

REPORT ON BOILERS.

No. 54103

Received at London Office 24 APR 1947

Date of writing Report 18-4-1947 When handed in at Local Office 23 APR 1947 Port of HULL

No. in Reg. Book. Survey held at HULL Date, First Survey 11-3-47 Last Survey 17-4-1942

on the STEAM TRAWLER KINGSTON SAPPHIRE (Number of Visits 15.) Tons { Gross 443 Net 161

Masters Built at SOUTH BANK By whom built SMITHS DOCK CO. LD. Yard No. 907 When built 1935

Engines made at SOUTH BANK By whom made SMITHS DOCK CO. LD. Engine No. 425 When made 1935

Boilers made at HARTLEPOOL By whom made RICHARDSON & WESTGARTH. Boiler No. When made 1935

Nominal Horse Power Owners KINGSTON STEAM TRAWLING CO. LD. Port belonging to HULL

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel NOT KNOWN (Letter for Record S)

Total Heating Surface of Boilers 2500 sq. ft. 2465 sq. ft. Is forced draught fitted No. Coal or Oil fired COAL

No. and Description of Boilers ONE - S.B. Working Pressure 225 lbs/sq. in.

Tested by hydraulic pressure to 275 lbs/sq. in. Date of test 12-4-47 No. of Certificate Can each boiler be worked separately.

Area of Firegrate in each Boiler 59.4 sq. ft. No. and Description of safety valves to each boiler 2.

Area of each set of valves per boiler 13.03 sq. in. Pressure to which they are adjusted 225 lbs/sq. in. 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 8" Is oil fuel carried in the double bottom under boilers No.

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated No.

Largest internal dia. of boilers 15'-6" Length 11'-0" Shell plates: Material STEEL Tensile strength 29-33 tons/sq. in.

Thickness 49/32 Are the shell plates welded or flanged No. Description of riveting: circ. seams P.R. LAP. inter. 3/8

Long. seams T.R.-D.B.S. Diameter of rivet holes in circ. seams 17/16 long. seams 1 1/2 Pitch of rivets 10/8

Percentage of strength of circ. end seams plate rivets AS APPROVED Percentage of strength of circ. intermediate seam plate rivets AS APPROVED

Percentage of strength of longitudinal joint plate rivets combined AS APPROVED Working pressure of shell by Rules AS APPROVED

Thickness of butt straps outer 38/32 inner 42/32 No. and Description of Furnaces in each Boiler 3 C.F. MORRISON WITH ASHLIN BACK ENDS

Material STEEL Tensile strength 26-30 tons/sq. in. Smallest outside diameter 3'-8 5/8"

Length of plain part top 11/16 Thickness of plates crown 11/16 bottom Description of longitudinal joint WELD

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules AS APPROVED

End plates in steam space: Material STEEL Tensile strength 26-30 tons/sq. in. Thickness 1 5/16 Pitch of stays 18" x 18" 17 1/2" x 20"

How are stays secured DOUBLE NUTS & WASHERS Working pressure by Rules AS APPROVED

End plates: Material front STEEL back STEEL Tensile strength 26-30 tons/sq. in. Thickness 1" 27/32

Long. pitch of stay tubes in nests 10 3/4 Pitch across wide water spaces 14 1/2 Working pressure front back AS APPROVED

Ends to combustion chamber tops: Material STEEL Tensile strength 28-32 tons/sq. in. Depth and thickness of girder centre 9 3/8 x 7/8 x 2 1/2 in. No. Length as per Rule 34 1/2 AS APPROVED Distance apart 8" CENTRE : 9" WINGS No. and pitch of stays each 3-8" Working pressure by Rules AS APPROVED Combustion chamber plates: Material STEEL

Tensile strength 26-30 tons/sq. in. Thickness: Sides 2 1/32 Back 2 1/32 Top 2 1/32 & 1 1/16 Bottom 1"

Length of stays to ditto: Sides 8" x 8" Back 8" x 8" 8 1/2 x 8" Top 8" x 9" Are stays fitted with nuts or riveted over NUTS

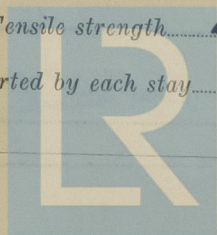
Working pressure by Rules AS APPROVED Front plate at bottom: Material STEEL Tensile strength 26-30 tons/sq. in. Thickness 1" Lower back plate: Material STEEL Tensile strength 26-30 tons/sq. in. Thickness 15/16

Length of stays at wide water space 14 1/2 x 8" to 17 3/4 x 6 1/2 Are stays fitted with nuts or riveted over NUTS

Working pressure AS APPROVED Main stays: Material STEEL Tensile strength 28-32 tons/sq. in. Area supported by each stay 350 sq. in. 324 sq. in.

