

REPORT ON BOILERS.

No. 68618

Received at London Office MON. - 3 APR. 1916

Date of writing Report

101

When handed in at Local Office

APR 1 1916

Port of

NEWCASTLE ON TYNE.

No. in
Reg. Book.

Survey held at

Newcastle on Tyne.

Date, First Survey

16th Feb. 1914 Last Survey 29th Mar 1916

on the TWIN SCREW STEAMER "LORD KELVIN."

(Number of Visits)

Gross 2641
Net 1306

Master

Built at Walker on Tyne. By whom built Swan Hunter & Wigham Richardson When built 1916.

Engines made at Walker on Tyne.

By whom made Swan Hunter & Wigham Richardson When made 1916.

Boilers made at Walker on Tyne.

By whom made Swan Hunter & Wigham Richardson When made 1916.

Registered Horse Power

Owners Anglo American Telegraph Co. Port belonging to London

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

(Letter for record S. ✓) Total Heating Surface of Boilers 342 sq. ft. Is forced draft fitted No. ✓ No. and Description of

Boilers One: Cylindrical. Single Working Pressure 100 lb. Tested by hydraulic pressure to 200 lb. Date of test 5/4/15

No. of Certificate 8792 Can each boiler be worked separately Area of fire grate in each boiler Oil fuel. No. and Description of

safety valves to each boiler 2: Spring loaded. Area of each valve 3.14 sq. in. Pressure to which they are adjusted 105 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 9 in. Mean dia. of boilers 4' 11" Length 6' 9"

Material of shell plates Steel Thickness 1/2" Range of tensile strength 29 to 33 tons Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams Lap Single long. seams Lap Double Riv Diameter of rivet holes in long. seams 13/16" Pitch of rivets 3 1/4"

Lap of plates or width of butt straps 5 1/4" Per centages of strength of longitudinal joint rivets 81.2% plate 75% Working pressure of shell by

rules 103 lb. Size of manhole in shell 16" x 12" Size of compensating ring 4 1/2" x 1/2" No. and Description of Furnaces in each

boiler 2: Plain. Material Steel. Outside diameter 28 1/4" Length of plain part top 52 1/2" Thickness of plates crown 1/2" bottom 3/4"

Desc. of longitudinal joint: Single No. of strengthening rings none Working pressure of furnace by the rules 149 lb. Combustion chamber

plates: Material Steel. Thickness: Sides 15/32" Back 13/32" Top 15/32" Bottom 5/8" Pitch of stays to ditto: Sides 6 5/8" x 8 1/2" Back 9 1/2" x 9"

Top 6 5/8" x 9 1/2" If stays are fitted with nuts or riveted heads No. Working pressure by rules 101 lb. Material of stays Steel Area Diameter at

smallest part 1.45 in. Area supported by each stay 58.5 sq. in. Working pressure by rules 135 lb. End plates in steam space: Material Steel Thickness 3/4"

Pitch of stays 14" x 14" How are stays secured: Washers Working pressure by rules 128 lb. Material of stays Steel Area Diameter at smallest part 2.17"

Area supported by each stay 196 sq. in. Working pressure by rules 118 lb. Material of Front plates at bottom Steel Thickness 3/4" Material of

Lower back plate Steel Thickness 3/4" Greatest pitch of stays 14" Working pressure of plate by rules 135 lb. Diameter of tubes 3"

Pitch of tubes 4 1/8" x 4 1/4" Material of tube plates Steel Thickness: Front 3/4" Back 5/8" Mean pitch of stays 10 1/2" Pitch across wide

water spaces 14" Working pressures by rules 102 lb. Girders to Chamber tops: Material Steel Depth and thickness of

girder at centre 4 1/2" x 1" Length as per rule 14 5/8" Distance apart 7 1/4" Number and pitch of Stays in each 1 - 6 5/8"

Working pressure by rules 102 lb. Superheater or Steam chest: how connected to boiler none. 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

The foregoing is a correct description,
SWAN, HUNTER & WIGHAM RICHARDSON, LTD.

Manufacturer.

Dates of Survey
During progress of
work in shops - -
while
During erection on
building board vessel - -

See Weekly Report

Is the approved plan of boiler forwarded herewith

Total No. of visits

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

This Donkey Boiler was built under special survey and the materials and workmanship are good. On completion it was tested as required by the Rules and found tight. For recommendations see accompanying report.

Survey Fee ... £ : : When applied for, 191
Travelling Expenses (if any) £ : : When received, 191

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

Committee's Minute

TUE. - 4 APR. 1916

Assigned

All minute hvc fe. attached