

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 13 JUL 1942
Date of writing Report 27.6.42 When handed in at Local Office 9 JUL 1942 Port of HULL
No. in Survey held at HULL. Date, First Survey 2.1.42. Last Survey 25.6.1942.
Reg. Book on the STEAM TUG. **EMPIRE SPRITE** (Number of Visits 46)
Built at HESSLE. By whom built Richard Dunstan & Co. Yard No. 422. When built 1942
Engines made at HULL. By whom made Chas. D. Holmes & Co. Engine No. 1603. When made "
Boilers made at HULL. By whom made Chas. D. Holmes & Co. Boiler No. 1595. When made "
Registered Horse Power Owners The Ministry of War Transport Port belonging to ✓
Gross 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 ✓

GINES, &c. Description of Engines Triple Expansion 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" Crank pin dia. 9 1/8" Mid. length breadth ✓ Thickness parallel to axis 5 3/4" ✓
as fitted 9 1/8" Crank webs shrunk Thickness around eye-hole 4 1/16" ✓
as per Rule 8.375" Mid. length thickness ✓
Intermediate Shafts, diameter as per Rule 8 5/8" Thrust shaft, diameter at collars as per Rule 8.9" 8.8" ✓
as fitted 8 5/8" as fitted 9 1/8" ✓
Tube Shafts, diameter as per Rule None Screw Shaft, diameter as per Rule 9.7" Is the {tube} shaft fitted with a continuous liner { No. ✓
as fitted None as fitted 9 7/8" {screw}
Bronze Liners, thickness in way of bushes as per Rule ✓ Thickness between bushes as per Rule ✓ Is the after end of the liner made watertight in the
as fitted ✓ as fitted ✓
Propeller boss ✓ 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 N°1. 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 Solid Total Developed Surface 46 sq. feet
Feed Pumps worked from the Main Engines, No. 2 Diameter 3" Stroke 18" Can one be overhauled while the other is at work Yes ✓
Bilge Pumps worked from the Main Engines, No. 2 Diameter 3" Stroke 18" Can one be overhauled while the other is at work Yes ✓
Feed Pumps No. and size One 7"x5"x6" Duplex Pumps connected to the Main Bilge Line No. and size 2 @ 3" D x 18" One 7"x7"x8" Duplex
How driven Independent Steam Main Engines Independent Steam
Ballast Pumps, No. and size One 7"x7"x8" Duplex Lubricating Oil Pumps, including Spare Pump, No. and size None
Are two independent means arranged for circulating water through the Oil Cooler None Suctions, connected to both Main Bilge Pumps and Auxiliary
Bilge Pumps: In Engine and Boiler Room 2 @ 2" / 2 @ 2 1/4" In Holds, &c. One @ 2" Dia in each of the following: Fore
Peak, Fore Bilge, After peak.
Main Water Circulating Pump Direct Bilge Suctions, No. and size One @ 5 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges,
No. and size One @ 2 1/2" One @ 2 1/2" Both 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 ✓
Are all Sea Connections fitted direct on the skin of the ship Cocks on skin Are they fitted with Valves or Cocks Both ✓
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates (a) ✓ 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 ✓
That Pipes pass through the bunkers None How are they protected ✓
That pipes pass through the deep tanks None Have they been tested as per Rule ✓
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 ✓ worked from ✓

MAIN BOILERS, &c. (Letter for record S.) Total Heating Surface of Boilers 2778. ✓
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.
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 ✓
(If not state date of approval)
Superheaters ✓ General Pumping Arrangements 1-11-40 Oil fuel Burning Piping Arrangements None.

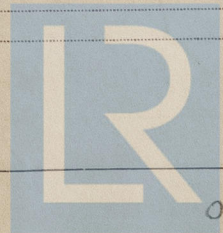
SPARE GEAR.

Is the spare gear required by the Rules been supplied Yes ✓
State the principal additional spare gear supplied A specification. See attached list.

The foregoing is a correct description.

CHARLES D. HOLMES & CO., LTD.

Manufacturer.



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Lloyd's Register
Foundation

Dates of Survey while building
During progress of work in shops - - 1942 Jan. 2, 7, 10, 13, 16, 17 Feb. 17, 23 Mar. 12, 19, 20, 27, 31 Apr. 2, 3, 16, 18, 21, 24, 25
During erection on board vessel - - May 1, 7, 8, 9, 14, 15, 20, 22, 26, 27, 28, 30 June 2, 4, 5, 8, 9, 10, 11, 12, 15, 17, 18, 19, 20, 25
Total No. of visits 46.

Dates of Examination of principal parts - Cylinders 14/5/42 7/5/42 Slides 15/5/42 Covers 14/5/42 7/5/42
Pistons 17/5/42 8/5/42 Piston Rods 24/4/42 Connecting rods 15/5/42
Crank shaft 16/4/42 Thrust shaft 27/3/42 Intermediate shafts 3/4/42
Tube shaft 16/1/42 Screw shaft 10/1/42 Propeller 17/1/42
Stern tube 16/1/42 Engine and boiler seatings 16/1/42 Engines holding down bolts 26/5/42
Completion of fitting sea connections 16/1/42
Completion of pumping arrangements 12/6/42 Boilers fixed 26/5/42 Engines tried under steam 19.6.42
Main boiler safety valves adjusted 19.6.42 Thickness of adjusting washers Both 15/32
Crank shaft material M.S. 6629 AEG 17/2/42 Identification Mark Pin 6876 AEG Thrust shaft material M.S. 6627 AEG 17/2/42 1635 JS Identification Mark 27.3.42
Intermediate shafts, material M.S. 6628 AEG 17/2/42 1635 JS Identification Marks 3.4.42 Tube shaft, material None Identification Mark -
Screw shaft, material M.S. 6566 AEG 8.12.41 Identification Mark JS 1635 Steam Pipes, material Steel Test pressure 630 lb/in Date of Test 7.5.42
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.T. 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, and the Specification; of tested material made by firm accredited by the Society. The Workmanship and Material are good.
The Machinery and auxiliaries have been fitted on board and when tried under steam at a sea full power as practicable in the basin, were found satisfactory in every respect.
It is eligible, in our opinion, when classed to have records of 1/2 LMC 6.42. and O.G. and notation T. 3 cy. 16", 26", 43" - 30". 177 NHP.
On SB 210 lb. 30 f. G 564 lb H.S. 2778 lb F.D.

Certificate to be sent to
The amount of Entry Fee ... £ 3 : - :
Special Supervision of Spec. ... £ 44 : 5 :
Donkey Boiler Fee ... £ 11 : 1 :
Travelling Expenses (if any) £ : :
When applied for, 40 JUL 1942
When received, 19
Committee's Minute ... FRI. 17 JUL 1942
Assigned ... + Lmb. 6.42
22.07.

W.S. Shields & J. P. H. ...
Engineer Surveyor to Lloyd's Register of Shipping.