

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office SEP 1942 2 DEC 1942

Date of writing Report: 17 SEP 1942 Written handed in at Local Office: 17 SEP 1942 Port of: IPSWICH
 No. in Survey held at Jarmonth. Date, First Survey 24 Nov. 1941 Last Survey 23 August 1942
 Reg. Book. on the Single Screw Eng "EMPIRE ARIEL" (Number of Visits 16)
 Built at Thorne By whom built Richard Dunston, Ltd. Yard No. T. 373 Tons { Gross 129 Net NIL
 Engines made at Jarmonth. By whom made Cribtree (1931) Ltd. Engine No. 632 when made 1942
 Boilers made at ✓ By whom made ✓ Boiler No. ✓ when made ✓
 Registered Horse Power ✓ Owners ✓ Port belonging to ✓
 Nom. Horse Power as per Rule 94.8 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted ✓
 Trade for which Vessel is intended ✓

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 150
 Dia. of Cylinders 11 3/4" 19 1/2" 32" Length of Stroke 22" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 6 3/8" Crank pin dia. 6 3/8" Crank webs Mid. length breadth ✓ Thickness parallel to axis 4 1/4"
 as fitted 6 3/8" Crank webs Mid. length thickness ✓ Thickness around eye-hole 2 3/16"
 Intermediate Shafts, diameter as per Rule 6 1/4" Thrust shaft, diameter at collars as per Rule 6 3/8"
 as fitted 6 1/4" as fitted 6 3/8"
 Tube Shafts, diameter as per Rule ✓ Screw Shaft, diameter as per Rule 7/8" Is the tube shaft fitted with a continuous liner no
 as fitted ✓ as fitted 7/8" as fitted no
 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 propeller boss ✓
 as fitted ✓ as fitted ✓ 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 shaft ✓
 Propeller, dia. 8' 0" Pitch 8' 4" No. of Blades 4 Material A.I. whether Moveable no Total Developed Surface 28 sq. feet
 Feed Pumps worked from the Main Engines, No. One Diameter 2 1/2" Stroke 11" Can one be overhauled while the other is at work ✓
 Bilge Pumps worked from the Main Engines, No. One Diameter 2 1/2" Stroke 11" Can one be overhauled while the other is at work ✓
 Feed Pumps { No. and size ✓ Pumps connected to the { No. and size ✓
 { How driven ✓ Main Bilge Line { How driven ✓
 Ballast Pumps, No. and size ✓ Lubricating Oil Pumps, including Spare Pump, No. and size ✓
 Are two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps;—In Engine and Boiler Room ✓
 In Holds, &c. ✓

Main Water Circulating Pump Direct Bilge Suctions, No. and size no **Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size** no
 Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes no
 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 no
 Are all Sea Connections fitted direct on the skin of the ship no Are they fitted with Valves or Cocks no
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates no Are the Overboard Discharges above or below the deep water line no
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel no Are the Blow Off Cocks fitted with a spigot and brass covering plate no
 What Pipes pass through the bunkers no How are they protected no
 What pipes pass through the deep tanks no Have they been tested as per Rule no
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times no
 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 no Is the Shaft Tunnel watertight no Is it fitted with a watertight door no worked from no

MAIN BOILERS, &c.—(Letter for record no) Total Heating Surface of Boilers no
 Is Forced Draft fitted no No. and Description of Boilers no Working Pressure 200 lb
IS A REPORT ON MAIN BOILERS NOW FORWARDED? no
IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? no
PLANS. Are approved plans forwarded herewith for Shafting 25-9-41 Main Boilers ✓ Auxiliary Boilers ✓ Donkey Boilers ✓
 (If not state date of approval)
 Superheaters ✓ General Pumping Arrangements ✓ Oil fuel Burning Piping Arrangements ✓

SPARE GEAR. State the articles supplied:—
1 - pair main bearing bars, 2 - main bearing bolts, 1 bottom end complete with nuts & bolts, 1 - top end complete with nuts & bolts, 1 - set of feed pump valves & seats, 1 - set H.P. I.P. V.L.P. piston rings & springs, 1 - set of rings for H.P. piston valve, 1 complete set of blocks & springs each for all valves & piston rods, 1 - set packs for Michell Thrust, 12 condenser tubes & ferrules, 1 - set of coupling bolts & nuts, 1 set bilge pump suction & delivery valves, 1 main & 1 aux. check valve, 12 boiler tube stoppers, Assorted nuts, bolts & iron

The foregoing is a correct description,
 FOR CRIBTREE (1931) LTD.
A. Smith
 Managing Director.

Manufacturer.



NOTE.—The words which do not apply should be deleted.

22/9/42

1941: Nov 24.

During progress of work in shops - -

31-1-42, 27-2-42, 10-3-42, 25-3-42, 3-4-42, 22-4-42, 6-5-42, 20-5-42, 19-5-42, 11-6-42, 17-6-42

26-6-42, 22-7-42, 7-8-42, 25-8-42

Dates of Survey while building

During erection on board vessel - - -

Total No. of visits 16.

Dates of Examination of principal parts—Cylinders 17-6-42 Slides 22-7-42 Covers 17-6-42
 Pistons 22-7-42 Piston Rods 22-7-42 Connecting rods 22-7-42
 Crank shaft 3-4-42 Thrust shaft 7-4-42 Intermediate shafts 22-4-42
 Tube shaft ✓ Screw shaft 22-4-42 Propeller 7-8-42
 Stern tube ✓ Engine and boiler seatings ✓ Engines holding down bolts ✓
 Completion of fitting sea connections ✓
 Completion of pumping arrangements ✓ Boilers fixed ✓ Engines tried under steam ✓
 Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓
 Crank shaft material *Stib* Identification Mark *LLOYD'S No 6372 -12-41 J.F.C.* Thrust shaft material *Stib* Identification Mark *LLOYD'S No 6089 J.F.C.*
 Intermediate shafts, material *Stib* Identification Marks *LLOYD'S No 6808 17-3-42 J.F.C.* Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material *Stib* Identification Mark *LLOYD'S No 6607 27-2-42 J.F.C.* Steam Pipes, material ✓ Test pressure ✓ Date of Test ✓
 Is an installation fitted for burning oil fuel ✓ 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 ✓ If so, have the requirements of the Rules 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 has been constructed under Special Survey in accordance with the approved plans & Rule requirements.

The materials & workmanship are sound & of good description.

The machinery has been dispatched to Builders at Harpe where it is to be installed in a Classed vessel.

The above fitted to "EMPIRE ARIEL" - see separate rpt. no. 4
W.S. Shields

Certificate to be sent to

The amount of Entry Fee ... £ 2 : 0 : 0
 2/3 Special 9 : 10 : 0
 + 25% 2 : 7 : 6
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ 3 : 5 : 0

When applied for,

17 SEP 1942

When received,

19

Boysell
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE 15 DEC 1942

Assigned

See Houl J.C. 51819



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