

REPORT ON MACHINERY.

Port of *Newcastle-on-Tyne*

Received at London Office

No. in Survey held at *South Shields*
Reg. Book. *515 "Speedy"*
on the

Date, first Survey *Dec 1st '99* Last Survey *June 28th 1901*
(Number of Visits *29*)

Master *Galt Bommel* By whom built *J. Meijer* Tons *Gross 297*
Engines made at *Leith* By whom made *G. J. Grey* when made *1901*
Boilers made at *Leith* By whom made *J. J. Eltringham & Co.* when made *1901*
Registered Horse Power Owners *Clanryl Steamship Co. Ltd.* Port belonging to *Newry*
Nom. Horse Power as per Section 28 *64 65* Is Refrigerating Machinery fitted *no* Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines *Triple Expansion* No. of Cylinders *3* No. of Cranks *3*
Dia. of Cylinders *12 1/4", 20", 32"* Length of Stroke *23"* Reps. per minute *108* Dia. of Screw shaft *as per rule 6-3/4"* Lgth. of stern bush *2'-6"*
Dia. of Tunnel shaft *as per rule 6 1/2"* Dia. of Crank shaft journals *as per rule 6 1/2"* Dia. of Crank pin *6 1/2"* Size of Crank webs *48x48"* Dia. of thrust shaft under
Halls *6 1/2"* Dia. of screw *8'-6"* Pitch of screw *10'-6"* No. of blades *4* State whether moveable *no* Total surface *285*
No. of Feed pumps *1* Diameter of ditto *2 1/2"* Stroke *13"* Can one be overhauled while the other is at work *✓*
No. of Bilge pumps *1* Diameter of ditto *2 3/4"* Stroke *13"* Can one be overhauled while the other is at work *✓*
No. of Donkey Engines *1* Sizes of Pumps *3 1/2" x 5" Duplex* No. and size of Suctions connected to both Bilge and Donkey pumps
Engine Room *Four 2' dia* In Holds, &c. *Two 2' dia.*

No. of bilge injections *1* sizes *2 1/2"* Connected *to condenser, on* to circulating pump *yes* Is a separate donkey suction fitted in Engine room & size *yes 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 *no*
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 *no* How are they protected *✓*
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*
When were stern tube, propeller, screw shaft, and all connections examined in dry dock *31/5/01* Is the screw shaft tunnel watertight *no*
Is it fitted with a watertight door *✓* worked from *✓*

BOILERS, &c.— (Letter for record *S*) Total Heating Surface of Boilers *1175 sq ft* Is forced draft fitted *no*
and Description of Boilers *1 Single ended Multitubular Working Pressure 180 lbs* Tested by hydraulic pressure to *360 lbs*
Date of test *8-2-01* Can each boiler be worked separately *✓* Area of fire grate in each boiler *36 1/2 sq ft* No. and Description of safety valves to
each boiler *2 Spring valves* Area of each valve *3.98 sq in* Pressure to which they are adjusted *184 lbs* Are they fitted with easing gear *yes*
Greatest distance between boilers or uptakes and bunkers or woodwork *14 ft 1 in* Mean dia. of boilers *11'-4 1/8"* Length *10'-6"* Material of shell plates *Steel*
Thickness *1 1/8"* Range of tensile strength *25 tons* Are they welded or flanged *no* Descrip. of riveting: cir. seams *D.R.* long. seams *5 Rows*
Diameter of rivet holes in long. seams *1 1/8"* Pitch of rivets *6"* Lap of plates or width of butt straps *11 1/8"*
Percentages of strength of longitudinal joint *82.5%* Working pressure of shell by rules *184 lbs* Size of manhole in shell *16"x12"*
No. of compensating ring *4"x1 1/8"* No. and Description of Furnaces in each boiler *2 Plain* Material *Steel* Outside diameter *41 1/2"*
Length of plain part *top 6'-9" bottom 7'-0"* Thickness of plates *top 49 bottom 44* Description of longitudinal joint *S.R. butt straps* No. of strengthening rings *1*
Working pressure of furnace by the rules *183 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *1/8"* Back *3/16"* Top *1/16"* Bottom *3/16"*
Pitch of stays to ditto: Sides *10"x9"* Back *9"x8 3/4"* Top *9"x8"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *181 lbs*
Material of stays *Steel* Diameter at smallest part *1 1/32"* Area supported by each stay *90 sq in* Working pressure by rules *198 lbs* End plates in steam space:
Material *Steel* Thickness *3/16"* Pitch of stays *15"x15 1/2"* How are stays secured *D.N.W. & S* Working pressure by rules *191 lbs* Material of stays *Steel*
Diameter at smallest part *2 1/8"* Area supported by each stay *232.5 sq in* Working pressure by rules *181 lbs* Material of Front plates at bottom *Steel*
Thickness *1/8"* Material of Lower back plate *Steel* Thickness *3/16"* Greatest pitch of stays *18"x9"* Working pressure of plate by rules *185 lbs*
Diameter of tubes *3 1/2"* Pitch of tubes *4 1/2"x4 1/2"* Material of tube plates *Steel* Thickness: Front *3/32"* Back *3/32"* Mean pitch of stays *13 1/2"x9"*
Pitch across wide water spaces *14 1/2"* Working pressures by rules *188 lbs* Girders to Chamber tops: Material *Steel* Depth and
Thickness of girder at centre *5 1/2"x1 1/8"* Length as per rule *2'-8"* Distance apart *8"* Number and pitch of Stays in each *2 8"x9"*
Working pressure by rules *184 lbs* 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
Pitch of rivets *✓* Working pressure of shell by rules *✓* Diameter of flue *✓* Material of flue plates *✓* Thickness *✓*
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 *✓*

