

REPORT ON MACHINERY.

No. 28379A

Date of writing Report 22nd Mar. 1915 When handed in at Local Office 22/3/15 Port of Hull Received at London Office THU. APR. - 1. 1915

No. in Survey held at Hull Date, First Survey 9-11-14 Last Survey 15.3.1915

Reg. No. 84 on the Steel S.S. K. "St. Cyr" (Number of Visits 34) Gross 351 Tons Net 165

Master Selby Built at Selby By whom built Bochraue & Co. Ltd. When built 1915

Engines made at Hull By whom made C. H. Holmes & Co. Ltd. when made 1915

Boilers made at Hull By whom made C. H. Holmes & Co. Ltd. when made 1915

Registered Horse Power 84 Owners J. Hauling & Co. Ltd. Port belonging to Hull

Nom. Horse Power as per Section 28 84 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Trip 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 7.88" Material of screw shaft ✓

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 3'-0"

Dia. of Tunnel shaft 7.074" Dia. of Crank shaft journals 7.39" Dia. of Crank pin 7 1/2" Size of Crank webs 14 1/2" x 4 1/8" Dia. of thrust shaft under collars 7 1/2" Dia. of screw 9-7 1/2" Pitch of Screw 11 ft. No. of Blades 4 State whether moveable no Total surface 34 sq ft.

No. of Feed pumps 1 Diameter of ditto 2 7/8" Stroke 16" Can one be overhauled while the other is at work ✓

No. of Bilge pumps 1 Diameter of ditto 2 7/8" Stroke 16" Can one be overhauled while the other is at work ✓

No. of Donkey Engines 1 Sizes of Pumps 6" x 3 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps 2-2" One forward, one aft. In Holds, &c. 4-2" After Slushwell, forward

In Engine Room Slushwell, Forehold. 2 1/2" ejector from all bilges. Is a separate Donkey Suction fitted in Engine room & size 2 1/2" ejector

No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump no 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 no

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 Hold Suctions How are they protected Wood casing

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

Dates of examination of completion of fitting of Sea Connections 3.12.14. of Stern Tube 3.12.14. Screw shaft and Propeller 3.12.14.

Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Messrs. Stewart & Lloyds

Total Heating Surface of Boilers 1350 sq ft. Is Forced Draft fitted no No. and Description of Boilers One single-ended.

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 28.1.15. No. of Certificate 3056

Can each boiler be worked separately ✓ Area of fire grate in each boiler 58 sq ft. No. and Description of Safety Valves to each boiler 2 Spring Area of each valve 4.9 sq in. Pressure to which they are adjusted 202 lbs. Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 6" Int Mean dia. of boilers 13' 9 1/2" Length 10' 9" Material of shell plates S.

Thickness 1 1/4" Range of tensile strength 28 tons Are the shell plates welded or flanged ✓ Descrip. of riveting: cir. seams BR long. seams J.R.O.B. Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 8 7/16" Lap of plates or width of butt straps 17 1/4"

Per centages of strength of longitudinal joint 85% Working pressure of shell by rules 202 Size of manhole in shell 16" x 12"

Size of compensating ring 7" x 1 1/32" No. and Description of Furnaces in each boiler 3 plain Material S. Outside diameter 3'-4"

Length of plain part 6'-5" Thickness of plates 5 1/16" Description of longitudinal joint welded No. of strengthening rings ✓

Working pressure of furnace by the rules 202 Combustion chamber plates: Material S. Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 9 x 8 7/8" Back 8 x 10 5/8" Top 10 5/8 x 8 7/8" stays are fitted with nuts or riveted heads nuts Working pressure by rules 202

Material of stays S. Diameter at smallest part 2.07" Area supported by each stay 87.3 sq in. Working pressure by rules 213 End plates in steam space: Material S. Thickness 1 1/16" Pitch of stays 20 x 20" How are stays secured on riv. Working pressure by rules 204 Material of stays S.

Diameter at smallest part 8 7/16" Area supported by each stay 400 sq in. Working pressure by rules 227 Material of Front plates at bottom S.

Thickness 1 1/16" Material of Lower back plate S. Thickness 29/32" Greatest pitch of stays 14 x 8" Working pressure of plate by rules 218

Diameter of tubes 3 1/2" Pitch of tubes 5 1/8 x 5" Material of tube plates S. Thickness: Front 15/16" Back 7/8" Mean pitch of stays 10 1/4 x 10"

Pitch across wide water spaces 14" Working pressures by rules 200 Girders to Chamber tops: Material S. Depth and thickness of girder at centre 11 1/2" x 1 3/4" Length as per rule 38 7/8" Distance apart 10 1/8" Number and pitch of stays in each 3 at 8 7/8"

Working pressure by rules 207 Superheater or Steam chest: how connected to boiler Can the superheater be shut off and the boiler worked separately

Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivets ✓

holes ✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓

If 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 ✓ Are they fitted with easing gear ✓

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - Two each top & bottom end connecting rod bolts nuts, two main bearing bolts nuts, one set of coupling bolts nuts, one set each feed & bidge pump valves, iron of various sizes, a quantity of assorted bolts nuts

The foregoing is a correct description,

CHARLES D. HOLMES & CO. LTD.
S. Arthur Holmes
DIRECTOR

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1914: Nov 9, 16, 23, 25, 27, 30 Dec 1, 2, 3, 10, 14, 18, 22, 24, 30, 31 1915: Jan 2, 5, 7. During erection on board vessel - 14, 15, 20, 27, 28 Feb 6, 9, 15, 19, 23 Mar 2, 6, 10, 11, 15. Total No. of visits 34. Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts - Cylinders 14.1.15, Slides 14.1.15, Covers 14.1.15, Pistons 27.1.15, Rods 27.1.15, Connecting rods 27.1.15, Crank shaft 30.12.14, Thrust shaft 25.11.14, Tunnel shafts, Screw shaft 2.12.14, Propeller 2.12.14, Stern tube 2.12.14, Steam pipes tested 2.3.15, Engine and boiler seatings 3.12.14, Engines holding down bolts 23.2.15, Completion of pumping arrangements 15.3.15, Boilers fixed 23.2.15, Engines tried under steam 6.2.15, Main boiler safety valves adjusted 6.2.15, Thickness of adjusting washers FV 3/32 AV 1/4, Material of Crank shaft S, Identification Mark on Do. 1416, Material of Thrust shaft S, Identification Mark on Do. 6570 MR, Material of Tunnel shafts, Identification Marks on Do., Material of Screw shafts S, Identification Marks on Do. 1398, Material of Steam Pipes Copper solid drawn, Test pressure 400 lbs, hydraulic press, Is an installation fitted for burning oil fuel, 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 constructed under special survey in accordance with the Rules. The materials & workmanship are sound and good. The Boiler tested by hydraulic pressure and with the engines secured on board and tested under steam they are now in good order and safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of +mc 3.15 in the Register book.

It is submitted that this vessel is eligible for THE RECORD + LMC 3.15.

The amount of Entry Fee £ 1, Special £ 12:12, Donkey Boiler Fee £, Travelling Expenses (if any) £ 8:2. When applied for 31/3/1915, When received 21/3/1915. J. G. Mackillop, Engineer Surveyor to Lloyd's Register of British & Foreign Shipping. Committee's Minute WED. APR. -7.1915. Assigned + LMC 3.15.

