Rpt. 4.

REPORT ON MACHINERY.

No. 20844

THUR. 21 JAN 1909

Port of Hull. Received at London Office 19

No. in Reg. Book. 1 Supp. Survey held at Hull. Date, first Survey Oct 5/08 Last Survey Jan 12th 1909

(Number of Visits 32)

on the S/Trawler ROSE OF ENGLAND Tons Gross 223 Net 86

Master Built at Selby. By whom built Cochrane & Sons When built 1909.

Engines made at Hull. By whom made C. D. Holmes & Co. when made —

Boilers made at — By whom made — when made —

Registered Horse Power — Owners J. Duncan Sons & Co Port belonging to Liverpool

Nom. Horse Power as per Section 28 67. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No.

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

Dia. of Cylinders 12½ - 21½ - 35 Length of Stroke 24" Revs. per minute 110 Dia. of Screw shaft as per rule 7.13 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 3'-0"

Dia. of Tunnel shaft as per rule 6.44 as fitted 6½ Dia. of Crank shaft journals as per rule 6.72 as fitted 7 Dia. of Crank pin 6½" Size of Crank webs 3½ x 7" Dia. of thrust shaft under collars 6⅞" Dia. of screw 8'-7½" Pitch of Screw 10'-10" No. of Blades 4. State whether moveable No. Total surface 30 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 2¾" x 8" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 2-2" (Fore & Aft). In Holds, &c. 3-2" (Fore hold, main hold + Shaft well). 2" Ejector Suction to 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" Ejector.

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 None.

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 7.11.08 of Stern Tube 7.11.08 Screw shaft and Propeller 7.11.08.

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

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Steel & Co Scotland.

Total Heating Surface of Boilers 1070 ft. Is Forced Draft fitted No. No. and Description of Boilers 1 S.E. Multitubular

Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 18.12.08. No. of Certificate 1684.

Can each boiler be worked separately Y Area of fire grate in each boiler 33.2 ft. No. and Description of Safety Valves to each boiler 2 Spring Loaded. Area of each valve 3.97. Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork 5" Mean dia. of boilers 12'-6" Length 10'-0" Material of shell plates Steel

Thickness 1/32" Range of tensile strength 28-32 Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams D.R. Lap. long. seams D/B Strs Welt Diameter of rivet holes in long. seams 1/32 Pitch of rivets 7" ~~Lap of plates or~~ width of butt straps 15"

Per centages of strength of longitudinal joint rivets 88.69. plate 88.26. Working pressure of shell by rules 180. 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 2 plain Material Steel Outside diameter 3'-7"

Length of plain part top 5'-9" bottom 5'-2½" Thickness of plates crown 49/32" bottom 1" Description of longitudinal joint welded. No. of strengthening rings —

Working pressure of furnace by the rules 187 Combustion chamber plates: Material Steel. Thickness: Sides 23/32" Back 1" Top 22/32" Bottom 23/32"

Pitch of stays to ditto: Sides 8½" x 10" Back 8½" x 9½" Top 10" x 8½" If stays are fitted with nuts or riveted heads Nuts. Working pressure by rules 190.

Material of stays Steel. Diameter at smallest part 2.4. Area supported by each stay 100 (96) sq in. Working pressure by rules 198. End plates in steam space:

Material Steel. Thickness 1/16" Pitch of stays 17" x 17" How are stays secured Sherardized. Working pressure by rules 185. Material of stays Steel.

Diameter at smallest part 5.79" Area supported by each stay 289 sq in. Working pressure by rules 208. Material of Front plates at bottom Steel

Thickness 7/8" Material of Lower back plate Steel. Thickness 29/32 Greatest pitch of stays 14½" x 9½" Working pressure of plate by rules 189.

Diameter of tubes 2½" Pitch of tubes 5" x 5" Material of tube plates Steel. Thickness: Front 7/8" Back 7/8" Mean pitch of stays 10"

Pitch across wide water spaces 15" Working pressures by rules 274. Girders to Chamber tops: Material Steel. Depth and thickness of girder at centre 9" x 1 3/32" Length as per rule 2'-8 3/32" Distance apart 8½" Number and pitch of stays in each 2 @ 10"

Working pressure by rules 245. Superheater or Steam chest; how connected to boiler None 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 —

W1294-0006

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 top, two bottom end connecting rod bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed & bilge pump valves, one set of air & circulating pump valves, one main & one donkey feed check valve, assorted bolts & nuts etc.

The foregoing is a correct description,

p. pro CHARLES D. HOLMES & CO. LTD.
SECRETARY

Manufacturer. Harold F. Shardlow

Dates of Survey while building — During progress of work in shops— 1908:- Oct 6. 10. 15 17. 20. 23. 26. 29 Nov 2. 4. 5. 7. 16 18. 20. 21. 25. 27. 28. 30. Dec 2. 4. 9. 11. 16. 18.

During erection on board vessel — Dec 24. 29. 1909: Jan 2. 8. 9. 12.

Total No. of visits 32

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 20.11.08 Slides 9.12.08 Covers 20.11.08 Pistons 30.11.08 Rods 21.11.08

Connecting rods 16.11.08 Crank shaft 21.11.08. Thrust shaft 21.11.08 Tunnel shafts - Screw shaft 5.11.08. Propeller 5.11.08

Stern tube 5.11.08. Steam pipes tested 24.12.08 Engine and boiler seatings 7.11.08. Engines holding down bolts 29.12.08

Completion of pumping arrangements 12.1.09. Boilers fixed 29.12.08. Engines tried under steam 2.1.09.

Main boiler safety valves adjusted 2.1.09 Thickness of adjusting washers A 3/8 F 5/16

Material of Crank shaft Iron Identification Mark on Do. 465 21.11.08 S.W.G Material of Thrust shaft Iron Identification Mark on Do. 465 21.11.08 S.W.G

Material of Tunnel shafts - Identification Marks on Do. - Material of Screw shafts Iron Identification Marks on Do. 465 5.11.08 S.W.G

Material of Steam Pipes Solid drawn Copper Test pressure 360 lbs

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery & boilers of this vessel have been constructed under Special Survey, are of good material & workmanship, have been tested & secured as found in accordance with the Rules. They are now in good working condition & eligible in my opinion to have record of ✠ L.M.C 1-09 in the Register Book.

Certificate (if required) to be sent to Hull

(The Surveyors 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 ✠ L.M.C. 1.09. Elec. light.

JWR. 21/1/09.

ARR 21.1.09

The amount of Entry Fee.	£ 1 : 0 0	When applied for. 20/11/1908
Special	£ 10 : 1 0	
Donkey Boiler Fee	£ - : - : -	When received. 30/1/1909
Travelling Expenses (if any)	£ - : 8 : 2	
	£ 11-9-2	

JB. 1.2.09

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

Committee's Minute FRI. 22 JAN 1909

Assigned ✠ L.M.C. 1.09. Elec. light.

MACHINERY CERTIFICATE WRITTEN.