

REPORT ON BOILERS.

No. 21104

Received at London Office

Date of writing Report 8th OCT. 1940. When handed in at Local Office 10th OCTOBER 1940. Port of GREENOCKNo. in Survey held at
Reg. Book. 87251 on the

GREENOCK

Date, First Survey 30th JANUARY 1940. Last Survey 4-10-40 19

(Number of Visits ✓)

Gross 5659
Tons Net 3280

SS "BURNSIDE"

Master _____ Built at GLASGOW By whom built BARCLAY, CUPPLE & CO. Yard No. 676 When built 1940
Engines made at GREENOCK By whom made JOHN G. KINCAID & CO. L^{td} Engine No. 704 When made 1940
Boilers made at GREENOCK By whom made JOHN G. KINCAID & CO. L^{td} Boiler No. 704 When made 1940
Nominal Horse Power 584 Owners BURNS PHILIP & CO Port belonging to SUVR

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

Manufacturers of Steel Colvilles L^{td} (Letter for Record S ✓)
Total Heating Surface of Boilers 9234 sq. ft. Is forced draught fitted Yes ✓ Coal or Oil fired Yes ✓
No. and Description of Boilers Three cylindrical single ended Working Pressure 220 lbs ✓
Tested by hydraulic pressure to 380 lbs Date of test 31-5-40 No. of Certificate 2206 Can each boiler be worked separately Yes ✓
Area of Firegrate in each Boiler 72.85 sq. ft. No. and Description of safety valves to each boiler 2 1/2" dia double opening 144 lbs ✓
Area of each set of valves per boiler {per Rule 5.18 as fitted 9.82 Pressure to which they are adjusted 220 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 7'-4" Is oil fuel carried in the double bottom under boilers No ✓
Smallest distance between shell of boiler and tank top plating 2'-3" Is the bottom of the boiler insulated Yes ✓
Largest internal dia. of boilers 16'-0" Length 11'-6" Shell plates: Material S Tensile strength 29/33 tons ✓
Thickness 1 1/2" Are the shell plates welded or flanged No Description of riveting: circ. seams {end DR inter. ✓
long. seams T.P. D.B.S. Diameter of rivet holes in {circ. seams 1 1/8" long. seams 1 1/8" Pitch of rivets {4.47 10 1/8" ✓
Percentage of strength of circ. end seams {plate 65.04 rivets 44.7 Percentage of strength of circ. intermediate seam {plate rivets ✓
Percentage of strength of longitudinal joint {plate 85.3 rivets 85.7 combined 87.7 Working pressure of shell by Rules 220 lbs ✓
Thickness of butt straps {outer 1 3/8" inner 1 3/8" No. and Description of Furnaces in each Boiler 4 Dighton ✓
Material S Tensile strength 26/30 tons Smallest outside diameter 3'-3.1875" ✓
Length of plain part {top bottom ✓ Thickness of plates {crown 1 9/32 bottom 1/32 Description of longitudinal joint Weld. ✓
Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 220 ✓
End plates in steam space: Material S Tensile strength 26/30 tons Thickness 1 3/8" Pitch of stays 21 x 18 1/2" ✓
How are stays secured D.N. ✓ Working pressure by Rules 226.7 lbs ✓
Tube plates: Material {front S back S Tensile strength {26/30 tons Thickness {1 5/8" 33/32 ✓
Mean pitch of stay tubes in nests 9.656" Pitch across wide water spaces 1'-2" Working pressure {front 231 lbs back 234 lbs ✓
Girders to combustion chamber tops: Material S Tensile strength 26/30 tons Depth and thickness of girder ✓
at centre 9 3/4" x 1 3/4" Length as per Rule 34.5" Distance apart 9 3/4" No. and pitch of stays ✓
in each 3 @ 8 1/4" Working pressure by Rules 232 lbs Combustion chamber plates: Material S ✓
Tensile strength 26/30 tons Thickness: Sides 33/32 Back 33/32 Top 33/32 Bottom 7/8" ✓
Pitch of stays to ditto: Sides 8 1/4" x 9 3/4" Back 8 1/2" x 8 1/2" Top 8 1/4" x 9 3/4" Are stays fitted with nuts or riveted over others nut inside only. ✓
Working pressure by Rules 221 lbs Front plate at bottom: Material S Tensile strength 26/30 tons ✓
Thickness 1 5/8" Lower back plate: Material S Tensile strength 26/30 tons Thickness 2 3/32 ✓
Pitch of stays at wide water space 14 1/4" Are stays fitted with nuts or riveted over Nutted. ✓
Working Pressure 239 lbs Main stays: Material S Tensile strength 25/32 tons ✓
Diameter {At body of stay, or Over threads 3 1/4" No. of threads per inch 6 Area supported by each stay 388.5 sq. in. ✓
Working pressure by Rules 238 lbs Screw stays: Material S Tensile strength 26/30 tons ✓
Diameter {At turned off part, or Over threads 1 3/4" No. of threads per inch 9 Area supported by each stay 80.437 sq. in. ✓

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Working pressure by Rules 224 lb Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 7/8" or Over threads }
No. of threads per inch 9 Area supported by each stay 96.73" Working pressure by Rules 221 lb
Tubes: Material 50 steel External diameter { Plain 3" Stay 3" Thickness { 3/8" 1/32" 9/32" No. of threads per inch 9
Pitch of tubes 4 1/8" x 4 1/4" Working pressure by Rules 250 lb Manhole compensation: Size of opening in shell plate 16 1/2" x 20 1/2" Section of compensating ring 3' 1 1/2" x 2' 9 1/2" x 1 1/2" No. of rivets and diameter of rivet holes 42 - 1 1/2"
Outer row rivet pitch at ends 10 1/2" Depth of flange if manhole flanged McNeil type 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 Superheater Co L

Manufacturers of { Tubes See manufacturer certificate Steel forgings N° C 623, C 624 attached to report Steel castings }

Number of elements 186 Material of tubes 50 steel Internal diameter and thickness of tubes 2 1/4"
Material of headers Steel forgings Tensile strength Thickness Can the superheater be shut off and the boiler be worked separately Yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes
Area of each safety valve 3.14" Are the safety valves fitted with easing gear Yes Working pressure as per Rules 220 lbs Pressure to which the safety valves are adjusted 225 lbs Hydraulic test pressure: tubes forgings and castings and after assembly in place 550 lbs Are drain cocks or valves fitted to free the superheater from water where necessary Yes

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

The foregoing is a correct description,
For JOHN G. KINCAID & CO. LIMITED.
McCauley Director. Manufacturer.

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building { During erection on board vessel - - }
SEE ACCOMPANYING MACHINERY REPORT
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.)

These boilers have been built under Special Survey in accordance with the Rules and approved plans. The materials & workmanship are sound & good. The safety valves have been adjusted under steam, accumulation Nil. Superheater safety valves adjusted under steam. The boilers are eligible in my opinion to be fitted in a vessel
Classed in the Society's Register Book

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

See machinery report

Charles Y. Hunter
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 15 OCT 1940

Assigned

SEE ACCOMPANYING MACHINERY REPORT.



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Foundation