

REPORT ON MACHINERY.

No. 6109

Port of Falmouth

Received at London Office

No. in Survey held at FalmouthDate, first Survey 22nd MayLast Survey 14th June 19 22

Reg. Book.

13959 on the SS "Nigaristan" ex "Diyatalawa"

(Number of Visits)

Master

Built at VegesackBy whom built Bremer VulkanTons { Gross 5993Net 3752When built 1912Engines made at VegesackBy whom made Bremer Vulkanwhen made 1912Boilers made at VegesackBy whom made Bremer Vulkanwhen made 1912

Registered Horse Power

Owners Frank. C. Strick and Co LtdPort belonging to LondonNom. Horse Power as per Section 28 521Is Refrigerating Machinery fitted for cargo purposes NoIs Electric Light fitted NoENGINES, &c.—Description of Engines Inverted triple expansion surf. cond No. of Cylinders Three No. of Cranks ThreeDia. of Cylinders 28 $\frac{3}{4}$, 46 $\frac{3}{8}$, 75 $\frac{5}{8}$ Length of Stroke 53 $\frac{1}{16}$ Revs. per minute 65 Dia. of Screw shaft as per rule 16.65 Material of Ingot steelIs the screw shaft fitted with a continuous liner the whole length of the stern tube No liner Is the after end of the liner made water tightin the propeller boss ✓ If the liner is in more than one length are the joints burned ✓ If the liner does not fit tightly at the partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If twoliners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 6'-1 $\frac{1}{2}$ "Dia. of Tunnel shaft as per rule 14.69 Dia. of Crank shaft journals as per rule 15.42 Dia. of Crank pin 15 $\frac{9}{16}$ Size of Crank webs 102 $\frac{1}{2}$ x 6 $\frac{1}{2}$ Dia. of thrust shaft undercollars 15 $\frac{9}{16}$ Dia. of screw 19 $\frac{1}{4}$ Pitch of Screw 19 $\frac{1}{4}$ No. of Blades 4 State whether moveable yes Total surface 104.4 $\frac{1}{2}$ No. of Feed pumps Two Diameter of ditto 3 $\frac{3}{4}$ Stroke 27 $\frac{1}{2}$ Can one be overhauled while the other is at work yesNo. of Bilge pumps Two Diameter of ditto 4 $\frac{1}{2}$ Stroke 27 $\frac{1}{2}$ Can one be overhauled while the other is at work yesNo. of Donkey Engines Four Sizes of Pumps 11 $\frac{1}{8}$ x 8 $\frac{1}{4}$ x 2 $\frac{1}{4}$ No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room Three in E.R. 3 $\frac{1}{2}$ dia. Two in SHS 3 $\frac{1}{2}$ dia. Two in Dry Tank 3 $\frac{1}{2}$ dia. In Holds, &c. Two 3 $\frac{1}{2}$ dia in each holdOne in Tunnel 3 $\frac{1}{2}$ dia. One in Tunnel Well 3 $\frac{1}{2}$ dia.No. of Bilge Injections one sizes 7 $\frac{3}{4}$ Connected to condenser, or to circulating pump but pumps a separate Donkey Suction fitted in Engine room & size 4 $\frac{1}{2}$ diaAre 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 noneAre all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks bothAre 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 bothAre 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 yesWhat pipes are carried through the bunkers forward suction How are they protected carried under timber boardsAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesDates of examination of completion of fitting of Sea Connections 6/6/22 of Stern Tube 7/6/22 Screw shaft and Propeller 7.14/6/22Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from E.R. top platformOILERS, &c.—(Letter for record ✓) Manufacturers of SteelTotal Heating Surface of Boilers 6943 $\frac{1}{2}$ Is Forced Draft fitted yes No. and Description of Boilers Three single endedWorking Pressure 192 lbs per sq in Tested by hydraulic pressure to — Date of test — No. of Certificate —Can each boiler be worked separately yes Area of fire grate in each boiler 49.5 $\frac{1}{2}$ No. and Description of Safety Valves toeach boiler two spring loaded Area of each valve 12.56 Pressure to which they are adjusted 195 lbs per sq in Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 2'-0" Mean dia. of boilers 14'-6" Length 12'-0" Material of shell plates SteelThickness 1.3 Range of tensile strength 27.9-33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams INT. Lap.long. seams ABS. T.R. Diameter of rivet holes in long. seams 1 $\frac{1}{2}$ Pitch of rivets 9.33 Lap of plates on width of butt straps 21 $\frac{1}{4}$ Per centages of strength of longitudinal joint 84 $\frac{1}{2}$ Working pressure of shell by rules 198 lbs Size of manhole in shell 11.81 x 15.74Size of compensating ring 37.79 x 41.73 x 13 No. and Description of Furnaces in each boiler 3. Morrison Material Steel Outside diameter 43.3Length of plain part top Thickness of plates crown Description of longitudinal joint welded No. of strengthening rings —Working pressure of furnace by the rules 198 lbs Combustion chamber plates: Material steel Thickness: Sides .65 Back .67 Top .64 Bottom .91Pitch of stays to ditto: Sides 7.87 x 6.89 Back 8.26 x 7.44 Top 7.87 x 7.46 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 195 lbsMaterial of stays steel Diameter at smallest part 1.46 Area supported by each stay 61.8 Working pressure approved 192 lbs End plates in steam space:Material steel Thickness 1.04 Pitch of stays 14.96 x 13.79 How are stays secured DR. 9.13 lbs Working pressure by rules 193 lbs Material of stays SteelDiameter at smallest part 3.03 Area supported by each stay 206 Working pressure by rules 250 lbs Material of Front plates at bottom SteelThickness 1.06 Material of Lower back plate Steel Thickness .94 Greatest pitch of stays 14 $\frac{3}{8}$ Working pressure of plate approved 192 lbsDiameter of tubes 2.99 Pitch of tubes 4.13 Material of tube plates steel Thickness: Front 1.06 Back .91 Mean pitch of stays 8.26Pitch across wide water spaces 13.98 Working pressures approved 192 lbs Girders to Chamber tops: Material Steel Depth andthickness of girder at centre 10.24 x 1.8 Length as per rule 34.65 Distance apart 7.48 Number and pitch of stays in each Three 7.87Working pressure by rules 209 lbs Superheater or Steam chest; how connected to boiler Schmidt Can the superheater be shut off and the boiler workedparately yes Diameter — Length — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivetholes — Pitch of rivets — Working pressure of shell by rules — Diameter of flue — Material of flue plates — Thickness —stiffened with rings — Distance between rings — Working pressure by rules — End plates: Thickness — How stayed —Working pressure of end plates — Area of safety valves to superheater 4.43 Are they fitted with easing gear yes

