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Rpt. 5.

REPORT ON BOILERS.

Gl. No. 23689
New No. 50846

Port of *Glasgow*

Received at London Office

TUESDAY 16th May 1906
APL 1906

No. in Survey held at *Annan* Date, first Survey *7 March* Last Survey *21 March 1906*
Reg. Book. *Twin* (Number of Visits *2*)
57 on the *Donkey Boiler for S.S. EMPRESS Swan Hunter no 4074* Tons { Gross *1342*
Net *645*
Master Built at *Newcastle* By whom built *Swan Hunter & W Richards & Co* When built *1906*
Engines made at *Newcastle* By whom made *Swan Hunter & W Richards & Co* when made *1906*
Boilers made at *S* By whom made *S* when made *1906*
Registered Horse Power Owners *Charlottenoun S. Har Co* Port belonging to *Charlottenoun*

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel

(Letter for record) Total Heating Surface of Boilers Is forced draft fitted No. and Description of Boilers
Working Pressure Tested by hydraulic pressure to Date of test
No. of Certificate Can each boiler be worked separately Area of fire grate in each boiler No. and Description of safety valves to each boiler
Area of each valve Pressure to which they are adjusted
Are they fitted with easing gear In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler
Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length
Material of shell plates Thickness Range of tensile strength Are the shell plates welded or flanged
Descrip. of riveting: cir. seams long. seams Diameter of rivet holes in long. seams Pitch of rivets
Lap of plates or width of butt straps Per centages of strength of longitudinal joint rivets Working pressure of shell by plate
rules Size of manhole in shell Size of compensating ring No. and Description of Furnaces in each boiler
Material Outside diameter Length of plain part top Thickness of plates crown bottom
Description of longitudinal joint No. of strengthening rings Working pressure of furnace by the rules Combustion chamber
plates: Material Thickness: Sides Back Top Bottom Pitch of stays to ditto: Sides Back
Top If stays are fitted with nuts or riveted heads Working pressure by rules Material of stays Diameter at smallest part
Area supported by each stay Working pressure by rules End plates in steam space: Material Thickness
Pitch of stays How are stays secured Working pressure by rules Material of stays Diameter at smallest part
Area supported by each stay Working pressure by rules Material of Front plates at bottom Thickness Material of Lower back plate
Thickness Greatest pitch of stays Working pressure of plate by rules Diameter of tubes
Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays Pitch across wide water spaces
Working pressures by rules Girders to Chamber tops: Material Depth and thickness of girder at centre
Length as per rule Distance apart Number and pitch of Stays in each
Working pressure by rules 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 pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER

No. *3930* Description *Cochran* Manufacturers of steel *Wm Beardmore & Co*
Made at *Annan* By whom made *Cochran & Co* When made *1906* Where fixed *Strickland* Working pressure *80 lb.*
tested by hydraulic pressure to *160 lb.* Date of test *21/3/06* No. of Certificate *4948* Fire grate area *8.54* Description of safety valves *Spring*
No. of safety valves *2* Area of each *3-1/4* Pressure to which they are adjusted *85* If fitted with easing gear *74* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *4'-0"* Length *9'-0"* Material of shell plates *Steel* Thickness *3/16" & 1/2"* Range of tensile strength *24/32* Descrip. of riveting long. seams *Double rivet* Dia. of rivet holes *2 3/32"* Whether punched or drilled *✓* Pitch of rivets *2 1/2"*
Lap of plating *3 3/8"* Per centage of strength of joint Rivets *48%* Working pressure of shell by rules *110 lb.* Thickness of shell crown plates *3/16"*
Radius of do. *14'-0 1/2"* No. of Stays to do. *32* Dia. of stays *3/4"* Diameter of furnace Top *1'-11"* Bottom *3'-6"* Length of furnace *2'-6"*
Thickness of furnace plates *10/32"* Description of joint *Lap single rivet* Working pressure of furnace by rules *122 lb.* Thickness of furnace crown plates *8/16"* Radius of do. *1'-11"* Stayed by *none* Diameter of uptake *9 1/4" x 13 1/4"* Thickness of uptake plates *9/16"* F.T.A. *2 1/2"* B.T.P. *1/2"*
Thickness of water tubes

The foregoing is a correct description,

For *COCHRAN & CO., ANNAN, LIMITED.* Manufacturer.

Dates of Survey { During progress of work in shops - - } *1906 March 7, 21*
while { During erection on board vessel - - } *1906 Apr 6, 17, 24, 28 May 3, 7, 10, 16*
building { Total No. of visits } *10*

Is the approved plan of main boiler forwarded herewith *✓*

donkey

Lloyd's Register
Foundation

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

The Boiler has been made under survey. The material & workmanship are of good description and the test proved Satisfactory.

This boiler has been filled in a sat. manner
John H Heck.

Certificate (if required) to be sent to the Committee's Minute.

The amount of Entry Fee...	£	:	:	When applied for.
Special ...	£	:	:	19
Donkey Boiler Fee ...	£	2	:	When received.
Travelling Expenses (if any) £	:	:	:	19

Glasgow 2 - APR 1906

Committee's Minute

Assigned

Transmit to London.

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

Clyde District

TUES. 15 MAY 1906

see minute on
Newcastle Rpt.

No. 5704

Lloyd's Register
Foundation