

REPORT ON BOILERS.

No. 18998.

Received at London Office

JUN 10 1937

Date of writing Report 8-6-1937 When handed in at Local Office 8-6-1937 Port of Aberdeen.

No. in Survey held at Aberdeen.

Date, First Survey

Last Survey 3rd June 1934.

on the G.W.E.N.T.H.I.L.L.S.

(Number of Visits 10) Tons { Gross 868
Net 456.

Master Built at Aberdeen. By whom built J. Lewis & Son Ltd Yard No. 142 When built 1934

Engines made at Aberdeen By whom made J. Lewis & Son Ltd Engine No. 220 When made 1934

Boilers made at " By whom made " Boiler No. 183 When made 1934

Nominal Horse Power 131. Owners Messrs. Morley Son & Co. Ltd Port belonging to Newport Man

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~, OR ~~DONKEY~~.

Manufacturers of Steel Colvilles Ltd.

(Letter for Record S. ✓)

Total Heating Surface of Boilers 2354 ft² Is forced draught fitted No ✓ Coal or Oil fired Coal ✓

No. and Description of Boilers One - Single ended. Working Pressure 200 lbs ✓

Tested by hydraulic pressure to 350 lbs Date of test 24-4-34 No. of Certificate 1128 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 60 ft² No. and Description of safety valves to each boiler 2 Direct Spring loaded ✓Area of each set of valves per boiler { per Rule 13.41 ft²
as fitted 14.13 ft² Pressure to which they are adjusted 205 lbs ✓ Are they fitted with easing gear Yes. ✓

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 4'-6" Is oil fuel carried in the double bottom under boilers No. ✓

Smallest distance between shell of boiler and tank top plating 6 ft ✓ Is the bottom of the boiler insulated Yes. ✓

Largest internal dia. of boilers 15'-0 3/8" Length 10'-9" Shell plates: Material Steel Tensile strength 29/33 tons ✓

Thickness 1 5/16" Are the shell plates welded or flanged No ✓ Description of riveting: circ. seams { end D. R. L ✓
inter. ✓long. seams T. R. D. B. S. ✓ Diameter of rivet holes in { circ. seams 1 3/8" ✓
long. seams 1 3/8" ✓ Pitch of rivets { 4.09" ✓
9.12" ✓Percentage of strength of circ. end seams { plate 66.6.
rivets 43.5 Percentage of strength of circ. intermediate seam { plate ✓
rivets ✓Percentage of strength of longitudinal joint { plate 85.5
rivets 88.5 Working pressure of shell by Rules 200.1 lbs ✓
combined 88.8.Thickness of butt straps { outer 1" ✓
inner 1 1/8" ✓ No. and Description of Furnaces in each Boiler 3 Plain. ✓

Material Steel Tensile strength 26/30 tons ✓ Smallest outside diameter 3'-4 3/8" ✓

Length of plain part { top 6'-4 3/32" ✓
bottom 5'-10 1/32" ✓ Thickness of plates { crown 1 3/16" ✓
bottom 1 3/16" ✓ Description of longitudinal joint Weld. ✓

Dimensions of stiffening rings on furnace or c.c. bottom None Working pressure of furnace by Rules 200 lbs ✓

End plates in steam space: Material Steel Tensile strength 26/30 tons ✓ Thickness 1 1/4" ✓ Pitch of stays 1'-8 1/4" x 1'-5 1/2" ✓

How are stays secured nuts inside & outside. ✓ Working pressure by Rules 202.3 lbs ✓

Tube plates: Material { front Steel ✓
back " ✓ Tensile strength { 26/30 tons ✓
Thickness { 29/32" ✓
25/32" ✓Mean pitch of stay tubes in nests 10.1" Pitch across wide water spaces 14 1/8" ✓ Working pressure { front 201 lbs ✓
back 206 " ✓

Girders to combustion chamber tops: Material Steel Tensile strength 29/33 tons ✓ Depth and thickness of girder

at centre 2 @ 11' x 9/16" ✓ Length as per Rule 2'-10 1/32" ✓ Distance apart 9" ✓ No. and pitch of stays

in each 3 @ 8 1/8" ✓ Working pressure by Rules 204 lbs ✓ Combustion chamber plates: Material Steel

