

REPORT ON BOILERS.

No. 22571.

NOV 20 1940

Received at London Office

of writing Report 7.11.40. 19 When handed in at Local Office 7.11.40. 19 Port of SWANSEA.

in Survey held at SWANSEA.

Date, First Survey 12.8.40.

Last Survey 10.10.40.

19

on the STEEL SCI. "EMPIRE BUFFALO" EX. "EGYPTINE"

(Number of Visits 7.)

Gross 6404.

Tons Net 4618.

at Seattle, Wash. By whom built Skinner & Eddy Corp.

Yard No. 68.

When built 1919.

nes made at Hamilton, O.

By whom made Hoover, Owens & Kentschler

Engine No. ✓

When made 1919.

ers made at ✓

By whom made ✓

Boiler No. ✓

When made 1919.

inal Horse Power 350 420 480

Owners Ministry of Shipping
(Lyle Shipping Co. Ltd. Mgrs)

Port belonging to London.

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

Manufacturers of Steel ✓

OIL BURNING 2684 \$ AS PER
COAL BURNING 2453 \$ PLAN.

(Letter for Record ✓)

Heating Surface of Boilers

Is forced draught fitted NO.

Coal or Oil fired OIL.

and Description of Boilers 3 SINGLE ENDED CYLINDRICAL.

Working Pressure 210 lbs $\frac{1}{2}$ ✓

ed by hydraulic pressure to ✓

Date of test ✓

No. of Certificate ✓

Can each boiler be worked separately YES

a of Firegrate in each Boiler ✓

No. and Description of safety valves to each boiler 2 SPRING LOADED - ENCASED. ✓

of each set of valves per boiler

per Rule 14.9 $\frac{1}{2}$ WHEN E TAKEN AT MIN. VALUE = 6

Pressure to which they are adjusted 210 lbs $\frac{1}{2}$ ✓

Are they fitted with easing gear YES. ✓

ase of donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓

llest distance between boilers & DECK OVERHEAD. 4'-9 $\frac{1}{2}$

Is oil fuel carried in the double bottom under boilers NO. FRESH WATER

llest distance between shell of boiler and tank top plating 18"

Is the bottom of the boiler insulated NO.

gest internal dia. of boilers 14'-9" ✓

Length 11'-0" ✓

Shell-plates: Material STEEL

Tensile strength TAKEN AT 60,000 lbs

ckness 19 $\frac{1}{16}$

Are the shell plates welded or flanged NO.

Description of riveting: circ. seams end ZIGZAG - DOUBLE.

seams 3 ROWS (INNER ROWS DOUBLE NO. IN OUTER ROW)

Diameter of rivet holes in circ. seams 1 $\frac{3}{8}$ RIVETS - HOLES 1 $\frac{7}{16}$

long. seams 1 $\frac{1}{2}$ RIVETS - HOLES 1 $\frac{9}{16}$

Pitch of rivets 4" ✓

centage of strength of circ. end seams

plate 64%

rivets 78.4%

Percentage of strength of circ. intermediate seam

plate 84.4%

rivets 91%

S1 TAKEN AT 60,000. S2 TAKEN AT 23 TONS.

ckness of butt straps

outer 1" ✓

inner 1 $\frac{3}{8}$ " ✓

No. and Description of Furnaces in each Boiler 3 STANDARD MORISON SUSPENSION TYPE. 30p

erial STEEL.

Tensile strength ✓

Smallest outside diameter 45 $\frac{1}{16}$ ✓

th of plain part

top 9" ✓

bottom 12" ✓

Thickness of plates

crown 21 $\frac{3}{32}$ ✓

bottom 21 $\frac{3}{32}$ ✓

Description of longitudinal joint WELDED. ✓

ensions of stiffening rings on furnace or c.e. bottom NONE.

plates in steam space: Material STEEL

Tensile strength ✓

Thickness 1 $\frac{1}{4}$ "

