

REPORT ON OIL ENGINE MACHINERY.

No. 25341

Received at London Office 27 APR 1955

pt. 4b.

23 APR 1955

Report of writing Report 19th APRIL 1955. When handed in at Local Office 22nd APRIL 1955. Port of GREENOCK

Survey held at GREENOCK Date, First Survey 24-2-54 Last Survey 19-3-55. Number of Visits 33.

on the ^{Single} ~~Twin~~ Screw vessel "SCOTTISH HAWK" Tons Gross 11147.61. Net 6185.24.

MACHINERY INSTALLED BY MESSRS. RANKIN & BLACKMORE LTD. GREENOCK. By whom built GREENOCK DOCKYARD CO. LTD. Yard No. 483. When built 1955.

engines made at WALLSEND-ON-TYNE By whom made WALLSEND SHIPWAY & ENG^s. CO. LTD. Engine No. 1058 When made 1955.

Boilers made at D^o. By whom made D^o. Boiler No. 1058 When made 1955.

Maximum Horse Power 6400 Owners SCOTTISH TANKER CO. LTD. Port belonging to GLASGOW.

Minimum Service 1280 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted YES.

Trade for which vessel is intended OPEN SEA SERVICE.

ENGINES, &c. —Type of Engines WALLSEND-DOXFORD. 2 or 4 stroke cycle 2. Single or double acting SINGLE.

Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks

Indicated Pressure Span of bearings (i.e., distance between inner edges of bearings in

of a crank) Is there a bearing between each crank. Revolutions per minute { Maximum Service

Wheel dia. Weight Moment of inertia of flywheel (lbs. in² or Kg. cm²) Means of ignition Kind of fuel used DIESEL & HEAVY OIL (BOILER).

Shaft dia. of journals as per Rule as fitted Crank webs Mid. length breadth shrunk Thickness parallel to axis

Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted

Screw Shaft, diameter as per Rule as fitted Is the (tube/screw) shaft fitted with a continuous liner YES

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

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-

rosive. If two liners are fitted, is the shaft lapped or protected between the liners. Is an approved Oil Gland fitted at the after

end of stern tube No. If so, state type Length of bearing in Stern Bush next to and supporting propeller 6'-0 7/8

Propeller, dia 18'-0" Pitch 12'-8" No. of blades 4. Material BRONZE whether moveable No. Total developed surface 132 sq. feet

Moment of inertia of propeller including entrained water (lbs. in² or Kg. cm²) Kind of damper, if fitted BIBBY DETUNER

Method of reversing Engines DIRECT Is a governor or other arrangement fitted to prevent racing of the engine YES. Means of

lubrication FORCED Thickness of cylinder liners Are the cylinders fitted with safety valves YES. Are the exhaust pipes and silencers water cooled

lagged with non-conducting material LAGGED. 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. and how driven 2 ELECT. & 2 STEAM. Working F.W. ONE

Other Pumps worked from the Main Engines, No. and capacity NONE. Can one be overhauled while the other is at work YES.

Pumps connected to the Main Bilge Line No. and capacity of each ONE BILGE PUMP 150 TONS/HR. ONE SANITARY PUMP 150 TONS/HR

How driven STEAM STEAM

Is 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 ONE SANITARY PUMP 150 TONS/HR. Power Driven Lubricating Oil Pumps, including spare pump, No. and size TWO EACH 70 TONS/HR.

Are two independent means arranged for circulating water through the Oil Cooler YES. Branch Bilge Suctions THREE OFF & THREE OILY BILGE

and size:—In machinery spaces ONE 3 1/2", TWO 4" OILY BILGE TO TRANS. P. THREE 2 1/2" & ONE 2 1/2" ECHO SOUND COMP. In pump room ONE 2 1/2" AUX.

Direct Bilge Suctions to the engine room bilges, No. and size TWO 6" DIA. ONE 7" DIA.

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

Are all Sea Connections fitted direct on the skin of the Ship YES. Are they fitted with valves or cocks YES. 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 BELOW.

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.

Do all pipes pass through the bunkers NONE. How are they protected YES

Do all pipes pass through the deep tanks ONE - FORE PEAK SUCTION. Have they been tested as per Rule YES.

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 NONE. Is it fitted with a watertight door YES. worked from YES.

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

Auxiliary Air Compressors, No. Two. No. of stages THREE. diameters 12 3/4", 10 1/4", 3" stroke 7" driven by STEAM.

What provision is made for first charging the air receivers DONKEY PUMPS & HANDLIGHTING UPSET & STEAM DRIVEN COMPRESSORS.

