

REPORT ON MACHINERY.

No. 76051

Received at London 17 OCT. 1922

Date of writing Report

19

When handed in at Local Office

13.10.22 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at

Janon & Hebburn

Date, First Survey

31. August 1922

Last Survey

12. Oct. 1922

Reg. Book.

36564 on the S.S. British Sergeant

Palmer no 931

(Number of Visits 110)

Tons { Gross 6050
Net 3620

Master

Built at Hebburn

By whom built

Palmer Shipbuilding & Iron Co. Ltd

When built 1922

Engines made at

Janon & Hebburn

By whom made

Palmer Shipbuilding & Iron Co. Ltd

When made 1922

Boilers made at

Janon & Hebburn

By whom made

Palmer Shipbuilding & Iron Co. Ltd

When made 1922

Registered Horse Power 1593

Owners

British Tanker Co. Ltd

Port belonging to London

Shaft Horse Power at Full Power 2890

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

TURBINE ENGINES, &c.—Description of Engines with double reduction gear No. of Turbines 2 ahead and 2 astern.

Diameter of Rotor Shaft Journals, H.P. 4 1/2" L.P. 6 1/2" Diameter of Pinion Shaft 2 1/2"
 Diameter of Journals 1st Red 4 1/2" 2nd 12" Distance between Centres of Bearings 28 1/2" Diameter of Pitch Circle 2nd Reduction 19.2"
 Diameter of Wheel Shaft 1st 12" 2nd 12" Distance between Centres of Bearings 80 3/8" Diameter of Pitch Circle of Wheel 2nd 59.66"
 Width of Face 1st 15" 2nd 35 1/2" Diameter of Thrust Shaft under Collars 17" Diameter of Tunnel Shaft as per rule 13.57"
 No. of Screw Shafts one Diameter of same as per rule 16.014" as fitted 17" Diameter of Propeller 18.7 1/2" Pitch of Propeller 17-10 1/2"
 No. of Blades 4 State whether Movable Yes Total Surface 98 sq ft Diameter of Rotor Drum, H.P. 16" L.P. 38"
 Thickness at Bottom of Groove, H.P. 1 1/2" L.P. 1 1/2" Revs. per Minute at Full Power, Turbine H.P. 3168 L.P. 2538 Propeller 74

PARTICULARS OF BLADING.

H.P.

L.P.

	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	13 1/4"	25 3/4"	2	1st 2"	30"	4	1 1/2"	29 1/8"	1
2nd Reaction	15 1/16"	17 7/8"	6	2nd 2 1/8"	31 1/4"	4	2 1/8"	31 1/4"	1
3rd "	1 1/4"	18 1/2"	6	3rd 3 3/8"	32 3/4"	4	2 1/8"	31 1/4"	1
4th "	1 9/16"	19 1/8"	5	4th 3 1/8"	42 3/4"	2	2 1/8"	31 1/4"	1
5th "	2"	20"	5	5th 3 1/8"	44 1/4"	2	2 1/8"	31 1/4"	1
6th "	2 9/16"	21 1/8"	5	6th 3 1/8"	45 1/4"	1	2 1/8"	31 1/4"	1
7th "				7th 3 1/8"	46 3/4"	1	2 1/8"	31 1/4"	1
8th "				8th 3 1/8"	48 3/4"	1	2 1/8"	31 1/4"	1
				9th 3 1/8"	50 3/4"	1	2 1/8"	31 1/4"	1
				10th 3 1/8"	50 3/4"	1	2 1/8"	31 1/4"	1
				11th 3 1/8"	50 3/4"	1	2 1/8"	31 1/4"	1

No. and size of Feed pumps One Heiss 10 1/2" x 8" x 21" and one electric rotor pump.
 No. and size of Bilge pumps No, 7" diam by 12" stroke, worked from main shaft
 No. and size of Bilge suction in Engine Room Three 3 1/2" diameter and two 3 1/2" in boiler room.
 In Hold, forward of oil cargo tanks, No, 3 1/2" diam

No. of Bilge Injections one sizes 11" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine Room & size Yes. 6"
 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 above
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel No 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
 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 None Is it fitted with a watertight door Yes worked from

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

Spencer & Long

Total Heating Surface of Boilers 7737 sq ft Is Forced Draft fitted Yes No. and Description of Boilers Three 355 Single Ended
 Working Pressure 200 lb per sq in Tested by hydraulic pressure to 350 lb per sq in Date of test 5/12/21, 29/12/21 No. of Certificate 9633, 9637, 9639
 Can each boiler be worked separately Yes Area of fire grate in each boiler Oil fuel No. and Description of Safety Valves to each boiler No, direct spring Area of each valve 9.62 sq in Pressure to which they are adjusted 205 lb per sq in Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 21" dia. of boilers 15-0" Length 12-0" Material of shell plates Steel
 Thickness 1 3/8" Range of tensile strength 28,320 lb per sq in Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 2 R Lap
 long. seams Double straps Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 5/8" Width of butt straps 20 5/16"

Per centages of strength of longitudinal joint plates 86.4 Working pressure of shell by rules 203 lb Size of manhole in shell 16" x 12"
 Size of compensating ring 46 1/2" x 33" x 1 3/8" No. and Description of Furnaces in each Boiler 3, Deighton Material Steel Outside diameter 46 3/4"
 Length of plain part top 11 1/2" Thickness of plates crown 5 3/8" Description of longitudinal joint Welded No. of strengthening rings 1
 bottom 11 1/2" Thickness of plates bottom 5 3/8"
 Working pressure of furnace by the rules 208 Combustion chamber plates: Material Steel Thickness: Sides 23 3/32" Back 3 1/4" Top 23 3/32" Bottom 7 1/8"
 Pitch of stays to ditto: Sides 10" x 8 1/2" Back 5" x 8" Top 11" x 7 1/2" If stays are fitted with nuts or riveted heads No Working pressure by rules 202 lb
 Material of stays Steel Diameter at smallest part 1 7/8" Area supported by each stay 6 1/4" Working pressure by rules 217 End plates in steam space
 Material Steel Thickness 1 1/2" Pitch of stays 22" x 21 1/4" How are stays secured Double nuts Working pressure by rules 203 lb Material of stays Steel
 Diameter at smallest part 8 4/8" Area supported by each stay 4 67 sq in Working pressure by rules 203 lb Material of Front plates at bottom Steel
 Thickness 15 1/16" Material of Lower back plate Steel Thickness 7 1/8" Greatest pitch of stays 14 1/2" x 8" Working pressure of plate by rules 209 lb
 Diameter of tubes 3" Pitch of tubes 4 1/4" x 4 1/8" Material of tube plates Steel Thickness: Front 15 1/16" Back 13 1/16" Mean pitch of stays 10 1/2"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 211 lb per sq in Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9" x 1 1/4" Length as per rule 32 5/8" Distance apart 7 1/2" Number and pitch of stays in each No, 11"
 Working pressure by rules 228 lb per sq in 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

