

REPORT ON BOILERS.

No. 34997

Received at London Office.

Date of writing Report 19... When handed in at Local Office *Sunderland* 1948 Port of *Sunderland*

No. in Survey held at *Sunderland* Date, First Survey *see Rpt 4* Last Survey 19...
 Reg. Book. on the *SS Admiral Fraser* (Number of Visits.....) Tons { Gross 2276
 Net 1127

Master Built at *Sunderland* By whom built *Wm Pickersgill & Sons* Yard No. *311* When built *1948*

Engines made at *Sunderland* By whom made *R E Marine Eng Co (1938) Ltd* Engine No. *4203* When made *1948*

Boilers made at *Sunderland* By whom made *R E Marine Eng Co (1938) Ltd* Boiler No. *4203* When made *1948*

Nominal Horse Power *366* Owners *Stratton Shipping Co Ltd* Port belonging to *London*

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *Colvilles* (Letter for Record.....)

Total Heating Surface of Boilers *4132 sq ft + Superheaters 1570 sq ft* forced draught fitted *yes* Coal or Oil fired *oil*

No. and Description of Boilers *2 - Multitubular* Working Pressure *220 lbs 10*

Tested by hydraulic pressure to *380 lbs 10* Date of test *1-9-48* of Certificate *4702* Can each boiler be worked separately *yes*

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler *2 - Double Enclosed*

Area of each set of valves per boiler *5.59 sq ft* Pressure to which they are adjusted *220 lbs 10* 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 *2'-6"* Is oil fuel carried in the double bottom under boilers. *yes*

Smallest distance between shell of boiler and tank top plating *2'-0"* Is the bottom of the boiler insulated. *yes*

Largest internal dia. of boilers *13'-9 1/2"* Length *11'-6"* Shell plates: Material *Steel* Tensile strength *29/33 T*

Thickness *1 1/4"* Are the shell plates welded or flanged *-* Description of riveting: *circ. seams* { end *DR Lap*
 inter *-*

long. seams *T.R.D.B.S.* Diameter of rivet holes in { *circ. seams* *1 3/8"*
long. seams *1 3/8"* Pitch of rivets { *4"*
9 9/16"

Percentage of strength of circ. end seams { plate *65.6%*
 rivets *44.2%* Percentage of strength of circ. intermediate seam { plate *85.5%*
 rivets *87.1%*

Percentage of strength of longitudinal joint { plate *88.8%*
 rivets *88.8%* Working pressure of shell by Rules *220 lbs 10*

Thickness of butt straps { outer *1"*
 inner *1 1/8"* No. and Description of Furnaces in each Boiler *3 - Deighton Type*

Material *Steel* Tensile strength *26/30 T* Smallest outside diameter *3'-2 7/16"*

Length of plain part { top *9"*
 bottom *9"* Thickness of plates { crown *19/32"*
 bottom *19/32"* Description of longitudinal joint *Flue weld*

Dimensions of stiffening rings on furnace or c.c. bottom *-* Working pressure of furnace by Rules *224 lbs 10*

End plates in steam space: Material *Steel* Tensile strength *26/30 T* Thickness *1 5/16"* Pitch of stays *19 1/2" x 18 1/4"*

How are stays secured *Nuts both sides* Working pressure by Rules *226 lbs 10*

Tube plates: Material { front *Steel*
 back *Steel* Tensile strength { *26/30 T*
26/30 T Thickness { *31/32"*
7/8"

Mean pitch of stay tubes in nests *10 1/2"* Pitch across wide water spaces *1'-2"* Working pressure { front *222 lbs 10*
 back *230 lbs 10*

Girders to combustion chamber tops: Material *Steel* Tensile strength *28/32 T* Depth and thickness of girder at centre *8 1/2" x 22 7/8"* Length as per Rule *2'-7 1/2"* Distance apart *9 1/4"* No. and pitch of stays in each *2 @ 9 1/2"* Working pressure by Rules *234 lbs 10* Combustion chamber plates: Material *Steel*

Tensile strength *26/30 T* Thickness: Sides *25/32"* Back *25/32"* Top *25/32"* Bottom *25/32"*

Pitch of stays to ditto: Sides *9 3/4" x 9 13/16"* Back *10 1/4" x 9 1/4"* Top *9 1/4" x 9 1/4"* Are stays fitted with nuts or riveted over *Nuts*

Working pressure by Rules *225 lbs 10* Front plate at bottom: Material *Steel* Tensile strength *26/30 T*

Thickness *31/32"* Lower back plate: Material *Steel* Tensile strength *26/30 T* Thickness *29/32"*

Pitch of stays at wide water space *14 1/2" x 9 1/4"* Are stays fitted with nuts or riveted over *Nuts*

Working pressure *222 lbs 10* Main stays: Material *Steel* Tensile strength *28/32 T*

Diameter { At body of stay *3"*
 or over threads *-* No. of threads per inch *6* Area supported by each stay *19 1/2" x 18 1/4"*

Working pressure by Rules *220 lbs 10* Screw stays: Material *Steel* Tensile strength *26/30 T*

Diameter { At turned off part *1 7/8"*
 or over threads *-* No. of threads per inch *9* Area supported by each stay *9 1/4" x 9 3/4"*

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Working pressure by Rules 222 lbs/10" Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part... 2" or Over threads... 2"
No. of threads per inch 9 Area supported by each stay 12 1/8 x 9 1/4 Working pressure by Rules 220 lbs/10"
Tubes: Material Steel External diameter { Plain... 3" Stay... 3" Thickness { 3/16" 3/8" 5/16" No. of threads per inch 9
Pitch of tubes 4 1/4 x 4 1/4 Working pressure by Rules 221 lbs/10" Manhole compensation: Size of opening in shell plate... — 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" IN END PLATE 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... — Inner radius of crown... — Working pressure by Rules... —
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 Smokebox (NEM) Manufacturers of { Tubes Ed HEADERS Apply 2 Fodingham Steel Co Steel castings...
Number of elements 96 Material of tubes Solid Drawn Steel internal diameter and thickness of tubes 15 1/2 x 2 1/2
Material of headers Forged Steel Tensile strength 26/30 T Thickness 1 1/8 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 sq" Are the safety valves fitted with easing gear yes Working pressure as per Rules 220 lbs/10" Pressure to which the safety valves are adjusted 220 lbs/10" Hydraulic test pressure: tubes 1500 lbs/10" HEADERS 660 lbs/10" forgings and castings and after assembly in place 500 lbs/10" 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 yes

The foregoing is a correct description,

Manufacturer.

Dates of Survey { During progress of work in shops - - - see Rpt 4 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building { During erection on board vessel - - - Total No. of visits... —

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. NEFERTITI N° 34895

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

These boilers have been constructed in accordance with the approved plans, Secretary's letter and the Requirements of the Rules. The workmanship and materials are good.
These boilers have been efficiently fitted on board the vessel examined under steam and the safety valves adjusted to working pressure 220 lbs/10". Accumulation tests carried out with satisfactory results.

Survey Fee ... see Rpt 4 £ : : } When applied for... 19.....
Travelling Expenses (if any) £ : : } When received... 19.....

J Grieve

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRL 3 DEC 1944

Assigned See F.E. mch. rpt.



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