

Port of Newcastle

WED. 31 JAN 1906

No. in Survey held at NewcastleDate, first Survey Apr 5<sup>th</sup>Last Survey Jan 27<sup>th</sup> 1906

Reg. Book.

(Number of Visits 61)on the S. S. "Hymettus"Gross 4606Tons Net 2985When built 1906Master C. McDonald Built at NewcastleBy whom built Palmer's CoEngines made at NewcastleBy whom made Palmer's Cowhen made 1906Boilers made at doBy whom made dowhen made 1906Registered Horse Power 539Owners A. Currie & CoPort belonging to MelbourneNom. Horse Power as per Section 28 539580Is Refrigerating Machinery fitted noIs Electric Light fitted yes

## ENGINES, &amp;c.—Description of Engines

Triple expansionNo. of Cylinders 3No. of Cranks 3Dia. of Cylinders 28" - 46" - 76"Length of Stroke 51"Revs. per minute 75

Dia. of Screw shaft

as per rule 15.49"

Material of

screw shaft SteelIs 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 yesIf 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 yes

If two

liners are fitted, is the shaft lapped or protected between the liners ✓Length of stern bush 5' 3 1/2"

Dia. of Tunnel shaft

as per rule 13.96"

Dia. of Crank shaft journals

as per rule 14.65"Dia. of Crank pin 15"Size of Crank webs 21 1/2" x 10"

Dia. of thrust shaft under

collars 15"Dia. of screw 18" - 9"Pitch of screw 18' 6"No. of blades 4State whether moveable yesTotal surface 97 sqNo. of Feed pumps 2Diameter of ditto 4 1/2"Stroke 30"Can one be overhauled while the other is at work yesNo. of Bilge pumps 2Diameter of ditto 4 1/2"Stroke 30"Can one be overhauled while the other is at work yesNo. of Donkey Engines TwoSizes of Pumps 9" x 10" x 10"

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

In Engine Room

Three 3 1/2" in E. Space One 3 1/2" in B SpaceIn Holds, &c. Two in each hold 3 1/2" One inhold well 3 1/2" one in tunnel well 3 1/2"No. of bilge injections 1 sizes 6"Connected to condensers or to circulating pump yesIs a separate donkey suction fitted in Engine room & size yes 3 1/2"Are all the bilge suction pipes fitted with roses yesAre the roses in Engine room always accessible yesAre the sluices on Engine room bulkheads always accessible noneAre all connections with the sea direct on the skin of the ship yesAre they Valves or Cocks BothAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yesAre the discharge pipes above or below the deep water line AboveAre they each fitted with a discharge valve always accessible on the plating of the vessel yesAre the blow off cocks fitted with a spigot and brass covering plate yesWhat pipes are carried through the bunkers noneHow are they protected ✓Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yesWhen were stern tube, propeller, screw shaft, and all connections examined in dry dock New vesselIs the screw shaft tunnel watertight yesIs it fitted with a watertight door yesworked from Top platform

## BOILERS, &amp;c.—

(Letter for record S.)Total Heating Surface of Boilers 7650 sqIs forced draft fitted yesNo. and Description of Boilers Three multitubular single endedWorking Pressure 180 lbsTested by hydraulic pressure to 360 lbsDate of test 24-28/11/05Can each boiler be worked separately yesArea of fire grate in each boiler 56 sq

No. and Description of safety valves to

each boiler Two - springArea of each valve 9.6 sqPressure to which they are adjusted 180 lbsAre they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 15"Mean dia. of boilers 14' - 4 1/2"Length 11' - 6"Material of shell plates SteelThickness 5 1/2"Range of tensile strength 28 - 30Are they welded or flanged noDescrip. of riveting: cir. seams S. Laplong. seams S.B.S.Y. RivdDiameter of rivet holes in long. seams 13 1/2"Pitch of rivets 9 1/4"Lap of plates or width of butt straps 20 1/2"

Per centages of strength of longitudinal joint

rivets 92plate 84.9Working pressure of shell by rules 204 lbsSize of manhole in shell end 16" x 12"Size of compensating ring FlangedNo. and Description of Furnaces in each boiler 3 - BrightonMaterial SteelOutside diameter 3' - 7 3/4"

