Rpt. 4.

REPORT ON MACHINERY.

No. 18539

Port of Hull

Received at London Office WED NOV 28 1906

No. in Reg. Book. 58 Tuff on the Steel Sc. K. Myton

Survey held at Hull — Date, first Survey June 22nd — Last Survey 21st Nov 1906 (Number of Visits 27)

Master — Built at Hull — By whom built Messrs Earles & Ld — When built 1906

Tons: Gross 286, Net 113

Engines made at Hull — By whom made Messrs Earles & Ld — when made 1906

Boilers made at Hull — By whom made Messrs Earles & Ld — when made 1906

Registered Horse Power / — Owners City Steam Fishing Co. Ltd. — Port belonging to Hull

Nom. Horse Power as per Section 28 77.33 — 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 12¾" ~ 22" ~ 36" — Length of Stroke 24" — Revs. per minute 110 — Dia. of Screw shaft as per rule 7.34" / as fitted 8" — 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 one length — 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 2'~10½"

Dia. of ~~Tunnel~~ plain part shaft as per rule 6.35" / as fitted 7½" — Dia. of Crank shaft journals as per rule 6.8 / as fitted 7½" — Dia. of Crank pin 7½" — Size of Crank webs 14" × 4⅞" — Dia. of thrust shaft under collars 7½" — Dia. of screw 9'~0" — Pitch of Screw 11'~0" to 12'~0" — No. of Blades 4 — State whether moveable No — Total surface 27 □

No. of Feed pumps 1 — Diameter of ditto 3" — Stroke 12" — ~~Can one be overhauled while the other is at work~~

No. of Bilge pumps 1 — Diameter of ditto 3 — Stroke 12" — ~~Can one be overhauled while the other is at work~~

Approved for duplicate engines

No. of Donkey Engines Two — Sizes of Pumps 6"×3½"×6", 6"×3"×6" — No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room (3) one 2", one 3", one 3½" — In Holds, &c. Three 2", one to each slush well, & one to fore compartment, & Ejector suction from Eng. Room bilge holds, & discharge to deck

No. of Bilge Injections 1 sizes 3½" — Connected to condenser, or to circulating pump pump — Is a separate Donkey Suction fitted in Engine room & size Yes 3"

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 O

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 suction — 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 25·10·06 — of Stern Tube 25·10·06 — Screw shaft and Propeller 25·10·06

Is the Screw Shaft Tunnel watertight None — Is it fitted with a watertight door — worked from —

BOILERS, &c.—(Letter for record C) — Manufacturers of Steel Hoerder Bergwerks Hutten. Vereins, Hoerder

Total Heating Surface of Boilers 1250 □ — Is Forced Draft fitted No — No. and Description of Boilers One Cyl. Multi

Working Pressure 200 lbs — Tested by hydraulic pressure to 400 lbs — Date of test 2·11·06 — No. of Certificate 1523

~~Can each boiler be worked separately~~ — Area of fire grate in ~~each~~ boiler 43 □ — No. and Description of Safety Valves to each boiler Two Spring — Area of each valve 4·9 □" — Pressure to which they are adjusted 204 lbs — Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 6" — ~~Mean~~ Ex dia. of boilers 12'~9" — Length 10'~3½" — Material of shell plates Steel

Thickness 15/32" — Range of tensile strength tons 28 ~ 32 — Are the shell plates welded or flanged No — Descrip. of riveting: cir. seams L. D. long. seams D.B.S.J.R — Diameter of rivet holes in long. seams 1 3/16" — Pitch of rivets 8 1/16" — ~~Lap of plates or~~ width of butt straps 17½"

Per centages of strength of longitudinal joint rivets 88·5 / plate 85·2 — Working pressure of shell by rules 200 lbs — Size of manhole in shell 16" × 12"

Size of compensating ring 40" × 30" × 15/32" — No. and Description of Furnaces in ~~each~~ boiler 3 plain — Material Steel — Outside diameter 36"

Length of plain part top 5'~10" / bottom — Thickness of plates crown ¾" / bottom — Description of longitudinal joint Welded — No. of strengthening rings O

Working pressure of furnace by the rules 216 lbs — Combustion chamber plates: Material Steel — Thickness: Sides 11/16" — Back 11/16" — Top 11/16" — Bottom 11/16"

