

REPORT ON MACHINERY.

Received at London Office

MON. AUG. 27. 1911

Date of writing Report 19th August 1911 When handed in at Local Office 19th Aug 1911 Port of Newcastle

No. in Survey held at Newcastle Date, First Survey 25 Feb 1907 Last Survey 11th August 1911
Reg. Book. (Number of Visits 35)

on the S.S. "Benquetla" 710789. Tons { Gross 5520
Net 5534
When built 1907-10

Master E. Cole Built at Newcastle By whom built Swan Hunter & Co Ltd. when made 1907.

Engines made at Newcastle By whom made Wallsend Slipway & Eng Co. Ltd. when made 1907.

Boilers made at Newcastle By whom made " " when made 1907.

Registered Horse Power Owners Elan, Dempster & Co Port belonging to Liverpool

Nom. Horse Power as per Section 28 556 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines In C.P.A.

No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 28 46 77 Length of Stroke 54 Revs. per minute 40 Dia. of Screw shaft as per rule 15.8 as fitted 16.25 Material of screw shaft 5

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 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 If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 5 9/2

Dia. of Tunnel shaft as per rule 14.24 as fitted 14.73 Dia. of Crank shaft journals as per rule 14.95 as fitted 15.25 Dia. of Crank pin 15 1/2 Size of Crank webs 10 1/2 x 25 Dia. of thrust shaft under collars 15 1/4 Dia. of screw 19 3/8 Pitch of Screw 19 feet No. of Blades 4 State whether moveable f Total surface 116 f.

No. of Feed pumps 2 Diameter of ditto 8 Stroke 21 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 5 Stroke 26 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Three Sizes of Pumps 9, 10, 10, 8, 5, 8, 8, 10, 21 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 4 Boiler room 4 3/2 In Holds, &c. No. 2. 2 3/2 No. 1. 2 3/2 No. 3. 2 3/2

No. of Bilge Injections 1 sizes 9. 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

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

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 four bilge suction How are they protected Under bunker floor

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 25/1/10 of Stern Tube 2/1/10 Screw shaft and Propeller 2/1/10

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper Deck

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spencer & Sons Ltd.

Total Heating Surface of Boilers 7785 Is Forced Draft fitted Yes No. and Description of Boilers Three S.E. Mult.

Working Pressure 180 Tested by hydraulic pressure to 360 lb Date of test 2.5.07 No. of Certificate 4444

Can each boiler be worked separately Yes Area of fire grate in each boiler 635 sq. ft. No. and Description of Safety Valves to each boiler Two Spring loaded Area of each valve 12.56 Pressure to which they are adjusted 180 lb Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork About 4'-0" Mean dia. of boilers 15 3/8 Length 11'-9" Material of shell plates 8

Thickness 1 1/4 Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 7.2 x 2 butts long. seams 2. 1/2 Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 9 3/4 Gap of plates on width of butt straps 20 1/16

Per centages of strength of longitudinal joint rivets 88.9 plate 85.25 Working pressure of shell by rules 204 lb Size of manhole in shell 16.12

Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Monsons Material 8 Outside diameter 4.1 3/4

Length of plain part top bottom Thickness of plates crown bottom 3 5/8 Description of longitudinal joint Weld No. of strengthening rings

Working pressure of furnace by the rules 202 1/2 Combustion chamber plates: Material J Thickness: Sides 5/8 Back 7/8 Top 7/8 Bottom 1

Pitch of stays to ditto: Sides 7 1/2, 8 8 Back 7 1/2, 8 Top 7 1/2, 8 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 219 lb

Material of stays 8 Diameter at smallest part 1.46 Area supported by each stay 60 Working pressure by rules 190. End plates in steam space:

Material 8 Thickness 1 3/8 Pitch of stays 11.15 1/2 How are stays secured a nuts Working pressure by rules 207 1/2. Material of stays 8

Diameter at smallest part 6.1 Area supported by each stay 11.15 1/2 Working pressure by rules 231 1/2 Material of Front plates at bottom 8

Thickness 1 Material of Lower back plate 8 Thickness 3/4 Greatest pitch of stays 14" x 8" Working pressure of plate by rules 274

