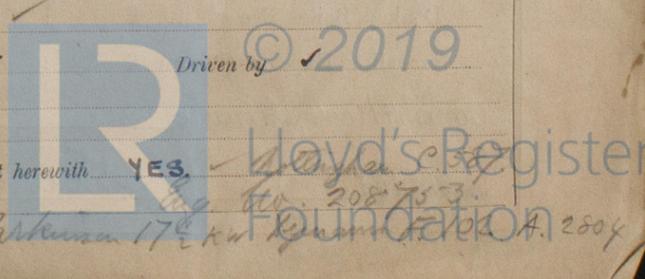
Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 3 3/4", 1 1/4" Stroke 3 1/4" Driven by CLUTCH - 4VROZ Eng.

What provision is made for first Charging the Air Receivers 4VROZ Eng. IS HAND STARTING.

Scavenging Air Pumps, No. ✓ Diameter ✓ Stroke ✓ Driven by ✓

Auxiliary Engines crank shafts, diameter as per Rule APPD. 17.5.40 as fitted P. 3" J 3 5/8" No. ✓ Position ✓

Have the Auxiliary Engines been constructed under special survey YES Is a report sent herewith YES



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Crompton Parkinson 17th Nov 1941

AIR RECEIVERS: — Have they been made under survey **YES** ✓ State No. of Report or Certificate **C. 580, C. 581**
 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. **2** Total cubic capacity **46.8 cu. ft.** Internal diameter **2'-6"** thickness **3/8"**
 Seamless, lap welded or riveted longitudinal joint **SEAMLESS** Material **S.M. STEEL** Range of tensile strength **26-30** Working pressure by Rules **APPD. 5-5-3** Actual **300 LB.** ✓

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 **{ 4.8.39 } Receivers 5.5.38 Separate Fuel Tanks { 25.2.41 }
 (If not, state date of approval) **{ 7.2.41 }**
 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 **YES.** ✓
 State the principal additional spare gear supplied **TO ADMIRALTY REQUIREMENTS.****

Ruston & Hornsby, Limited

The foregoing is a correct description.

R. Lloyd
 Manufacturer.

Oil & Gas Engine Des.
 Dates of Survey while building: During progress of work in shops - - **24.7.41** To 23.12.41, **14 VISITS.**
 During erection on board vessel - -
 Total No. of visits

Dates of Examination of principal parts	Cylinders	Covers	Pistons	Rods	Connecting rods
Crank shaft	Flywheel shaft ✓	Thrust shaft ✓	Intermediate shafts ✓	Tube shaft ✓	
Screw shaft ✓	Propeller ✓	Stern tube ✓	Engine seatings ✓	Engines holding down bolts ✓	
Completion of fitting sea connections ✓	Completion of pumping arrangements ✓	Engines tried under working conditions SHOP TRIALS 18-2			
Crank shaft, Material S.M. STEEL	Identification Mark 216 JB 7.8.41	Flywheel shaft, Material ✓	Identification Mark ✓		
Thrust shaft, Material ✓	Identification Mark ✓	Intermediate shafts, Material S.M. STEEL	Identification Marks 6005 A.S. 18.4		
Tube shaft, Material ✓	Identification Mark ✓	Screw shaft, Material S.M. STEEL	Identification Mark 5998 A.S. 11.4		

Identification Marks on Air Receivers
B. 2838 B. 2839.
LLOYD'S TEST.
600 LB./SQ. IN.
W.P. 300 LB./SQ. IN.
JB. 15.12.41 JB.

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 **YARD No. 107.**

General Remarks (State quality of workmanship, opinions as to class, &c.)
 This engine has been built under Special Survey in accordance with the approved plans and the Society's Rules.
 The materials and workmanship are good. Shop trials carried out at the makers works were satisfactory.
 The engine has been despatched to Lisbon for installation in the vessel.

Now charged - £20-0-0 as per letter 12/2/41
 2124/T/40/13/48-55

The amount of Entry Fee .. £	:	:	When applied for,
Special £	20: 0	:	Monthly A/c.
Donkey Boiler Fee £	:	:	When received,
Travelling Expenses (if any) £	:	:	19

J. Buchanan
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned *See Lis. J.C. 3571*



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