

REPORT ON OIL ENGINE MACHINERY.

No. 25341.

Received at London Office 27 APR 1955

pt. 4b.

23 APR 1955

Report of writing 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} ~~Triple~~ ~~Quadruple~~ 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^g. CO. LTD. Engine No. 1058 When made 1955.

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

Indicated Horse Power { Maximum 6400 Service 1280 Owners SCOTTISH TANKER CO. LTD. Port belonging to GLASGOW.

N. as per Rule 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).

ank { Solid forged dia. of journals as per Rule Crank webs Mid. length breadth Thickness parallel to axis

aft, { Semi built dia. of journals as fitted Crank webs Mid. length thickness Thickness around eyehole

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

be Shaft, diameter as fitted Screw Shaft, diameter as fitted Is the { tube screw } shaft fitted with a continuous liner YES

onze Liners, thickness in way of bushes as per Rule Thickness between bushes 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

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

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

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

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

agged with non-conducting material LAGGED If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

k to the engine Cooling Water Pumps, No. and how driven 2 ELECT. & 2 STEAM. Working F.W. ONE

ONE Spare F.W. ONE S.W. ONE 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. and capacity NONE Can one be overhauled while the other is at work

mps 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

he 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

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

last Pumps, No. and capacity TWO EACH 70 TONS/HR. Branch Bilge Suctions THREE OFF & THREE OILY BILGE

two independent means arranged for circulating water through the Oil Cooler YES. In pump room ONE 2 1/2" AUX.

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

holds, &c. Two 6" DIA. ONE 7" DIA.

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

all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Are the bilge suction in the machinery spaces led from easily

ossible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES

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

iciently 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.

they each fitted with a discharge valve always accessible on plating of the vessel YES Are the blow off cocks fitted with a spigot and brass covering plate YES.

at pipes pass through the bunkers NONE How are they protected

at pipes pass through the deep tanks ONE — FORE PEAK 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.

he 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

ces, or from one compartment to another YES Is the shaft tunnel watertight NONE Is it fitted with a watertight door worked from

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

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

xiliary Air Compressors, No. No. of stages diameters stroke driven by

all Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

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

avenging Air Pumps THREE How driven FROM MAIN ENGINE CROSSHEADS NOS. 1, 2 AND 3.

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

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

ROOM FLOOR PORT SIDE STEAM ON OIL TANK FLAT PORT SIDE ENGINE ROOM Report No. LON 130194 & B.M. P. 11080.

014784-014793-0114

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./sq. in.
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 SHAFTING) Yes. Receivers ✓ Separate fuel tanks Yes.
(If not, state date of approval)
Donkey boilers ✓ General pumping arrangements Yes. Pumping arrangements in machinery space Yes.
(WITH SHIP PLANS).
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 R.P.M.
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 FOR THE WALSLEY STEELWORKS & ENGINEERING CO. LIMITED
W. H. H. H. Manufacturer.
MANAGING DIRECTOR

Dates of Survey while building
During progress of work in shops —
During erection on board vessel (1954) Feb. 24. 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.
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
Crank shaft, material ✓ Identification mark ✓ Flywheel shaft, material ✓ Identification mark ✓
Thrust shaft, material ✓ Identification mark ✓ Intermediate shafts, material S.M. STEEL Identification marks 59918. 59939
Tube shaft, material ✓ Identification mark ✓ Screw shaft, material S.M. STEEL Identification mark 59940 SHF.
Identification marks on air receivers hexag. NWC. TESTED 800 lb./sq. in. W.P. 600 lb./sq. in. 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 EXTINGUISHERS. FOUR HOSE CONNECTIONS IN REAR OF 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 DBS 150 lb./sq. in. Oil engine. N.B. notice board fitted at control station, stating that the engine is 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.
HKT. Special ... £
Donkey Boiler Fee ... £
Travelling Expenses (if any) £
When applied for 22ND APRIL 1955.
When received 19
GLASGOW 26 APR 1955
Committee's Minute
Assigned + L.M.C. 3.55. Oil Engine with torsional endorsement 2 DBS. 150 lb.

G. Manson
Engineer Surveyor to Lloyd's Register of Shipping
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