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202-0108

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|--------------------------------------|--|--|---------------------------|--|-------------------------------------|--|----------------------------------|--|-----------------------|--|
| No. | Description | | | | | | | | | |
| Made at | By whom made | | When made | | Where fixed | | | | | |
| Working pressure | tested by hydraulic pressure to | | Date of test | | No. of Certificate | | Fire grate area | | Description of Safety | |
| Valves | No. of Safety Valves | | Area of each | | Pressure to which they are adjusted | | Date of adjustment | | | |
| If fitted with easing gear | If steam from main boilers can enter the donkey boiler | | | | Dia. of donkey boiler | | Length | | | |
| Material of shell plates | Thickness | | Range of tensile strength | | Descrip. of riveting long. seams | | | | | |
| Dia. of rivet holes | Whether punched or drilled | | Pitch of rivets | | Lap of plating | | Per centage of strength of joint | | Rivets | |
| | | | | | | | | | Plates | |
| Working pressure of shell by rules | Thickness of shell crown plates | | Radius of do. | | No. of stays to do. | | Dia. of stays | | | |
| Diameter of furnace Top | Bottom | | Length of furnace | | Thickness of furnace plates | | Description of joint | | | |
| Working pressure of furnace by rules | Thickness of furnace crown plates | | Stayed by | | | | | | | |
| Diameter of uptake | Thickness of uptake plates | | Thickness of water tubes | | Dates of survey | | | | | |

