

REPORT ON OIL ENGINE MACHINERY.

Received at London Office

of writing Report 1st Aug., 1949 When handed in at Local Office 2nd Aug., 1949 Port of Halifax, N. S.

in Survey held at Shelburne, N. S. Date, First Survey 17-10-48 Last Survey 28-4-49 19 49

g. Book. Single on the Deck Triple Quadruple Screw Wood Motor Vessel "FORT HEARNE" Tons { Gross 382.27 Net 296.60

uilt at Shelburne, N. S. By whom built John Etherington Limited. Yard No. 10 When built April, 1949

ines made at Beloit, Wisconsin. By whom made Fairbanks-Morse & Co. Engine No. 922822 When made 3/49

nkey Boilers made at None By whom made Boiler No. When made

ake Horse Power 480 Owners Hudson's Bay Co. Ltd. Port belonging to Montreal.

m. Horse Power as per Rule 101 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

ade for which Vessel is intended Hudson's Bay Company Trade.

IL ENGINES, &c.—Type of Engines 8 cylinder / geared 2:1 2 stroke cycle Single or double acting.

imum pressure in cylinders 585 1150 lb/in² Diameter of cylinders 8½" Length of stroke 11½" No. of cylinders 8 No. of cranks 8

an Indicated Pressure 76.6 brake 100 mhp

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

olutions per minute 525 267 Flywheel dia. 3'-0" Weight 2170 lbs. Means of ignition Compression Kind of fuel used ---

ank Shaft, { Solid forged Cast as per Rule 6-15 as fitted 7" Crank pin dia. 7" Crank Webs Mid length breadth 10.25" Thickness parallel to axis ---
 { Semi-built dia. of journals as fitted 7" Crank pin dia. 7" Crank Webs Mid length thickness 3" Thickness around eyehole ---
 { All built as fitted 7" Crank pin dia. 7" Crank Webs Mid length thickness 3" Thickness around eyehole ---

wheel Shaft, diameter as per Rule --- Intermediate Shafts, diameter as per Rule 4.97" 4.86 Thrust Shaft, diameter at collars as per Rule ---
 as fitted --- as fitted 5½" as fitted 7"

be Shaft, diameter as per Rule --- Screw Shaft, diameter as per Rule 4.59" 516 Is the nut shaft fitted with a continuous liner {
 as fitted --- as fitted 6" Bronze as fitted --- { screw } No

onze Liners, thickness in way of bushes as per Rule --- Thickness between bushes as per Rule None Is the after end of the liner made watertight in the
 as fitted 5/8" as fitted Fitted as fitted ---

PELLER boss. Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Liners not connected.

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-corrosive ---

two liners are fitted, is the shaft lapped or protected between the liners. No Is an approved Oil Gland or other appliance fitted at the after end of the tube ---

ft no If so, state type --- Length of Bearing in Stern Bush next to and supporting propeller 27" inches.

opeller, dia. 76" Pitch 58" No. of blades 3 R.H. Material Cast steel whether Moveable No Total Developed Surface 2300 sq. ft

thod of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication ---

ced Thickness of cylinder liners See Beloit, Wis. Surveyor Are the cylinders fitted with safety valves --- Are the exhaust pipes and silencers water cooled or lagged with
 conducting material No If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Nil

oling Water Pumps, No. Two Is the sea suction provided with an efficient strainer which can be cleared within the vessel Nil

ge Pumps worked from the Main Engines, No. 1 Diameter 2¼" Stroke 2½" Can one be overhauled while the other is at work No

mps connected to the Main Bilge Line { No. and Size 2 - One 2¼" x 2½" - one aux. 1½" Cent. avg 5 l/min/hr bilge main 26 l/min/hr
 How driven Main engine Aux. engine. hand pump 25 l/min/hr x 2

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
 ngements ---

last Pumps, No. and size --- Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size Built in. 2" dia.

two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
 ps, No. and size:—In Machinery Spaces 2 - 2½" In Pump Room ---

Holds, &c. 2½"

ependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 - See Aux. 1½" Centrifugal.

