

REPORT ON OIL ENGINE MACHINERY.

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of writing Report 19 When handed in at Local Office 11 DEC 1950 19 Port of NEWCASTLE-on-TYNE

Survey held at Date, First Survey 10/1/50 Last Survey 12/10/50 19

Book. Number of Visits 40

Single on the Triple Quadruple Screw vessel

at SOUTH BANK By whom built SMITHS DOCK CO. LD. Yard No. 1210 When built 1950

nes made at NEWCASTLE By whom made R. W. HAWTHORN LESLIE & CO. LD. Engine No. 4063 When made 1950

ey Boilers made at WALLSEND ON TYNE By whom made NORTH EASTERN MARINE ENG. CO. (1938) LTD. Boiler No. 3200 When made 1950

0. e Horse Power 4450 Owners ATHEL LINE LTD. Port belonging to LIVERPOOL

Power as per Rule 902 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES

e for which vessel is intended OPEN SEA SERVICE

ENGINES, &c. — Type of Engines HAWTHORN DOXFORD OPPOSED PISTON or 4 stroke cycle 2 Single or double acting SINGLE

imum pressure in cylinders 640 LBS/SQ IN Diameter of cylinders 26 3/8" 670 mm Length of stroke 2320 mm No. of cylinders 4 No. of cranks 4 THREE - THROW

Indicated Pressure 89 LBS/SQ IN Ahead Firing Order in Cylinders 1.3.4.2 Span of bearings, adjacent to the crank, measured BETWEEN EACH 3-THROW. Revolutions per minute 112

inner edge to inner edge 2020 mm. Is there a bearing between each crank 3-THROW. Means of ignition COMPRESSOR Kind of fuel used HEAVY OIL

NING dia. 2493 mm Weight 1.15 TNS Moment of inertia of flywheel (Lbs. in² or Kg. cm²) 0.497

ak / Semi built dia. of journals 500 mm Crank pin dia. 500 mm Crank webs Mid. length breadth 710 mm Thickness parallel to axis 285 mm

ft. / All built as fitted 500 mm as fitted 500 mm Mid. length thickness 285 mm Thickness around eye-hole 219 mm

NING wheel Shaft, diameter as per Rule 23" REDUCED Intermediate Shafts, diameter as per Rule 22 3/4" REDUCED Thrust Shaft, diameter at collars as fitted 500 mm

e Shaft, diameter as fitted 20" Is the (tube / screw) shaft fitted with a continuous liner YES

ize Liners, thickness in way of bushes as per Rule 13 1/16" Thickness between bushes as fitted 5/8" Is the after end of the liner made watertight in the

eller boss YES If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner IN ONE LENGTH

he 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-

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

of tube shaft If so, state type Length of bearing in Stern Bush next to and supporting propeller 5' 2 1/2"

PELLER, dia. 17' 0" Pitch 12.40 FT. No. of blades 4 Material M. BRONZE Whether moveable NO Total developed surface 102.5 sq. feet

ment of inertia of propeller (Lbs. in² or Kg. cm²) 5.01 INCLUDING 25% ENTRAINED WATER Kind of damper, if fitted DOXFORD-BIBBY DETUNER (SEE OVERLEAF)

ethod of reversing Engines COMP. AIR Is a governor or other arrangement fitted to prevent racing of the engine when declutched YES Means of

ication FORCED Thickness of cylinder liners 25 mm 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

to the engine Cooling Water Pumps (I.M.E. DRIVEN F.W. 200 TNS/HR + 1 Ind. standby) Is the sea suction provided with an efficient strainer which can be cleared within the vessel

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

mps connected to the Main Bilge Line (No. and size. How driven)

he 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

angements

last Pumps, No. and size Power Driven Lubricating Oil Pumps, including spare pump, No. and size I.M.E. DRIVEN 45 TNS/HR

two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both main bilge pumps and auxiliary

e pumps, No. and size: — In machinery spaces In pump room

holds, &c.

ependent Power Pump Direct Suctions to the engine room bilges, No. and size

d) e 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

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

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

iciently 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

e 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

er at pipes pass through the bunkers How are they protected

at pipes pass through the deep tanks Have they been tested as per Rule

e all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times

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 Is the shaft tunnel watertight Is it fitted with a watertight door worked from

a 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. NONE No. of stages — diameters — stroke — driven by —

iliary Air Compressors, No. No. of stages — diameters — stroke — driven by —

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

at provision is made for first charging the air receivers

venting Air Pumps, No. TWO diameter 1700 mm stroke 548 mm driven by LEVERS FROM Nos 1 & 2 ENGINES

