Hull Rpt. No 25310

REPORT ON MACHINERY.

No. Y1850

Received at London Office WED. AUG.-7.1912

t. 4.

e of writing Report 1st Aug 1912 When handed in at Local Office ____ 19__ Port of London

. in Survey held at Yarmouth Date, First Survey 6th May Last Survey 6th July 1912

g. Book. (Number of Visits 3)

on the Engines No ***/ 471. S/s Balsense Tons { Gross / Net

aster Built at Selby By whom built Cochrane & Sons L.S542 When built

gines made at Yarmouth By whom made Crabtree & Co Ld when made 1912

oilers made at Stockton By whom made Riley Bros Ld. when made 1912

gistered Horse Power Owners Port belonging to

m. Horse Power as per Section 28 22. ✓ Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted

GINES, &c.—Description of Engines Compound surface condensing No. of Cylinders two No. of Cranks two

a. of Cylinders 10" & 20" ✓ Length of Stroke 15" Revs. per minute 160 Dia. of Screw shaft as per rule ~~4.35~~ 4.65 ✓ as fitted 4 7/8" Material of screw shaft Steel

the screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the liner made water tight

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

ween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two

ers are fitted, is the shaft lapped or protected between the liners Lapped. Length of stern bush 22" ✓

ia. of INTER~~Tunnel~~ shaft as per rule 4.15" as fitted 4 1/2" Dia. of Crank shaft journals as per rule 4.35" ✓ as fitted 4 3/4" Dia. of Crank pin 4 3/4" ✓ Size of Crank webs 6 3/4 × 3 1/4 Dia. of thrust shaft under

llars 4 3/4" Dia. of screw 5'-0" Pitch of Screw 7'-6" ✓ No. of Blades 4 State whether moveable No Total surface 13 sq ft

o. of Feed pumps 1 Diameter of ditto 2 1/8" ✓ Stroke 6 1/2" ✓ Can one be overhauled while the other is at work ✓

o. of Bilge pumps 1 Diameter of ditto 2 1/8" Stroke 6 1/2" Can one be overhauled while the other is at work ✓

o. of Donkey Engines 1 Sizes of Pumps 2 3/4" × 4" duplex ✓ No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room In Holds, &c.

o. of Bilge Injections ____ sizes ____ Connected to condenser, or to circulating pump ____ Is a separate Donkey Suction fitted in Engine room & size ____

re all the bilge suction pipes fitted with roses ____ Are the roses in Engine room always accessible ____ Are the sluices on Engine room bulkheads always accessible ____

re all connections with the sea direct on the skin of the ship ____ Are they Valves or Cocks ____

re they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates ____ Are the Discharge Pipes above or below the deep water line ____

re they each fitted with a Discharge Valve always accessible on the plating of the vessel ____ Are the Blow Off Cocks fitted with a spigot and brass covering plate ____

What pipes are carried through the bunkers How are they protected

re all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

re the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Dates of examination of completion of fitting of Sea Connections ____ of Stern Tube ____ Screw shaft and Propeller ____

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

OILERS, &c.—(Letter for record ____) Manufacturers of Steel

Total Heating Surface of Boilers 470 sq ft Is Forced Draft fitted ____ No. and Description of Boilers

Working Pressure 130lbs. Tested by hydraulic pressure to ____ Date of test ____ No. of Certificate ____

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

ach boiler ____ Area of each valve ____ Pressure to which they are adjusted ____ Are they fitted with easing gear ____

Smallest distance between boilers or uptakes and bunkers or woodwork ____ Mean dia. of boilers ____ Length ____ Material of shell plates ____

Thickness ____ Range of tensile strength ____ Are the shell plates welded or flanged ____ Descrip. of riveting: cir. seams ____

ng. seams ____ Diameter of rivet holes in long. seams ____ Pitch of rivets ____ Lap of plates or width of butt straps ____

Per centages of strength of longitudinal joint rivets ____ plate ____ Working pressure of shell by rules ____ Size of manhole in shell ____

Size of compensating ring ____ No. and Description of Furnaces in each boiler ____ Material ____ Outside diameter ____

Length of plain part top ____ bottom ____ Thickness of plates crown ____ bottom ____ Description of longitudinal joint ____ No. of strengthening rings ____

Working pressure of furnace by the rules ____ Combustion chamber plates: Material ____ Thickness: Sides ____ Back ____ Top ____ Bottom ____

Pitch of stays to ditto: Sides ____ Back ____ Top ____ If stays are fitted with nuts or riveted heads ____ Working pressure by rules ____

Material of stays ____ Diameter at smallest part ____ Area supported by each stay ____ Working pressure by rules ____ End plates in steam space:

Material ____ Thickness ____ Pitch of stays ____ How are stays secured ____ Working pressure by rules ____ Material of stays ____

Diameter at smallest part ____ Area supported by each stay ____ Working pressure by rules ____ Material of Front plates at bottom ____

Thickness ____ Material of Lower back plate ____ Thickness ____ Greatest pitch of stays ____ Working pressure of plate by rules ____

Diameter of tubes ____ Pitch of tubes ____ Material of tube plates ____ Thickness: Front ____ Back ____ Mean pitch of stays ____

Pitch across wide water spaces ____ Working pressures by rules ____ Girders to Chamber tops: Material ____ Depth and

hickness of girder at centre ____ Length as per rule ____ Distance apart ____ Number and pitch of stays in each ____

Working pressure by rules ____ 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 ____

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 :—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building — During progress of work in shops: 1912 - May 6. July 5. 19.

During erection on board vessel:

Total No. of visits 3.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts— Cylinders 18.5.12 5.7.12 19.7.12 Slides 19.7.12 Covers 19.7.12 Pistons 19.7.12 Rods 19.7.12

Connecting rods 19.7.12 Crank shaft 19.7.12 Thrust shaft 19.7.12 ~~Tunnel~~ INTER^TE shafts 5.7.12 19.7.12 Screw shaft 24.6.12 Propeller 24.6.12

Stern tube 24.6.12 Steam pipes tested Engine and boiler seatings Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers

Material of Crank & thrust shaft Steel Identification Mark on Do. 3079 W.D.H. Material of Thrust shaft Steel Identification Mark on Do. ✓

Material of ~~Tunnel~~ INTER^TE shafts Steel Identification Marks on Do. 799 J.P. Material of Screw shafts Steel Identification Marks on Do. £71. J.P.

Material of Steam Pipes Test pressure

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines have been constructed under Special Survey, the material tested as per the Rules, & the workmanship so good, they have been forwarded to Selby to be fitted on board.

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee £	2 : 0 13 0 4	When applied for,
Special £5. 18. 0. £ Hull a/c / Lon a/c	5 : XX - 0 / 3 : 4 : 8	7. 8. 1912
Donkey Boiler Fee .. .. £	: :	When received,
Travelling Expenses (if any) £	: 15 1	1/10/12

A. E. Palmer Jr.

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

TUE. AUG. 13. 1912

Committee's Minute

Assigned Ill Minute on Hull Rpt 25310