all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces Yes

from easily accessible 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, as usual practice Are they fitted with Valves or Cocks Yes

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 above

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 ---

at pipes pass through the bunkers None How are they protected ---

at pipes pass through the deep tanks None Have they been tested as per Rule ---

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 spaces, or from
 compartment to another Yes Is the Shaft Tunnel watertight No Is it fitted with a watertight door No worked from ---

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

in Air Compressors, No. 1 No. of Stages 1 Diameters 3½" Stroke 7½" Driven by Main engine

iliary Air Compressors, No. 1 No. of Stages 2 Diameters 3½" x 2" Stroke 2½" Driven by V-Belt driven off Aux. engine.

all Auxiliary Air Compressors, No. --- No. of Stages --- Diameters --- Stroke --- Driven by ---

at provision is made for first Charing the Air Receivers Aux. Compressor Driven by aux. engine (Hand start)

venting Air Pumps, No. 1 Diameter Vane Stroke --- Driven by Main engine

iliary Engines crank shafts, diameter as per Rule 3-3/16" No. --- Position ---

as fitted --- as fitted --- as fitted ---

the Auxiliary Engines been constructed under special survey No Is a report sent herewith No

AIR RECEIVERS:—Have they been made under survey. YES

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. No 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. 6 Total cubic capacity 65.4 Internal diameter 20" thickness .250

~~Seamless, lap welded or riveted longitudinal joint~~ Butt welded Material Steel Range of tensile strength Working pressure by Rules Actual 250 Lbs.

IS A DONKEY BOILER FITTED? No 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 11-12-48 Receivers 20-12-48 Separate Fuel Tanks
(If not, state date of approval)

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. Lloyd's spares and extra spares.

The foregoing is a correct description

Manufacturer.

Dates of Survey while building During progress of work in shops - - See surveyor attending at Works. Main engine stamped B.C. G.H.G. Engine
During erection on board vessel - - No. 922822, dated 4th March, 1949
Total No. of visits 7

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods
Crank shaft Flywheel shaft Thrust shaft Intermediate shafts Tube shaft
Screw shaft 7-4-49 Propeller 7-4-49 Stern tube Engine seatings 26-3-49 Engines holding down bolts 36
Completion of fitting sea connections 7-4-49 Completion of pumping arrangements 28-4-49 Engines tried under working conditions 28-4-49
Crank shaft, Material Cast Iron alloy Identification Mark AB 177 Flywheel shaft, Material Identification Mark DMC 2-8-48 PHT
Thrust shaft, Material Steel Identification Mark (2) Intermediate shafts, Material O.H. steel Identification Marks M5970 28-1-49 TL
Tube shaft, Material Identification Mark Screw shaft, Material Bronze Identification Mark See footnote.
Identification Marks on Air Receivers P.S.T. 3653, P.S.T. 3656, P.S.T. 3705, P.S.T. 3710, P.S.T. 3711, P.S.T. 3081,
L.R. 3077, L.R. 3081, L.R. 3080, L.R. 3135, L.R. 3134, L.R. 3129

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. No 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.)

Bronze tail shaft supplied to Fairbanks-Morse & Co. from H. M. Hillman, 188 Flatbush Extension, New York, together with affidavit herewith attached.

This engine, together with shafting, have been constructed under special survey, in accordance with rules and approved plans, and the workmanship is, in my opinion, good. The shaft forgings and castings tested by the undersigned at Trenton Steel Works, Trenton, N. S., and finally examined by him, were found satisfactory. The materials and workmanship are of good quality and the main and auxiliary machinery, pumping arrangements, etc., have been tried under working conditions and found satisfactory. In my opinion, this machinery is suitable for the purpose intended and eligible for the notation M.B.S.# 4,49 T.S. 4,49.

The amount of Entry Fee ... £ : When applied for,
Special ... \$285.00 : May 28, 1949
Donkey Boiler Fee ... £ : When received,
Travelling Expenses (if any) \$ 73.00 : June 27, 1949

Committee's Minute THU 13 SEP 1951

Assigned See minute on fee hull rpl.

Engineer Surveyor to Lloyd's Register of Shipping.



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