

REPORT ON MACHINERY.

THUR. MAR 19 1896

Port of Glasgow

Received at London Office

No. in Survey held at Glasgow
Reg. Book.

Date, first Survey 10 April 1895 Last Survey 14 March 1896
(Number of Visits 28)

on the "S.S. Polycarp"

Gross 2966
Net 1893
Tons

Master R. Oliphant Built at Glasgow By whom built Barclay Currier & Co. When built 1896

Engines made at Glasgow By whom made " " " " when made 1896

Boilers made at " By whom made " " " " when made 1896

Registered Horse Power 244 Owners Booth Steam Ship Coy Ltd. Port belonging to Liverpool

Nom. Horse Power as per Section 28 277 NE.

ENGINES, &c. — Description of Engines Triple Exp No. of Cylinders 3

Diameter of Cylinders 23 1/2" 30" 64" Length of Stroke 42" Revolutions per minute about 80 Diameter of Screw shaft as per rule 11 1/4"
as fitted 12 1/4" Diameter of Crank shaft journals 12 3/4" Diameter of Crank pin 12 3/4" Size of Crank webs 8 1/2"

Diameter of screw 15 1/2" Pitch of screw 16" x 6" No. of blades 4 State whether moveable fixed Total surface 42 sq ft

No. of Feed pumps Two Diameter of ditto 3 1/2" Stroke 21" Can one be overhauled while the other is at work yes

No. of Bilge pumps Two Diameter of ditto 3 1/2" Stroke 21" Can one be overhauled while the other is at work yes

No. of Donkey Engines Two Sizes of Pumps 1/2" x 5" x 10" Duplex No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 4 - 2 - 3" + 2 - 4" 1/2" x 1/2" x 10" In Holds, &c. 2 - 3" in each + 1 to aft funnel well

No. of bilge injections 1 sizes 6" Connected to condenser, or to circulating pump no Is a separate donkey suction fitted in Engine room & size yes (4")

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 yes

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 near to
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

What pipes are carried through the bunkers bilge & waste pipes How are they protected by 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 on slip before launch Is the screw shaft tunnel watertight yes

Is it fitted with a watertight door yes worked from upper platform

OILERS, &c. — (Letter for record) Total Heating Surface of Boilers 4328 sq ft

No. and Description of Boilers 2 Multitubular Simple end Working Pressure 160 lbs Tested by hydraulic pressure to 325 lbs.

Date of test 3/12/95 Can each boiler be worked separately yes Area of fire grate in each boiler 60 sq ft No. and Description of safety valves to
each boiler 2 Sweet Spring Area of each valve 8.5" Pressure to which they are adjusted 165 lbs Are they fitted
with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork no side Mean diameter of boilers 15" - 3"
bunkers

Length 10" - 3" Material of shell plates Steel Thickness 1/2" Description of riveting: circum. seams Lap double rivet Long. seams double butt
butt

Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/8" Lap of plates or width of butt straps 18" straps

Per centages of strength of longitudinal joint rivets 84% Working pressure of shell by rules 160 lbs Size of manhole in shell ends 16" x 12"
plate 86%

Size of compensating rings Lapped No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 3' 11 1/4"

Length of plain part top 6 1/4" Thickness of plates crown 8 1/16" Description of longitudinal joint Welded No. of strengthening rings —
bottom —

Working pressure of furnace by the rules 160 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 1 1/4"

Pitch of stays to ditto: Sides 8" x 8" Back 8" x 7 1/4" Top 8" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 140 lbs.

Material of stay Steel Diameter at smallest part 1 3/8" + 1/2" Area supported by each stay 6 1/4" Working pressure by rules 181 lbs. End plates in steam space:
Material Steel Thickness 3/2" Pitch of stays 16" x 16" How are stays secured double nuts Working pressure by rules 160 lbs. Material of stays Steel

Diameter at smallest part 2 1/16" Area supported by each stay 256" Working pressure by rules 160 lbs. Material of Front plates at bottom Steel
Thickness 13/16" Material of Lower back plate Steel Thickness 1/2" Greatest pitch of stays 13" Working pressure of plate by rules 225 lbs.

Diameter of tube 3 1/4" Pitch of tubes 13 1/8" x 4 3/8" Material of tube plate Steel Thickness: Front 13/16" Back 1 1/16" Mean pitch of stays 8 3/4"

Pitch across wide water spaces 15" Working pressures by rules 190 lbs. Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 8 1/4" x 1 1/2" Length as per rule 2' 4" Distance apart 8" Number and pitch of Stays in each 3 (8)

Working pressure by rules 190 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
les — Pitch of rivets — Working pressure of shell by rules — Diameter of flue — Material of flue plates — Thickness —
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— Description *Round Multitubular*
 Made at *Glasgow* By whom made *Barclay Curle & Co. Ltd.* When made *1896* Where fixed *On main deck*
 Working pressure *60 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *3918* Fire grate area *26 sq ft* Description of safety valves *Direct Spring*
 No. of safety valves *2* Area of each *5.94 sq ft* Pressure to which they are adjusted *80 lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no*
 Diameter of donkey boiler *9' 6"* Length *8' 6"* Material of shell plates *steel* Thickness *3/16"*
 Description of riveting long. seams *Lap tub riveted* Diameter of rivet holes *3/8"* Whether punched or drilled *Drilled* Pitch of rivets *3 1/2"*
 Lap of plating *6 1/4"* Per centage of strength of joint *100%* Rivets *100%* Thickness of shell *3/16"* Radius of do. *—* No. of Stays to do *8*
 Dia. of stays *2 1/2"* Diameter of furnace *2' 6"* Length of furnace *5' 6"* Thickness of furnace plates *3/16"* Description of joint *Double straps* *Comb Chamber* *Stays 4" - 9' 9"* Working pressure of shell by rules *85 lbs*
 Thickness of furnace crown plates *3/16"* Stayed by *—* Working pressure of furnace by rules *186 lbs* Diameter of uptake *—* Thickness of uptake plates *—* Thickness of water tubes *—*

SPARE GEAR. State the articles supplied:— *2 main bearing bolts, 2 Combs, rod bolts, top bottom, set coupling bolts, set of valves for pumps, assorted bolts nuts springs &c.*

The foregoing is a correct description,
Barclay Curle & Co. Ltd. Manufacturer.
J. James Director

General Remarks (State quality of workmanship, opinions as to class, &c.) *These Engines & Boilers are of good workmanship & materials and are now in good order & safe working condition and eligible in opinion eligible to be noted in the Register Book* ✘
L.M.C. 3/96

Electric Lighting Report will be forwarded as soon as received from Ed. Engineers

It is submitted that this vessel is eligible for THE RECORD.

L.M.C. 3.96
Elec: Light.
19.3.96
Glasgow

Certificate (if required) to be sent to
 The amount of Entry Fee... £ *2* : : : : When applied for, *16/3/96*
 Special £ *33 14* : : : : When received, *14/3/96*
 Donkey Boiler Fee £ : : : :
 Travelling Expenses (if any) £ : : : :
 James Morrison *John Sanderson*
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute

FRI. MAR 20 1896

Assigned

L.M.C. 3.96

WRITTEN



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