Rpt. 4.

REPORT ON MACHINERY.

No. 27004

Received at London Office FRI. DEC. 12. 1913

Date of writing Report ____ 19 ____ When handed in at Local Office 11-12-1913 Port of Hull.

Date, First Survey Sept. 2nd Last Survey Dec 1st 1913 (Number of Visits 20)

No. in Reg. Book. 33 Iuff Survey held at Hull.

on the Steel S.C.K. "CLOTILDE". Tons Gross 289 Net 114

Master ____ Built at Selby By whom built Cochrane & Sons Ltd. When built 1913.

Engines made at Hull. By whom made ____ when made 1913

Boilers made at Hull. By whom made Thomas Charles & J. Holmes & Co. Ltd. when made 1913.

Registered Horse Power ____ Owners J. Marr & Son Ltd. Port belonging to Fleetwood.

Nom. Horse Power as per Section 28 83. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Triple Expansion. No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 13"-23"-34" Length of Stroke 24" Revs. per minute ____ Dia. of Screw shaft as per rule 7.63" as fitted 7½" Material of screw shaft Iron

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 36"

Dia. of Tunnel shaft as per rule 6.84" as fitted 7½" Dia. of Crank shaft journals as per rule 7.19" as fitted 7½" Dia. of Crank pin 7½" Size of Crank webs 4⅞"×14½" Dia. of thrust shaft under collars 7½" Dia. of screw 9'-3" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable No. Total surface 32 ☐ft

No. of Feed pumps 1 Diameter of ditto 2⅜" Stroke 14½" Can one be overhauled while the other is at work ____

No. of Bilge pumps 1 Diameter of ditto 2⅜" Stroke 14½" Can one be overhauled while the other is at work ____

No. of Donkey Engines 1 Sizes of Pumps 6"×4½"×6 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 2"-one forward & one aft. In Holds, &c. One 2"½ Hushwell, one 2"½ main hold. one 2"½ fore hold. Ejector suctions from all bilges with discharge on deck.

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump pump. Is a separate Donkey Suction fitted in Engine room & size 2½" yes.

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 0

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 3.9.13 of Stern Tube 3.9.13 Screw shaft and Propeller 3.9.13

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

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Thomas. Phoenix Akt. Höder Verein of Höde.

Total Heating Surface of Boilers 1370 ☐ft Is Forced Draft fitted No. No. and Description of Boilers One cyl. multi. tubular.

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 3.11.13 No. of Certificate 2029

Can each boiler be worked separately ____ Area of fire grate in each boiler 45.6 ☐ft No. and Description of Safety Valves to each boiler Two - Spring. Area of each valve 4.90" 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~~ 4" Mean dia. of boilers 13'-6" Length 11'-0" Material of shell plates S.

Thickness 1 3/16" Range of tensile strength 29 tons Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams D.B.S.L. long. seams D.B.S.L. Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 8⅜" ~~Lap of plates or~~ width of butt straps 16 5/8"

Per centages of strength of longitudinal joint rivets 84.2 plate 85.4 Working pressure of shell by rules 204 lbs. Size of manhole in shell 16"×12"

Size of compensating ring 7"×1 3/16" No. and Description of Furnaces in each boiler 3 plain Material S. Outside diameter 3'-4"

Length of plain part top 6'-7½" bottom ____ Thickness of plates crown 13/16" bottom 5/8" Description of longitudinal joint Welded No. of strengthening rings 0.

Working pressure of furnace by the rules 205 lbs. Combustion chamber plates: Material S. Thickness: Sides 23/32" Back 23/32" Top ¾" Bottom 23/32"

Pitch of stays to ditto: Sides 10"×8½" Back 8"×10½" Top 11"×8½" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 205 lbs.

Material of stays S. Diameter at smallest part 2.40" Area supported by each stay 100 ☐" Working pressure by rules 215 lbs. End plates in steam space:

Material S. Thickness 1 3/16" Pitch of stays 8"×8½" How are stays secured D.B.S.L. Working pressure by rules 201 lbs. Material of stays S.