Pitch of stays to ditto: Sides 8" × 8" — Back 9⅝" × 7⅝" — Top 8" × 7¼" — If stays are fitted with nuts or riveted heads Nuts — Working pressure by rules 216 lbs

Material of stays Steel — Diameter at smallest part (Mean) 15/16 — Area supported by each stay 90 □" — Working pressure by rules 207 lbs — End plates in steam space:

Material Steel — Thickness 1 3/32" — Pitch of stays 15" × 17" — How are stays secured D. Nuts — Working pressure by rules 208 lbs — Material of stays Steel

Diameter at smallest part 2 9/16" — Area supported by each stay 255 □" — Working pressure by rules 202 lbs — Material of Front plates at bottom S

Thickness 15/16" — Material of Lower back plate S — Thickness ⅞" × ¾" dbly — Greatest pitch of stays 14" × 7 5/8" — Working pressure of plate by rules 208 lbs

Diameter of tubes 3¼" — Pitch of tubes 4¾" × 4⅞" — Material of tube plates Steel — Thickness: Front 15/16" — Back 13/16" — Mean pitch of stays 9 5/8"

Pitch across wide water spaces 13¾" — Working pressures by rules 202 lbs — Girders to Chamber tops: Material Steel — Depth and thickness of girder at centre 9½" × 1¾" — Length as per rule 2'~9 15/16" — Distance apart 8½~7¼" — Number and pitch of stays in each 3 ~ 8"

Working pressure by rules 208 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 —— 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 ——

VERTICAL DONKEY BOILER—

Manufacturers of Steel

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

SPARE GEAR. State the articles supplied :— Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set feed and bilge pump valves and a quantity of assorted bolts + nuts etc.

The foregoing is a correct description,

FOR EARLE'S SHIPBUILDING & ENGINEERING CO. LIMITED SECRETARY

F. Salthouse

Manufacturer.

Dates of Survey while building — During progress of work in shops— 1906:- June 22.27. Aug. 13.23. Sep 10.19.20.27 Oct 3.5.11.22.25.29.31

During erection on board vessel — Nov 2.3.5.6.7.8.10.12.13.15.20.21.

Total No. of visits 27

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 23-8-06 Slides 31-10-06 Covers 31-10-06 Pistons 10.9.06 Rods 19.9.06

Connecting rods 19.9.06 Crank shaft 3.10.06 Thrust shaft 3-10-06 ~~Tunnel shafts~~ Screw shaft 11.10.06 Propeller 11-10-06

Stern tube 11-10-06 Steam pipes tested 7.11.06 Engine and boiler seatings 3.11.06 Engines holding down bolts 12.11.06

Completion of pumping arrangements 20.11.06 Boilers fixed 12-11-06 Engines tried under steam 20-11-06

Main boiler safety valves adjusted 12-11-06 Thickness of adjusting washers 3/8" 3/8"

Material of Crank shaft Steel Identification Mark on Do. 1737 ATG Material of Thrust shaft Steel Identification Mark on Do. 64 G.A.H

~~Material of Tunnel shafts~~ ~~Identification Marks on Do.~~ Material of Screw shafts Iron Identification Marks on Do. 64 G.A.H

Material of Steam Pipes Solid drawn Copper Test pressure 400 lbs per sq inch.

General Remarks (State quality of workmanship, opinions as to class, &c. The engines and boiler of this ~~vessel~~ have been constructed under special survey in accordance with the Rules. The material + workmanship are good. The boiler tested by hydraulic pressure and with the engines placed 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 ✠ L.M.C. 11.06 in the Register Book.
These Engines Boilers, are very similar to those fitted on the "Lord Curzon" ♀ 654 in the Reg. Book.

Attached are plan of boiler, forging reports for shafts and steel advice notes for plates furnaces

Certificate (if required) to be sent to Hull

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

The amount of Entry Fee.. £ 1 : . : .
Special .. .. .. £ 11 : 11 : .
Donkey Boiler Fee .. .. £ - : - : .
Travelling Expenses (if any) £ - : - : .

When applied for, 26/11/1906
When received, 30/11/07 31.1.07

FRI. NOV 30 1906

Committee's Minute

Assigned ✠ L.M.C. 11.06

It is submitted that this vessel is eligible for THE RECORD ✠ L.M.C. 11.06.

James Barclay.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
28.11.06.

28.11.06

MACHINERY CERTIFICATE WRITTEN.