

REPORT ON MACHINERY.

No. 11040

Received at London Office

FUE. 14 NOV. 1922

Date of writing Report 13 Nov 1922 When handed in at Local Office 13 Nov 1922 Port of WEST HARTLEPOOL
 Date, First Survey 13 Feb 1920 Last Survey 7th Nov 1922
 Reg. Book. 8194 on the S.S. "London Commerce" (T. 197) (H 2624) to "Nataliana"
 Tons { Gross 7680 Net 4780
 Built at Middlesbrough by whom built Furness S.B.C. Ltd. When built 1922
 Engines made at Hartlepool By whom made Richardsons Westgarth & Co. Ltd. When made 1922
 Boilers made at ditto By whom made ditto when made 1922
 Registered Horse Power 1000 Owners Furness Withy & Co. Ltd. Port belonging to Liverpool
 Shaft Horse Power at Full Power 5000 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes

TURBINE ENGINES, &c. — Description of Engines Single red. geared turbines No. of Turbines 2
 Diameter of Rotor Shaft Journals, H.P. 7 1/2" L.P. 10" Diameter of Pinion Shaft 9"
 Diameter of Journals 9" Distance between Centres of Bearings 3-1 1/4" Diameter of Pitch Circle 10.012"
 Diameter of Wheel Shaft 17" Distance between Centres of Bearings 7-1 1/4" Diameter of Pitch Circle of Wheel 144.21"
 Width of Face 50" Diameter of Thrust Shaft under Collars 17 1/4" Diameter of Tunnel Shaft as per rule 15.44"
 No. of Screw Shafts 1 continuous line as per rule 16.5" Diameter of same as fitted 17 1/2" Diameter of Propeller 18-9" Pitch of Propeller 17-3"
 No. of Blades 4 State whether Moveable no Total Surface 118.2 ft² Diameter of Rotor Drum, H.P. as per rule L.P. as per rule Astern as per rule
 Thickness at Bottom of Groove, H.P. as per rule L.P. as per rule Astern as per rule Revs. per Minute at Full Power, Turbine 1270 Propeller 88

PARTICULARS OF BLADING.

All impulse blades.

H.P.

L.P.

ASTERN.

	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION	<u>7 1/8"</u>	<u>57 5/8"</u>	<u>2</u>	<u>2 1/2"</u>	<u>74 1/2"</u>	<u>1</u>	<u>2 1/2"</u>	<u>57 15/16"</u>	<u>1</u>
2ND	<u>3 1/2"</u>	<u>57 15/16"</u>	<u>2</u>	<u>2 5/8"</u>	<u>74 5/8"</u>	<u>1</u>	<u>3 1/2"</u>	<u>58 3/16"</u>	<u>1</u>
3RD	<u>1 7/8"</u>	<u>58 7/8"</u>	<u>1</u>	<u>3 5/8"</u>	<u>74 5/8"</u>	<u>1</u>	<u>2 3/2"</u>	<u>59 3/16"</u>	<u>1</u>
4TH	<u>1 1/2"</u>	<u>58 1/2"</u>	<u>1</u>	<u>3 3/4"</u>	<u>74 1/4"</u>	<u>1</u>			
5TH	<u>1 7/8"</u>	<u>58 9/16"</u>	<u>1</u>	<u>4 1/2"</u>	<u>74 1/2"</u>	<u>1</u>			
6TH	<u>1 1/4"</u>	<u>58 1/16"</u>	<u>1</u>	<u>5 3/4"</u>	<u>75 1/4"</u>	<u>1</u>			
7TH	<u>1 1/8"</u>	<u>58 1/8"</u>	<u>1</u>	<u>7"</u>	<u>76"</u>	<u>1</u>			
8TH	<u>1 1/8"</u>	<u>58 1/8"</u>	<u>1</u>	<u>9 3/4"</u>	<u>78 1/4"</u>	<u>1</u>			
No. and size of Feed pumps	<u>2 5/8"</u>	<u>59 5/8"</u>	<u>1</u>	<u>11 1/4"</u>	<u>78 1/4"</u>	<u>1</u>	See separate list of auxiliary pumps.		
No. and size of Bilge pumps	<u>2 5/8"</u>	<u>59 5/8"</u>	<u>1</u>	<u>12 1/4"</u>	<u>79 1/4"</u>	<u>1</u>			
No. and size of Bilge suction in Engine Room	<u>2 7/8"</u>	<u>59 7/8"</u>	<u>1</u>	<u>12 3/4"</u>	<u>79 3/4"</u>	<u>1</u>			

No. and size of Bilge suction in Engine Room Four of 3 1/2" and four of 2 1/2" in oil wells.
 One of 2 1/2" in tunnel. In Holds, &c. One of 3 1/2" in after hold, and two of 3 1/2" in other holds.

