

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

11 MAY 1942

Date of writing Report 4-4-1942 When handed in at Local Office 7 MAY 1942 Port of HULL  
 No. in Survey held at Thorne Date, First Survey 19. 1. 42. Last Survey 31. 3. 1942  
 Reg. Book Thorne (Number of Visits 6)  
 on the Imperial **EMPIRE SPRUCE** Tons { Gross 129  
 Net 112  
 Built at Thorne By whom built R. Dunston & Co. Yard No. 364 When built 1942  
 Engines made at Parsloes By whom made Moffe & Baxter & Co. Engine No. 1333 When made do.  
 Boilers made at Glasgow By whom made John Thompson (New Bn) Boiler No. 5166 When made do.  
 Registered Horse Power 85 Owners The Ministry of War Transport Port belonging to do.  
 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
 Trade for which vessel is intended Young Services

GINES, &c.—Description of Engines Triple Expansion Revs. per minute 140  
 No. of Cylinders 12 Length of Stroke 22" No. of Cylinders 3 No. of Cranks 3  
 as per Rule 6.44 Mid. length breadth ✓ Thickness parallel to axis 4 1/8"  
 Crank shaft, dia. of journals 6 1/2" Crank pin dia. 6 1/2" Crank webs shrunk Thickness around eye-hole 2 1/2"  
 as fitted 6 1/2" Mid. length thickness ✓ as per Rule 6.44  
 Intermediate Shafts, diameter 6.13 Thrust shaft, diameter at collars 6 1/2"  
 as fitted 6 1/4" as fitted 6 1/2"  
 as per Rule 7.12" Is the { tube } shaft fitted with a continuous liner { no  
 as fitted 7 1/8" as fitted 7 1/8" screw }  
 as per Rule 7.12" as per Rule 7 1/8"  
 as fitted 7 1/8" as fitted 7 1/8"  
 Bronze Liners, thickness in way of bushes ✓ Thickness between bushes ✓ Is the after end of the liner made watertight in the  
 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 ✓  
 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 ✓  
 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 ✓  
 at yes If so, state type Hubark Length of Bearing in Stern Bush next to and supporting propeller 29"  
 Propeller, dia. 81.3" Pitch 10'-0" No. of Blades 4 Material C-1 whether Moveable Solid Total Developed Surface 24 sq. feet  
 ed Pumps worked from the Main Engines, No. One Diameter 2 1/2" Stroke 12" Can one be overhauled while the other is at work ✓  
 ge Pumps worked from the Main Engines, No. One Diameter 2 1/2" Stroke 12" Can one be overhauled while the other is at work ✓  
 ed { No. and size 6 x 4 1/2 x 10" Pumps connected to the { No. and size 5 x 3 1/2 x 6"  
 mps { How driven Steam Main Bilge Line { How driven Steam  
 Fast Pumps, No. and size One Lubricating Oil Pumps, including Spare Pump, No. and size One  
 e two independent means arranged for circulating water through the Oil Cooler ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary  
 lge Pumps:—In Engine and Boiler Room One in each of 2" dia. Also direct suction in below.  
 Pump Room One in each of 2" dia. In Holds, &c. Fore & Aft Compartments one each of 2" dia.  
Each fitted with check valve controlled from upper deck.  
 in Water Circulating Pump Direct Bilge Suctions, No. and size One - 3 1/2" dia. Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 and size One each of 2 1/2" dia. Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yes  
 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  
 e all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks yes  
 e 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 W.L.  
 e 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  
 at Pipes pass through the bunkers One How are they protected ✓  
 at pipes pass through the deep tanks One 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 yes  
 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  
 apartment to another yes Is the Shaft Tunnel watertight One Is it fitted with a watertight door ✓ worked from ✓

IN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 1356 sq. ft.  
 Is Boiler yes fitted with Forced Draft yes Which Boilers are fitted with Superheaters One  
 and Description of Boilers One S.B. Working Pressure 200 lbs./sq. in.

A REPORT ON MAIN BOILERS NOW FORWARDED? yesA DONKEY BOILER FITTED? noIf so, is a report now forwarded? ✓Is the donkey boiler be used for domestic purposes only ✓

ANS. Are approved plans forwarded herewith for Shafting 29-11-39 Main Boilers 6-11-39 Auxiliary Boilers ✓ Donkey Boilers ✓  
 (If not state date of approval)

Superheaters ✓ General Pumping Arrangements 17-3-41 Oil fuel Burning Piping Arrangements ✓

## SPARE GEAR.

Is the spare gear required by the Rules been supplied yesState the principal additional spare gear supplied See list attached to Gls Rpt.

Stokehold mud boxes are under removable floor plates. This is the only practicable position.

The foregoing is a correct description.

Manufacturer.

Lloyd's Register  
 Foundation  
 005756-005778-0054

During progress of work in shops - - {  
 Dates of Survey while building { 1942. Jan. 7. 11. 13. Mar. 17. 27. 31.  
 During erection on board vessel - - - {  
 Total No. of visits 6

Dates of Examination of principal parts—Cylinders Gb Rpt Slides Gb Rpt Covers Gb Rpt  
 Pistons Gb Rpt Piston Rods Gb Rpt Connecting rods Gb Rpt  
 Crank shaft Gb Rpt Thrust shaft Gb Rpt Intermediate shafts Gb Rpt  
 Tube shaft ✓ Screw shaft Gb Rpt 4. 13-1-42 Propeller 13-1-42  
 Stern tube 11-1-42 Engine and boiler seatings 11-1-42 Engines holding down bolts 17-3-42  
 Completion of fitting sea connections 13-1-42  
 Completion of pumping arrangements 31-3-42 Boilers fixed 17-3-42 Engines tried under steam 31-3-42  
 Main boiler safety valves adjusted 31-3-42 Thickness of adjusting washers P 1/32" S 1/4"  
 Crank shaft material Steel Identification Mark 10347. Thrust shaft material Steel Identification Mark 419.  
 Intermediate shafts, material Steel Identification Marks 419. Tube shaft, material ✓ Identification Mark 419.  
 Screw shaft, material Steel Identification Mark T.T. 12-11-41 Steam Pipes, material Steel Test pressure 600 lbs/sq. Date of Test 27-3-42  
 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 No  
 Is this machinery duplicate of a previous case Yes If so, state name of vessel S.S. EMPIRE MAPLE.

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

The Machinery of the vessel has been constructed & fitted on board under Special Survey in accordance with the approved plans, the Society's Rules & the Specification. The workmanship & materials are good & when tried under working conditions it was found satisfactory in every respect.

It is eligible, in our opinion, to have the records of L.M.C. 3. 42. O.G. & the notations of T. 3 Cy. 12' 20" 32' - 22" 85 NHP. 200 lbs. 2 cf. G.S. 37 H.S. 1356 F.D.

Certificate to be sent to  
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee	... £ 5 : 0	When applied for,
Balance of		
Special	... £ 4 : 5	15 APR 1942
Specification	... £ 3 : 3/9	
Donkey Boiler Fee	... £	When received,
Travelling Expenses (if any)	£	19

Committee's Minute FRI 15 MAY 1942  
 Assigned + dmb. 3. 42  
 J.D. Og.

D. J. H. P. and J. H. P.  
 Engineer Surveyor to Lloyd's Register of Shipping.