

REPORT ON BOILERS.

No. 50904

Port of *Newcastle on Tyne.*

MON. 11 JUN 1906

Survey held at *S. Shields* Date, first Survey *Nov. 30 '05.* Last Survey *Feb 27* 19 *06.*
 Book. (Number of Visits *15*)
 Name of vessel *S.S. Lillian* Gross *320* Net *127*
 Built at *Yarm* By whom built *Yarm S. B. C.* When built *1906.*
 Lines made at *S. Shields* By whom made *G. J. Gray.* when made *1906. 5.*
 Engines made at *South Shields.* By whom made *G. J. Eltringham & Co* when made *1906.*
 Registered Horse Power *71.* Owners *Westcombe Shipping Co Ltd* Port belonging to *Newcastle.*

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~—Manufacturers of Steel *John Spencer & Sons.*

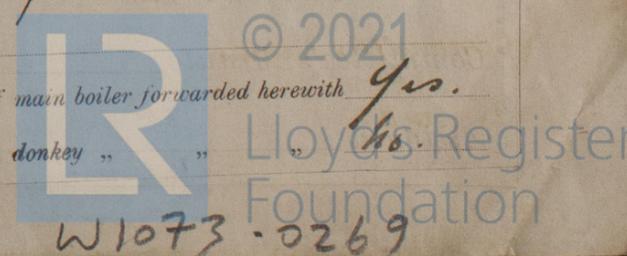
Letter for record *S.* Total Heating Surface of Boilers *1328.* Is forced draft fitted *No.* No. and Description of Boilers *One S.E. cyl. multitubular* Working Pressure *130 lbs.* Tested by hydraulic pressure to *260 lbs.* Date of test *27/2/06.*
 No. of Certificate *7182.* Can each boiler be worked separately Area of fire grate in each boiler *44 sq ft* No. and Description of Safety valves to each boiler *2. Spring Load.* Area of each valve *7.06 sq in* Pressure to which they are adjusted *135 lbs.*
 Are they fitted with easing gear *Yes.* In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *No.*
 Greatest distance between boilers or ~~upstays~~ and bunkers *12"* Mean dia. of boilers *12'-5 1/2"* Length *10'-0"*
 Material of shell plates *Steel.* Thickness *29/32"* Range of tensile strength *28 1/2-32.* Are the shell plates *welded* or flanged *No.*
 Description of riveting: cir. seams *Lap. L.R.* long. seams *Lap. J.R.* Diameter of rivet holes in long. seams *1 1/8"* Pitch of rivets *4 3/4"*
 Width of plates or width of butt straps *12 3/8"* Per centages of strength of longitudinal joint: rivets *78.6.* Working pressure of shell by rules *131 1/2.* Size of manhole in shell *17" x 13"* Size of compensating ring *7" x 1"* No. and Description of Furnaces in each boiler *Three - plain* Material *Steel.* Outside diameter *37"* Length of plain part: top *6'-1"* Thickness of plates: crown *19/32"* bottom *23/32"*
 Description of longitudinal joint *Lap. S.R.* No. of strengthening rings Working pressure of furnace by the rules *140 lbs.* Combustion chamber: Material *Steel.* Thickness: Sides *9/16"* Back *19/32"* Top *9/16"* Bottom *23/32"* Pitch of stays to ditto: Sides *9 1/4 x 9"* Back *9 1/2 x 9 3/4"*
 If stays are fitted with nuts or riveted heads *Nuts.* Working pressure by rules *131 1/2.* Material of stays *Steel.* Diameter at smallest part *1 1/2"* Area supported by each stay *83 sq in* Working pressure by rules *136 1/2.* End plates in steam space: Material *Steel* Thickness *29/32"*
 How are stays secured *10 1/2 x 7/8.* Working pressure by rules *133 1/2.* Material of stays *Steel.* Diameter at smallest part *2 5/16"*
 Area supported by each stay *297.5 sq in* Working pressure by rules *143.* Material of Front plates at bottom *Steel.* Thickness *7/8"* Material of lower back plate *Steel.* Thickness *25/32"* Greatest pitch of stays *14 1/2 x 9 1/2"* Working pressure of plate by rules *140 lbs.* Diameter of tubes *3 1/2"*
 Pitch of tubes *4 3/4 x 4 3/4"* Material of tube plates *Steel* Thickness: Front *29/32 x 7/8"* Back *3/4"* Mean pitch of stays *11 7/8"* Pitch across wide water spaces *14 1/2"* Working pressures by rules *130 lbs.* Girders to Chamber tops: Material *Steel.* Depth and thickness of girder at centre *5 1/2 x 2 15/16"* Length as per rule *2'-6"* Distance apart *9 1/4"* Number and pitch of Stays in each *Two. 9"*
 Working pressure by rules *131.* 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 rivets 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

VERTICAL DONKEY BOILER—No. Description Manufacturers of steel

Made at *Donkey Boiler* By whom made *Donkey Boiler* When made *Donkey Boiler* Where fixed *Donkey Boiler*
 Working pressure tested by hydraulic pressure to *Donkey Boiler* No. of Certificate *Donkey Boiler* Fire grate area *Donkey Boiler* Description of safety valves *Donkey Boiler*
 No. of safety valves *Donkey Boiler* Area of each *Donkey Boiler* Pressure to which they are adjusted *Donkey Boiler* If fitted with easing gear *Donkey Boiler* If steam from main boilers can enter the donkey boiler *Donkey Boiler*
 Dia. of donkey boiler *Donkey Boiler* Length *Donkey Boiler* Material of shell plates *Donkey Boiler* Thickness *Donkey Boiler* Range of tensile strength *Donkey Boiler*
 Descrip. of riveting long. seams *Donkey Boiler* Dia. of rivet holes *Donkey Boiler* Whether punched or drilled *Donkey Boiler* Pitch of rivets *Donkey Boiler*
 Width of plating *Donkey Boiler* Per centage of strength of joint: Rivets *Donkey Boiler* Working pressure of shell by rules *Donkey Boiler* Thickness of shell crown plates *Donkey Boiler*
 Radius of do. *Donkey Boiler* No. of Stays to do. *Donkey Boiler* Dia. of stays *Donkey Boiler* Diameter of furnace top *Donkey Boiler* Length of furnace *Donkey Boiler*
 Thickness of furnace plates *Donkey Boiler* Description of joint *Donkey Boiler* Working pressure of furnace by rules *Donkey Boiler* Thickness of furnace crown plates *Donkey Boiler*
 Stayed by *Donkey Boiler* Diameter of uptake *Donkey Boiler* Thickness of uptake plates *Donkey Boiler* Thickness of water tubes *Donkey Boiler*

The foregoing is a correct description,
G. J. Eltringham & Co Manufacturers of Main Boilers

Dates of Survey while building: During progress of work in shops - *1905. Nov. 30. Dec. 20. 1906. Jan 5. 10. 12. 16. 22. 25. 31. Feb. 5. 7. 15. 21. 27.*
 Total No. of visits *15* Is the approved plan of main boiler forwarded herewith *Yes.*
 " " " donkey " " *Yes.*



GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This boiler has been constructed under Special Survey, the materials & workmanship good & efficient.

Certificate (if required) to be sent to

The amount of Entry Fee...	£		When applied for.
Special	£	19	
Donkey Boiler Fee ...	£		When received.
Travelling Expenses (if any)£		19	

See Machinery Report attached

A.G. Dearden.

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

TUES. JUN 12 1906

Committee's Minute

Assigned

All minute on attached report



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