

REPORT ON MACHINERY.

No. 61374
FRI. NOV. 24 1911

Received at London Office

Date of writing Report 10 When handed in at Local Office NOV 22 1911 Port of NEWCASTLE ON TYNE
 No. in Survey held at Newcastle on Tyne Date, First Survey 24th April 1911 Last Survey 17th Nov. 1911
 Reg. Book. on the s/s Goldenfels (Number of Visits 54)
 Master Walker Built at Walker By whom built Swan Hunter & Wigham Richardson When built 1911
 Engines made at Walker By whom made Swan Hunter & Wigham Richardson L^d when made 1911
 Boilers made at Walker By whom made Hitto when made 1911
 Registered Horse Power 606 Owners Hansa Deutsche Dampfschiffahrtsgesellschaft Port belonging to Bremen
 Nom. Horse Power as per Section 28 606 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Inverted Quadruple Expansion No. of Cylinders 4 No. of Cranks 4
 Dia. of Cylinders 26¹/₂, 39, 56, 80 Length of Stroke 54 Revs. per minute 60 Dia. of Screw shaft as per rule 16.35 Material of screw shaft steel
 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 7' 0"
 Dia. of Tunnel shaft as per rule 14.51 Dia. of Crank shaft journals as per rule 15.23 Dia. of Crank pin 15.9 Size of Crank webs 5 1/2 x 10 1/2 Dia. of thrust shaft under
 collars 15 13/16 Dia. of screw 20' 0" Pitch of Screw 20' 6" No. of Blades 4 State whether moveable Yes Total surface 120 sq ft
 No. of Feed pumps 2 Diameter of ditto 4 3/8 Stroke 28 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 5/8 Stroke 28 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps F. 9 3/4 x 6 x 11 1/2; B. 13 3/4 x 15 3/4 x 23 5/8 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 7 of 3 1/2, 1 in tunnel well 3" In Holds, &c. 2 of 3 1/2 in each
 No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump Yes 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 above & 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 forward 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 14.9.11 of Stern Tube 14.9.11 Screw shaft and Propeller 14.9.11
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from top platform

BOILERS, &c.—(Letter for record Y) Manufacturers of Steel J. Spencer & Sons
 Total Heating Surface of Boilers 7955 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 3 S. E. Cyl^d Knell^d
 Working Pressure 213 lbs Tested by hydraulic pressure to 426 lbs Date of test 27.9.11 No. of Certificate 8206
 Can each boiler be worked separately Yes Area of fire grate in each boiler 63 sq ft No. and Description of Safety Valves to
 each boiler 2 spring Area of each valve 12.56 sq in Pressure to which they are adjusted 218 lbs or 213 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 21" Mean dia. of boilers 15' 3" Length 12' 0" Material of shell plates steel
 Thickness 1 1/2" Range of tensile strength 28 3/4/32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams t & d r lap
 long. seams t & d r s Diameter of rivet holes in long. seams 1 1/32 Pitch of rivets 10 1/4 Lap of plates or width of butt straps 22 1/2"
 Per centages of strength of longitudinal joint 89 Working pressure of shell by rules 230 lbs Size of manhole in shell 16 x 12"
 Size of compensating ring flanged saddle No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 47 7/8"
 Length of plain part top 21/32 Thickness of plates bottom 21/32 Description of longitudinal joint weld No. of strengthening rings 1
 Working pressure of furnace by the rules 223 lbs Combustion chamber plates: Material steel Thickness: Sides 21/32 Back 21/32 Top 21/32 Bottom 1"
 Pitch of stays to ditto: Sides 7 1/2 x 7 1/2 Back 7 1/2 x 7 1/2 Top 7 1/2 x 7 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 241 lbs
 Material of stays Iron Diameter at smallest part 2.03 Area supported by each stay 62.01 Working pressure by rules 245 lbs End plates in steam space:
 Material steel Thickness 1 3/16 Pitch of stays 17 1/2 x 15 How are stays secured d n & w Working pressure by rules 251 lbs Material of stays steel
 Diameter at smallest part 6.65 Area supported by each stay 262.5 Working pressure by rules 264 lbs Material of Front plates at bottom steel
 Thickness 1 1/4 Material of Lower back plate steel Thickness 1 1/2 Greatest pitch of stays as per plan Working pressure of plate by rules 248 lbs
 Diameter of tubes 2 1/2 Pitch of tubes 8 1/2 x 3 1/2 Material of tube plates steel Thickness: Front 1" Back 7/8" Mean pitch of stays 11 1/2 x 7 1/2"
 Pitch across wide water spaces 13 1/2 Working pressures by rules 225 lbs Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 10 1/2 x 1 3/4 Length as per rule 33 1/2 Distance apart 7 1/2 Number and pitch of stays in each 3-7 1/2"
 Working pressure by rules 244 lbs Superheater or Steam chest, how connected to boiler Yes Can the superheater be shut off and the boiler worked
 separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet
 holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes
 If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes
 Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes

