

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 3/8/40 When handed in at Local Office 3/8/40 Port of MIDDLESBROUGH  
 No. in Survey held at South Bank Mdb. Date, First Survey 22-9-40 Last Survey 2/8/1940  
 Reg. Book. 85258 on the S.S. TUDOR PRINCE (Number of Visits 29)  
 Built at South Bank By whom built Smith's Dock Co Ltd Yard No. 1068 Tons Gross 1913.72 Net 919.51  
 Engines made at South Bank By whom made Smith's Dock Co Ltd Engine No. 530 when made 1940  
 Boilers made at Hartlepool By whom made Richardson's Westgate Boiler No. D530 when made 1940  
 Registered Horse Power 394.5 Owners Prime Line Ltd Port belonging to London  
 Nom. Horse Power as per Rule 394.5 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes  
 Trade for which Vessel is intended

ENGINES, &c. — Description of Engines Triple Expansion Revs. per minute 85  
 Dia. of Cylinders 21, 35, 60 Length of Stroke 42 No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 12.075 as fitted 12 1/2 Crank pin dia. 12 1/2 Crank webs Mid. length breadth 19 1/4 Mid. length thickness 7 13/16 shrunken Thickness parallel to axis 7 13/16 Thickness around eye-hole 5 1/2  
 Intermediate Shafts, diameter as per Rule 11.50 as fitted 11 7/8 Thrust shaft, diameter at collars as per Rule 12.075 as fitted 12 1/2  
 Tube Shafts, diameter as per Rule 12.75 as fitted 13 1/4 Is the screw shaft fitted with a continuous liner Yes  
 Screw Shaft, diameter as per Rule 11/16 as fitted 23/32 Thickness between bushes as per Rule 33/64 as fitted 17/32 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 One length  
 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 Yes  
 If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft Yes Length of Bearing in Stern Bush next to and supporting propeller 4'-11 1/2"  
 Propeller, dia. 15'-3" Pitch 16'-6" No. of Blades 4 Material Bronze whether Moveable solid Total Developed Surface 84.2 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 21" Can one be overhauled while the other is at work Yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 21" Can one be overhauled while the other is at work Yes  
 Feed Pumps { No. and size 2-9 1/2" x 7 x 21 Simplex Pumps connected to the Main Bilge Line { No. and size Ballast Pump  
 { How driven Steam { How driven Steam  
 Ballast Pumps, No. and size 1-9" x 11" x 10" Duplex Lubricating Oil Pumps, including Spare Pump, No. and size   
 Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps; — In Engine and Boiler Room 4-2 1/2" Dey Jank 1-2 1/2"  
 In Holds, &c. No. 1, 2-2 1/2"; No. 2, 2-2 1/2"; No. 3, 2-2 1/2"; No. 4, 4-2 1/2"  
 Tunnel well 1-2 1/2"

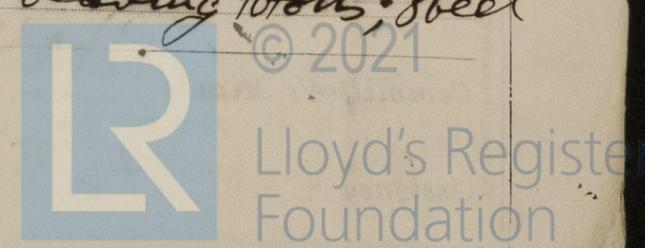
Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-9" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-4" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes Yes  
 Are the Bilge Suctions in the Machinery Space led from easily 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 Yes 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 Yes Are the Overboard Discharges above or below the deep water line Both  
 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  
 What Pipes pass through the bunkers Bilge Pipes How are they protected Strong steel basings  
 What pipes pass through the deep tanks Yes Have they been tested as per Rule Yes  
 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 Yes Is it fitted with a watertight door Yes worked from Upper platform

MAIN BOILERS, &c. — (Letter for record S) Total Heating Surface of Boilers 5968 # Working Pressure 22 lbs/sq"  
 Is Forced Draft fitted Yes No. and Description of Boilers 2-S.B  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? See Hpl Report.  
 IS A DONKEY BOILER FITTED? No. If so, is a report now forwarded? Yes  
 PLANS. Are approved plans forwarded herewith for Shafting 14/6/39 Main Boilers See Hpl Auxiliary Boilers Yes Donkey Boilers Yes  
 Superheaters 13/7/39 General Pumping Arrangements 13/6/39 Oil fuel Burning Piping Arrangements Yes