DONKEY BOILER— No. *one* Description *Vertical cross tube*
Made at *Truro* By whom made *G. Black* When made *14/3/01* Where fixed *Stoke Newington*
Working pressure *100 lbs* tested by hydraulic pressure to *200 lbs* No. of Certificate *490* Fire grate area *12.54* Description of safety valves *Spring*
No. of safety valves *one* Area of each *7.07* Pressure to which they are adjusted *100 lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Dia. of donkey boiler *5'-0"* Length *10'-0"* Material of shell plates *S* Thickness *3/32* Range of tensile strength
Descrip. of riveting long. seams *Lap butt* Dia. of rivet holes *13/16* Whether punched or drilled *drilled* Pitch of rivets *3 3/8*
Lap of plating *5 1/2"* Per centage of strength of joint *74* Thickness of shell crown plates *9/16* Radius of do. *5'-0"* No. of Stays to do. *1*
Dia. of stays. *1 1/2"* Diameter of furnace Top *3'-11"* Bottom *4'-4 1/2"* Length of furnace *52"* Thickness of furnace plates *9/16* Description of joint *Lap single* Thickness of furnace crown plates *1/8* Stayed by *upstays* Working pressure of shell by rules *108*
Working pressure of furnace by rules *130* Diameter of uptake *12"* Thickness of uptake plates *3/8* Thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:— *one propeller, two top end and two bottom end connecting rods bolts & nuts, two main bearing bolts, one set coupling bolts one set fuel & trip pump valves, various bolts & nuts, Iron of various sizes*

The foregoing is a correct description,
G. J. Gray Engineer Manufacturer. *J. S. Kemp* Manufacturer *Marine Road*

Dates of Survey while building	During progress of work in shops—	<i>1899 Dec. 12, 1900 Jan. 12, Oct. 1, 19, Nov. 26 Dec. 12, 1901 Jan. 12, 29, Mar. 14, Apr. 3, May 14, June 14, 21</i>
	During erection on board vessel—	<i>Dec. 1900 Nov. 19, 16, 20, 22, 27 Dec. 5, 7, 10, 12, 14, 1901 Jan. 16, 22 Feb. 1, 6</i>
	Total No. of visits	<i>29</i>

Is the approved plan of main boiler forwarded herewith *yes*
" " " donkey " " *yes*

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

Material of screw shaft *Iron* Is 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 in the propeller boss *yes* If the liner is in more than one length are the joints burned *no*
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 & non-corrosive *yes* If two liners are fitted, is the shaft lapped or protected between the liners *yes*

The machinery of this vessel has been built under special survey. The materials & workmanship are sound and first class and under the vessel slip in our opinion to have record of 1st M.C. 6.01

It is submitted that this vessel is eligible for THE RECORD. + LMC 6.01

C.M.
9.7.01

The amount of Entry Fee..	£	1	:	:	:
Special ..	£	9	:	12	:
Donkey Boiler Fee ..	£	:	:	:	:
Travelling Expenses (if any) £	:	:	:	:	:

When applied for *-6 JUL 1901*
When received *9.7.01*

Committee's Minute *TUES. JUL 9 1901*

Assigned

G. A. Nale & *A. C. Jarmin*
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping