

REPORT ON BOILERS.

RECEIVED

2 MAY 1946

Received at London Office 3 MAY 1946

Date of writing Report 19 When handed in at Local Office 2 MAY 1946 Port of Sunderland.

No. in Surrey held at Sunderland Date, First Survey 27 Jan Last Survey 26 April 1946

on the 35 "WAVE PREMIER" (Number of Visits 18) Gross Tons Net

Built at Haverton Hill By whom built Furness S. B. Co. Ld. Yard No. 389 When built 1946
Engines made at Hatterpool By whom made Richardson Westgarth & Co. Ld. Engine No. 2453 When made 1946
Boilers made at Sunderland By whom made G. Clark (1930) Ld. Boiler No. 2453 When made 1946.
Nominal Horse Power Owners The Admiralty Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland & Appleby Rotherham. (Letter for Record S.)

Total Heating Surface of Boilers 4160 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 180 lb/sq in

Tested by hydraulic pressure to 320 lb/sq in. Date of test 15/3/46 No. of Certificate 4633 Can each boiler be worked separately Yes

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

Area of each set of valves per boiler (per Rule as fitted) 4.96 sq in. Pressure to which they are adjusted 185 lb 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 2'-0" Is oil fuel carried in the double bottom under boilers Yes

Smallest distance between shell of boiler and tank top plating 2'-6" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 13'-3 1/16" Length 11'-4 24/32" Shell plates: Material Steel Tensile strength 29/33

Thickness 1 3/32" Are the shell plates welded or flanged No Description of riveting: circ. seams end DR lap

long. seams T.R.D.B.P. Diameter of rivet holes in (circ. seams 1 3/16" Pitch of rivets 3-59 8 3/16"

Percentage of strength of circ. end seams (plate 66.9 rivets 44.4) Percentage of strength of circ. intermediate seam (plate 85.5 rivets 91.85)

Percentage of strength of longitudinal joint (plate 4/8" rivets 89.35) combined

Thickness of butt straps (outer 1" inner 1" No. and Description of Furnaces in each Boiler Three Corrugated (beigher)

Material Steel Tensile strength 26/30 Smallest outside diameter 3'-1 1/4"

Length of plain part (top bottom) 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 5/32" Pitch of stays 19" x 14 1/2"

How are stays secured Double nuts

Tube plates: Material (front back) Steel Tensile strength 26/30 Thickness 1 3/16" 1 1/16"

Mean pitch of stay tubes in nests 11 1/4" x 4 1/2" Pitch across wide water spaces 13 1/2"

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder

at centre 8 3/8" x 13 1/16" (2) Length as per Rule 2'-8" Distance apart 10" No. and pitch of stays

in each 2 @ 10" Combustion chamber plates: Material Steel

Tensile strength 26/30 Thickness: Sides 2 1/32" Back 1 1/16" Top 2 3/32" Bottom 2 1/32"

Pitch of stays to ditto: Sides 8" x 10" Back 10 1/2" x 4 1/2" Top 10" x 10" Are stays fitted with nuts or riveted over Nuts on margin inside c.c.

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

Thickness 1 3/16" Lower back plate: Material Steel Tensile strength 26/30 Thickness 2 4/32"

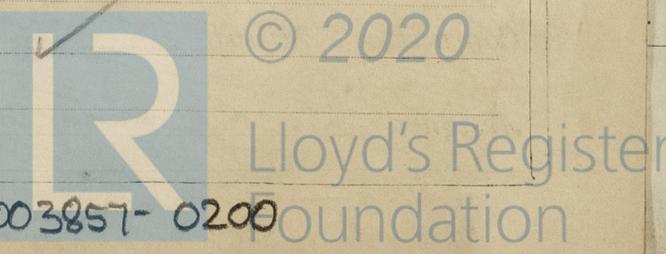
Pitch of stays at wide water space 16" x 4 1/2" Are stays fitted with nuts or riveted over Nuts on marginal stays

Main stays: Material Steel Tensile strength 28/32

Diameter: (At body of stay, or Over threads) 2 7/8" Front end 2 5/16" No. of threads per inch 6.

Screw stays: Material Steel Tensile strength 26/30

Diameter: (At turned off part, or 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 1 7/8" x 2" ✓

No. of threads per inch 9. ✓

Tubes: Material S.D. Steel External diameter { Plain 2 1/2" ✓ Stay 2 1/2" ✓ Thickness { 9/16" ✓ 3/8" ✓ No. of threads per inch 9. ✓

Pitch of tubes 3 3/4" x 3 3/4" ✓ Manhole compensation: Size of opening in shell plate 20 1/2" x 16 1/2" ✓ Section of compensating ring 4 7/8" x 1" ✓ No. of rivets and diameter of rivet holes 36 @ 1 3/16" ✓

Outer row rivet pitch at ends 8 3/16" ✓ Depth of flange if manhole flanged 3 1/4" ✓ 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 _____ Thickness of crown _____ No. and diameter of stays _____ Inner radius of crown _____

How connected to shell _____ 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 (1888) LTD.

Manufacturer.

Dates of Survey { During progress of work in shops - - } 7. Jan 29, 31 Feb. 1, 5, 13, 19, 25, 27, 1946 ✓ Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval) Yes. ✓

while building { During erection on board vessel - - - } 6, 8, 13, 15, 27, 28, 29, April 2, 24, 26 Total No. of visits 18 ✓

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. Sld. Rpt. No 34440.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed under special in accordance with the approved plan specification & the rules of the Society. The material & workmanship are good.

On completion the boilers were tested by hydraulic pressure of 320 lb. & found tight & sound at that pressure.

These boilers have been despatched to Harlepool for installation on board the vessel.

These boilers have now been satisfactorily fitted & secured on board

S.W. Boyd

Survey Fee £ 29 : 14 : - When applied for, 2 MAY 1946

Travelling Expenses (if any) £ 4 : 9 : - When received, _____

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

Committee's Minute FRI. 17 JAN 1947

Assigned See F.E. Moly. rpt.