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

ve the auxiliary engines been constructed under special survey Is a report sent herewith

JM
9/1/51

AIR RECEIVERS:—Have they been made under survey YES. State No. of report or certificate. —
Is each receiver, which can be isolated, fitted with a safety valve as per Rule. FUSIBLE PLUG.
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 by Rules. —
Starting Air Receivers, No. TWO. Total cubic capacity. 300 cu. ft. Internal diameter. 4'-6" thickness. 1 3/8"
Seamless, welded or riveted longitudinal joint. ELECT. WELDED Material. M. STEEL. Range of tensile strength. SHELL 28/32. Working pressure by Rules. —
Actual. 600

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. YES. Receivers. SEE LETTER DATED 13.1.50. Separate fuel tanks. —
(If not, state date of approval)
Donkey boilers. — General pumping arrangements. — Pumping arrangements in machinery space. —
Oil fuel burning arrangements. —
Have Torsional Vibration characteristics been approved. YES. Date of approval. 6 1 3.50 for 120y
SPARE GEAR. provided from best to prevent speed exceeding 128y.
Has the spare gear required by the Rules been supplied. YES.
State the principal additional spare gear supplied. AS PER ATTACHED LISTS. (To come)

DOXFORD - BIBBY DETUNER FITTED:— FIXED MEMBER $WK^2 = 4.5$ TNS.FT²
For R. & W. HAWTHORN LESLIE & CO. LTD. FLOATING. " $WK^2 = 10.0$ TNS.FT².
The foregoing is correct description, and the Particulars of the installation as fitted are as Approved for the TORSIONAL VIBRATION CHARACTERISTICS.
Manufacturer.

Dates of Survey while building
During progress of work in shops. — 11.9.50 JAN 10¹ 12² FEB 10.24 MAR 2.28 APR 3.18 14 MAY 2.8 24 26 JUNE 7.9.13.15.19.21.23.27.29 JULY 3.5.7.13.24.26 AUG 4.18. SEP
During erection on board vessel. — 8.11.13.21 OCT 3.12
Total No. of visits. NEWCASTLE-ON-TYNE = 40
Dates of examination of principal parts—Cylinders. 10.2.50 etc. Covers. — Pistons. 21.6.50 etc. Rods. 21.6.50 etc. Connecting rods. 19.6.50
Crank shaft. 27.3.50 etc. Flywheel shaft. — Thrust shaft. IN CRANKSHAFT. Intermediate shafts. 7.7.50 Tube shaft. —
Screw shaft. 24.8.50/5.7.50. Propeller. 5.7.50. Stern tube. 12.10.50 Engine seatings. — Engine holding down bolts. —
Completion of fitting sea connections. — Completion of pumping arrangements. — Engines tried under working conditions. —
Crank shaft, material. F.O.H.I.S. Identification mark. 21634. AB. Flywheel shaft, material. — Identification mark. —
Thrust shaft, material. F.O.H.I.S. Identification mark. IN CRANKSHAFT Intermediate shafts, material. F.O.H.I.S. Identification marks. LL.No. 21258
Tube shaft, material. — Identification mark. — Screw shaft, material. F.O.H.I.S. Identification mark. AB. 7.7.50
Identification marks on air receivers. " LLOYDS TEST. T.P. 950 LBS : WP. 600 LBS : AB. 7.9.50."
LL.No. 21261
AB. 17.12.49
AB. 5.7.50.

Welded receivers, state Makers' Name. R & W. HAWTHORN LESLIE & CO. LD. NEWCASTLE ON TYNE.
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. No. If so, state name of vessel. —

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery referred to herein has been constructed under Special Survey in accordance with the Society's Rules, Approved Plans, & Secretary's letters. The workmanship and materials are good. The machinery has been despatched to South Bank for installation in Messrs Smiths Dock Co. Ltd. Ship No. 1210.

A notice board to be fitted at the control station stating maximum revs 128 RPM. Engine governor to be adjusted accordingly.

2/3rd FEE (CONSTRUCTN ONLY) £ 170. 5 0
EW. CONSTRUCTN. £ 17. 15 0
Special ..(66 TNS) £ 8. 0 0
2. AIR RESERVOIRS
Donkey Boiler Fee... £
Travelling Expenses (if any) £
When applied for 11 DEC 1950
When received 19
FRI. 13 APR 1951

Assigned See F.E. mch. rpt.