SPARE GEAR. State the articles supplied: — 1 connecting rod bottom end bearing nuts; 1 connecting rod top end bearing nuts; 1 set of coupling bolts; 1 set of propeller valves; 1 set of bilge pump valves; 1 set of air pump valves; 1 propeller stop (spare); 1 set of valves of each size used for the liquid end of each independent pump; 1 valve lid for main feed check valve; 1 propeller shaft for main circulating pump; 1 set of pads of each hand for 1 face of Micallet thrust block; 1 set of metallic packing complete for each size of main piston rod; 1 set H.P. Piston rings; 12 boiler tube stoppers; 1 set of fine fans for 1 furnace; 2 main bearing bolts; steel base plates of various sizes.

The foregoing is a correct description,

Manufacturer.



NOTE.—The words "The words in this report were taken on the date of the ship" are an expression of opinion and do not imply that the ship was in any way damaged or that the machinery was in any way defective.

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1939 Sept. 22. Oct. 20. Nov. 29. 1940 May 1. 2. 15.

During progress of work in shops - -

Dates of Survey while building

During erection on board vessel - - -

Total No. of visits 29.

May. 21. 22. 23. 24. 27. 28. 29. 30. June. 3. 7. 10. 20. 26. July. 4. 5. 10. 12. 15. 17. 19. 23. 25. Aug. 2

Dates of Examination of principal parts - Cylinders 27/5/40 Slides 28/5/40 Covers 28/5/40

Pistons 3/5/40 Piston Rods 3/5/40 Connecting rods 22/5/40

Crank shaft 3/5 & 5/7/40 Thrust shaft 5/7/40 Intermediate shafts 5/7/40

Tube shaft ✓ Screw shaft 27/5/40 Propeller 27/5/40

Stern tube 24/5/40 Engine and boiler seatings 22/5/40 Engines holding down bolts 5/7/40

Completion of fitting sea connections 23/5/40

Completion of pumping arrangements 24/7/40 Boilers fixed 20/6/40 Engines tried under steam 23/7/40

Main boiler safety valves adjusted 23/7/40 Thickness of adjusting washers P 3/8" S 1/2" P 5/16" S 3/4"

Crank shaft material SM Steel Identification Mark No 4560 22/12/39 JFC Thrust shaft material SM Steel Identification Mark No 4562 22/12/39 JFC

Intermediate shafts, material SM Steel Identification Marks No 4563-64 22/12/39 JFC Tube shaft, material ✓ Identification Mark ✓

Screw shaft, material SM Steel Identification Mark No 4568 22/12/39 Steam Pipes, material SD Steel Test pressure 660 lbs Date of Test 5/40-7/4

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 carrying and burning oil fuel been complied with ✓

Is this machinery duplicate of a previous case Yes If so, state name of vessel "Lancastrian Prince"

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been constructed under Special Survey in accordance with the approved plans, & Rule Regts. The workmanship & materials are good. The machinery found satisfactory under working conditions, & eligible in my opinion to have a record of + LMC 8,40 notation of Tail shaft (CL) 8,40, Forced Draught, & Superheated.

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The amount of Entry Fee ... £ 5 : : When applied for, 1940

Less Boilers Special ... £ 51 : 15 : : When received, 3-10-1940

Donkey Boiler Fee ... £ : : : 1940

Travelling Expenses (if any) £ : : : 1940

Committee's Minute

Assigned, + LMC 8.40 FD CL

TUE. 13 AUG 1940

R. J. Easthope  
Engineer Surveyor to Lloyd's Register of Shipping.

Date of writing

No. in Survey Reg. Book.

5258 on the

Master

Engines made

Boilers made

Nominal Horse

MULTITU

Manufacturer

Total Heating

No. and Desc

Tested by hyd

Area of Fire

Area of each

In case of dor

Smallest dist

Smallest dist

Largest inter

Thickness

long. seams

Percentage

Percentage

Thickness of

Material

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Dimensions

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Tube plate

Mean pitch

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Working

Diameter

Working

Diameter

