

REPORT ON MACHINERY.

No. 15943

Date of writing Report 7 Dec 21 When handed in at Local Office 7 Dec 21 Port of WEST HARTLEPOOL
 Received at London Office 10 Dec 21
 No. in Survey held at Hartlepool Date, First Survey 3rd Sept 20 Last Survey 1st Dec 1921
 Reg. Book 13082 on the S.S. Corsican Prince (No 2622) now named PERSIANA MDB " " 20K 50N 51 (Number of Visits 105) MDB 21 (Gross 4500)
 Master Built at Haverton Hill on Tees By whom built Furness S.B. Co. Ltd. Tons Net 2790
 Engines made at Hartlepool By whom made Richardsons Westgarth & Co. Ltd. when made 1921
 Boilers made at ditto By whom made ditto when made 1921
 Registered Horse Power 547 Owners Prince Line Ltd. Port belonging to Newcastle
 Nom. Horse Power as per Section 28 547 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 26"-43"-73" Length of Stroke 48" Revs. per minute 73 Dia. of Screw shaft as per rule 14.44" Material of screw shaft Lock fast Iron
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight in the propeller boss yes If the liner is in more than one length are the joints burned ✓ 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 ✓
 Dia. of Tunnel shaft as per rule 13.07" Dia. of Crank shaft journals as per rule 13.74" Length of stern bush 5'-2 1/4"
 as fitted 13 1/4" as fitted 14 1/2" Dia. of Crank pin 14 1/2" Size of Crank webs 9x22 1/2" Dia. of thrust shaft under collars 14 1/4" Dia. of screw 17'-3" Pitch of Screw 18'-0" No. of Blades 4 State whether moveable no Total surface 95 sq ft
 No. of Feed pumps 2 Diameter of ditto 4 1/2" Stroke 27" Can one be overhauled while the other is at work yes 2 Independent
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 27" Can one be overhauled while the other is at work yes main feed pumps
 No. of Donkey Engines 5 Sizes of Pumps Ballast 9x11x10 duplex No. and size of Suctions connected to both Bilge and Donkey pumps yes 10 1/2 x 8 x 21"
 In Engine Room 4 of 3 1/2" General 8 1/2 x 8 Sanitary 6 1/2 x 6 duplex Oil transfer 7 1/2 x 10 single Fresh water 1 1/2 x 2 1/2 x 4 duplex CP 2 @ 3 1/2 inch hold forward; 1 @ 2 1/2 in back keel
 No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump CP 2 @ 3 1/2 in 4 hold; 1 @ 3 1/2; Sea Tank 2 @ 3 1/2; Tank 1 @ 2 1/2
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible none
 Are all connections with the sea direct on the skin of the ship yes Are they 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 Discharge Pipes above or below the deep water line above
 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 are carried through the bunkers Drainage How are they protected As above
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from 7th platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer & Sons Ltd.
 Total Heating Surface of Boilers 8365 sq ft Forced Draft fitted yes No. and Description of Boilers 3 single ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 320 lbs Date of test 29.9.21-2 No. of Certificate 3605-2
 Can each boiler be worked separately yes Area of fire grate in each boiler 62.56 sq ft No. and Description of Safety Valves to each boiler 2, direct spring Area of each valve 12.56 sq ft Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork about 4 feet Mean dia. of boilers 15'-9" Length 12'-0" Material of shell plates Steel
 Thickness 1 3/32" Range of tensile strength 28 3/4/32 3/4 Are the shell plates welded or flanged no Descrip. of riveting: cut. cir. seams Int. R. Lap.
 long. seams JR DR S Diameter of rivet holes in long. seams 1 9/32" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 18 3/4"
 Per centages of strength of longitudinal joint rivets 85.4 Working pressure of shell by rules 184 lbs Size of manhole in shell 13" x 16 1/2"
 Size of compensating ring 2'5" x 2'6 1/2" x 1 1/2" No. and Description of Furnaces in each boiler 3 Deightons Material Steel Outside diameter 44 13/16"
 Length of plain part top ✓ bottom ✓ Thickness of plates crown 21" bottom 32" Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 217 Combustion chamber plates: Material Steel Thickness: Sides 19" Back 19" Top 19" Bottom 27"
 Pitch of stays to ditto: Sides 7 1/2" x 8 1/4" Back 8" x 8 1/4" Top 8 3/4" x 7 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 184
 Material of stays Steel Area at smallest part 1 1/2" Area supported by each stay 8" x 8 1/4" Working pressure by rules 190 End plates in steam space: Material Steel Thickness 1 1/8" Pitch of stays 19 1/8" x 16" How are stays secured D. Nuts Working pressure by rules 180 Material of stays Steel
 Area at smallest part 2 1/8" x 2 1/4" Area supported by each stay 9 1/4" x 15" Working pressure by rules 223 Material of Front plates at bottom Steel
 Thickness 7/8" Material of Lower back plate Steel Thickness 1 1/16" Greatest pitch of stays 13 1/2" x 8" Working pressure of plate by rules 196
 Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 1/16" Material of tube plates Steel Thickness: Front 15/16" Back 3/4" Mean pitch of stays 11 1/4" x 7 3/8"
 Pitch across wide water spaces 13 1/2" Working pressures by rules 180 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9" x 1 3/4" Length as per rule 30 3/4" Distance apart 8 3/4" Number and pitch of stays in each three 7 1/2"
 Working pressure by rules 254 Steam dome: description of joint to shell none % of strength of joint ✓
 Diameter ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓
 Pitch of rivets ✓ Working pressure of shell by rules ✓ Crown plates ✓ Thickness ✓ How stayed ✓

