

Rpt. 5a.

## REPORT ON BOILERS.

Received at London Office.

Date of writing Report, 17 July 1953. When handed in at Local Office, 16th July 1953. Port of GREENOCK

No. in Survey held at GREENOCK Date, First Survey 15/10/52 Last Survey 29/6/1953  
Reg. Book.91670 on the SINGLE SCREEN MOTORSHIP "BEDFORD" (Number of Visits.....) Gross 12578.32  
Tons Net 7306.00

Built at PORT GLASGOW By whom built LITHGOWS LTD., (KINGSTON) Yard No. 1070 When built 1953

Engines made at GREENOCK By whom made J. G. KINCAID &amp; Co., LTD. Engine No. K239 When made 1953

Boilers made at GREENOCK By whom made J. G. KINCAID &amp; Co., LTD. Boiler No. K239 When made 1953

Nominal Horse Power. Owners BLANFORD SHIPPING CO., LTD. Port belonging to LONDON

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

Manufacturers of Steel COLVILL &amp; SONS LTD. (Letter for Record S)

Total Heating Surface of Boilers 5910 Sq. Ft. (2 x 2955) Of Superheaters.

Total for Register Book 5910 Is forced draught fitted YES Coal or Oil fired OIL &amp; OR EXH. GAS

No. and Description of Boilers 2 S.E. CYLINDRICAL MULTITUBULAR Working Pressure 180 lbs/sq. in.

Tested by hydraulic pressure to 320 lbs/sq. in. Date of test 12/12/52 No. of Certificate S. 2691 Can each boiler be worked separately YES

Area of Firegrate in each Boiler. No. and Description of safety valves to each boiler ONE - 2 1/2 DBL. SPRING IMPROVED HIGH LIFT.

Area of each set of valves per boiler { per Rule 9.46 sq. in. Pressure to which they are adjusted 180 lbs/sq. in. Are they fitted with easing gear YES  
as fitted 9.81 sq. in.

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. Is oil fuel carried in the double bottom under boilers. NO. BOILERS ON FLAT.

Smallest distance between shell of boiler and tank top plating. Is the bottom of the boiler insulated. YES

Largest internal dia. of boilers 15'-4 3/4" Length 12'-0" Shell plates: Material STEEL Tensile strength 29/33 TONS/sq. in.

If fusion welded, state name of welding Firm. Have all the requirements of the Rules for Class I vessels

been complied with. Thickness 1 3/4" Are the shell plates welded or flanged. Description of riveting: circ. seams end DR  
inter.long. seams TROBS Diameter of rivet holes in { circ. seams 1 1/4" Pitch of rivets 3.5834  
long. seams 1 1/4"Percentage of strength of circ. end seams { plate 64.9 Percentage of strength of circ. intermediate seam { plate  
rivets 44.2 rivetsPercentage of strength of longitudinal joint { plate 85.29  
rivets 87.6 rivets

combined 88.1

Thickness of butt straps { outer 1" No. and Description of Furnaces in each Boiler 3 DEIGHTON CORRUGATED  
inner 1 1/8"

Material STEEL Tensile strength 26/30 TONS/sq. in. Smallest outside diameter 3'-11 3/8"

Length of plain part { top Thickness of plates 1 3/4" Description of longitudinal joint WELD  
bottom

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

End plates in steam space: Material STEEL Tensile strength 26/30 TONS/sq. in. Thickness 1 1/2" Pitch of stays 1'-8 1/2" x 1'-10"

How are stays secured ON

Tube plates: Material { front STEEL Tensile strength 26/30 TONS/sq. in. Thickness 1 5/8"  
back

Mean pitch of stay tubes in nests 8.74" Pitch across wide water spaces 1'-1 1/2"

Girders to combustion chamber tops: Material STEEL Tensile strength 29/33 TONS/sq. in. Depth and thickness of girder

at centre 10" x 1 3/8" Length as per Rule 2'-11 5/8" Distance apart 8" CRS X 1 @ 7" CRS No. and pitch of stays

in each NONE. GIRDERS WELDED TO SPACES 5 WELDS EACH 3" LONG APPROX 9 1/2 CRS Combustion chamber plates: Material STEEL

Tensile strength 26/30 TONS/sq. in. Thickness: Sides 2 3/32" Back 2 1/32" Top 2 1/32" Bottom 2 1/32"

Pitch of stays to ditto: Sides 9" x 9 1/4" Back 8 3/4" x 9" Top WELDED Are stays fitted with nuts or riveted over YES EXCEPT ON SHELL PLATE.

