

REPORT ON MACHINERY.

Port of *Grimby* Received at London Office **THUR. 27 OCT 1904**
 Date, first Survey *July 6th* Last Survey *October 7 1904*
 (Number of Visits *16*)
 Survey held at *Grimby* on the *Steel Steamer INCOMAR*
 - *Chaterfield* Built at *Selly* By whom built *Bochmann & Sons* When built *1904*
 Engines made at *Grimby* By whom made *St. Central Co. of Eng & R.L.* when made *1904*
 Repairs made at *West Hartlepool* By whom made *The Central Marine Engineers* when made *1904*
 Registered Horse Power *66.5* Owners *E. Bacon J.* Port belonging to *Grimby*
 Horse Power as per Section 28 *66.5* Is Refrigerating Machinery fitted *no* Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines *3* No. of Cylinders *3* No. of Cranks *3*
 of Cylinders *1 1/2* Length of Stroke *24* Revs. per minute *115* Dia. of Screw shaft *6 3/4* Lgth. of stern bush *2-6*
 of Tunnel shaft *6 7/8* Dia. of Crank shaft journals *6 3/4* Dia. of Crank pin *6 3/4* Size of Crank webs *12x4* Dia. of thrust shaft under
 Dia. of screw *8-6* Pitch of screw *10-3* No. of blades *4* State whether moveable *no* Total surface *27 1/2*
 of Feed pumps *1* Diameter of ditto *2 1/2* Stroke *12* Can one be overhauled while the other is at work *✓*
 of Bilge pumps *1* Diameter of ditto *3* Stroke *12* Can one be overhauled while the other is at work *✓*
 of Donkey Engines *1* Sizes of Pumps *3 1/2* 6 Stroke. No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room *Sea Bilge & Stowell 2 bore. In Holds, &c. Fish hold. Res. Bunkers & Deck*
 bilge injections *1* sizes *2 1/2* Connected to condenser, or to circulating pump *no* Is a separate donkey suction fitted in Engine room & size *2 1/2*
 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*
 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 *At deep water line*
 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*
 Are the pipes carried through the bunkers *Fish hold, Res. Bunkers & Stowell* 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*
 Were stern tube, propeller, screw shaft, and all connections examined in dry dock *not stated* Is the screw shaft tunnel watertight *no*
 Fitted with a watertight door *no* worked from *See memo letter dated 28/10/04*

BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers Is forced draft fitted
 and Description of Boilers Working Pressure Tested by hydraulic pressure to
 of test Can each boiler be worked separately Area of fire grate in each boiler No. and Description of safety valves to
 boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
 st distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates
 ess Range of tensile strength Are they riveted or flanged Descrip. of riveting: cir. seams long. seams
 er of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 itages of strength of longitudinal joint plates Working pressure of shell by rules Size of manhole in shell
 compensating ring Description of Furnaces in each boiler Material Outside diameter
 of plain part top Thickness of plates bottom Description of longitudinal joint No. of strengthening rings
 ug pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
 f stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
 al of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
 al Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
 er at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
 ss Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
 er of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
 across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
 ss of girder at centre Length as per rule Distance apart Number and pitch of Stays in each
 ng pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
 uely Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
 Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 fened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
 ng 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 Dia. of rivet holes Whether punched or drilled Pitch of rivets

Lap of plating Per centage of strength of joint Rivets 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

Thickness of furnace crown plates Stayed by Working pressure of shell by rules

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

SPARE GEAR. State the articles supplied:— Two big, two bottom end Bolts, 2 main bearing bolts, one set Coupling bolts, one set each of air, feed & bilge pump valves, Check valves, boiler tubes, boiler nuts, Studion etc.

The foregoing is a correct description,

Manufacturer.

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

Fred Lister

Dates of Survey { During progress of work in shops - - - 1904. July 6, 9, 18, 29. Aug. 9, 10, 12, 15. Sep. 8, 14, 19, 21. while building { During erection on board vessel - - - October 1, 4, 7, 16. Total No. of visits

Is the approved plan of main boiler forwarded herewith *Yes.*
" " " donkey " " " *None.*

General Remarks (State quality of workmanship, opinions as to class, &c.)

Material of screw shaft *Seapiron* 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 *✓*

This machinery has been constructed and Special Survey. The material & workmanship good. The engine have been securely fastened on board and tried under steam, and in my opinion the case is eligible for record of + L.M.C. 10.04 (in red).

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 10.04

Sal.
31. 10. 04
1. 11. 04

This office. Fred.

Certificate (if required) to be sent to

The amount of Entry Fee.. £ 1 : 00 : 00 When applied for, 26. 10. 04
Special .. £ 10 : 00 : 00
Donkey Boiler Fee .. £ 11 : 00 : 00 When received, 15. 11. 04
Travelling Expenses (if any) .. £ 3 : 6 : 0
Committee's Minute £ 7 : 14 : 0

Assigned

TUES. 1 NOV 1904

+ L.M.C. 10.04.

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



Lloyd's Register Foundation