UPERHEATER. Type None Date of Approval of Plan ✓ Tested by Hydraulic Pressure to ✓
 Date of Test ✓ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler ✓
 Diameter of Safety Valve ✓ Pressure to which each is adjusted ✓ Is Easing Gear fitted ✓

IS A DONKEY BOILER FITTED?

none

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 con. rod top end bolts & nuts, 2 bottom end ditto. 2 main bearing ditto. 1 set coupling ditto. 1 set valves for feed, bilge & general donkey pumps. 1/2 set valves for air pump. 1 set rings & springs for H.P. piston. 1 pair crank pin bushes. 1 eccentric strap. 1 propeller. 1 propeller shaft. 1 impeller & shaft for centrifugal pump. 12 condenser tubes 2 feed check valves 2 safety valve springs. 20 boiler tubes. Assorted bolts, nuts, and iron.

The foregoing is a correct description,
FOR RICHARDSONS, WESTGARTH & CO. LIMITED.

[Signature]

GENERAL MANAGER.

Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1920. Sept 3, 14, Oct 27, Nov 2, 4, 8, 10, 11, 16, 22, 25, Dec 7, 3, 8, 15, 17, 30. 1921. Jan 18, 24, Feb 18, Apr 1, 8, 11, 14, 15, 18, 20, 26, May 4, 9, 11, 18, 23, 24, 25, June 6, 8, 13, 20, 21, 22, 27, 30, July 4, 5, 7, 8, 11, 15, 18, 19, 20, 25, 26, 27, Aug 9, 10, 11, 16, 18, 19, 22, 23, 26, 29, 31, Sept 1, 12, 13, 15, 16, 27, 28, 29, Oct 4, 6, 7, 10, 12, 13, 17, 21, 24, 24, 27, Nov 1, 2, 3, 7, 8, 9, 10, 15, 17, 17, 18, 21, 22, 28, 28, 29, 30, Dec 1.

Total No. of visits 105. M.D.B. — 1921 June 20, 23, July 21, Sept 27, 13, 26, Oct 5, 6, 10, Dec 13, 20. 1922 Jan. 5, 23, 30, Feb 22, 23, Mar. 8, 23, 28, May 2 = 21

Is the approved plan of main boiler forwarded herewith? Yes. Please return for duplicate.

Dates of Examination of principal parts—Cylinders 19.7.21 Slides 6.6.21 Covers 19.7.21 Pistons 25.7.21 Rods 25.7.21

Connecting rods 26.7.21 Crank shaft 20.6.21 Thrust shaft 14.4.21 Tunnel shafts 27.9.21 Screw shaft 11.10.21 Propeller 29.9.21

Stern tube 22.8.21 Steam pipes tested 10.8-28.11.21 Engine and boiler seatings 13.10.21 Engines holding down bolts 2.11.21

Completion of pumping arrangements 2.5.22 Boilers fixed 2.11.21 Engines tried under steam 30.11.21

Completion of fitting sea connections Stern tube 27.10.21 Screw shaft and propeller 27.10.21

Main boiler safety valves adjusted 185 lbs. Thickness of adjusting washers Ss 3/8" P 3/8" Cs 23/64 P 13/32 Ps 21/64 P 3/8"

Material of Crank shaft Steel Identification Mark on Do. 6277 Material of Thrust shaft Steel Identification Mark on Do. 6210

Material of Tunnel shafts Steel Identification Marks on Do. 6210 Material of Screw shafts Lockfast Identification Marks on Do. 6210.

Material of Steam Pipes Lap welded steel. Test pressure 540 lbs

Is an installation fitted for burning oil fuel yes Is the flash point of the oil to be used over 150° F. yes

Have the requirements of Section 49 of the Rules been complied with yes

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. An evaporator & a feed heater fitted.)

the coils of former tested to 400 lb & the bodies of both to 50 lb per sq inch hydraulic press. This vessel's machinery has been built and installed under Special Survey. The materials and workmanship are good. It has been examined under full steam at work at moorings and found satisfactory. The vessel has returned to Middlesbrough for completion.

To complete the survey the pumping connections in tunnel are to complete, the oil fuel pipes and connections are to be completed and the installation tried, and the spare gear to be checked.

The survey has now been satisfactorily completed in accordance with above W.M. On completion the vessel will be eligible to have the rotation L.M.C. with date. 5.22.

The amount of Entry Fee ... £ 6 : 0 :
Special ... £ 102 : 7 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :

When applied for, 7 Dec 1921. When received, 23.12.21. F.D. C.L. 29/5/22. Fitted for Oil Fuel, 5.22, F.P. above 150° F. B.D. Shilston, W. Morrison, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Assigned + L.M.C. 5.22 F.D. C.L. Fitted for oil fuel 5.22 F.P. above 150° F.

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