

REPORT ON MACHINERY.

Port of *Primsby*
 No. in Survey held at *Primsby* Date, first Survey *April 8th* Last Survey *Aug 3rd* 1905
 Reg. Book. *Steel & Ketch* (Number of Visits *20*) Gross Tons *240*
 on the *Steel & Ketch* *JANUS* Net Tons *98*
 Master *W. Smith* Built at *Selby* By whom built *Cochrane & Sons* When built *1905*
 Engines made at *Primsby* By whom made *R. Cooper & Co. Ex. & Ship Reps* when made *1905*
 Boilers made at *W. H. Hatfield* By whom made *Central Marine Eng. Co. Ltd.* when made *1905*
 Registered Horse Power *77* Owners *Orients. S. S. Co. Ltd.* Port belonging to *Primsby*
 Nom. Horse Power as per Section 28 *77* Is Refrigerating Machinery fitted *no* Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines *See exp. trip exp. exp. Cond.* No. of Cylinders *3* No. of Cranks *3*
 Dia. of Cylinders *12 1/4, 22 3/8* Length of Stroke *24* Revs. per minute *110* Dia. of screw shaft *7 1/4* Lgth. of stern bush *2-8*
 Dia. of Tunnel shaft *as per rule 6.44* Dia. of Crank shaft journals *as per rule 6.8* Dia. of Crank pin *7* Size of Crank webs *13x4 1/2* Dia. of thrust shaft under collars *7 1/2* Dia. of screw *8-6* Pitch of screw *10-6* No. of blades *4* State whether moveable *no* Total surface *25 1/2*
 No. of Feed pumps *1* Diameter of ditto *2 1/2* 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 *✓*
 No. of Donkey Engines *1* Sizes of Pumps *3 1/2 x 6 inch* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *See bilge & Hotwell 2 bore* In Holds, &c. *See hold + fore peak 2 bore*
 No. of bilge injections *1* sizes *2 3/4* Connected to condenser, or to circulating pump *pump* Is a separate donkey suction fitted in Engine room & size *Ejector 2 1/2*
 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 *Cocks*
 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 *See hold + fore peak* How are they protected *Strong 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*
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock *yes* Is the screw shaft tunnel watertight *no*
 Is it fitted with a watertight door *✓* worked from *no*

BOILERS, &c.— (Letter for record *Boiler Report here with*) Total Heating Surface of Boilers *1262* Is forced draft fitted
 No. and Description of Boilers *1* Working Pressure *150* Tested by hydraulic pressure to
 Date of test *Can each boiler be worked separately* Area of fire grate in each boiler *1262* No. and Description of safety valves to
 each boiler *Area of each valve* Pressure to which they are adjusted *Are they fitted with easing gear*
 Smallest distance between boilers or uptakes and bunkers or woodwork *Mean dia. of boilers* Length *Material of shell plates*
 Thickness *Range of tensile strength* Are they welded or flanged *Descrip. Riveting: cir. seams* long. seams
 Diameter of rivet holes in long. seams *Pitch of rivets* of plates or width of butt straps
 Per centages of strength of longitudinal joint *rivets* Working pressure of shell by rules *Size of manhole in shell*
 Size of compensating ring *No. and Description of Furnaces in each boiler* Material *Outside diameter*
 Length of plain part *top* Thickness of plates *bottom* Description of longitudinal joint *No. of strengthening rings*
 Working pressure of furnace by the rules *Combustion chamber plates: Material* Thickness: Sides *Back* Top *Bottom*
 Pitch of stays to ditto: Sides *Top* If stays are fitted with nuts or riveted heads *Working pressure by rules*
 Material of stays *Diameter at smallest part* Area supported by each stay *Working pressure by rules* End plates in steam space:
 Material *Thickness* Pitch of stays *How are stays secured* Working pressure by rules *Material of stays*
 Diameter at smallest part *Area supported by each stay* Working pressure by rules *Material of Front plates at bottom*
 Thickness *Material of Lower back plate* Thickness *Greatest pitch of stays* Working pressure of plate by rules
 Diameter of tubes *Pitch of tubes* Material of tube plates *Thickness: Front* Back *Mean pitch of stays*
 Pitch across wide water spaces *Working pressures by rules* Girders to Chamber tops: Material *Depth and*
 thickness of girder at centre *Length as per rule* Distance apart *Number and pitch of Stays in each*
 Working pressure by rules *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

DONKEY BOILER— No. Description

Made at By whom made When made Where fixed

Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves

No. of safety valves Area of each Pressure to which they are adjusted 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 Rivets Thickness of shell crown plates Radius of do. No. of Stays to do.

Lap of plating Per centage of strength of joint Plates Thickness of furnace plates Description of joint

Dia. of stays Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Working pressure of shell by rules

Thickness of furnace crown plates Stayed by Thickness of water tubes

Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates

SPARE GEAR. State the articles supplied: 2 each of top & bottom end & main bearing bolts, one set coupling bolts, one set each of air circulating feed & bilge valves, main & auxiliary check valves, stop & return bottom valves, condenser & trial tubes

For the GREAT CENTRAL CO-OPERATIVE ENGINEERING & SHIP REPAIRING COMPANY, LTD.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building During progress of work in shops - 1905. April 8. 11. 18. 25. May 2. 4. 12. 23. 29. June 7. 15. 20. July 3. 13. 20. July 28. Aug 13.

During erection on board vessel -

Total No. of visits

Is the approved plan of main boiler forwarded herewith See below

General Remarks (State quality of workmanship, opinions as to class, &c) Materials & workmanship for these engines have been built under special survey, have been securely fastened on board and tried under steam and in my opinion are eligible for record of + L.M.C. 8.05 in red.

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

The approved plan of the boiler was forwarded with Grimby Report No. 3690.

This case is similar to the St. Clitus. Machinery Reports Nos. 3690 & 4141 & 4262.

It is submitted that this vessel is eligible for THE RECORD L.M.C. 8.05.

12.8.05

B. Ritchie

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

The amount of Entry Fee. £ 1 : 00

Special £ 10 : 13 : 0

Donkey Boiler Fee £ 11 : 13 : 0

Charged as per for boiler £ 3 : 11 : 0

Travelling Expenses (if any) £ 7 : 8 : 2 : 0

Committee's Minute

Assigned

TUES. 15 AUG 1905

+ L.M.C. 8.05

MACHINERY CERTIFICATE WRITTEN.

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