

REPORT ON MACHINERY.

No. 21460

Port of *Sunderland*

WED. 19 AUG 1903

Received at London Office 19

No. in Survey held at *Sunderland* Date, first Survey *29 April '03* Last Survey *6 August 1903*
Reg. Book. (Number of Visits)

on the s.s. *"Amiral l'Hermite"*

Tons { Gross 228
Net 81

Master *P. Zomequin* Built at *Sunderland* By whom built *R. Thompson & Sons* When built *1903*

Engines made at *Sunderland* By whom made *Maccoll & Pollock* when made *1903*

Boilers made at *Sunderland* By whom made *Maccoll & Pollock* when made *1903*

Registered Horse Power Owners *Cie Franca Neerlandaise de Nav a vap* Port belonging to *Dunk*

Nom. Horse Power as per Section 28 *49.4* Is Refrigerating Machinery fitted *No* Is Electric Light fitted *No*

ENGINES, &c.—Description of Engines *Compound inverted* No. of Cylinders *Two* No. of Cranks *Two*
Dia. of Cylinders *13 1/2 + 31* Length of Stroke *21* Revs. per minute *100* Dia. of Screw shaft *as per rule 6.45* Material of *Ingot Steel*
as fitted *6 3/4* screw shaft

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 *—* 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 *2-3 7/8*

Dia. of Tunnel shaft *as per rule 5.94 6.05* Dia. of Crank shaft journals *as per rule 6.24 3 5/8* Dia. of Crank pin *6 3/8* Size of Crank webs *9 1/2 x 4 3/8* Dia. of thrust shaft under

collars *6 3/8* Dia. of screw *4-6* Pitch of screw *10 3/4 mm* No. of blades *4* State whether moveable *no* Total surface *23.4 sq ft*

No. of Feed pumps *one* Diameter of ditto *2 1/4* Stroke *11 1/2* Can one be overhauled while the other is at work *—*

No. of Bilge pumps *one* Diameter of ditto *2 1/4* Stroke *11 1/2* Can one be overhauled while the other is at work *—*

No. of Donkey Engines *one* Sizes of Pumps *5 1/4 x 3 1/2 x 5 duplex* No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *2" Gate, 2" port, 2" star* In Holds, &c. *2" forepeak tank - 2" after peak tank -*

2" forehold port, 2" forehold star, 2" after hold centre

No. of bilge injections *one* sizes *2 1/2* Connected to condenser, or to circulating pump *pump* Is a separate donkey suction fitted in Engine room & size *yes 2"*

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 *Valves*

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 *valves* fitted with a spigot and brass covering plate *yes*

What pipes are carried through the bunkers *None* How are they protected *—*

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 *23/7/03* Is the screw shaft tunnel watertight *yes*

Is it fitted with a watertight door *yes* worked from *Top Steering*

BOILERS, &c.— (Letter for record *5*) Total Heating Surface of Boilers *888 sq ft* Is forced draft fitted *no*

No. and Description of Boilers *one single ended marine* Working Pressure *140 lb.* Tested by hydraulic pressure to *280 lb.*

Date of test *8/7/03* Can each boiler be worked separately *—* Area of fire grate in each boiler *30 sq ft* No. and Description of safety valves to

each boiler *Two direct spring* Area of each valve *4.9 sq in* Pressure to which they are adjusted *145 lb.* Are they fitted with easing gear *yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *13* Mean dia. of boilers *10-6* Length *9-6* Material of shell plates *steel*

Thickness *3/4* Range of tensile strength *28 1/2 - 32* Are they welded or flanged *no* Descrip. of riveting: cir. seams *lap DR* long. seams *DR 55, DR*

Diameter of rivet holes in long. seams *1* Pitch of rivets *5 7/8* Lap of plates or width of butt straps *10 1/2*

Per centages of strength of longitudinal joint *83.04* rivets *82.20* plate Working pressure of shell by rules *144 lb.* Size of manhole in shell *some 16 x 12*

Size of compensating ring *11 1/8 x 3/4* No. and Description of Furnaces in each boiler *Two plain* Material *steel* Outside diameter *37 1/2*

Length of plain part *top 6-3* Thickness of plates *crown 4 1/4* Description of longitudinal joint *Welded* No. of strengthening rings *—*

Working pressure of furnace by the rules *145 lb.* Combustion chamber plates: Material *steel* Thickness: Sides *19 3/32* Back *19 3/32* Top *19 3/32* Bottom *13 7/16*

