

## REPORT ON MACHINERY.

No. 14896.

Received at London Office

Date of writing Report 6.1.1916. When handed in at Local Office 10.1.1916. Port of *Lith* THU. 13 JAN. 1916No. in Survey held at *Alma* Date, First Survey *54th March, 1915* Last Survey *3rd January, 1916*  
Reg. Book. on the *45 "Colin"* (Number of Visits *16*)Master *R. Aiken* Built at *Alma* By whom built *A Jiffy 185* Tons { Gross *283.80*  
Net *99.69*  
When built *1915*Engines made at *Alma* By whom made *A Jiffy 185* when made *1916*Boilers made at *Glasgow* By whom made *A. L. Snyders* when made *1915*Registered Horse Power Owners *Messrs. Howden Bros., Larne* Port belonging to *Belfast*Nom. Horse Power as per Section 28 *53* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines *Compound* No. of Cylinders *2* No. of Cranks *2*  
 Dia. of Cylinders *14" 30"* Length of Stroke *22"* Revs. per minute *110* Dia. of Screw shaft *6.66* as per rule *4.48* as fitted *6.2* Material of screw shaft *Iron*  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube *no* Is the after end of the liner made water tight in the propeller boss *no* If the liner is in more than one length are the joints burned *—* 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 *28"*  
 Dia. of Tunnel shaft *6.17* as per rule *6.48* as fitted *nom.* Dia. of Crank shaft journals *6.48* as per rule *6.2* as fitted *6.2* Dia. of Crank pin *6.2* Size of Crank webs *4 1/2 x 12* Dia. of thrust shaft under collars *6 1/2* Dia. of screw *7-9* Pitch of Screw *9-3* No. of Blades *4* State whether moveable *no* Total surface *278*  
 No. of Feed pumps *1* Diameter of ditto *2 1/4* Stroke *11"* Can one be overhauled while the other is at work *—*  
 No. of Bilge pumps *1* Diameter of ditto *2 1/4* Stroke *11"* Can one be overhauled while the other is at work *—*  
 No. of Donkey Engines *1* Sizes of Pumps *5 x 3 1/2 x 6* No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room *Two 2 1/2* In Holds, &c. *Two in main hold 2 1/2*

No. of Bilge Injections *1* sizes *3"* Connected to condenser or to circulating pump *no* Is a separate Donkey Suction fitted in Engine room & size *4 1/2 2 1/2*  
 Are all the bilge suction pipes fitted with roses *no* Are the roses in Engine room always accessible *no* Are the sluices on Engine room bulkheads always accessible *nom*  
 Are all connections with the sea direct on the skin of the ship *no* Are they Valves or Cocks *nom*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *no* Are the Discharge Pipes above or below the deep water line *nom*  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel *no* Are the Blow Off Cocks fitted with a spigot and brass covering plate *no*  
 What pipes are carried through the bunkers *nom* How are they protected *—*

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *no*Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges *no*Dates of examination of completion of fitting of Sea Connections *8/11/15* of Stern Tube *8/11/15* Screw shaft and Propeller *8/11/15*Is the Screw Shaft Tunnel watertight *nom* Is it fitted with a watertight door *—* worked from *Engines aft*BOILERS, &c.—(Letter for record *Manufacturers of Steel* in *Glasgow Report attached*)

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers  
 Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate  
 Can each boiler be worked separately Area of fire grate in each boiler *35.5 sq ft* No. and Description of Safety Valves to each boiler *Two Spring Valves* Area of each valve *5.94* Pressure to which they are adjusted *138 lbs* Are they fitted with easing gear *no*  
 Smallest distance between boilers or uptakes and bunkers or woodwork *11"* Mean dia. of boilers Length Material of shell plates  
 Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams  
 long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap 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 crown..... Description of longitudinal joint No. of strengthening rings  
 bottom..... bottom.....  
 Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom  
 Pitch of stays to ditto: Sides Back 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



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded? —

SPARE GEAR.

State the articles supplied:— Two top end, two bottom end connecting rod bolts & nuts, two main bearing bolts, one at coupling bolts, one at foot and little pump valves, assorted bolts and nuts, Iron of various sizes.

The foregoing is a correct description,

A. Jeffery & Co. Manufacturer.  
A. Jeffery & Co. Partners

Dates of Survey while building { During progress of work in shops -- 1915. March 5. 9. 12. 14. 29. May 5. June 10. 14. July 8. August 23. October 19. 22. 24. Nov. 8.  
During erection on board vessel -- 1915. December 15. 1916. January 3.  
Total No. of visits 16.

Is the approved plan of main boiler forwarded herewith. No

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 5/5/15 19/10/15 Slides 7/6/15 8/7/15 Covers 17/6/15 8/7/15 Pistons 17/6/15 8/7/15 Rods 6/5/15 17/6/15  
Connecting rods 6/5/15 17/6/15 Crank shaft 5/5/15 7/3/15 Thrust shaft 22/10/15 27/10/15 Tunnel shafts None Screw shaft 9/8/15 19/10/15 Propeller 10/6/15  
Stern tube 19/10/15 Steam pipes tested 15/12/15 Engine and boiler seatings 17/6/15 15/12/15 Engines holding down bolts 15/12/15  
Completion of pumping arrangements 15/12/15 3/1/16 Boilers fixed 15/12/15 Engines tried under steam 3/1/16  
Main boiler safety valves adjusted 3/1/16 Thickness of adjusting washers P 8 5 7/16

Material of Crank shaft Steel Identification Mark on Do. 4032 GAH Material of Thrust shaft Steel Identification Mark on Do. 4032 GAH  
Material of Tunnel shafts None Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 4037 GAH  
Material of Steam Pipes Copper Test pressure 270 lbs ✓

Is an installation fitted for burning oil fuel —

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. — If so, state name of vessel ✓

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

Sus letter E. March 22<sup>nd</sup> 1915

The Machinery of this vessel has been built under special survey the materials and workmanship are sound and good and under the vessel shipth in my opinion to have work of 1st L.M.C. 1.16.

It is submitted that  
this vessel is eligible for  
THE RECORD + LMC 1.16.

The amount of Entry Fee ... £ 1 : - : -  
Special ... £ 8 : 10 :  
Donkey Boiler ... £ 4 : 10 :  
Travelling Expenses (if any) £ 2 : 8 :  
When applied for, 12.1.1916.  
When received, 15/1/1916.

Committee's Minute

FRI. JAN. 14. 1916

Assigned

+ L.M.C. 1.16

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



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Lloyd's Register  
Foundation  
Assigned

Rpt. 5a.

Date of writing Report

No. in Survey

Reg. Book.

on the

Master

Engines made at

Boilers made at

Registered Horse

MULTITUBULAR

Letter for record

Boilers / Sing

No. of Certificate

safety valves to each

Are they fitted with

Smallest distance

Material of shell

Descrip. of riveting

Gap of plates or

rules 141 lb

boiler 2 plates

Description of long

plates: Material

Top 2 x 7 1/2 in

1739 Port

We re  
A. Jeffery  
e Specially Survey

We hereby

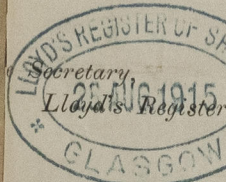
For boilers  
Horse Power,  
above 200. The  
than £2 2s.

MEM.—In  
all cases where  
to be defrayed

No. 666

This request is made  
Foreign Shipping, w

While the Committee use  
food that neither the Com  
report or certificate issued  
or for any error of judgm



Under

Survey Fee

Travelling Exp