

REPORT ON BOILERS.

No. 29727

Received at London Office 9 MAY 1928

Date of writing Report

When handed in at Local Office

Port of Sunderland

No. in Survey held at

Sunderland.

Date, First Survey

Last Survey 1st May 1928

on the

S.S. "CEDARTREE"

(Number of Visits) Gross 1557
Net 824

aster

Built at Sunderland By whom built J. Brown

Yard No. 180 When built 1928.

engines made at

Sunderland By whom made George Rank Ltd.

Engine No. 1152. When made 1928.

boilers made at

do By whom made do

Boiler No. 1152 When made 1928.

nominal Horse Power

193

Owners The Tree Steamship Co. Ltd. Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Whiteley & Sons Ltd.

(Letter for Record 5 ✓)

Total Heating Surface of Boilers

3268 sq ft

Is forced draught fitted No ✓

Coal or Oil fired Coal ✓

No. and Description of Boilers

Two cyl mult single ended.

Working Pressure 180 lb/sq in

Tested by hydraulic pressure to

320 lbs/sq in

Date of test 14/10/27

No. of Certificate 3961

Can each boiler be worked separately Yes ✓

Area of Firegrate in each Boiler

46.5 sq ft

No. and Description of safety valves to each boiler Two spring loaded.

Area of each set of valves per boiler

per Rule 5.32 x 2
as fitted 25/8 dia (5.41 x 2)

Pressure to which they are adjusted 185

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 8'-0" ✓

Is oil fuel carried in the double bottom under boilers No ✓

Smallest distance between shell of boiler and tank top plating 2'-0" ✓

Is the bottom of the boiler insulated No ✓

Largest internal dia. of boilers

13'-3 3/32"

Length 10'-6"

Shell plates: Material STEEL

Tensile strength 28 TO 32 TONS

Thickness

1 7/16"

Are the shell plates welded or flanged No ✓

Description of riveting: circ. seams {

Long. seams

TROBS.

Diameter of rivet holes in {

circ. seams 1 1/8" ✓

long. seams 1 1/8" ✓

Pitch of rivets {

circ. 3 5/8" ✓

long. 7 3/4" ✓

Percentage of strength of circ. end seams {

plate 65%

rivets 44.1%

Percentage of strength of circ. intermediate seam {

plate -

rivets -

Percentage of strength of longitudinal joint {

plate 85.48%

rivets 89%

combined 84.7%

Working pressure of shell by Rules 182 lbs/sq in

Thickness of butt straps {

outer 3 7/32" ✓

inner 3 1/32" ✓

No. and Description of Furnaces in each Boiler 3 TIGHTONS.

Material

STEEL ✓

Tensile strength 26 TO 30 TONS. ✓

Smallest outside diameter 3'-2 1/4" ✓

Length of plain part {

top -

bottom -

Thickness of plates {

crown 3 1/2" ✓

bottom 3 1/2" ✓

Description of longitudinal joint WELDED.

Dimensions of stiffening rings on furnace or c.c. bottom -

Working pressure of furnace by Rules 187 lbs/sq in

End plates in steam space: Material

STEEL ✓

Tensile strength 26 TO 30 TONS ✓

Thickness 1 1/32" ✓

Pitch of stays 20 3/8" x 1 1/8" ✓

How are stays secured

IN & W. ✓

Working pressure by Rules 186 lbs/sq in

Tube plates: Material {

front STEEL ✓

back STEEL ✓

Tensile strength { 26 TO 30 TONS ✓

Thickness {

front 1 1/8" ✓

back 1 1/8" ✓

Mean pitch of stay tubes in nests 10 1/4"

Pitch across wide water spaces 14 1/4" x 8 3/4"

Working pressure {

front 226 lbs/sq in

back 191 lbs/sq in

Girders to combustion chamber tops: Material

STEEL ✓

Tensile strength 28 TO 32 TONS. ✓

Depth and thickness of girder

at centre

7 1/2" x 1 3/4" ✓

Length as per Rule 2'-6" ✓

Distance apart 9" x 10"

No. and pitch of stays

in each

2 @ 9 x 10

Working pressure by Rules 184 lbs/sq in

Combustion chamber plates: Material STEEL ✓

Tensile strength

26 TO 30 TONS ✓

Thickness: Sides 23/32" ✓

Back 1/8" ✓

Top 1/8" ✓

Bottom 23/32" ✓

Pitch of stays to ditto: Sides

9 x 10 ✓

Back 9 x 10 ✓

Top 9 x 9 x 10 ✓

Are stays fitted with nuts or riveted over NUTS ✓

Working pressure by Rules

182 lbs/sq in

Front plate at bottom: Material STEEL ✓

Tensile strength 26 TO 30 TONS

Thickness

1 1/8" & 1 1/16" ✓

Lower back plate: Material STEEL ✓

Tensile strength 26 TO 30 TONS.

Thickness 1 1/8" ✓

Pitch of stays at wide water space

16 x 9 ✓

Are stays fitted with nuts or riveted over NUTS ✓

Working Pressure

184 lbs/sq in

Main stays: Material STEEL ✓

Tensile strength 28 TO 32 TONS.

Diameter {

At body of stay, 2 3/4" & 2 7/8" ✓

Over threads 3 1/8" & 3 1/4" ✓

No. of threads per inch 6 ✓

Area supported by each stay 342 sq in

Working pressure by Rules

190 lbs/sq in

Screw stays: Material STEEL ✓

Tensile strength 26 TO 30 TONS ✓

Diameter {

At turned off part, 1 3/4" ✓

Over threads 1 3/4" ✓

No. of threads per inch 9 ✓

Area supported by each stay 90 sq in



005788-005799-0082

Working pressure by Rules 200 lbs. Are the stays drilled at the outer ends No Margin stays: Diameter 1 1/8" At turned off part, or Over threads

No. of threads per inch 9 Area supported by each stay 1170" Working pressure by Rules 182 lbs.

Tubes: Material STEEL External diameter Plain 3 1/2" Stay 3 1/4" Thickness 8WG 4 1/8" 5 1/8" 3" No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 3/8" Working pressure by Rules 230 lbs. Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring - No. of rivets and diameter of rivet holes -

Outer row rivet pitch at ends - Depth of flange if manhole flanged 3 1/8" Steam Dome: Material -

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 Small Manufacturers of Tubes - 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 - castings - and after assembly in place - Are drain cocks or valves fitted to free the superheater from water where necessary -

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes

The foregoing is a correct description,
FOR GEORGE CLARK LIMITED. Wolverhampton Manufacturer.

Dates of Survey During progress of work in shops - while building - During erection on board vessel - Please see Machinery Rpt Are the approved plans of boiler and superheater forwarded herewith - (If not state date of approval.)

Total No. of visits -

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under Special Survey & the materials & workmanship are good. In completion they were satisfactorily fitted in the vessel & the safety valves adjusted under steam for notation see machinery report.

Survey Fee £ : : } When applied for, 192

Travelling Expenses (if any) £ : : } When received, 192

W. G. ...
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 11 MAY 1928

Assigned See P. 6 rpt. attached

