

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office.

Date of writing Report 19

When handed in at Local Office 12 DEC 1944 19

Port of HULL

No. in Survey held at HULL

Date, First Survey 5.1.44

Last Survey 29.11.44

Reg. Book

(Number of Visits 34)

on the STEAM TUG

EMPIRE LINOR

N/MS 826

Tons Gross 243.87

Net NIL

Built at HESSLE

By whom built

Richard Dunstan & Co. No. 461

When built 1944

Engines made at HULL

By whom made

Chas. D. Holmes & Co. Engine No. 1688

When made

Boilers made at HULL

By whom made

Chas. D. Holmes & Co. Boiler No. 1668

When made

Registered Horse Power

Owners Ministry of War Transport

Port belonging to Hull

Nom. Horse Power as per Rule 177

Is Refrigerating Machinery fitted for cargo purposes No.

Is Electric Light fitted Yes.

Trade for which vessel is intended

Towing Services

ENGINES, &c.—Description of Engines

Triple Expansion

Contract Revs. per minute 116

Dia. of Cylinders 16" 26" 43"

Length of Stroke 30"

No. of Cylinders 3

No. of Cranks 3

Crank shaft, dia. of journals

as per Rule 8.8"

as fitted 9 1/8"

Crank pin dia. 9 1/8"

Crank webs

Mid. length breadth

Thickness parallel to axis 5 3/4"

Mid. length thickness

shrunk

Thickness around eye-hole 4 1/16"

Intermediate Shafts, diameter

as per Rule 8.375"

as fitted 8 5/8"

Thrust shaft, diameter at collars

as per Rule 8.8"

as fitted 9 1/8"

Tube Shafts, diameter

as per Rule

as fitted NONE

Screw Shaft, diameter

as per Rule 9.7"

as fitted 9 7/8"

Is the screw shaft fitted with a continuous liner No.

Bronze 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

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

If so, state type Newark Patent Oil Gland

Length of Bearing in Stern Bush next to and supporting propeller 42"

Propeller, dia. 11'-0"

Pitch 11'-8"

No. of Blades 4

Material C.I.

whether Moveable No.

Total Developed Surface 46 sq. feet

Pumps worked from the Main Engines, No. 2

Diameter 3"

Stroke 18"

Can one be overhauled while the other is at work Yes

Pumps worked from the Main Engines, No. 2

Diameter 3"

Stroke 18"

Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line

No. and size One 7" x 5" x 6" Duplex

How driven Independent Beam

Pumps connected to the Main Bilge Line

Pumps, No. and size One 7" x 7" x 8" Duplex

Lubricating Oil Pumps, including Spare Pump, No. and size NONE

Are two independent means arranged for circulating water through the Oil Cooler NONE

Pumps:—In Engine and Boiler Room 2 @ 2" Dia 2 @ 2 1/4" Dia

Suctions, connected to both Main Bilge Pumps and Auxiliary

Pump Room

In Holds, &c. (One @ 2" Dia in each of the following:—

One Peak Ford Bilge. One Peak

Water Circulating Pump Direct Bilge Suctions, No. and size One @ 5 1/2" Dia

Independent Power Pump Direct Suctions to the Engine Room Bilges,

and size One @ 2 1/2" One @ 2 1/4" in Bilge Room

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes

Are the Bilge Suctions in the Machinery Space led 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 ON PLATED BOXES

Are they fitted with Valves or Cocks B&H

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes

Are the Overboard Discharges above or below the deep water line Above

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

Pipes pass through the bunkers NONE

How are they protected

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

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 worked from

MAIN BOILERS, &c.—(Letter for record S)

Total Heating Surface of Boilers 2778 sq. ft.

Which Boilers are fitted with Forced Draft All

Which Boilers are fitted with Superheaters None

No. and Description of Boilers One S.B.

Working Pressure 210 lbs. 10"

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded?

Can the donkey boiler be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting 3-1-41

Main Boilers 8.8.40

Auxiliary Boilers

Donkey Boilers

Superheaters

General Pumping Arrangements 1-11-40

Oil fuel Burning Piping Arrangements NONE

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied As Specification

The foregoing is a correct description.

FOR CHARLES D. HOLMES & CO., LTD

W.R. Evans

Manufacturer.



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During progress of work in shops - - { 1944 Jan 5, 6, 28. Apr. 20. June 9, 16, 23, 30. July 5, 7, 12, 13, 22, 29. Aug 8, 11, 14, 29, 30, 31. Sept. 1, 8, 9.

Dates of Survey while building { During erection on board vessel - - { 1944 SEP 15, 23 OCT 2, 4 Nov 1, 3, 7, 10, 15, 20, 21, 23, 24, 29.

Total No. of visits 34.

Dates of Examination of principal parts - Cylinders 12/7/44 7/7/44 5/7/44 Slides 31/8/44 Covers 12/7/44 7/7/44 5/7/44

Pistons 29/8/44 30/8/44 Piston Rods 17/8/44 Connecting rods 17/8/44

Crank shaft 9-9-44 Thrust shaft 29-7-44 Intermediate shafts 22-7-44

Tube shaft None Screw shaft 17-8-44 Propeller 2-10-44

Stern tube 15-9-44 Engine and boiler seatings 4-10-44 Engines holding down bolts 3-11-44

Completion of fitting sea connections 2-10-44

Completion of pumping arrangements 24-11-44 Boilers fixed 3-11-44 Engines tried under steam 24-11-44

Main boiler safety valves adjusted 24-11-44 Thickness of adjusting washers F & A 3/8"

Crank shaft material F.1. Steel Identification Mark 2408.F.H. Thrust shaft material F.1. Steel Identification Mark 2883.F.H.

Intermediate shafts, material F.1. Steel Identification Marks 2/580 P.H. Tube shaft, material None Identification Mark -

Screw shaft, material F.1. Steel Identification Mark 109 F.W. 10/4/45 Pipes, material Steel Test pressure 630 lb. Date of Test 10.11.44

Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150° F. ✓

Have the requirements of the Rules for the use of oil as fuel been complied with ✓

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 Yes ✓ If so, state name of vessel S. Tug EMPIRE BIRCH. HUL Rpt. 51472.

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Machinery of this vessel, has been constructed in accordance with the approved plans, the Rules, & the Specification. Of tested material made by firms accredited by the Society.

The Materials and Workmanship are good.

The Machinery and auxiliaries have been fitted on board and when tried under steam at as near full power as practicable in the basin were found satisfactory in every respect.

The Vessel is eligible, in our opinion, when classed, to have record of * LMC 11, 44. and O.G. and Notation T-30, 16", 26", 43", - 30". 177 NHP.

One S.B. 210 lb/13 c.f. G.S. 64 #11 H.S. 2778. F.D.

Committee's Minute

Assigned + LMC 11, 44 F.D. O.G.

The amount of Entry Fee ... £ 3 : 0 : When applied for,

Special CHASS. + LMC £ 44 : 5 : 12 DEC 1944

Donkey Boiler Fee ... £ 11 : 1 : When received,

Travelling Expenses (if any) £ : : 19

W. Shields & J. F. F. L.

Engineer Surveyor to Lloyd's Register of Shipping.