Pitch of stays VERTICAL 18"

are stays secured NUTS INSIDE & NUTS OUTSIDE WITHOUT WASHERS. ✓

e plates: Material

front STEEL

back STEEL

Tensile strength ✓

Thickness 13 $\frac{1}{16}$ ✓

en pitch of stay tubes in nests 8 $\frac{1}{4}$ H + 8" V = 8 $\frac{1}{8}$ MEAN. Pitch across wide water spaces 12 $\frac{3}{4}$ H + 8" V = 10 $\frac{3}{8}$ MEAN. ✓

ders to combustion chamber tops: Material

Steel ✓

Tensile strength ✓

Depth and thickness of girder

entre 11" x 3 $\frac{1}{4}$ " (2 PLATES) ✓

Length as per Rule ✓

Distance apart 8" ✓

No. and pitch of stays

ach 4 PITCH = 7" ✓

Combustion chamber plates: Material ✓

ile strength ✓

Thickness: Sides 11 $\frac{1}{16}$ ✓

Back 11 $\frac{1}{16}$ ✓

Top 11 $\frac{1}{16}$ ✓

Bottom 15 $\frac{1}{16}$ ✓

h of stays to ditto: Sides 7" H x 7 $\frac{3}{4}$ H ✓

Back 7 $\frac{1}{4}$ H - 7 $\frac{3}{4}$ ✓

Top 7" - 8" ✓

Are stays fitted with nuts or riveted over RIVETED OVER EXCEPT CHAMBER TOPS. ✓

nt plate at bottom: Material STEEL.

Tensile strength ✓

ckness 13 $\frac{1}{16}$ ✓

Lower back plate: Material STEEL

Tensile strength ✓

Thickness 13 $\frac{1}{16}$ ✓

h of stays at wide water space (3) P. 12" TESTED STEEL DIA. 2 $\frac{3}{8}$ x 2 $\frac{3}{4}$ AT ENDS

PITCH AT FRONT BOTTOM MANHOLE 17 $\frac{3}{4}$ " & 25"

Are stays fitted with nuts or riveted over NUTS INSIDE & OUTSIDE.

n stays: Material TESTED STEEL AS PER PLAN.

Tensile strength ✓

At body of stay 3 $\frac{1}{4}$ " ✓

Over threads AT ENDS. 3 $\frac{5}{8}$ "

No. of threads per inch 6. ✓

w stays: Material WROUGHT IRON AS PER PLAN.

Tensile strength ✓

At turned off part 15 $\frac{1}{8}$ "

Over threads BACKS & SIDES ✓

No. of threads per inch 12.



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Are the stays drilled at the outer ends ☒

Margin stays: Diameter ^{At turned off part,} _{or} Over threads $1\frac{3}{4}"$ ☒

No. of threads per inch 12

Tubes: Material ☒

External diameter

Plain $3"$
Stay $3"$

Thickness $\frac{1}{4}"$

ALL TUBES BEADED OVER IN CHAMBERS
No. of threads per inch 12

Pitch of tubes $4"$ VERTICAL $4\frac{1}{8}"$ HORIZONTAL ☒

Manhole compensation: Size of opening

shell plate **NONE**

Section of compensating ring ☒

No. of rivets and diameter of rivet holes ☒

Outer row rivet pitch at ends ☒

Depth of flange if manhole flanged $4\frac{1}{4}"$

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 ☒

Thickness of crown ☒

No. and diameter

stays ☒

Inner radius of crown ☒

How connected to shell ☒

Size of doubling plate under dome ☒

Diameter of rivet holes and

of rivets in outer row in dome connection to shell ☒

Type of Superheater **NOW REMOVED**

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

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 ☒

Pressure to which the safety valves are adjusted ☒

Hydraulic test pressure

tubes ☒

forgings and castings ☒

and after assembly in place ☒

Are drain cocks

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 ☒

The foregoing is a correct description, ☒

Manufact

Dates of Survey ^{During progress of} _{work in shops - -} ☒
^{while} _{building} ^{During erection on} _{board vessel - - -} ☒

Are the approved plans of boiler and superheater forwarded herewith
(If not state date of approval.)

Total No. of visits ☒

Is this Boiler a duplicate of a previous case ☒

If so, state Vessel's name and Report No. ☒

GENERAL REMARKS

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

The dimensions & scantlings of the boilers have been found to conform with the plan forwarded herewith & the workmanship is satisfactory. Please refer to Swansea Report No 22572 forwarded herewith.

Survey Fee

Charged on RPT. 4
1st ENTRY

Travelling Expenses (if any) £

When applied for,

19

When received,

19

Friedmann
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned



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Foundation