

Rpt. 4.

REPORT ON MACHINERY.

No. 26888

MON. NOV. 10. 1913

Received at London Office

Date of writing Report

19

When handed in at Local Office

4-11-13 Port of Hull

No. in Survey held at
Reg. Book.

Hull.

Date, First Survey

Apr. 25

Last Survey

Oct. 23 1913

(Number of Vols. 22)

2/ on the *Steel S. K. "PEARY".*

Master

Built at

Selly

By whom built *Cochran & Sons Ltd.*Tons { Gross 289
Net 115
When built 1913

Engines made at

By whom made

when made 1913

Boilers made at

Hull.

By whom made

Charles E. Holmes & Co. Ltd.

when made 1913

Registered Horse Power

Owners *Pickering & Haldane's Ship Supply Co. Ltd.*

Port belonging to

Hull.

Nom. Horse Power as per Section 28

79.

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 *13" - 22" - 36"* Length of Stroke *24"* Revs. per minuteDia. of Screw shaft as per rule *4.599* Material of *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

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush *36"*Dia. of Tunnel shaft as per rule *6.78*Dia. of Crank shaft journals as per rule *4.4*Dia. of Crank pin *4"*Size of Crank webs *4" x 14"* Dia. of thrust shaft undercollars *7"* Dia. of screw *9-3* Pitch of Screw *10-8* No. of Blades *4* State whether moveable *No.* Total surface *30 sq. ft.*No. of Feed pumps Diameter of ditto *2.5"* Stroke *14.4"* Can one be overhauled while the other is at workNo. of Bilge pumps Diameter of ditto *2.5"* Stroke *14.4"* Can one be overhauled while the other is at workNo. of Donkey Engines *One* Sizes of Pumps *6" x 4.4" x 6"*

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *2-2" one forward & one aft.*In Holds, &c. *One 2" to stowage well, one 2" to*No. of Bilge Injections sizes *3"* Connected to condenser, or to circulating pumpIs a separate Donkey Suction fitted in Engine room & size *2.5" gals.*

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

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 pipes* 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 *31.7.13* of Stern Tube *31.7.13* Screw shaft and Propeller *31.7.13*

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &c.—(Letter for record

S.)

Manufacturers of Steel *Hessels, Phoenix & Co. Ltd. Union of Iron*Total Heating Surface of Boilers *1295 sq. ft.* Is Forced Draft fitted *No.* No. and Description of Boilers *One cyl. mult. tube incl. incl.*Working Pressure *200 lbs.* Tested by hydraulic pressure to *400 lbs.* Date of test *30.9.13* No. of Certificate *2018*

