

Rpt. 4.

## REPORT ON MACHINERY.

No. 51.660

TUES. 2 OCT 1906

Port of *Newcastle on Tyne*

Received at London Office

19

No. in Survey held at

*Newcastle*

Date, first Survey

*April 2*

Last Survey

*27 Sept 1906*

Reg. Book.

*15 on the Steel S.S. "GOSIAR"*(Number of Visits *33*)Master *H. Schmitt*

Built at

*Newcastle*

By whom built

*Swan Hunter & W Richardson L<sup>ts</sup>*Tons { Gross *4331*Net *2743*When built *1906*

Engines made at

*Newcastle*

By whom made

*Swan Hunter & W Richardson L<sup>ts</sup>*when made *1906*

Boilers made at

*S-*

By whom made

*S-*when made *1906*

Registered Horse Power

Owners *Deutsch Austral Dampfschiff*Port belonging to *Hamburg*

Nom. Horse Power as per Section 28

*495*

Is Refrigerating Machinery fitted for cargo purposes

*no*

Is Electric Light fitted

*ye*

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

*Quadruple Expansion*

No. of Cylinders

*4*No. of Cranks *4*

Dia. of Cylinders

*23.32-48.72*

Length of Stroke

*54*

Revs. per minute

*68*

Dia. of Screw shaft

*as per rule 14.9*

Material of

*Steel*

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

*ye*

Is the after end of the liner made water tight

in the propeller boss

*ye*

If the liner is in more than one length are the joints burned

*ye*

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

*ye*

If two

liners are fitted, is the shaft lapped or protected between the liners

*ye*

Length of stern bush

*6 1/2*

Dia. of Tunnel shaft

*as per rule 13.08*

Dia. of Crank shaft journals

*as per rule 13.7*

Dia. of Crank pin

*14 1/2*

Size of Crank webs

*22 1/2 x 9 1/4*

Dia. of thrust shaft under

collars

*14 1/2*

Dia. of screw

*18.6*

Pitch of Screw

*18.6*

No. of Blades

*4*

State whether moveable

*no*

Total surface

*108 sq*

No. of Feed pumps

*2*

Diameter of ditto

*4*

Stroke

*28*

Can one be overhauled while the other is at work

*ye*

No. of Bilge pumps

*2*

Diameter of ditto

*4 1/2*

Stroke

*28*

Can one be overhauled while the other is at work

*ye*

No. of Donkey Engines

*Two*

Sizes of Pumps

*9 x 11 x 10**- 9 x 6 x 10*

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

In Engine Room

*Five 3 1/2*

In Holds, &amp;c.

*In all hold two 3 1/2*

Tunnel well

*Two 2 1/2*

No. of Bilge Injections

*1*

sizes

*8*

Connected to condenser, or to circulating pump

*CP*

Is a separate Donkey Suction fitted in Engine room &amp; size

*ye 3 1/2*

Are all the bilge suction pipes fitted with roses

*ye*

Are the roses in Engine room always accessible

*ye*

Are the sluices on Engine room bulkheads always accessible

*ye*

Are all connections with the sea direct on the skin of the ship

*ye*

Are they Valves or Cocks

*both*

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

*ye*

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

*ye*

Are the Blow Off Cocks fitted with a spigot and brass covering plate

*ye*

What pipes are carried through the bunkers

*For bilge pipe*

How are they protected

*Strong wood casing*

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

*ye*

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

*ye*

Dates of examination of completion of fitting of Sea Connections

*Aug 1906 of Stern Tube**Aug 1906*

Screw shaft and Propeller

*July & Aug 1906*

Is the Screw Shaft Tunnel watertight

*ye*

Is it fitted with a watertight door

*ye*

worked from

*Top platform*

## BOILERS, &amp;c.—(Letter for record

*R*)

