

# REPORT ON MACHINERY.

No. 26150

Received at London Office

MAY 5 - 1913

Date of writing Report

When handed in at Local Office

1157 13 Port of Hull

Date First Survey Jan 30

Last Survey

Apr 25 1913

No. in Survey held at

Hull

Reg. Book.

78 enpl. on the Stead S.K. "EMERALD"

Number of Visits 21

Gross Tons 289

Net Tons 115

Master

Built at

Sully

By whom built Cockayne & Sons

When built 1913

Engines made at

By whom made

when made 1913

Boilers made at

Hull

By whom made

Charles R. Holmes & Co. Ltd.

when made 1913

Registered Horse Power

Owners Timplon Steam Trawling Co. Ltd. Port belonging to Hull

Nom. Horse Power as per Section 28 83

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 1/2" - 34" Length of Stroke 24" Revs. per minute

Dia. of Screw shaft as per rule 4 1/4" 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

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 38"

Dia. of Tunnel shaft as per rule 6 1/2" Dia. of Crank shaft journals as per rule 4 1/4" Dia. of Crank pin 4 1/2" Size of Crank webs 4 1/2" x 4 1/2" Dia. of thrust shaft under

collars 4 1/2" Dia. of screw 9 1/2" Pitch of Screw 10 1/2" No. of Blades 4. State whether moveable No. Total surface 32 sq ft

No. of Feed pumps 1 Diameter of ditto 2 3/4" Stroke 1 1/4" Can one be overhauled while the other is at work

No. of Bilge pumps 1 Diameter of ditto 2 3/4" Stroke 1 1/4" Can one be overhauled while the other is at work

No. of Donkey Engines 1 Sizes of Pumps 6" x 4 1/4" x 6" duplex. No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 2 1/2" on forward & on aft. In Holds, &c. One 2 1/2" on fore hold, one 2 1/2" on main hold, one 2 1/2" on aft hold, one 2 1/2" on aft hold.

No. of Bilge Injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump Pump. Is a separate Donkey Suction fitted in Engine room & size 3" dia.

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 0

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 cuttings. 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 8.2.13 of Stern Tube 8.2.13 Screw shaft and Propeller 8.2.13.

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

## BOILERS, &c.—(Letter for record S.) Manufacturers of Steelworks Phoenix A.S. Ltd. No. 100 Union of Works

Total Heating Surface of Boilers 1350 sq ft Is Forced Draft fitted No. No. and Description of Boilers One up. mult. angle m. d. d.

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 31.3.13 No. of Certificate 1941.

Can each boiler be worked separately Area of fire grate in each boiler 47.3 sq ft No. and Description of Safety Valves to

each boiler Two Spring Area of each valve 4.90 Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear Yes.

Smallest distance between boilers on uptakes and bunkers or woodwork 6" Mean dia. of boilers 13'-0" Length 10'-6" Material of shell plates S.

Thickness 1 3/16" Range of tensile strength 28 tons Are the shell plates welded or flanged No. Descrip. of riveting: cir. seams R. P. L.

long. seams R. B. S. J. A. Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 8 5/8" Lap of plates or width of butt straps 18"

Per centages of strength of longitudinal joint rivets 89 Working pressure of shell by rules 205 lbs. Size of manhole in shell 16" x 12"

plate 85.5 No. and Description of Furnaces in each boiler 3 plain. Material S. Outside diameter 37 1/2"

Size of compensating ring 1 3/16" x 4" No. of strengthening rings 0.

Length of plain part top 6'-5" Thickness of plates crown 13" Description of longitudinal joint Weld. No. of strengthening rings 0.

bottom 7" Working pressure of furnace by the rules 221 lbs. Combustion chamber plates: Material S. Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 1/16"

Pitch of stays to ditto: Sides 8 3/4" x 8" Back 8 3/4" x 8 1/4" Top 8 3/4" x 8" If stays are fitted with nuts or riveted heads Yes. Working pressure by rules 232 lbs.

Material of stays S. Diameter at smallest part 2 1/4" Area supported by each stay 890" Working pressure by rules 242 lbs. End plates in steam space:

Material S. Thickness 1 3/16" Pitch of stays 19" x 18" How are stays secured Rivets. Working pressure by rules 228 lbs. Material of stays S.

Diameter at smallest part 4.50 Area supported by each stay 3420" Working pressure by rules 228 lbs. Material of Front plates at bottom S.

