

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 30504

21 NOV 1930

Date of writing Report 19 Nov 1930 When handed in at Local Office 19 Nov 1930 Port of Sunderland.

No. in Survey held at Sunderland Date, First Survey 31 Jan Last Survey 17 Nov 1930 Reg. Book. Number of Visits 62

Single on the ~~Twin~~ ~~Triple~~ ~~Quadruple~~ MOTOR "THORS HAVN" Screw vessel

Tons Gross 6748 Net 4045

Built at Sunderland By whom built Sir James Laing & Co. Yard No. 710 When built 1930 Engines made at Do By whom made William Dumbell & Co. Engine No. 178 When made 1930 Donkey Boilers made at Sunderland By whom made Richard & Sons Wetherby Boiler No. 2083/2092 When made 1930 Brake Horse Power 2900 Owners ~~...~~ Port belonging to ~~...~~ Nom. Horse Power as per Rule 687 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes Trade for which vessel is intended Oil Tanker.

OIL ENGINES, &c.—Type of Engines Inward Exhaust Piston Valves 2 or 4 stroke cycle 2 Single or double acting Simple

Maximum pressure in cylinders 568 lbs/sq. in. Diameter of cylinders 800 = 23 7/8 Length of stroke 2320 = 91 1/2 No. of cylinders 4 No. of cranks 4 2 stroke

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 1050 Is there a bearing between each crank Yes

Revolutions per minute 90 Flywheel dia. 7-8 1/2 Weight 11 TONS Means of ignition TEMPERATURE Kind of fuel used CRUDE OIL

Crank Shaft, dia. of journals as per Rule 4 23 = APPROVED as fitted 4 30 Crank pin dia. 4 7 1/2 Crank Webs Mid. length breadth 650 Thickness parallel to axis 260 Thickness around eyelets 190

Flywheel Shaft, diameter as per Rule APPROVED as fitted 4 30 Intermediate Shafts, diameter as per Rule APPROVED as fitted 4 30 Thrust Shaft, diameter at collars as per Rule APPROVED as fitted 4 30

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule APPROVED as fitted 20 Thickness between bushes as per Rule APPROVED as fitted 20 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 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 No

Propeller, dia. 17-5 Pitch 14-8 1/2 No. of blades 4 Material BRONZE whether Moveable NO Total Developed Surface 101 sq. feet Length of Bearing in Stern Bush next to and supporting propeller 6-0

Method of reversing Engines COMPRESSED AIR Is a governor or other arrangement fitted to prevent racing of the engine when decelerated YES Means of lubrication FORCED Thickness of cylinder liners REINFORCED Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled or lagged with non-conducting material LAGGED

Cooling Water Pumps, No. 2 @ 125 TONS EACH PER HOUR Is the sea suction provided with an efficient strainer which can be cleared within the vessel EXHAUST FRESH WATER COOLING

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

Pumps connected to the Main Bilge Line No. and Size 1 BALLAST 250 TONS PER HOUR 1 BILGE 50 TONS PER HOUR 1 GENERAL SERVICE 5 TONS PER HOUR How driven STEAM ELECTRIC MOTOR STEAM

Ballast Pumps, No. and size 1 @ 250 TONS PER HOUR Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 2 TONS PER HOUR (WINDING, 1 SPARE EACH READY COUPLED) Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Are two independent means arranged for circulating water through the Oil Cooler YES Pumps, No. and size:—In Machinery Spaces 4 @ 3 1/2, 1 @ 4, 1 @ 8 In Pump Room 2 @ 3 1/2

In Holds, &c. 1 @ 2 1/2 FORE COMPARTMENT Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 8" TO BALLAST PUMP

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes YES 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 YES

Are all Sea Connections fitted direct on the skin of the ship YES Are they fitted with Valves or Cocks BOTH

Are 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 YES

Are 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

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 YES

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 YES 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 STEAM

Auxiliary Air Compressors, No. 2 No. of stages 3 Diameters Stroke Driven by ELECTRIC

Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Scavenging Air Pumps, No. Diameter 1980 Stroke 600 Driven by LEVERS ON MAIN ENGINE

Auxiliary Engines crank shafts, diameter as per Rule SEE SEPARATE REPORT. No. 2 @ 65 KW. Position ENGINE ROOM PLATFORM

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule YES Is a drain fitted at the lowest part of each receiver YES

Can the internal surfaces of the receivers be examined and cleaned YES High Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness

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

Starting Air Receivers, No. 2 Total cubic capacity 220 CUB FT Internal diameter 3-6 thickness 1

Seamless, lap welded or riveted longitudinal joint RIVETED Material STEEL Range of tensile strength 28 TO 32 TONS Working pressure Actual 610 LBS/SQ. IN



REPORT

NO. 30504

DATE

BY

FOR

REASON

REMARKS

...

...

...

...

...

...