Manufacturers of Steel

*J. Spencer & Son*

Total Heating Surface of Boilers

*6567*

Is Forced Draft fitted

*ye*

No. and Description of Boilers

*3 Cyl. - Mch.*

Working Pressure

*210*

Tested by hydraulic pressure to

*420*

Date of test

*17.8.06*

No. of Certificate

*7293*

Can each boiler be worked separately

*ye*

Area of fire grate in each boiler

*53 sq*

No. and Description of Safety Valves to

each boiler

*Two Spring*

Area of each valve

*9.6*

Pressure to which they are adjusted

*215*

Are they fitted with easing gear

*ye*

Smallest distance between boilers or uptakes and bunkers or woodwork

*21*

Mean dia. of boilers

*14.2*

Length

*12.0*

Material of shell plates

*S*

Thickness

*1 1/2*

Range of tensile strength

*2834 - 32*

Are the shell plates welded or flanged

*ye*

Descrip. of riveting: cir. seams

*d lap*

long. seams

*d shop*

Diameter of rivet holes in long. seams

*1 1/2*

Pitch of rivets

*10*

Lap of plates or width of butt straps

*22 1/4*

Per centages of strength of longitudinal joint

rivets

*89*

plate

*85*

Working pressure of shell by rules

*240*

Size of manhole in shell

*16 x 12*

Size of compensating ring

*9 x 1 1/2*

No. and Description of Furnaces in each boiler

*3 Mch.*

Material

*S*

Outside diameter

*42 1/8*

Length of plain part

top

*ye*

Thickness of plates

crown

*5/8*

bottom

Description of longitudinal joint

*Well*

No. of strengthening rings

*ye*

Working pressure of furnace by the rules

*239*

Combustion chamber plates: Material

*S*

Thickness: Sides

*2 1/2*

Back

*2 1/2*

Top

*2 1/2*

Bottom

*1 1/2*

Pitch of stays to ditto: Sides

*8 x 7 1/8*

Back

*7 3/4 x 7 3/4*

Top

*7 3/4 x 7 3/4*

If stays are fitted with nuts or riveted heads

*nut*

Working pressure by rules

*240*

Material of stays

*Iron*

Diameter at smallest part

*2.03*

Area supported by each stay

*63*

Working pressure by rules

*245*

End plates in steam space:

Material

*S*

Thickness

*13/64*

Pitch of stays

*15 1/2 x 15 1/2*

How are stays secured

*D & W*

Working pressure by rules

*216*

Material of stays

*S*

Diameter at smallest part

*6.1*

Area supported by each stay

*241*

Working pressure by rules

*253*

Material of Front plates at bottom

*S*

Thickness

*1*

Material of Lower back plate

*S*

Thickness

*1*

Greatest pitch of stays

*as per plan*

Working pressure of plate by rules

*210*

Diameter of tubes

*2 1/4*

Pitch of tubes

*4 x 4*

Material of tube plates

*S*

Thickness: Front

*1*

Back

*7/8*

Mean pitch of stays

*8*

Pitch across wide water spaces

*13 3/4*

Working pressures by rules

*217*

Girders to Chamber tops: Material

*S*

Depth and

thickness of girder at centre

*11 1/4 x 13 1/8*

Length as per rule

*34 1/2*

Distance apart

*7 7/8*



# VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.                      Description No Donkey Boiler fitted-

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                      Stayed by                     

Diameter of uptake                      Thickness of uptake plates                      Thickness of water tubes                      Dates of survey                     

SPARE GEAR. State the articles supplied:— Propeller, Tail shaft, two top end, two bottom end, two main bearings, one set coupling bolts, feed & bilge valves, unrolled bolts & nuts, one & one pump rods, a few bars of iron & other small gear.

The foregoing is a correct description,

FOR SWAN, HUNTER, & WIGHAM RICHARDSON, LTD. Manufacturer.

Dates of Survey while building                      During progress of work in shops                      During erection on board vessel                      Total No. of visits 33

1906. April 26 May 14 21 22 June 7 14 18 25 July 14 16 20 21 Aug 18 19 20 21 22 23 27 Sep 11 12 14

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " None

Dates of Examination of principal parts—Cylinders July 1906 Slides Aug 1906 Covers Aug 1906 Pistons Aug 1906 Rods July 1906

Connecting rods Aug 1906 Crank shaft July 1906 Thrust shaft Aug 1906 Tunnel shafts July 1906 Screw shaft July 1906 Propeller Aug 1906

Stern tube Aug 1906 Steam pipes tested 11 Sept 1906 Engine and boiler seatings Aug 1906 Engines holding down bolts Sept 1906

Completion of pumping arrangements Sept 1906 Boilers fixed Sept 1906 Engines tried under steam 19 Sept 1906

Main boiler safety valves adjusted 19 Sept 1906 Thickness of adjusting washers 7/16 3/8 3/8 3/8 7/16 7/16

Material of Crank shaft Steel Identification Mark on Do. PA 587.06 Material of Thrust shaft Steel Identification Mark on Do. 1174.1.H.H.06

Material of Tunnel shafts Steel Identification Marks on Do. 1174.1.H.H.06 Material of Screw shafts Steel Identification Marks on Do. 1174.1.H.H.06

Material of Steam Pipes Copper 11 Sept 1906 Test pressure 4204.

General Remarks (State quality of workmanship, opinions as to class, &c. The material & workmanship is good.

The Mach<sup>y</sup> is practically a duplicate of the fitted in the S.S. "Ottersen" Inve Rep<sup>t</sup> No 47773.

The Mach<sup>y</sup> has been built under special Survey & is eligible in my opinion for classification & the record L.M.C. 9.06

It is submitted that this vessel is eligible for THE RECORD

LM.C. 9.06 F.D. ELEC. LIGHT.

2.10.06

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

The amount of Entry Fee. £ 3 : : : When applied for, 26 Sept 1906

Special . . . . . £ 44 : 15 : : : When received, 29 Sept 1906

Donkey Boiler Fee . . . . . £ : : : : 29 Sept 1906

Travelling Expenses (if any) £ : : : : 29 Sept 1906

Committee's Minute TUES. 2 OCT 1906

Assigned + LMC 9.06

MACHINERY CERTIFICATE WRITTEN.

Lloyd's Register Foundation

Certificate (if required) to be sent to Newcastle-on-Tyne.

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