

5a.

REPORT ON BOILERS.

No. 7483

Received at London Office

MON. JAN. 18. 1915

Writing Report 13th Jan 1915 When handed in at Local Office

10 Port of Belfast

in Survey held at Belfast

Date, First Survey 1st Oct 1913 Last Survey 8th Jan 1915

Book. S.S. Ebro

(Number of Visits 110) Tons { Gross 8479
Net 5173

on the Belfast Built at Belfast By whom built Workman Clark & Co. Ltd built 1915

Rivets Belfast By whom made - when made -

Plates Belfast By whom made - when made -

Registered Horse Power - Owner Royal Mail S. P. Coy Port belonging to Belfast

TUBULAR BOILERS - MAIN, AUXILIARY OR DONKEY. Manufacturers of Steel Boardman & Co. Ltd

Total Heating Surface of Boilers 5860 sq. ft. Is forced draft fitted Yes No. and Description of 2 Single End Cylinders

Working Pressure 215 lbs Tested by hydraulic pressure to 430 lbs Date of test 10-9-14

of Certificate 466 Can each boiler be worked separately Yes Area of fire grate in each boiler 7 1/2 sq. ft. No. and Description of 2 - Direct Spring

Area of each valve 11.04 sq. ft. Pressure to which they are adjusted 215 lbs

they fitted with casing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler Yes

Least distance between boilers or uptakes and bunkers or woodwork about 15" Mean dia. of boilers 16'-0" Length 11'-9"

Material of shell plates Steel Thickness 1 5/8" Range of tensile strength 30 1/2 to 33 1/2 Tons Are the shell plates welded or flanged No

Direction of riveting: cir. seams Lap 9 x 5 long. seams 9/Butt, Single of rivet holes in long. seams 1 5/8" Pitch of rivets 10 1/2"

width of butt straps 2 3/4" Per centages of strength of longitudinal joint rivets 90.5% plate 84.5% Working pressure of shell by 253 lbs

Size of manhole in shell 18" x 12" Size of compensating ring McNeil No. and Description of Furnaces in each 4 - Morrison

Material Steel Outside diameter 44 1/4" Length of plain part 4" Thickness of plates crown 4 3/4" bottom 6 1/4"

Description of longitudinal joint Weld No. of strengthening rings Yes Working pressure of furnace by the rules 248 lbs combustion chamber

Material Steel Thickness: Sides 2 1/2" Back 2 1/2" Top 2 1/2" Bottom 2 9/32" Pitch of stays to ditto: Sides 8 1/4" x 7 1/2" Back Various

Stays are fitted with nuts or riveted heads Nuts used Working pressure by rules 219 lbs Material of stays Steel Diameter at 8 1/2" x 7 1/2"

Least part supported by each stay 64 sq. ft. Working pressure by rules 271 lbs plates in steam space: Material Steel Thickness 1 1/4"

How are stays secured Butt & Wash Working pressure by rules 216 lbs Material of stays Steel Diameter at smallest part 6.09" x 2.3 sq. ft.

Front plates at bottom Steel Thickness 1" Material of Steel Thickness 3/2" Greatest pitch of stays 14 1/8" Working pressure of plate by rules 227 lbs Diameter of tubes 2 1/2"

Material of tube plate Steel Thickness: Front 1 1/4" Back 1 3/16" Mean pitch of stay 7 1/2" x 7 1/4" Pitch across wide 13 1/2"

Working pressures by rules 219 lbs Girders to Chamber tops: Material Steel Depth and thickness of 10" x (7/4" x 2) Length as per rule 33" Distance apart 8 1/2" Number and pitch of Stays in each 3 - 7 1/2"

Working pressure by rules 224 lbs Superheater or Steam chest; how connected to boiler Yes Can the superheater be shut off and the boiler worked Yes

Material Steel Description of longitudinal joint - Diam. of rivet -

Pitch of rivets - Working pressure of shell by rules - Diameter of flue - Material of flue plates - Thickness -

End plates: Thickness - How stayed -

Working pressure of end plates - Area of safety valves to superheater - Are they fitted with casing gear -

The foregoing is a correct description,
FOR WORKMAN, CLARK & CO, LIMITED
Manufacturer.

See other sheet

Is the approved plan of boiler forwarded herewith Yes

Total No. of visits -

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

Survey Fee £ : : } When applied for, 19.....
Travelling Expenses (if any) £ : : } When received, 19.....

R. F. Pennington

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

TUE. JAN. 19. 1915

Committee's Minute

Assigned

015292-015301-0645



List of Donkey Pumps

2 Weir Main Feed	14 x 10 1/2 x 26 - ✓
General	11 x 7 1/2 x 12 - ✓
Ash Expectan	11 x 7 1/2 x 12 - ✓
Aux. Air	8 x 12 x 12 - ✓
Aux. Feed	8 x 5 x 12 - ✓
Lantern	5 x 4 x 6 - ✓
F. Water	5 x 5 x 6 - ✓
Ballast	8 x 10 x 12 - ✓

Spare Gear

- 2 Propeller blades
- 1 Thomson Breakdown Coupling
- 1 Piston rod
- 1 Eccentric rods, pulley & trap
- 2 Valve spindles
- 1 Pair crank pin bushes
- 2 - top end
- 2 - main bearing
- 2 Sets H.P. piston rings
- 1 - H.P. M.P. M.P.
- 1 - piston valve packing rings
- 1 Air pump bucket, rod & head valve
- 50 Main condenser tubes
- 4 Safety valve springs
- 1 Centrifugal pump impeller & spindle
- 12 Boiler tubes
- 2 Eccentric straps bolts & nuts
- Sets fire bars, bolts etc
- Full gear to Lloyd's Rules extra ✓

R. J. Beveridge



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Foundation