Thickness 1" Material of Lower back plate S. Thickness 1 1/16" Greatest pitch of stays 13" x 8 3/4" Working pressure of plate by rules 234 lbs.

Diameter of tubes 3 1/2" Pitch of tubes 4 3/8" x 4 3/8" Material of tube plates S. Thickness: Front 1" Back 3/8" Mean pitch of stays 12"

Pitch across wide water spaces 13 3/4" Working pressures by rules 203 lbs. Girders to Chamber tops: Material S. Depth and

thickness of girder at centre 10" - 1 1/2" Length as per rule 3'-0" Distance apart 8 1/2" Number and pitch of stays in each 3 - 8"

Working pressure by rules 205 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

RETAIN

RETAIN

W369-0094

Lloyd's Register Foundation

**VERTICAL DONKEY BOILER—** Manufacturers of Steel

No.	Description			When made	Where fired
Made at	By whom made				
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 casing 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 end connecting rods bolts & nuts, two main beam bolts & nuts, one set of coupling bolts & nuts, one set each fore & aft pump valves, one of various sizes, a quantity of assorted bolts, nuts etc.*

The foregoing is a correct description,

*Harold Shuardon* Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1913:— Jan 30. Feb 6. 8. 12. 17. 26. 28. Mar 5. 7. 10. 17. 20. 27. 31. Apr 3. 7. 10. 17. 21.  
During erection on board vessel --- Apr 22. 25.  
Total No. of visits 21

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

Dates of Examination of principal parts—Cylinders 7.2.13 Slides 11.4.13 Covers 11.4.13 Pistons 2.4.13 Rods 2.4.13  
Connecting rods 10.4.13 Crank shaft 26.2.13 Thrust shaft 3.4.13 Tunnel shafts ✓ Screw shaft 20.1.13 Propeller 20.1.13  
Stern tube 30.1.13 Steam pipes tested 17.4.13 Engine and boiler seatings 8.2.13 Engines holding down bolts 17.4.13  
Completion of pumping arrangements 25.4.13 Boilers fixed 19.4.13 Engines tried under steam 19.4.13  
Main boiler safety valves adjusted 19.4.13 Thickness of adjusting washers *found 3/8" off 1/2"*  
Material of Crank shaft *Steel* Identification Mark on Do. *Nº 995 T.G.* Material of Thrust shaft *Steel* Identification Mark on Do. *Nº 995 T.G.*  
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. *Nº 995 T.G.*  
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 material & workmanship are sound & good. The boiler tested by hydraulic pressure & with the engines secured on board & tested under steam they are now in good order & safe working condition & respectfully submitted as being eligible in my opinion to be classed with the notation of "L.M.C. 4.13" in the Register Books.*

It is submitted that this vessel is eligible for **THE RECORD, L.M.C. 4.13.**

*Paul S. 13*  
*5.5.13*

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

The amount of Entry Fee .. £ 1 : 0 :  
Special .. £ 12 : 9 :  
Donkey Boiler Fee .. £ : :  
Travelling Expenses (if any) £ 4/1 :  
When applied for, 3/57-13  
When received, 31/5/13

Committee's Minute THE MAY 6-1913

Assigned *Home 4.13*

MACHINERY CERTIFICATE WRITTEN



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Lloyd's Register Foundation

PR. 1913

These p

Signal Let

Official I

1334

No., Date, and

Whether British Foreign Built

British

Number of Decks

Number of Masts

Rigged ...

Stern ...

Build ...

Galleries ...

Head ...

Framework and

vessel ...

Number of Buoy

Number of watertight

and their capacity

Total to quarter the deck

to bottom of keel

No. of sets of Engines.

Description of Engines.

One Triple

No. of Shafts.

One

Particulars of the Propeller.

Number of Iron or Steel Loaded Pro

Under Tonnage

Space or spaces

Turret or Trunk

Forecastle ...

Bridge space

Peep or Break

Stair Houses

Deck Houses

Chart House

Spaces for machinery

Section 78 (2) of 1894

Excess of Hatchway

Gross Tonnage

Deductions, as per

Register

NOTE 1.—The tonnage

Deck for

NOTE 2.—The under

Open fore

Less Co

Name of

No. of Owners

Name, Residence,

*The King*

whose pr

*Andrews*

things to

*Management*

Dated 16th

(830) (69862) Wt. 2895

Certificate (if required) to be sent to the Registrar of Shipping (The Surveyors are requested not to write on, or below the space for Committee's Minute).