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:— *2 top end, 2 bottom end, 2 Main bearing & 1 set of coupling bolts, 1 set feed and bilge pump valves, bolts & nuts assorted & iron of rings, 1/2" Crank shaft 11" propeller shaft, 1 Propeller blade, 1 Air bottom end, 1 Ecc. strap, 2 Valve spindles, 1 set pump links 11" Air top end braces, 1 Air pump rod, 1 impeller & rod for Centrifugal pump, 15 Air pump Valves, 3 Main feed checks & 1 donkey feed check, 1 set springs for each piston ✓*

The foregoing is a correct description.
 SWAN HUNTER & WIGHAM RICHARDSON, LTD. Manufacturer.

G. F. Tweed 1911
 Dates of Survey while building: During progress of work in shops - - - - - *DIRECTOR* Apr. 24 May 8 17 23 26 31 Jun 9 13 14 26 28 Jul 4 10 12 19 20 24 25 Aug 3 8
 During erection on board vessel - - - - - 9 10 15 27 31 Sep 6 12 14 16 19 21 25 26 27 28 Oct 2 4 6 9 10 11 12 13 18 20 23 26 30 31 Nov 2 4 8 13
 Total No. of visits *54* Is the approved plan of main boiler forwarded herewith *Yes ✓*
 " " " donkey " " " *Yes ✓*

Dates of Examination of principal parts—Cylinders *21.9.11* Slides *14.9.11* Covers *14.9.11* Pistons *25.7.11* Rods *14.9.11*
 Connecting rods *14.9.11* Crank shaft *2.8.11* Thrust shaft *14.9.11* Tunnel shafts *14.9.11* Screw shaft *28.8.11* Propeller *6.9.11*
16 & 25/07/11
 Stern tube *3.8.11* Steam pipes tested *31.10.11* Engine and boiler seatings *14.9.11* Engines holding down bolts *18.10.11*
 Completion of pumping arrangements *4.11.11* Boilers fixed *18.10.11* Engines tried under steam *4.11.11*
 Main boiler safety valves adjusted *4.11.11* Thickness of adjusting washers *S.P. 7/16, S.S. 7/16, C.P. 7/16, C.S. 1/2, P.P. 7/16, P.S. 7/16*
 Material of Crank shaft *Steel* Identification Mark on Do. *471 M.P.* Material of Thrust shaft *Steel* Identification Mark on Do. *Riv. 14.9.11*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *Riv. 14.9.11* Material of Screw shafts *Steel* Identification Marks on Do. *Riv. 28.8.11*
 Material of Steam Pipes *Steel ✓* Test pressure *640 lbs ✓*

General Remarks (State quality of workmanship, opinions as to class, &c. *The Machinery of this vessel has been constructed under special survey the workmanship and materials used are both of good quality, the Engines have been tried under steam ahead & astern and worked satisfactorily*)

We beg to recommend that this vessel is eligible in our opinion to have the record of L.M.C. 11.11. in the Register Book

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 11.11.
 F.D.
J.W.D. 24/11/11

The amount of Entry Fee .. £ *3 : 0 : 0* When applied for, *NOV 22 1911*
 Special £ *50 : 6 : 0*
 Donkey Boiler Fee £ *2 : 2 : 0*
 Travelling Expenses (if any) £ : : :
 When received, *£ 53.6/- paid 24/11/11*
£ 2.2/- paid 1/12/11

R.W. Coomber & Wm. Currie
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *TUE NOV. 28, 1911*
 Assigned *+ L.M.C. 11.11*

NEWCASTLE ON TYNE

Certificate (if required) to be sent to

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