Revolving Air Pumps No. THREE. How driven FROM MAIN ENGINE CROSSHEADS NOS. 1, 2 AND 3.

Auxiliary Engines Have they been made under survey YES. Engine Nos. K3/54689/A, K3/54689/B, 10881.

Makers name DIESELS BY W. H. ALLEN. STEAM BY BELLISS & MORCAM. Position of each in engine room DIESELS ON ENGINE

Room Floor PORT SIDE. STEAM ON OIL TANK FLAT PORT SIDE ENGINE ROOM. Report No. LDN. 130194. & B.M. P. 11080.

014784-014793-0112

18/5/53

Register Foundation

AIR RECEIVERS:—Have they been made under survey Yes. State No. of report or certificate SEE NWC REPORT N° 11

State full details of safety devices FUSIBLE PLUG FITTED TO EACH RECEIVER.

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, welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure -

Starting Air Receivers, No. Two Total cubic capacity 360 cu. ft. Internal diameter ✓ thickness ✓

Seamless, welded or riveted longitudinal joint RIVETED Material ✓ Range of tensile strength ✓ Working pressure 600 lb/5"

IS A DONKEY BOILER FITTED Yes (Two) If so, is a report now forwarded ✓

Is the donkey boiler intended to be used for domestic purposes only No.

PLANS. Are approved plans forwarded herewith for shafting (STRAIGHT SHAFING) Yes. Receivers ✓ Separate fuel tanks Yes.

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

Oil fuel burning arrangements Yes.

Have Torsional Vibration characteristics been approved Yes. Date and particulars of approval 17-12-53 for service speed of 115 R.P.M. provided the engine is not operated continuously between 44 and 53.

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes. State if for "short voyages" only ✓

State the principal additional spare gear supplied SPARE SCREWSHAFT & PROPELLER

The foregoing is a correct description of the machinery and boilers of the vessel 90 Hull Manufacturer. MANAGING DIRECTOR

Dates of Survey while building: During erection on board vessel - (1954) Feb. 21. Aug. 26. Sept. 7. Oct. 7. 25. Nov. 2. 5. 7. 8. 9. 10. 19. 27. Dec. 28. 10. 11. 28. (1955) Jan. 12. 20. 21. 25. 28. Feb. 2. 4. 7. 8. 9. 11. 14. 18. 19. 21. 25. 28. Total No. of visits 33.

Dates of examination of principal parts—Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓ Crank shaft ✓ Flywheel shaft ✓ Thrust shaft ✓ Intermediate shafts 15. 2. 55 Tube shaft ✓ Screw shafts 5. 11. 54 Propeller 10. 11. 54 Stern tube 9. 11. 54 Engine seatings 28-12. 54 Engine holding down bolts 15. 2. 55 Completion of fitting sea connections 10-11-54 Completion of pumping arrangements 9-3-55 Engines tried under working conditions 16-3-55

Identification marks on air receivers hhexys Nwc. TESTED 800 lb/5" W.P. 600 lb/5" 18-11-54 S.B.

Welded receivers, state Makers' Name ✓ 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. Full description of fire extinguishing apparatus fitted in machinery spaces TWO 10 GALL. AND TWELVE 2 GALL. FOAM EXTING. FOUR HOSE CONN IN 15. R. AND TWO IN BOILER FLAT. STEAM SMOOTHERING.

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 ✓

What is the special notation desired - 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 No. If so, state name of vessel -

General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.) The machinery and boilers of this vessel have been constructed under special survey in accordance with the Society's Rules, Approved Plans and the Secretary's letter. The materials and workmanship are good. The engine and auxiliary boilers have been efficiently installed in the vessel and tested under full working conditions on a sea trial with satisfactory results. This installation is eligible in my opinion to be classed in the Society's Register Book with Record L.M.C. 3.55 and notation T.S. C.L. 2 DB 150 lb/5". All engines N.B. notice board fitted at control station, stating that these engines are not to be operated continuously between 44 and 53 R.P.M. and tachometer marked accordingly. Crankcase explosion relief devices fitted.

The amount of Entry Fee INSTALLATION ... £ 134 Special ... £ 134 Donkey Boiler Fee... £ 134 Travelling Expenses (if any) £ - When applied for 22ND APRIL 1955. When received 19

Assigned + L.M.C. 3.55. Oil Engine with torsional endorsement 2 DB. 150 lb.

Signature of G. Mearns, Engineer Surveyor to Lloyd's Register of Shipping. Lloyd's Register Foundation logo.

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