Tensile strength 26/30 tons ✓ Thickness: Sides 2 1/32" ✓ Back 1 1/16" ✓ Top 2 1/32" ✓ Bottom 2 1/32" ✓

Pitch of stays to ditto: Sides 9 1/8" x 8 1/8" Back 9 1/8" x 9" Top 8 1/8" x 9" Are stays fitted with nuts or riveted over nuts. ✓

Working pressure by Rules 200.5 lbs ✓ Front plate at bottom: Material Steel Tensile strength 26/30 tons ✓

Thickness 29/32" ✓ Lower back plate: Material Steel Tensile strength 26/30 tons ✓ Thickness 29/32" ✓

Pitch of stays at wide water space 1'-2 1/8" ✓ Are stays fitted with nuts or riveted over nuts. ✓

Working Pressure 205.5 lbs ✓ Main stays: Material Steel Tensile strength 28/32 tons ✓

Diameter { At body of stay, ✓
or 3 1/8" ✓ No. of threads per inch 6" ✓ Area supported by each stay 354.4" ✓
Over threads

Working pressure by Rules 208 lbs ✓ Screw stays: Material Steel Tensile strength 26/30 tons ✓

Diameter { At turned off part, ✓
or 1 3/4" & 1 5/8" ✓ No. of threads per inch 9" ✓ Area supported by each stay 82.1" & 94.4" ✓
Over threads

Working pressure by Rules 205 221 *Are the stays drilled at the outer ends* *Margin stays: Diameter* { At turned off part, 1 7/8" or Over threads 1 7/8" ✓
No. of threads per inch 9. ✓ Area supported by each stay 105.5" Working pressure by Rules 202.3 lbs ✓
Tubes: Material L. W. W. L. External diameter { Plain 3 1/4" ✓ Thickness { 8 W G 1/4" & 5/16" ✓ No. of threads per inch 9. ✓
Pitch of tubes 4 1/2" x 4 1/2" ✓ Working pressure by Rules 209.8 & 205.8 lbs ✓ Manhole compensation: Size of opening in shell plate 19" x 15" ✓ Section of compensating ring 4" x 1 5/16" ✓ No. of rivets and diameter of rivet holes 40 - 1 3/8" ✓
Outer row rivet pitch at ends 9 1/2" ✓ Depth of flange if manhole flanged 3" ✓ Steam Dome: Material None ✓
Tensile strength Thickness of shell Description of longitudinal joint
Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate Rivets
Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays
How connected to shell Inner radius of crown Working pressure by Rules
Size of doubling plate under dome Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell

Type of Superheater None. Manufacturers of { Tubes Steel forgings Steel castings
Number of elements Material of tubes Internal diameter and thickness of tubes
Material of headers Tensile strength Thickness Can the superheater be shut off and the boiler be worked separately
Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
Area of each safety valve Are the safety valves fitted with easing gear Working pressure as per Rules
Pressure to which the safety valves are adjusted Hydraulic test pressure tubes forgings and castings and after assembly in place Are drain cocks of valves fitted to free the superheater from water where necessary
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

For JOHN LEWIS & SONS LTD.
The foregoing is a correct description,
Jan. J. Donald SECRETARY Manufacture

Dates of Survey { During progress of work in shops - - 1934 Feb. 23. Mar. 24. 30. Apr. 9. 24. ✓ Are the approved plans of boiler and superheater forwarded herewith Yes
while building { During erection on board vessel - - Apr. 28. May 28. June 1. 3. Total No. of visits 10
(If not state date of approval.)

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. "GLENGARIFF" ABN Rpt. 18650

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under Special Survey, in accordance with the Rules & approved plan.
The materials & workmanship are good.
The boiler has been securely fitted on board the vessel, examined under working conditions & found good.
The safety valves have been adjusted under steam as stated, tried for accumulation & found satisfactory.
For record of survey. Please see Mch'y Rpt attached

Survey Fee ... £ : : } When applied for, 10
Travelling Expenses (if any) £ : : } When received, 10
changed on Mch'y Rpt.

J. Avey
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
Assigned See Abn. J.E. 18998