Pitch of stays to ditto: Sides *8 1/2* Back *10 1/2 x 7 1/8* Top *10* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *144 lb.*

Material of stays *steel* Diameter at smallest part *1 3/8* Area supported by each stay *82.7 sq in* Working pressure by rules *144 lb.* End plates in steam space:

Material *steel* Thickness *29 3/32* Pitch of stays *5 1/2 x 6 7/8* How are stays secured *into frames* Working pressure by rules *146 lb.* Material of stays *steel*

Diameter at smallest part *2.28* Area supported by each stay *258 sq in* Working pressure by rules *159* Material of Front plates at bottom *steel*

Thickness *29 3/32* Material of Lower back plate *steel* Thickness *29 3/32* Greatest pitch of stays *12 x 8 1/4* Working pressure of plate by rules *268 lb.*

Diameter of tubes *3 1/2* Pitch of tubes *4 1/2 x 4 1/2* Material of tube plates *steel* Thickness: Front *29 3/32* Back *29 3/32* Mean pitch of stays *11 1/4*

Pitch across wide water spaces *12* Working pressures by rules *146 lb.* Girders to Chamber tops: Material *steel* Depth and

thickness of girder at centre *6 1/8 x 1 1/2* Length as per rule *21 5/16* Distance apart *10* Number and pitch of Stays in each *one*

Working pressure by rules *142 lb.* 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 *—*

DONKEY BOILER— No. ONE Description Vertical with cross tubes
Made at Treardunth By whom made George Black When made 1903 Where fixed Engine room
Working pressure 100 lb tested by hydraulic pressure to 200 lb No. of Certificate 545 Fire grate area 11 ft Description of safety valves Direct spring
No. of safety valves one Area of each 4'9" Pressure to which they are adjusted 100 lb If fitted with easing gear yes If steam from main boilers can enter the donkey boiler no Dia. of donkey boiler 4'9" Length 9'0" Material of shell plates steel Thickness 3/8" Range of tensile strength 27 1/2 Descrip. of riveting long. seams Treble lap Dia. of rivet holes 3/4" Whether punched or drilled drilled Pitch of rivets 3 1/8"
Lap of plating 5 1/4" Per centage of strength of joint Rivets 95.7 Thickness of shell crown plates 9/16" Radius of do. 4'9" No. of Stays to do. none
Dia. of stays. — Diameter of furnace Top 3'4 1/4" Bottom 4'1 1/4" Length of furnace 4'0" Thickness of furnace plates 1/2" Description of joint Lap, single Thickness of furnace crown plates 5/8" Stayed by uptake Working pressure of shell by rules 110 lb
Working pressure of furnace by rules 109 lb Diameter of uptake 12" Thickness of uptake plates 3/8" Thickness of water tubes 3/8"

SPARE GEAR. State the articles supplied:— 2 Top end bolts, 2 Bottom end bolts, 2 Main Bearing bolts, one set coupling bolts one set each feed & tilge pump valves spare propeller — assorted bolts nuts & turn —

The foregoing is a correct description,

MacColl & Pollock Manufacturer.

Dates { During progress of work in shops - - } 1903- April 29 May 15. 21. 26. June 11. 18. 29. July 1. 2. 8. 9. 20. 23. 25. 30
of Survey { During erection on board vessel - - } August 1. 5. 6.
while building { Total No. of visits } 18

Is the approved plan of main boiler forwarded herewith

" " " donkey " " " No

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

The Machinery of the Vessel has been built under special survey, the material & workmanship sound and good, Boilers & steam pipes tested by hydraulic pressure to double the working pressure. The Engines worked well & the safety valves of the Main & Donkey Boilers were adjusted as above & worked well —

It is submitted that this vessel is eligible for THE RECORD. L.M.C 8.03

Bale
19.8.03

RS
20.8.03

This Vessel is Eligible in Our opinion have the Notation in the Register Book * L.M.C 8.03

The amount of Entry Fee. £ 1 : : : When applied for, 18.8.03
Special .. £ 8 : : :
Donkey Boiler Fee .. £ : : : When received, 22.8.03
Travelling Expenses (if any) £ : : :

Committee's Minute

FRI. 21 AUG 1903

Assigned

+ L.M.C 8.03

MACHINERY CERTIFICATE
WRITTEN.



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Foundation