S.P.A.R.E GEAR. State the articles supplied:— 2 top end bolts & nuts, with brasses complete, 2 bottom end bolts and nuts with brasses complete, 2 sets of coupling bolts & nuts, 2 main bearing bolts & nuts, a quantity of assorted nuts bolts & iron of various sizes; 1 set gear & bilge pump valves, 1 propeller blade, 1 tail shaft-hut, 1 length of crank shaft, 1 eccentric strap, 1 front & 1 back pump link, 1 air pump valves, 1 air pump rod, 1 air
The foregoing is a correct description,
8 1/2 piston rings, 4 1/2 piston rings, 2 1/2 piston rings, 4 1/2
Manufacturers' stuffing box bolts, 12 cover studs, 10 condenser tubes, and
2 1/2 ferrules, 8 7/8 boiler tubes, 3 3/4 springs, 28 superheater coils.

| | | | |
|-----------------|--------------------------------------|---|--|
| Dates of Survey | During progress of work in shops - - | May 22, 24, 26, 30 June 1, 6, 7, 8, 9, 12, 14, 17 | Is the approved plan of main boiler forwarded herewith |
| while building | During erection on board vessel - - | | |
| | Total No. of visits | 12. | Yes |

" " " donkey " " " No. sent to Glasgow 26/5/22
 Dates of Examination of principal parts—Cylinders 26/5/22 Slides 24/5/22 Covers 26/5/22 Pistons 26/5/22 Rods 26/5/22
 Connecting rods 24/5/22 Crank shaft 24/5/22 Thrust shaft 24/5/22 Tunnel shafts 24/5/22 Screw shaft 7/6/22 Propeller 7/6/22
 Stern tube 7/6/22 Steam pipes tested 9/6/22 Engine and boiler seatings 24/5/22 Engines holding down bolts 24/6/22
 Completion of pumping arrangements 14/6/22 Boilers fixed — Engines tried under steam 17/6/22
 Main boiler safety valves adjusted 17/6/22 Thickness of adjusting washers $PV \frac{1}{2} 5V \frac{1}{2}$ $PV \frac{1}{2} 5V \frac{1}{2}$ $PV \frac{1}{2} 5V \frac{1}{2}$
 Material of Crank shaft Steel Identification Mark on Do. — Material of Thrust shaft Steel Identification Mark on Do. —
 Material of Tunnel shafts Steel Identification Marks on Do. — Material of Screw shafts Steel Identification Marks on Do. —
 Material of Steam Pipes Steel Test pressure Five hundred & seventy five pounds per sq. in.

General Remarks (State quality of workmanship, opinions as to class, &c.) This vessel has been placed in dry dock, the cylinders, pistons, slide valves and their chests, the air, circulating, feed and bilge pumps, condenser (tested) pipe connections; Graft, thrust, intermediate and propeller shafts; propeller; stern bush; sea valves and cocks and their fastenings to the shell plating; steam steering engine; windlass; all engine room auxiliaries; the main boilers, their safety valves and other mountings examined throughout and found or put in good order. Safety valves adjusted under steam as above. Engines tried and found satisfactory (The screw shaft works in a white metal lined bush, with modified Gledhill outside gland and oil lubrication). Wear & tear repairs. Stern bush reinstalled, new spare tail shaft fitted, feed pump ram after bilge pump ram and air pump rod skinned up in lathe and new neck rings and gland bushes fitted. Engine room auxiliaries overhauled and repaired as required. Windlass cable left, shaft renewed and several minor repairs effected. This machinery is now so far as seen in good condition and eligible in my opinion to be classed with record of L.M.C. 6, 22 for a working pressure of 192 lbs per sq. in. and notation

of Tail Shaft No 6, 22. when the Donkey Boiler has been surveyed (E. 12/6/22)

| | | | | | | | | |
|--------------------------------|---|----|---|---|---|---|-------------------|--|
| The amount of Entry Fee.. | £ | 30 | : | 0 | : | 0 | When applied for, | |
| Special | £ | . | : | . | : | . |19. | |
| Donkey Boiler Fee | £ | . | : | . | : | . |19. | |
| Travelling Expenses (if any) £ | . | . | : | . | : | . |19. | |

The vessel has proceeded to Glasgow and the surveyors there have been advised

A. T. Graham.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

FRI. JUL. 7 1922

Emb. 6.22

FD, CL. O.G.

CERTIFICATE

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