Can each boiler be worked separately

Area of fire grate in each boiler *46 sq. ft.*

No. and Description of Safety Valves to

each boiler *Two Spring* Area of each valve *4.9 sq. in.* Pressure to which they are adjusted *200 lbs.* Are they fitted with easing gear Yes.Smallest distance between boilers or uptakes and bunkers or woodwork *4"* Mean dia. of boilers *13-6"* Length *10-6"* Material of shell plates *S.*Thickness *1/16"* Range of tensile strength *29 tons.* Are the shell plates welded or flanged *No.* Descrip. of riveting: cir. seams *D. P. L.*long. seams *D. P. L. P.* Diameter of rivet holes in long. seams *1/16"* Pitch of rivets *8"* Lap of plates or width of butt straps *16-8"*Per centages of strength of longitudinal joint rivets *85* plate *85* Working pressure of shell by rules *203 lbs.* Size of manhole in shell *16" x 12"*Size of compensating ring *7" x 1 3/16"* No. and Description of Furnaces in each boiler *Three plain* Material *S.* Outside diameter *38"*Length of plain part top *6-5 1/2"* bottom *6-4"* Thickness of plates crown *5 1/2"* bottom *6 1/2"* Description of longitudinal joint *Weld.* No. of strengthening rings *0*Working pressure of furnace by the rules *212 lbs.* Combustion chamber plates: Material *S.* Thickness: Sides *3/32"* Back *3/32"* Top *3/4"* Bottom *3/32"*Pitch of stays to ditto: Sides *8" x 10"* Back *8 1/2" x 10"* Top *8" x 11"* If stays are fitted with nuts or riveted heads *True's.* Working pressure by rules *212 lbs.*Material of stays *S.* Diameter at smallest part *2 1/4"* Area supported by each stay *101 sq. in.* Working pressure by rules *213 lbs.* End plates in steam space:Material *S.* Thickness *1/16"* Pitch of stays *18" x 18"* How are stays secured *To S. S. S.* Working pressure by rules *206 lbs.* Material of stays *S.*Diameter at smallest part *6 3/32"* Area supported by each stay *324 sq. in.* Working pressure by rules *203 lbs.* Material of Front plates at bottom *S.*Thickness *1/16"* Material of Lower back plate *S.* Thickness *29"* Greatest pitch of stays *8 1/2" x 14 1/2"* Working pressure of plate by rules *204 lbs.*Diameter of tubes *3 1/2"* Pitch of tubes *5" x 5 1/2"* Material of tube plates *S.* Thickness: Front *1/16"* Back *3/8"* Mean pitch of stays *10"*Pitch across wide water spaces *14 1/2" x 14 1/2"* Working pressures by rules *315 lbs.* Girders to Chamber tops: Material *S.* Depth andthickness of girder at centre *1 1/2" x 10 3/4"* Length as per rule *2-11 3/8"* Distance apart *11"* Number and pitch of stays in each *3-8"*Working pressure by rules *203 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

If not, state whether, and when, one will be sent?

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Lloyd's Register
Foundation

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	Radius of do.	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 & bottom and connecting rods bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set each side & bilge pump valves, iron of different sizes, a quantity of assorted bolts & nuts.

The foregoing is a correct description,

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

Dates of Survey while building: During progress of work in shops -- 1913. Apr 25 May 29 Jun 30 July 18.31. Aug. 29.30. Sep. 9 10.13.16.26
During erection on board vessel -- Sept. 30 Oct. 2.3.6.15.16.17.20.23
Total No. of visits 22.

Is the approved plan of main boiler forwarded herewith *Ref 26829*
" " " donkey " " *Ref 26829*

Dates of Examination of principal parts—Cylinders 29.8.13 Slides 15.10.13 Covers 15.10.13 Pistons 8.10.13 Rods 2.10.13
Connecting rods 2.10.13 Crank shaft 2.10.13 Thrust shaft 8.10.13 Tunnel shafts ✓ Screw shaft 18.7.13 Propeller 18.7.13
Stern tube 18.7.13 Steam pipes tested 17.10.13 Engine and boiler seatings 31.7.13 Engines holding down bolts 20.10.13
Completion of pumping arrangements Boilers fixed 23.10.13 Engines tried under steam 23.10.13
Main boiler safety valves adjusted 23.10.13 Thickness of adjusting washers *Forward 1/16" aft 1/16"*
Material of Crank shaft *Iron* Identification Mark on Do. *Nº 11697.9.2* Material of Thrust shaft *Steel* Identification Mark on Do. *11697.9.2*
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. *11697.9.4*
Material of Steam Pipes *Solid drawn copper* Test pressure *400 lbs. per sq. inch hydraulic.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The engines & boiler of this vessel have been constructed under special survey in accordance with the Rules. The materials & workmanship are sound & good. The boiler tested by hydraulic pressure, & with the engines secured on board & tried under steam they are now in good man & safe working condition, & submitted as being eligible in my opinion to be classed with the notation of i.c.h. c. 10-13 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. + LMC. 10.13.

The amount of Entry Fee £ 1 : 0 :
Special £ 11 : 12 :
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ : :
When applied for. 8/11/13
When received. 29.11.13

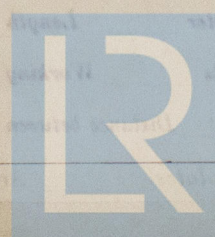
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI. NOV. 14. 1913

Assigned

+ LMC 1013



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