At body of stay 3 1/4 & 3 No. of threads per inch 6

At turned off part 1 5/8 No. of threads per inch 9 Area supported by each stay 58 sq. in. 64 sq. in.



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Working pressure by Rules AS APPROVED Are the stays drilled at the outer ends NO ✓ Margin stays: Diameter { At turned off part, 1 7/8" + 2" ✓
or Over threads.....
No. of threads per inch 9 ✓ Area supported by each stay 3 1/2" ✓ Working pressure by Rules AS APPROVED
Tubes: Material STEEL ✓ External diameter { Plain 3 1/2" ✓ Thickness { 7 W.G. ✓ No. of threads per inch 9 ✓
Pitch of tubes 1 3/4" x 4 7/8" ✓ Working pressure by Rules AS APPROVED Manhole compensation: Size of opening
shell plate 20 1/2" x 14" ✓ Section of compensating ring 4 3/32" x 15 1/2" No. of rivets and diameter of rivet holes 30 - 1 1/2" ✓
Outer row rivet pitch at ends 10 1/8" ✓ Depth of flange if manhole flanged BOTTOM + DOME 3 1/2" ✓ Steam Dome: Material STEEL
Tensile strength 26/30 TONS/SQ IN ✓ Thickness of shell 15 1/16" ✓ Description of longitudinal joint T.R. LAP ✓
Diameter of rivet holes 1 3/16" ✓ Pitch of rivets 4 1/4" ✓ Percentage of strength of joint { Plate AS APPROVED ✓
Rivets AS APPROVED ✓
Internal diameter 3' - 0" ✓ Working pressure by Rules AS APPROVED Thickness of crown 1" ✓ No. and diameter
stays NONE ✓ Inner radius of crown 3' - 0" ✓ Working pressure by Rules AS APPROVED ✓
How connected to shell RIVETED ✓ Size of doubling plate under dome NONE ✓ Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell 1 9/16" - 9.07" ✓

Type of Superheater SMOKE TUBE ✓ Manufacturers of { Tubes THE SUPERHEATER CO. LD. MANCHESTER ✓
Steel forgings.....
Steel castings.....
Internal diameter and thickness of tubes 20 M.M. 2.5 M.M. ✓
Number of elements 49 ✓ Material of tubes S.D. MILD STEEL ✓ Thickness 1" ✓ Can the superheater be shut off
Material of headers STEEL FORGINGS ✓ Tensile strength 23/29 TONS/SQ IN ✓ 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 AS APPROVED ✓ Are the safety valves fitted with easing gear YES ✓ Working pressure as
Rules AS APPROVED ✓ Pressure to which the safety valves are adjusted 230 LBS/SQ IN ✓ Hydraulic test pressure
tubes 675 LBS/SQ IN ✓ forgings and castings 675 LBS/SQ IN ✓ and after assembly in place 675 LBS/SQ IN ✓ Are drain cocks
valves fitted to free the superheater from water where necessary YES ✓ SUPERHEAT H.S. 1100 F. ✓
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with YES ✓

The foregoing is a correct description,

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

This boiler has been examined internally & externally with safety valves, mountings & their fastenings & found or placed in good condition. The scantlings are in accordance with approved plan of 13-3-47. The superheaters have been examined & tested to 675 lb/sq. in. found satisfactory. The boiler tested by hydraulic pressure & examined under steam & safety valves adjusted to 225 lb/sq. in. SPT 230 lbs/sq. in.

Survey Fee ... SEE RPT 9 ATT. ...
Travelling Expenses (if any) £ ...
When applied for.....19.....
When received.....19.....

J. Dobbie
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI, 8 JUN 1947

Assigned See F.E. mchey rpt.



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