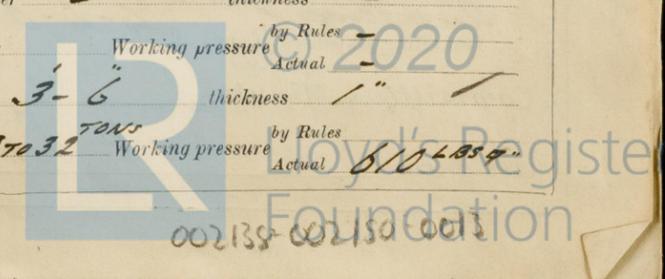
...

...

...

...

...



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 NO <sup>DUP M.V. PEGASUS</sup> Receivers NO <sup>DUP M.V. PEGASUS</sup> Separate Tanks NO <sup>DUP M.V. PEGASUS</sup>

Donkey Boilers YES. General Pumping Arrangements YES. Oil Fuel Burning Arrangements NO <sup>DUP M.V. PEGASUS</sup>

SPARE GEAR.

Has the spare gear required by the Rules been supplied YES.

State the principal additional spare gear supplied 1 Piston rod with skirt complete, 1 extra piston ring, 1 centre cross-head bearing, 1 centre bottom end bearing, 1 side connecting rod bottom end bearing, 1 non return starting valve, 1 relief valve for main cylinder, 4 scavenger pump valve direct, 1 thrust pad, 1 propeller shaft, 1 C.I. propeller, 1 set valves for fuel transfer pump, 1 set of valves for bilge pump. Extra spares for boilers, oil fuel burning plant and auxiliary machinery.

The foregoing is a correct description.

WILLIAM DOXFORD & SONS, Limited,

A. Maxwell

Manufacturer.

Dates of Survey while building: During progress of work in shops - 30. Jan. 31. Feb. 11, 12, 14, 18, 19, 20, 25, 26, 28. Mar. 26. Apr. 3, 4, 7, 28. May. 1, 12, 15, 16, 30. June 2, 20, 27. July 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. Nov. 3, 6, 7, 10, 11. Total No. of visits 62

Dates of Examination of principal parts - Cylinders 26/3/30 JACKET 34/4/30 Pistons 28/2/30 Rods 11/2/30 Connecting rods 25/2/30 Crank shaft 2/6/30 Flywheel shaft 8 Thrust shaft 30/3/30 Intermediate shafts 10/7/30 Tube shaft 1/10/30 Screw shaft 7/10/30 Propeller 29/7/30 Stern tube 3/9/30 Engine seatings 15/10/30 Engines holding down bolts 31/10/30 Completion of fitting sea connections 3/9/30 Completion of pumping arrangements 17/11/30 Engines tried under working conditions 17/11/30 Crank shaft, Material I. STEEL Identification Mark 8045/6/7 Flywheel shaft, Material and. Identification Mark and. Thrust shaft, Material I. STEEL Identification Mark 3652 Intermediate shafts, Material I. STEEL Identification Marks 3845 Tube shaft, Material and. Identification Mark and. Screw shaft, Material I. STEEL Identification Mark SPARE 3822. WORK 3784.

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 Yes If so, have the requirements of the Rules been complied with Yes

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with Yes

Is this machinery duplicate of a previous case YES. If so, state name of vessel M. V. PEGASUS.

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been built under special survey & the materials & workmanship are good. On completion the machinery was tried under full working conditions with satisfactory results. The machinery throughout is now in a good & efficient condition & eligible in my opinion to have the record LMC-11-30 marked in The Society's Register Book.

The Donkey boilers are also fitted to burn oil fuel F. P above 150° F & the requirements of the Rules (Section 20) fully complied with.

The amount of Entry Fee .. £ 6-0-0 When applied for, Special ... .. £ 109-7-0 15 Nov. 19. 30 Donkey Boiler Fee ... .. £ Travelling Expenses (if any) £ 4-4-0 18 Nov. 19. 30 As received

A. Maxwell  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 25 NOV 1930

Assigned

+ Lmbk 11.30 Ch. oil Eng 2 DB-150

CERTIFICATE WRITTEN.



© 2020

Lloyd's Register Foundation

Rpt. 4b

Date of writing

No. in Survey Reg. Book.

on the

Built at

Engines made

Donkey Boiler

Brake Horse

Nom. Horse P

Trade for wh

IL ENGLI

Maximum pressu

Span of bearings,

Revolutions per m

Crank Shaft, d

Flywheel Sha

Tube Shaft, d

Bronze Liners

propeller boss

If the liner does

If two liners ar

end of the tube

Propeller, dia.

Method of rev

pumps

non-conducting

Cooling Water

Bilge Pumps

Pumps connecte

Ballast Pump

Are two independ

Pumps, No. and

In Holds, &c.

Independent

Are all the Bilg

ed from easily

Are all Sea Co

Are they sized su

Are they each fit

What pipes pass

What pipes pass

Are all Pipes, C

Is the arrangem

compartment to

If a wood vessel

Main Air Con

Auxiliary Air

Small Auxilia

Scavenging A

Auxiliary En

IR REC

Can the interna

Is there a dra

High Pressu

Seamless, lap w

starting Air

Seamless, lap w

SUNDERLAND (The Surveyors are requested not to write on or below the space for Committee's Minute.)