

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

MAY 13 1940

MIDDLESBROUGH.

Date of writing Report 22/4/1940 When handed in at Local Office 26/4/1940 Port of

No. in Survey held at South Bank

Date, First Survey 28-8-39

Last Survey 9-4-1940

Reg. Book.

S.40321 on the

S.S. "NORMAN PRINCE"

Tons { Gross 1913.27
Net 919.06

When built 1940.

Built at South Bank By whom built Smith's Dock Co. Ltd

Yard No. 1066

Engines made at South Bank By whom made Smith's Dock Co. Ltd

Engine No. 528 when made 1940

Boilers made at Heston By whom made Richardsons Westgate

Boiler No. 3528 when made 1939

Registered Horse Power

Owners Prince Line Limited

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"

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 5/8"

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 13 3/4"

as fitted 13 3/4"

Is the shaft filled 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"

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

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 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 4 x 21

Simplex

Pumps connected to the

Main Bilge Line

No. and size Ballast Pump.

How driven Steam

Ballast Pumps, No. and size 1-9 x 11 x 10

Duplex

Lubricating Oil Pumps, including Spare Pump, No. and size

Suctions, connected to both Main Bilge Pumps and Auxiliary

Oil Cooler

Are two independent means arranged for circulating water through the

Bilge Pumps;—In Engine and Boiler Room

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 the Overboard Discharges above or below the deep water line Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Yes

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Yes

How are they protected Strong steel casings

What Pipes pass through the bunkers Bilge Pipes.

Have they been tested as per Rule

Yes

What pipes pass through the deep tanks

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

MAIN BOILERS, &c.—(Letter for record 5)

Total Heating Surface of Boilers 5968 sq

Working Pressure 220 lbs/sq

Is Forced Draft fitted Yes

No. and Description of Boilers 2 SB.

See Hpl Report.

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

Yes

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

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 bearings nuts

1 connecting rod top end bearings nuts

1 set of coupling bolts 1 C.I.

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1 propeller 1 set bilge pump valves & seals

1 set of coupling bolts 1 C.I.

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1 propeller shaft (spare) 1 set valves of each size used for the liquid

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1939 Aug. 28, Sept. 13, 21, Oct. 23, Nov. 6, 9, 15, 21, 22, 23, 24
 During progress of work in shops - -
 Dates of Survey while building
 During erection on board vessel - - -
 Total No. of visits 29.

Dates of Examination of principal parts—Cylinders 13/9/39. Slides 29/12/39 Covers 21/9/39.
 Pistons 21/9/39. Piston Rods 23/9/39. Connecting rods 30/1/40.
 Crank shaft 9/11/39. Thrust shaft 30/1/40. Intermediate shafts 30/1/40.
 Tube shaft ✓ Screw shaft 29/12/39. Propeller 2/1/40.
 Stern tube 28/12/39. Engine and boiler seatings 13/12/39. Engines holding down bolts 30/1/40.
 Completion of fitting sea connections 13/12/39.
 Completion of pumping arrangements 8/4/40. Boilers fixed 16/1/40. Engines tried under steam 19/2/40.
 Main boiler safety valves adjusted 19/2/40. Thickness of adjusting washers P. 13/32 S. 1/32 P. 23/64 S. 1/32 P. 23/64 S. 1/32.
 Crank shaft material S.M. Steel Identification Mark No. 4540 JFC Thrust shaft material S.M. Steel Identification Mark No. 4542 JFC
 Intermediate shafts, material S.M. Steel Identification Marks 4543-47 JFC Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material S.M. Steel Identification Mark 4548 JFC Steam Pipes, material S.M. Steel Test pressure 660 lbs Date of Test 9-26/1/40
 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 No If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of the vessel has been constructed under Special Survey in accordance with the approved plans & Rule Regs. The workmanship & materials are good. The machinery found satisfactory under working conditions, & eligible in my opinion to have a record of + L MC 4,40 notation of Tail shaft (CL) 4,40, Forced Draught & Superheater.

The amount of Entry Fee ... £ 5 : - : When applied for,
 Special ... £ 51 : 15 : 10 6 19 40
 Donkey Boiler Fee ... £ : : When received,
 Travelling Expenses (if any) £ : : 3/7/ 40 28 3/

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

Committee's Minute. 17 MAY 1940
 Assigned. + Lmb. 4.40 (Spt) 22, Cd.