

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

NOV -1 1940

Date of writing Report 11/10/40 When handed in at Local Office 12/10/40 Port of MIDDLESBROUGH  
 No. in Survey held at S. 89967 on the s/s "STUART PRINCE" Date, First Survey July 22<sup>nd</sup> 1940 Last Survey Oct. 10<sup>th</sup> 1940  
 Reg. Book. (Number of Visits 22)  
 Built at South Bank By whom built Smith's Dock Co Ltd Yard No. 1069 Tons { Gross 1911.15  
 Engines made at South Bank By whom made Smith's Dock Co Ltd Engine No. 531 when made 1940  
 Boilers made at Hartlepool By whom made Richardson's Westgarth Boiler No. D 531 when made 1940  
 Registered Horse Power Owners Prince 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 webs Mid. length breadth 19 1/4" Mid. length thickness 7 13/16" Thickness parallel to axis 7 13/16" Thickness around eye-hole 5 1/2"  
 Intermediate Shafts, diameter as per Rule 11.5" 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 as fitted Screw Shaft, diameter as per Rule 12.75" as fitted 13 1/4" Is the shaft fitted with a continuous liner Yes  
 Bronze Liners, thickness in way of bushes as per Rule 11/16" as fitted 23/32" Thickness between bushes as per Rule 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 ✓  
 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. 15'-3" Pitch 16'-6" No. of Blades 4 Material C.I. whether Movable 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 2 1/2" 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 ✓ Suctions, connected to both Main Bilge Pumps and Auxiliary  
 Bilge Pumps;—In Engine and Boiler Room 4-2 1/2" Dry Gauge 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 Casings  
 What pipes pass through the deep tanks 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 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 sq. ft.  
 Is Forced Draft fitted Yes No. and Description of Boilers 2 S.B. Working Pressure 220 lb/sq. in.  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? See Hpl Report  
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? ✓

PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers See Hpl Report Auxiliary Boilers ✓ Donkey Boilers ✓  
 Superheaters 13/4/39 General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements ✓

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 (spare). 1 set bilge pump valves & seats. 1 set air pump valves. 1 propeller shaft (spare). 1 set valves of each size used for the bilge end of each independent pump. 1 valve lid for main feed check valve. 1 impeller shaft for main circulating pump. 1 set of pads of each hand for 1 face of Mitchell thrust block. 1 set putalike packing complete for each size of main piston rod. 1 set of piston rings. 12 boiler tube stoppers. 1 set of firebricks for furnace. 2 main bearing bolts. Steel cover plates of various sizes, nuts & bolts.

The foregoing is a correct description,

FOR SMITH'S DOCK CO. LTD.

Manufacturer.

ENGINE WORKS MANAGER.



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004946-004953-0228



During progress of work in shops - - -  
 Dates of Survey while building  
 During erection on board vessel - - -  
 Total No. of visits

July 22. 26. 27. 29. Aug. 3. 14. 19. 21. 22. 27. 29 Sept. 2. 4. 10. 12. 16. 18. 20. 24 Oct. 23. 7.

22.

Dates of Examination of principal parts—Cylinders 22/27/29/7/40 Slides 26/7/40 Covers 26/7/40  
 Pistons 14/8/40 Piston Rods 14/8/40 Connecting rods 14/8/40  
 Crank shaft 22/7; 24/9/40 Thrust shaft 24/9/40 Intermediate shafts 24/9/40  
 Tube shaft - Screw shaft 14/8/40 Propeller 14.15/8/40  
 Stern tube 22/8/40 Engine and boiler seatings 26/7/40 Engines holding down bolts 24/9/40  
 Completion of fitting sea connections 14/8/40  
 Completion of pumping arrangements 2/10/40 Boilers fixed 2/9/40 Engines tried under steam 2/10/40  
 Main boiler safety valves adjusted 2/10/40 Thickness of adjusting washers PORT  $P\frac{3}{8}'' S\frac{3}{8}''$  STARB  $P\frac{3}{8}'' S\frac{3}{8}''$   
 Crank shaft material SM Steel Identification Mark No 4572/39 Thrust shaft material SM Steel Identification Mark No 4572/39  
 Intermediate shafts, material SM Steel Identification Marks Nos 4573-77 Tube shaft, material - Identification Mark -  
 Screw shaft, material SM Steel Identification Mark No 4578 Steam Pipes, material SD Steel Test pressure 660 lbs Date of Test 22/8-23/9  
 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 "Tudor 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 Requirements. The workmanship & materials are good. The machinery found satisfactory under working conditions, & eligible in my opinion to have a record of + LMC 10, 40, notation of Tail shaft (CL) 10, 40, Tweed Dranght, & Superheated.

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 : - : When applied for,  
 Less Boilers Special ... £ 51 : 15 : 28.10.19.40  
 Donkey Boiler Fee ... £ : : : When received,  
 Travelling Expenses (if any) £ : : : 6.12.19.40

Committee's Minute TUE 5 NOV 1940

Assigned + Limb. 10.40  
 J.D., C.

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



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