Length of plain part

top ✓

Thickness of plates

crown 9 1/2"Description of longitudinal joint WeldedNo. of strengthening rings ✓Working pressure of furnace by the rules 204 lbsCombustion chamber plates: Material SteelThickness: Sides 21/32"Back 21/32"Top 21/32"Bottom 13/16"Pitch of stays to ditto: Sides 9 1/4" x 8 1/2"Back 9 1/4" x 8 1/2"Top 9 1/4" x 8"If stays are fitted with nuts or riveted heads nutsWorking pressure by rules 193 lbsMaterial of stays SteelDiameter at smallest part 2.1"Area supported by each stay 77 sqWorking pressure by rules 244 lbs

End plates in steam space:

Material SteelThickness 1 1/2"Pitch of stays 18 1/2" x 17"How are stays secured S.H. WWorking pressure by rules 246 lbsMaterial of stays SteelDiameter at smallest part 6.9"Area supported by each stay 314 sqWorking pressure by rules 220 lbsMaterial of Front plates at bottom SteelThickness 1"Material of Lower back plate SteelThickness 1"Greatest pitch of stays 14 1/2"Working pressure of plate by rules 245 lbsMean pitch of stays 9 1/4"Diameter of tubes 2 1/2"Pitch of tubes 3 3/4" x 3 5/8"Material of tube plates SteelThickness: Front 1"Back 3/8"Mean pitch of stays 9 1/4"Pitch across wide water spaces 14"Working pressures by rules 195 lbsGirders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 9" x 1 1/2"Length as per rule 30"Distance apart 9 1/4"Number and pitch of Stays in each 3 - 8"Working pressure by rules 196 lbsSuperheater or Steam chest; how connected to boiler none

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 ✓Working pressure of end plates ✓



## DONKEY BOILER—

No.

Description

Made at

By whom made

When made

Where fixed

Working pressure

tested by hydraulic pressure to

No. of Certificate

Fire grate area

Description of safety valves

No. of safety valves

Area of each

Pressure to which they are adjusted

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

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

Thickness of furnace crown plates

Stayed by

Working pressure of shell by rules

Working pressure of furnace by rules

Diameter of uptake

Thickness of uptake plates

Thickness of water tubes

## SPARE GEAR.

State the articles supplied:—

Two top-end, two bottom end, 2 main-bearing bolts + nuts, a set of coupling bolts a set of feed + bilge pump valves, a set of rings for each piston, a quantity of assorted bolts nuts + washers, a propeller shaft + propeller, a set of check valves, an air pump rod with bucket + headvalve, a circulating pump bucket 2 feed pump plungers, 1 guide shoe, 1 eccentric sheave + strap, 1 slide valve, spindle 4 main safety valve springs 50 boiler tubes + 50 condenser tubes.

The foregoing is a correct description,

Manufacturer.

Dates  
of Survey  
while  
building

During progress of

work in shops—

During erection on

board vessel—

Total No. of visits

61.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

## General Remarks

(State quality of workmanship, opinions as to class, &amp;c.)

The engines + boilers of this vessel have been constructed under special survey + the materials + workmanship are found + good. The engines have been tried under steam + the boiler safety valves adjusted at the working pressure. The machinery is now in good + safe working condition + eligible in my opinion to have the notation of + L M C 1,06.

A report on the electric installation will be forwarded when received from the Electricians. The installation requires to be tried + the casing in of wires in tween-decks examined + it has been arranged with the Owner's Representative to have this done on the vessel's arrival at Cardiff + the Surveyors have been advised.

It is submitted that  
this vessel is eligible for  
THE RECORD

E L M C 1.06 F.D.

1 Aux Br.

The record ELEC. LIGHT. to be deferred pending the receipt of a report from the Off. Surveyors on the proper casing in of the Electric light-wires.

The Off. Surveyors now state  
that the Elec. Light installation  
is all in order. As instructed.

31.1.06

The amount of Entry Fee..

£ 3

Special

£ 40

Donkey Boiler Fee

£

Travelling Expenses (if any)

£

When applied for

30 JAN 1906

When received

19/2/06

Committee's Minute

FRI. 2 FEB 1906

Assigned

+ L M C 1.06

MACHINERY CERTIFICATE  
WRITTEN.

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Foundation