

REPORT ON BOILERS.

Received at London Office

7 MAY 1945

Date of writing Report 19 4 MAY 1945 When handed in at Local Office - 4 MAY 1945 Port of Sunderland.

No. in Reg. Book. 23498 on the 1/5 "Empire Pacific" Date, First Survey 3 May 1945 Last Survey 3 May 1945

(Number of Visits) Gross 984 Net 380 Tons

Built at Burontisland By whom built Burontisland S.B. Co. Ltd. Yard No. 298 When built 1945

Engines made at Sunderland By whom made G. Clark (1938) Ltd. Engine No. 1344 When made 1945

Boilers made at Sunderland By whom made G. Clark (1938) Ltd. Boiler No. 1344 When made 1945

Nominal Horse Power _____ Owners Ministry of War Transport Port belonging to Burontisland.

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Cochranes Ltd. (Letter for Record S.)

Total Heating Surface of Boilers 2490 sq. ft. Is forced draught fitted Yes Coal or Oil fired oil

No. and Description of Boilers Two Single ended multitubular return tube marine Working Pressure 200

Tested by hydraulic pressure to 350 Date of test 4/3/45 No. of Certificate 4588 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 2 Cochran Imp. high lift.

Area of each set of valves per boiler {per Rule 4.050 as fitted 4.810 Pressure to which they are adjusted 206 lb. 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 ~~boiler~~ uptakes and bunkers 1'-3" Is oil fuel carried in the double bottom under boilers Yes

Smallest distance between shell of boiler and tank top plating 1'-11" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 11'-6 15/16" Length 4'-0" Shell plates: Material Steel Tensile strength 29/33

Thickness 1 1/32" Are the shell plates welded or flanged No. Description of riveting: circ. seams {end D.R. Lap. inter. 3 1/4"

Long. seams T.R.D.B.S. Diameter of rivet holes in {circ. seams 1 1/8" long. seams 1 1/8" Pitch of rivets 4 13/16"

Percentage of strength of circ. end seams {plate 60.55 rivets 44.0 Percentage of strength of circ. intermediate seam {plate 85.6 rivets 91.6

Percentage of strength of longitudinal joint {plate 89.5 rivets 89.5 combined 89.5

Thickness of butt straps {outer 25/32" inner 29/32" No. and Description of Furnaces in each Boiler Three Corrugated (Leighton)

Material Steel Tensile strength 26/30 Smallest outside diameter 2'-9 3/4"

Length of plain part {top 1/2" bottom 1/2" Thickness of plates {crown 1/2" bottom 1/2" Description of longitudinal joint Welded.

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

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1" Pitch of stays 15" x 15"

How are stays secured Washers nuts.

Tube plates: Material {front Steel back Steel Tensile strength {front 26/30 back 26/30 Thickness {front 1" back 25/32"

Pitch of stay tubes in nests 8" x 10 5/8" Pitch across wide water spaces 14"

Orders to combustion chamber tops: Material Steel Tensile strength 29/33 Depth and thickness of girder -

Centre 11" x 1 1/16" Length as per Rule 3'-0" Distance apart 4" No. and pitch of stays -

Each No stays - welded to c.c. top plate. Combustion chamber plates: Material Steel

Tensile strength 26/30 Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 10" x 8 1/2" Back 10" x 8 1/2" Top Yes Are stays fitted with nuts or riveted over Nuts (4 Caulked at shell outside)

Front plate at bottom: Material Steel Tensile strength 26/30 Thickness 1"

Lower back plate: Material Steel Tensile strength 26/30 Thickness 1"

Pitch of stays at wide water space 14 1/2" x 10" Are stays fitted with nuts or riveted over Nuts.

Supporting stays: Material Steel Tensile strength 28/32

Diameter {At body of stay, 2 1/2" or 2 3/4" Over threads 2 3/4" No. of threads per inch 6.

New stays: Material Steel Tensile strength 26/30.

Diameter {At turned off part, 1 3/4" or 1 3/4" Over threads 1 3/4" No. of threads per inch 9.



Are the stays drilled at the outer ends no. ✓ Margin stays: Diameter { At turned off part, or Over threads 2" ✓

No. of threads per inch 9.

Tubes: Material S.D. Steel External diameter { Plain 3" ✓ Stay 3" ✓ Thickness { 8 lbs. 5/16" + 3/8" No. of threads per inch 9. ✓

Pitch of tubes 4" x 4 1/4" Manhole compensation: Size of opening in shell plate 20 1/8" x 16 1/8" ✓ Section of compensating ring 4 1/16" x 1 1/16" No. of rivets and diameter of rivet holes 32 @ 1 3/8" ✓

Outer row rivet pitch at ends 10" Depth of flange if manhole flanged 3 3/4" ✓ 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 of stays _____

How connected to shell _____ Inner radius of crown _____

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 _____ 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 _____

Pressure to which the safety valves are adjusted _____ Hydraulic test pressure: tubes _____ forgings and 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 22 inclusive for boilers been complied with _____

The foregoing is a correct description,
 GEORGE CLARK (1938) LTD
 Manufacturer.

Dates of Survey { During progress of work in shops - - } Please see Rpt 4 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Archie J. Berry Retained for Sister Vessels

{ During erection on board vessel - - } _____ 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 constructed under special survey in accordance with the approved plans, specification & the rules of the Society. The materials & workmanship are good. In completion they were tested by hydraulic pressure of 350 lbs. & found tight & sound at that pressure. These boilers have been despatched to Busanland for installation on board the vessel. In recommendation please see machy Rpt.

Survey Fee £ see machy Rpt. When applied for, _____ 19 _____

Travelling Expenses (if any) £ _____ When received, _____ 19 _____

J. H. Green
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI, 21 SEP 1945

Assigned see Rpt.