

Swan Hunter & W Richardson Ltd S.S. No 760

Rpt. 4.

REPORT ON MACHINERY.

No. 51423

Port of Newcastle on Tyne Received at London MON. 13 AUG 1906

No. in Survey held at Newcastle Date, first Survey 14 Feb 1906 Last Survey 14 Aug 1906
Reg. Book. (Number of Visits 29)

on the Steel S.S. BRAUNFELS Tons Gross 555 1/2 Net 559

Master Swan Hunter & W Richardson Ltd Built at Newcastle By whom built Swan Hunter & W Richardson Ltd When built 1906

Engines made at Newcastle By whom made Swan Hunter & W Richardson Ltd when made 1906

Boilers made at D By whom made D when made 1906

Registered Horse Power 500 Owners Messrs The Hansa Co. Port belonging to Bremen

Nom. Horse Power as per Section 28 500 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Quadruple Expansion No. of Cylinders 4 No. of Cranks 4

Dia. of Cylinders 24 34 51 74 Length of Stroke 54 Revs. per minute 60 Dia. of Screw shaft 15-35 as per rule 16 1/4 Material of Steel 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 Yes 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 Yes Length of stern bush 72

Dia. of Tunnel shaft 13-5 as per rule 14 Dia. of Crank shaft journals 14-17 as per rule 14 3/4 Dia. of Crank pin 14 3/4 Size of Crank webs 22 1/2 x 9 1/2 Dia. of thrust shaft under

collars 15 Dia. of screw 19-0 Pitch of Screw 21-0 No. of Blades 4 State whether moveable Yes Total surface 112 sq ft

No. of Feed pumps 2 Diameter of ditto 4 Stroke 28 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 28 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 15 3/4 x 23 5/8 - 6 x 11 3/4 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Six 3 1/2 In Holds, &c. In all holds two 3 1/2

Tunnel well One 3 1/2

No. of Bilge Injections 1 sizes 8 Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2

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 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 Below

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 For Bilge Suction 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 Yes

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

Dates of examination of completion of fitting of Sea Connections June 1906 of Stern Tube June 1906 Screw shaft and Propeller June 1906

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform

BOILERS, &c.—(Letter for record R) Manufacturers of Steel 1 Spencer & Son

Total Heating Surface of Boilers 63724 Is Forced Draft fitted Yes No. and Description of Boilers 3. Steel Cylindrical

Working Pressure 213 Tested by hydraulic pressure to 426 Date of test 18-6-06 No. of Certificate 7250

Can each boiler be worked separately Yes Area of fire grate in each boiler 53 sq ft No. and Description of Safety Valves to

each boiler 2 Spring Area of each valve 8-25 Pressure to which they are adjusted 218 Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2-6 Mean dia. of boilers 14-0 Length 12-0 Material of shell plates S

Thickness 1 1/2 Range of tensile strength 283 1/4 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams d lap

long. seams d shap Diameter of rivet holes in long. seams 19/16 Pitch of rivets 9 7/8 Lap of plates or width of butt straps 22 9/16

Per centages of strength of longitudinal joint rivets 96 Working pressure of shell by rules 246 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 Morrison Material S Outside diameter 44

Length of plain part top 5/8 Thickness of plates crown 5/8 Description of longitudinal joint welded No. of strengthening rings ✓

Working pressure of furnace by the rules 229 Combustion chamber plates: Material S Thickness: Sides 2 1/32 Back 2 1/32 Top 2 1/32 Bottom 1 3/32

Pitch of stays to ditto: Sides 7 3/8 x 7 3/4 Back 7 3/4 x 7 3/4 Top 7 3/8 x 7 3/8 If stays are fitted with nuts or riveted heads nut Working pressure by rules 244

Material of stays Iron Diameter at smallest part 2-36 Area supported by each stay 61 Working pressure by rules 290 End plates in steam space:

Material S Thickness 1 1/4 Pitch of stays 15 5/8 x 14 3/4 How are stays secured d n & w Working pressure by rules 218 Material of stays S