Front plate at bottom: Material STEEL Tensile strength 26/30 TONS/sq. in.

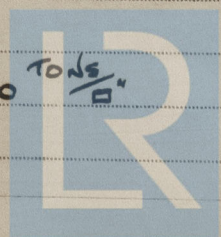
Thickness 1 5/8" Lower back plate: Material STEEL Tensile strength 26/30 TONS/sq. in. Thickness 2 5/8"

Pitch of stays at wide water space 1'-1 1/2" x 9" Are stays fitted with nuts YES

Main stays: Material STEEL Tensile strength 28/32 TONS/sq. in.

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

Screw stays: Material STEEL Tensile strength 26/30 TONS/sq. in.

Diameter { At turned off part 1 1/8" No. of threads per inch 9  
Over threads

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Foundation

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Are the stays drilled at the outer ends No Margin stays: Diameter At turned off part 1 1/2"  
No. of threads per inch 9  
Tubes: Material STEEL External diameter 2 1/2" Thickness 9 W.G. 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 17.08 sq" No. of rivets and diameter of rivet holes 36 - 1 3/8"  
Outer row rivet pitch at ends 9.375" Depth of flange if manhole flanged 4" Steam Dome: Material STEEL  
Tensile strength 50,000 Thickness of shell 1/2" Description of longitudinal joint Butt joint  
Diameter of rivet holes 1 1/8" Pitch of rivets 4" Percentage of strength of joint 100%  
Internal diameter 17 1/2" Thickness of crown 1/2" No. and diameter of  
stays 12 - 1 1/2" Inner radius of crown 17 1/2"  
How connected to shell By 4 stays Size of doubling plate under dome 18" x 18" Diameter of rivet holes and pitch  
of rivets in outer row in dome connection to shell 1 1/8" x 4"

Type of Superheater Water tube Manufacturers of W. G. & Co. Tubes W. G. & Co.  
Number of elements 12 Material of tubes STEEL Internal diameter and thickness of tubes 2 1/2" x 1/2"  
Material of headers STEEL Tensile strength 50,000 Thickness 1/2" 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 10 sq. in. Are the safety valves fitted with easing gear Yes  
Pressure to which the safety valves are adjusted 180 lb/sq. in. Hydraulic test pressure: 225 lb/sq. in.  
tubes STEEL forgings and castings STEEL and after assembly in place Yes Are drain cocks or  
valves fitted to free the superheater from water where necessary Yes

Have all the requirements of THE APPROPRIATE SECTIONS for boilers been complied with YES  
For JOHN G. KINCAID & COY. LIMITED  
The foregoing is a correct description,  
W. G. & Co. Manufacturer.  
Chief Draughtsman.

Dates of Survey while building During progress of work in shops - - Are the approved plans of boiler and superheater forwarded herewith YES  
During erection on board vessel - - - (If not state date of approval.)  
SEE MACHINERY REPORT Total No. of visits 1

Is this Boiler a duplicate of a previous case YES If so, state Vessel's name and Report No. "TUAREG" - GRK. No. 24881

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) THE BOILERS HAVE BEEN CONSTRUCTED  
UNDER SPECIAL SURVEY IN ACCORDANCE WITH THE RULES AND APPROVED PLANS.  
THE MATERIALS AND THE WORKMANSHIP ARE GOOD. THE BOILERS HAVE BEEN  
EFFICIENTLY INSTALLED ON BOARD THE VESSEL AND THE SAFETY VALVES  
WERE ADJUSTED UNDER STEAM TO 180 lb/sq. in. A SATISFACTORY ACCUMULATION  
TEST WAS CARRIED OUT.

COMPRESSION RINGS:-			PORT BOILER	STARBOARD BOILER
INBOARD VALVE			13 1/32"	7 1/16"
OUTBOARD "			15 1/32"	29 1/64"

SEE MACHINERY REPORT.

Survey Fee £ 100 When applied for 19  
Travelling Expenses (if any) £ 0 When received 19

H. K. Taylor.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 14 JUL 1953

Assigned SEE ACCOMPANYING MACHINERY REPORT