

REPORT ON MACHINERY.

No. 32449

Received at London Office

Date of writing Report 19 When handed in at Local Office 14/2/21 Port of Hull TUE FEB 15 1921
No. in Survey held at Hull Date, First Survey 20/8/20 Last Survey 4/2/1921
Reg. Book. on the S.T. RUDYARD KIPLING (Number of Voids 37 Gross 333 Net 140)

Master Built at Hull By whom built Buchanan & Co 686 Tons Gross 333 Net 140
Engines made at Hull By whom made Jas D Holmes & Co Ltd when made 1921
Boilers made at do By whom made do when made 1921
Registered Horse Power Owners Newington S.T. Co Ltd Port belonging to Hull
Nom. Horse Power as per Section 28 94 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 13"-23"-37" Length of Stroke 26 Revs. per minute Dia. of Screw shaft as per rule 7 1/4" Material of screw shaft as fitted 8 1/4" Material of thrust shaft under collars 7 1/2" Dia. of screw 9-9" Pitch of Screw 10-10 1/2" No. of Blades 4 State whether moveable No Total surface 33 1/4"
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 Yes 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 — If two liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 35 1/2"
Dia. of Tunnel shaft as per rule 7 1/4" Dia. of Crank shaft journals as per rule 7 1/2" Dia. of Crank pin 7 1/2" Size of Crank webs 18" x 11" a. of thrust shaft under collars 7 1/2" Dia. of screw 9-9" Pitch of Screw 10-10 1/2" No. of Blades 4 State whether moveable No Total surface 33 1/4"
No. of Feed pumps one Diameter of ditto 2 5/8" Stroke 14 1/2" Can one be overhauled while the other is at work —
No. of Bilge pumps one Diameter of ditto 2 5/8" Stroke 14 1/2" Can one be overhauled while the other is at work —
No. of Donkey Engines one Sizes of Pumps 6" x 4 1/2" x 6" DUPLEX No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Two 2" Dia. In Holds, &c. 2 @ 2" in each compartment

No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 3" separate
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 Yes
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
Are they fired 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 For motion How are they protected They are capped
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 — Is it fitted with a watertight door worked from —

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel J. Spencer & Co.
Total Heating Surface of Boilers 1625 sq ft Is Forced Draft fitted No No. and Description of Boilers one each mouth SE.
Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 14/1/21 No. of Certificate 3472
Can each boiler be worked separately — Area of fire grate in each boiler 48 sq ft No. and Description of Safety Valves to each boiler Two 8" loaded Area of each valve 4-9" Pressure to which they are adjusted 205 lbs Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 168" Length 10-8 Material of shell plates Steel
Thickness 1 1/4" Range of tensile strength 28 to 32 TONS Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.L.
long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/8" Lap of plates or width of butt straps 18 1/8"
Per centages of strength of longitudinal joint rivets 88.04 Working pressure of shell by rules 200 lbs Size of manhole in shell 16" x 12"
Size of compensating ring 7" x 1 1/4" No. and Description of Furnaces in each boiler 3 Plain Material Steel Outside diameter 40"
Length of plain part top 19" Thickness of plates crown 3 1/2" Description of longitudinal joint Welded No. of strengthening rings — bottom 13" Thickness of plates bottom 3 1/2"
Working pressure of furnace by the rules 205 Combustion chamber plates: Material Steel Thickness: Sides 3/4" Back 1/2" Top 2 1/2" Bottom 2 1/2"
Pitch of stays to ditto: Sides 10" x 8 1/2" Back 8 1/2" x 9 1/2" Top 11" x 8 1/2" If stays are fitted with nuts or riveted heads No Working pressure by rules 221 End plates in steam space: Material of stays Steel Area at smallest part 2.07 Area supported by each stay 97 1/2 sq in Working pressure by rules 230 Material of stays Steel
Material Steel Thickness 1 1/2" Pitch of stays 19" x 18 How are stays secured D.N.W. Working pressure by rules 205 Material of Front plates at bottom Steel
Area at smallest part 7.5" Area supported by each stay 342 sq in Working pressure by rules 228 Material of Front plates at bottom Steel
Thickness 1" Material of Lower back plate Steel Thickness 1 1/2" Greatest pitch of stays 16 1/2" x 9 1/2" Working pressure of plate by rules 217
Diameter of tubes 3 1/2" Pitch of tubes 4-8" Material of tube plates Steel Thickness: Front 1" Back 1/2" Mean pitch of stays 11"
Pitch across wide water spaces 13 1/2" Working pressures by rules 203 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10 1/2" x 1 1/2" Length as per rule 35 3/8 Distance apart 10 1/2" Number and pitch of stays in each 3 @ 8 1/2"
Working pressure by rules 206 Steam dome: description of joint to shell — % 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 —
Tested by Hydraulic Pressure to —

SUPERHEATER. Type — Date of Approval of Plan — Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler —
Date of Test — Pressure to which each is adjusted — Is Easing Gear fitted —
Diameter of Safety Valve —

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— two top end, two bottom end, two main beam & one set of coupling bolts & nuts. One set, air, feed & bilge pump valves, one main & one donkey check valve, a quantity of assorted bolts & nuts & iron of various sizes. 1 set check valve, 1 safety valve spring, 10 bilge tubes.

The foregoing is a correct description,

FOR CHARLES D. HOLMES & Co. LTD.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - - 1920: Aug 20. Sep 21-27. Oct 6-11-13-14-19-20-28. Nov 1-2-9-11-18-19-23. During erection on board vessel - - - Dec 2-6-9-10-14-16-24-31. 1921: Jan 3-5-6-10-14-17-20-24-27-28 Feb 1-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31. Total No. of visits 34.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 5/1/21 Slides 10/1/21 Covers 5/1/21 Pistons 5/1/21 Rods 23/1/21 Connecting rods 10/1/21 Crank shaft 23/1/20 Thrust shaft 5/1/21 Tunnel shafts 2/1/20 Screw shaft 2/1/20 Propeller 2/1/20 Stern tube 2/1/20 Steam pipes tested 27/1/21 Engine and boiler seatings 24/1/21 Engines holding down bolts 24/1/21 Completion of pumping arrangements 4/2/21 Boilers fixed 24/1/21 Engines tried under steam 4/2/21 Completion of fitting sea connections 9/1/20 Stern tube 9/1/20 Screw shaft and propeller 9/1/20 Main boiler safety valves adjusted 2/2/21 Thickness of adjusting washers $A\frac{7}{16}$ $F\frac{1}{2}$ Material of Crank shaft Steel Identification Mark on Do. 2522 Material of Thrust shaft Steel Identification Mark on Do. 2523 Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. 2524 Material of Steam Pipes Copper Test pressure 400 lbs 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 Section 49 of the Rules 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 engines & boiler of this vessel have been built under special survey & the materials & workmanship are good.

On completion the machinery was tried under full working conditions while moored to the Quay Wall with satisfactory results.

The machinery of this vessel is now in good & efficient condition & eligible in my opinion to have the second LMC-2-21 marked in Red in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD + LMC 2.21.

The amount of Entry Fee ... £ 2-0-0 When applied for, 14/2/1921 Special ... £ 23-10-0 Donkey Boiler Fee ... £ : : When received, 2-3-1921 Travelling Expenses (if any) £ : :

Committee's Minute

Assigned

TUE FEB 22 1921

+ LMC 2.21

Engineer Surveyor to Lloyd's Register of Shipping



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