Diameter at smallest part 5-56 Area supported by each stay 223 Working pressure by rules 249 Material of Front plates at bottom S

Thickness 1 Material of Lower back plate S Thickness 1 Greatest pitch of stays in plan Working pressure of plate by rules 213

Diameter of tubes 2 1/2 Pitch of tubes 33 1/4 x 33 1/4 Material of tube plates S Thickness: Front 1 Back 7/8 Mean pitch of stays 20 5/8

Pitch across wide water spaces 13 1/2 Working pressures by rules 238 Girders to Chamber tops: Material S Depth and

thickness of girder at centre 11 1/4 x 13 1/8 Length as per rule 33 1/2 Distance apart 7 1/8 Number and pitch of stays in each 3-7 5/8

Working pressure by rules 252 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 ✓

6210-261X

Spencer & Co

No. One Description Please see attached Report.
Made at New By whom made Swan Hunt & W. Richardson When made 1906 Where fixed Shokole
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 _____
Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____ Plates _____
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:— Spare Propeller Blade, Tail shaft, Crank shaft
Two top end, two bottom end, two main bearing & set of coupling
bolt, slide rod, air pump rod, various bushes, feed & bilge valves, piston
springs, assorted bolts & nuts, a few bars of iron & other gear.

FOR *The foregoing is a correct description,*

SWAN, HUNTER, & WIGHAM RICHARDSON, LTD.
John Hunter **Manufacturer.**

Dates of Survey while building	During progress of work in shops - -	1906 Feb. 11, 1907 Mar. 28, 11, Apr. 26, 12, 11, May 11, 19, 21, 22, June 7, 11, 18, 20, 25, July 3, 11, 16, 21, 24, 28
	During erection on board vessel - -	August 11, 1907
	Total No. of visits	29

Is the approved plan of main boiler forwarded herewith ☒

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Dates of Examination of principal parts—Cylinders June 06 Slides June 06 Covers June 06 Pistons June 06 Rods June 06
Connecting rods June 06 Crank shaft June 06 Thrust shaft June 06 Tunnel shafts June 06 Screw shaft June 06 Propeller June 06
Stern tube July 06 Steam pipes tested 29. 6. 06 Engine and boiler seatings July 06 Engines holding down bolts July 06
Completion of pumping arrangements July & Aug: 06 Boilers fixed Aug: 1906 Engines tried under steam Aug: 1906
Main boiler safety valves adjusted 3 Aug: 1906 Thickness of adjusting washers P^t 9 9 218 lb.
 $\frac{7}{16}$ $\frac{9}{16}$ $\frac{9}{16}$ $\frac{10}{32}$ $\frac{9}{16}$ $\frac{7}{16}$ S.A.
Material of Crank shaft Steel Identification Mark on Do L.R. 2023-5-06 Material of Thrust shaft Steel Identification Mark on Do Lloyd's 1906-14
Material of Tunnel shafts Steel Identification Marks on Do Lloyd's 1906-14 Material of Screw shafts Steel Identification Marks on Do Lloyd's 1906-14
Material of Steam Pipes Wrote Jun. Test pressure 660 lb.

General Remarks (State quality of workmanship, opinions as to class, &c.) The Mach. is practically a duplicate of that fitted in the S-S Reinforced Iron Rep. 49127.

The material & workmanship is good.

The Mach. has been built under special survey & is eligible in my opinion for classification & the record. ⁺ E. M. C. 8-06.

It is submitted that
this vessel is eligible for
THE RECORD + LMB 8.06. Rec. light. FD



13. 8. 06

13.8.06

The amount of Entry Fee . . .	£ 13	:	:	When applied for,
Special . . .	£ 45	:	:	11 Aug 1940
Donkey Boiler Fee . . .	£	:	:	When received,
Travelling Expenses (if any) £		:	:	15 Aug 1940

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

Committee's Minute TUES. 14 AUG 1906

Assigned

MACHINERY CERTIFICATE
WRITTEN.

Lloyd's Register
Foundation