

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

JUN -5 1940

Date of writing Report 22/5/40 When handed in at Local Office 24/5/40 Port of MIDDLESBROUGH

No. in Survey held at South Bank Date, First Survey Sept. 13, 1939. Last Survey 22/5/1940  
Reg. Book 39924 on the S.S. "LANCASTRIAN PRINCE" (Number of Visits 25)Built at South Bank By whom built Smiths Dock Co Ltd Yard No. 1067 Tons { Gross 1913.72  
Net 919.51

Engines made at South Bank By whom made Smiths Dock Co Ltd Engine No. 529 when made 1940

Boilers made at Haptlepool By whom made Richardsons Westgarth Boiler No. D529 when made 1939

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" Crank pin dia. 12 1/2" Crank webs Mid. length breadth 19 1/4" Thickness parallel to axis 7 13/16" as fitted 12 1/2" Mid. length thickness 7 13/16" Thickness around eye hole 5 1/2"

Intermediate Shafts, diameter as per Rule 11 5/8" Thrust shaft, diameter at collars as per Rule 12.075" as fitted 12 1/2"

Tube Shafts, diameter as per Rule 13 1/4" Is the screw shaft fitted with a continuous liner? Yes

Bronze Liners, thickness in way of bushes as per Rule 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? 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

Propeller, dia. 15'-3" Pitch 16'-6" No. of Blades 4 Material Bronze 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 21" Simplex Pumps connected to the { No. and size Ballast Pump  
How driven Steam Main Bilge Line 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

Bilge Pumps;—In Engine and Boiler Room 4-2 1/2"; Dry Tank 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? 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 sq. ft. Working Pressure 220 lbs/sq. in.

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 15/4/39 Auxiliary Boilers Donkey Boilers

Superheaters 13/4/39 General Pumping Arrangements 13/6/39 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  
1 set of bilge pump valves & seats; 1 set of air pump valves  
1 propeller shaft (spare); 1 set valves of each size used for the  
liquid 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 band for 1 pad of Michell 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 five bars for furnace; 2 main bearing bolts; steel  
bars & plates of various sizes.

The foregoing is a correct description,

FOR SMITH'S DOCK CO. LTD.

Manufacturer.



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Dates of Survey while building  
 During progress of work in shops -- Sept. 13, 22, 28, Oct. 5, 14, Dec. 12, Feb. 2, 12, 21, 22.  
 During erection on board vessel --- March 11, 12, 14, 20, 28, 29, April 2, 3, 11, 15, 22, 25, 26, May 1, 22.  
 Total No. of visits Twenty-five.

Dates of Examination of principal parts—Cylinders 22/1+12/2/40 Slides 12/2/40 Covers 12/2/40  
 Pistons 9/2/40 Piston Rods 21/2/40 Connecting rods 22/2/40  
 Crank shaft 12/2+15/4/40 Thrust shaft 15/4/40 Intermediate shafts 15/4/40  
 Tube shaft ✓ Screw shaft 11+12/3/40 Propeller 12/3/40  
 Stern tube 11+12/3/40 Engine and boiler seatings 29/2/40 Engines holding down bolts 15/4/40  
 Completion of fitting sea connections 5/3/40  
 Completion of pumping arrangements 18/4/40 Boilers fixed 18/4/40 Engines tried under steam 25/4/40  
 Main boiler safety valves adjusted 25/4/40 Thickness of adjusting washers P 3/8" S 23/64" Supt 9/32" P 21/64" S 1/32" Supt 5/16" NO 4552  
 Crank shaft material S.M. Steel Identification Mark NO 4550 24/10/39 JFC Thrust shaft material S.M. Steel Identification Mark NO 4552 24/10/39 JFC  
 Intermediate shafts, material S.M. Steel Identification Marks 4553-57 24/10/39 JFC Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material S.M. Steel Identification Mark NO 4557 24/10/39 JFC Steam Pipes, material S.D. Steel Test pressure 660 lb Date of Test 14/3-15/4  
 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 S/S 'NORMAN 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 Reg. The workmanship & materials are good. The machinery found satisfactory under working conditions, & eligible in my opinion to have a vessel of + L.M.C 5,40, notation of Tail shaft (C.L.) 5,40, Forced draught, & Superheated.

The amount of Entry Fee ... £ 5 : - :  
 Less Boilers Special ... £ 51 : 15 :  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 4-6-1940.  
 When received, 2nd August 1940. R.S.Y. 5/8

Committee's Minute

Assigned

+ L.M.C 5.40 Spl  
 J.D., C.L.

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



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