

REPORT ON BOILERS.

No. 6005

Port of *Belfast*
 No. in Survey held at *Belfast* Date, first Survey *Feb 27th* Last Survey *Dec. 14* 19 *05*
 Reg. Book. *S.S. Malakand* (Number of Visits *50*)
 on the *Belfast* Built at *Belfast* By whom built *Harland & Wolff Ltd* When built *1905*
 Engines made at *Belfast* By whom made *Harland & Wolff Ltd* when made *1905*
 Boilers made at By whom made when made
 Registered Horse Power Owners *J. F. Bricklebank* Port belonging to *Liverpool*

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel *D. Colville & Sons Ltd*

(Letter for record *305*) Total Heating Surface of Boilers *4212 sq ft* forced draft fitted *No* No. and Description of Boilers *2 Single End Cylindrical*
 Working Pressure *210 lb* Tested by hydraulic pressure to *430 lb* Date of test *13-10-05*
 No. of Certificate *305* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *57 1/2 sq ft* and Description of safety valves to each boiler *2 - 4 Poppet Springs* No. of each valve *707 1/2 lb* Pressure to which they are adjusted *215 lb*
 Are they fitted with easing gear *Yes* In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *No*
 Smallest distance between boilers or uptakes and bunkers or woodwork *about 40"* Mean dia. of boilers *14'-5 1/2"* Length *10'-6"*
 Material of shell plates *Steel* Thickness *1 1/2"* Range of tensile strength *29-32* Are the shell plates welded or flanged *No*
 Descrip. of riveting: cir. seams *Lap Rivet* long. seams *Butt Rivet* Diameter of rivet holes in long. seams *1 1/8"* Pitch of rivets *10"*
 Lap of plates on width of butt straps *22 1/2"* Per centages of strength of longitudinal joint rivets *93 1/2* plate *84 1/2* Working pressure of shell by rules *246 lb* Size of manhole in shell *16" x 12"* Size of compensating ring *10" x 12"* No. and Description of Furnaces in each boiler *3 - 2 Right Hand* Material *Steel* Outside diameter *46 1/2"* Length of plain part *4'* Thickness of plates *3 1/4"*
 Description of longitudinal joint *Weld* No. of strengthening ring *2 To an* Working pressure of furnace by the rules *244 lb* Combustion chamber plates: Material *Steel* Thickness: Sides *1 1/2"* Back *5"* Top *1 1/2"* Bottom *3 1/4"* Pitch of stays to ditto: Sides *7 1/2" x 7 1/2"* Back *8 1/2" x 7 1/2"*
 Top *7 1/2" x 7 1/2"* If stays are fitted with nuts or riveted heads *Nuts inside* Working pressure by rules *216 lb* Material of stays *Steel* Diameter at smallest part *3 1/2"* Area supported by *each* stay *54 1/2 sq ft* Working pressure by rules *218 lb* plates in steam space: Material *Steel* Thickness *1 1/2"*
 Pitch of stay *16" x 4 1/2"* How are stays secured *Nuts inside* Working pressure by rules *280 lb* Material of stays *Steel* Diameter at smallest part *2 1/2" - 2 3/4"*
 Area supported by *each* stay *232 sq ft* Working pressure by rule *240 lb* Material of Front plates at bottom *Steel* Thickness *1 1/2"* Material of Lower back plate *Steel* Thickness *1 1/2"* Greatest pitch of stays *12 1/2"* Working pressure of plate by rules *604 lb* Diameter of tubes *4" x 4"*
 Pitch of tubes *4" x 4"* Material of tube plates *Steel* Thickness: Front *1 1/2"* Back *3 1/4"* Mean pitch of stays *8" x 8"* Pitch across wide water spaces *14"* Working pressures by rules *238 lb with 1/4" double* Material *Iron* Depth and thickness of girder at centre *8" x (8" x 2)* Length as per rule *27 1/2"* Distance apart *7 1/2"* Number and pitch of Stays in each *3 - 7 1/2"*
 Working pressure by rules *253 lb* Superheater or Steam chest: how connected to boiler *No* 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

VERTICAL DONKEY BOILER—

No.

Description

Manufacturers of steel

Made at By whom made When made Where fixed
 Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves
 No. of safety valves Area of each Pressure to which they are adjusted 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
 Stayed by Diameter of uptake Thickness of uptake plates Thickness of water tubes

The foregoing is a correct description,

Harland & Wolff Ltd Manufacturer.

Dates of Survey while building
 During progress of work in shops - -
 During erection on board vessel - -
 Total No. of visits

See other sheet

Is the approved plan of main boiler forwarded herewith

W839-0068

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

Donkey Pumps. & Spare Gear.
Weirs 12 $\frac{1}{2}$ " x 9 $\frac{1}{2}$ " x 28" Feed
Woodsons 7" x 6" x 12" Auxiliary Feed
Watsons 12" x 10" x 14" Ballast
Lowland Muffs 9" x 6" x 10" General
Expor^r Pump set^r

1 Propeller Blade.
Pair Crank pin brasses
Cross head
Air pump bucket rod, complete
head valve
Set piston rings H.P. & I.P.
H.P. valve spindle & neck bush
I.P.
Impeller & spindle for Circulating Pump.
Eccentric Strap complete.
4 Cylinder escape valve springs
Condenser tubes.
Set 2 tube nuts for Cylinder flanks.
Feed pump escape valve spring
Water tubes set^r, and all gear to Lloyd's
Rules extra.

Certificate (if required) to be sent to

The amount of Entry Fee...	£	:	:	When applied for.
Special	£	:	:	16/12 1905
Donkey Boiler Fee ...	£	:	:	When received.
Travelling Expenses (if any) £	:	:	:	19

Committee's Minute

FRI. 22 DEC 1905

Assigned

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



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