Diameter at smallest part 7.50" Area supported by each stay 333 ☐" Working pressure by rules 234 lbs. Material of Front plates at bottom S.

Thickness 15/16" Material of Lower back plate S. Thickness 29/32" Greatest pitch of stays 14½"×8" Working pressure of plate by rules 207 lbs.

Diameter of tubes 3½" Pitch of tubes 5"×5½" Material of tube plates S. Thickness: Front 15/16" Back ⅞" Mean pitch of stays 10½"

Pitch across wide water spaces 14" adj. Working pressures by rules 215 lbs. Girders to Chamber tops: Material S. Depth and thickness of girder at centre 12"-13/4" Length as per rule 3'-2 5/8" Distance apart 11" Number and pitch of stays in each 3-8½"

Working pressure by rules 206 lbs. 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 rivet holes ____ Pitch of rivets ____ Working pressure of shell by rules ____ Diameter of flue ____ Material of flue plates ____ Thickness ____ How stayed ____ If stiffened with rings ____ Distance between rings ____ Working pressure by rules ____ End plates: Thickness ____ Are they fitted with easing gear ____ Working pressure of end plates ____ Area of safety valves to superheater ____

1m,9,13. T.

IS A DONKEY BOILER FITTED? No. 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 fwd & bilge pump valves, assy of various sizes, a quantity of assorted bolts, nuts &c.

The foregoing is a correct description,

p. pro CHARLES D. HOLMES & CO LTD

Arthur Holmes DIRECTOR

Manufacturer.

Dates of Survey while building — During progress of work in shops: 1913:- Sep 2. 3. 23. 30 Oct 2, 8. 13. 18. 22, 24. 28. 31. Nov 3. 6. 11. 12. 25. 26. 27.

During erection on board vessel: Dec 1

Total No. of visits 20

Is the approved plan of main boiler forwarded herewith Yes ✓

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 28.10.13 Slides 11.11.13 Covers 11.11.13 Pistons 6.11.13 Rods 11.11.13

Connecting rods 11.11.13 Crank shaft 6.11.13 Thrust shaft 6.11.13 Tunnel shafts ✓ Screw shaft 29.13 Propeller 2.9.13

Stern tube 2.9.13 Steam pipes tested 26.11.13 Engine and boiler seatings 3.9.13 Engines holding down bolts 26.11.13

Completion of pumping arrangements 1.12.13 Boilers fixed 27.11.13 Engines tried under steam 27.11.13

Main boiler safety valves adjusted 27.11.13 Thickness of adjusting washers Forward $\frac{5}{16}$" Aft $\frac{1}{2}$"

Material of Crank shaft S. Identification Mark on Do. 1181 T.G.D. Material of Thrust shaft S. Identification Mark on Do. 1181 T.G.D.

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 1181 J.G.H.

Material of Steam Pipes Solid drawn Copper ✓ Test pressure 400 lbs per sq in. hydraulic ✓

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 & boilers of this vessel have been constructed under special survey in accordance with the Rules. The materials & workmanship are sound & good. The boilers tested by hydraulic pressure, & with the engines aboard & tested under steam they are now in good order & safe working condition & respectfully submitted as being eligible in my opinion to be classed with the notation of +L.M.C. 12.13 in the Register Book.

Certificate (if required) to be sent to Hull

The Surveyor are requested not to write on or below the space for Committee's Minute.)

It is submitted that this vessel is eligible for THE RECORD. +LMC 12.13.

JWD 17/12/13

A.R.H.

The amount of Entry Fee ... £ 1 : 0 : When applied for, 11.12.13

Special ... ... £ 12 : 9 :

Donkey Boiler Fee ... £ ✓ : ✓ : When received. 31/12/13

Travelling Expenses (if any) £ : 2/8 :

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUE. DEC. 16. 1913

Assigned +LMC 12.13

ARRANGEMENT CERTIFICATE WRITTEN.