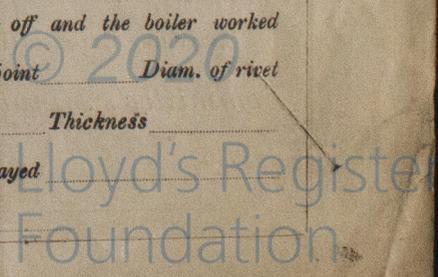
Diameter of tubes 2 1/2 Pitch of tubes 3 3/4, 3 5/8 Material of tube plates 8 Thickness: Front 1" Back 3/4 Mean pitch of stays 7 1/2 x 4 1/4

Pitch across wide water spaces 15 Working pressures by rules 212 lb Girders to Chamber tops: Material 8 Depth and thickness of girder at centre 9 1/2 x 1 1/2 Length as per rule 2.7 3/2 Distance apart 7 1/2 Number and pitch of stays in each 3 @ 7 1/2

Working pressure by rules 274 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 p. of end plates Area of safety valves to superheater Are they fitted with easing gear

B710-085M



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 casing 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:— *In accordance with the Rules*

The foregoing is a correct description, FOR THE WALLSEND SLIPWAY & ENGINEERING CO., LIMITED.
 Manufacturer. *N. W. Murray* SECRETARY

1907

Dates of Survey while building { During progress of work in shops - - 25, 28 March, 6, 9, 24, 25, 26 Apr, 2, 9, 25, May 2, June 27, July 4, Aug 12, Nov 16, 18, 1905
 During erection on board vessel - - 21, 24, 26, 28, 29 June, 1, 2, 4, 8, 19, 24, 25, 26, 27, 28, 29, 30 June, 1, 2, 4, 15, June 27, July 19, 1906
 Total No. of visits 35

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders $\frac{21.22}{3.07}$ Slides $\frac{23.504}{}$ Covers $\frac{21.22}{3.07}$ Pistons $\frac{21.22}{3.07}$ Rods $\frac{23.3104}{25.3104}$

Connecting rods $\frac{22.407}{}$ Crank shaft $\frac{12.807}{}$ Thrust shaft $\frac{12.807}{}$ Tunnel shafts $\frac{12.807}{}$ Screw shaft $\frac{12.807}{}$ Propeller $\frac{12.807}{}$

Stern tube $\frac{25.807}{}$ Steam pipes tested $\frac{29/2/10}{3.6.07}$ Engine and boiler seatings $\frac{24/1/10}{}$ Engines holding down bolts $\frac{24/2/10}{}$

Completion of pumping arrangements $\frac{4/3/10}{}$ Boilers fixed $\frac{4/3/10}{}$ Engines tried under steam $\frac{4/3/10}{}$

Main boiler safety valves adjusted $\frac{4/3/10}{}$ Thickness of adjusting washers $\frac{P \frac{1}{2} S \frac{3}{8} P \frac{3}{8} S \frac{3}{8} P \frac{1}{2} S \frac{3}{8}}{}$

Material of Crank shaft *S* Identification Mark on Do. *RITF* Material of Thrust shaft *S* Identification Mark on Do. *RITF*

Material of Tunnel shafts *S* Identification Marks on Do. *RITF* Material of Screw shafts *S* Identification Marks on Do. *RITF*

Material of Steam Pipes *Iron* Test pressure $\frac{5000}{}$

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery and boilers for this vessel have been examined during construction in the factory. Materials and workmanship satisfactory; they have been run with fuel on board and tried under steam.

In my opinion this machinery is now eligible to have notification of + L M C S. 11 in the Register Book

It is submitted that this vessel is eligible for THE RECORD + L M C S. 11.

F.D. *J.W.D.* 27/8/11

The amount of Entry Fee	£ 3 : 0 : 0	When applied for,
Special	£ 47 : 16 : 0	19/8/11
Donkey Boiler Fee	£ : : :	When received,
Travelling Expenses (if any)	£ : : :	7/9/11

J. Linday A.M.C.E. Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUE. AUG. 22. 1911
 Assigned *Thurs 8.11*

MACHINERY CERTIFICATE WRITTEN.



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