No. of Bilge Injections 1 sizes 1 1/4" Connected to condenser, or to circulating pump C.P. 2 as a separate Donkey Suction fitted in Engine Room & size 3 1/2"
 Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes
 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 below
 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 none How are they protected yes
 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 see ship reports Is it fitted with a watertight door yes worked from deck

BOILERS, &c. — (Letter for record S) Manufacturers of Steel J. Spencer & Sons Ltd.
 Total Heating Surface of Boilers 13314 ft² Forced Draft fitted yes No. and Description of Boilers Four, single ended
 Working Pressure 190 lbs Tested by hydraulic pressure to 335 lbs Date of test 6.4.22 (2) 13.4.22 (2) No. of Certificate 3612 & 3613
 Can each boiler be worked separately yes Area of fire grate in each boiler 77.9 ft² No. and Description of Safety Valves to each boiler Two, direct spring Area of each valve 12.56 ft² Pressure to which they are adjusted 195 lb Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 1'-9" Int'l Mean dia. of boilers 14'-6" Length 12'-0" Material of shell plates Steel
 Thickness 1 1/32" Range of tensile strength 29/33 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR Lap.
 long. seams DR B.S. Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 10" Lap of plates or width of butt straps 21 3/4"

Per centages of strength of longitudinal joint plates 85.31 Working pressure of shell by rules 193 lbs Size of manhole in shell 13" x 16 1/2"

Size of compensating ring 2'-6" x 2'-7 1/2" x 1 1/32" No. and Description of Furnaces in each Boiler 4 Deightons Material Steel Outside diameter 43 3/4"
 Length of plain part top 5" Thickness of plates bottom 8" Description of longitudinal joint Welded No. of strengthening rings 1

Working pressure of furnace by the rules 208.5 Combustion chamber plates: Material Steel Thickness: Sides 4 1/8" Back 3 1/2" Top 4 1/8" Bottom 1 3/8"
 Pitch of stays to ditto: Sides 10" x 8" Back 9 1/4" x 8" Top 10" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 200

Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 80 ft² Working pressure by rules 190 End plates in steam space Steel
 Material Steel Thickness 1 3/32" Pitch of stays 17 1/4" x 20 1/2" How are stays secured 2. Nuts Working pressure by rules 193 Material of stays Steel

Diameter at smallest part 2 25/32" Area supported by each stay 17 1/4" x 20 1/2" Working pressure by rules 190.2 Material of Front plates at bottom Steel
 Thickness 3 1/2" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 14 1/4" x 8" Working pressure of plate by rules 235

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 7/8" Material of tube plates Steel Thickness: Front 1 5/16" Back 1 3/16" Mean pitch of stays 11 1/8"
 Pitch across wide water spaces 14 1/4" Working pressures by rules 207.5 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 1/2" x 1 3/4" Length as per rule 32 1/2" Distance apart 10" Number and pitch of stays in each Three 8"

Working pressure by rules 219 Steam dome: description of joint to shell none % of strength of joint ✓ Diameter ✓
 Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diameter of rivet holes ✓ Pitch of rivets ✓

Working pressure of shell by rules ✓ Crown plates: Thickness ✓ How stayed ✓

If so, is a report now forwarded?

Manufacturer.

air pump & fan engines.
Assorted bolts, nuts & iron

Indo vials - 1222 May 31 June 14 Nov 10. 13. 15. 27. Dec 13. 14 (1223) Jan 23. 24. 30 = 11 " donkey " " "

Is this machinery a duplicate of a previous case yes. If so, state name of vessel S.S. Peliciana Indl Rpt No 11282

The survey has now been satisfactorily completed as required above.

Committee's Minute

Assigned + Lm 6 1.92

F. D. C. L.
 Listed for at price 1.23 P. above 150.00