

REPORT ON BOILERS.

No. 39676.

-9 MAR 1929

Received at London Office

HULL.

Date of writing Report 7.2.1929 When handed in at Local Office 7.2.1929 Port of Hull.

No. in Reg. Book. 61510

Surrey held at Hull. on the Steam Trawler "KINGSTON SAPPHIRE"

Date, First Survey 20 Nov/28 Last Survey 22 Feb/29

(Number of Visits 13.) (Gross Tons 357.77) (Net Tons 149.85)

Master Built at Bursley By whom built G.R. Wilson & Son Ltd Card No. 514 When built 1919

Engines made at Hull By whom made Charles D. Holmes & Co Ltd Engine No. 1356 When made 1919

Boilers made at Hull By whom made do Boiler No. 1356 When made 1919

Nominal Horse Power 96. Owners Kingston S. Trawling Co. Ltd Port belonging to Hull.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Witkowitz, Bryan & Eisenhütten Gb. (Letter for Record (S))

Total Heating Surface of Boilers 1698 Sq. ft. Is forced draught fitted ho Coal or Oil fired Coal

No. and Description of Boilers One single ended return tube 1 S.B. Working Pressure 200 lbs

Tested by hydraulic pressure to 359 lbs Date of test 28.1.29 No. of Certificate 3691 Can each boiler be worked separately

Area of Firegrate in each Boiler 49.2 sq ft No. and Description of safety valves to each boiler Two spring loaded.

Area of each set of valves per boiler {per Rule 9.8 sq ft as fitted 9.5 sq ft Pressure to which they are adjusted 200 lbs. 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 4" Is oil fuel carried in the double bottom under boilers

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

Largest internal dia. of boilers 14'-0" Length 10'-8" Shell plates: Material Steel Tensile strength 28/32 Tons.

Thickness 1 3/32" Are the shell plates welded or flanged Description of riveting: circ. seams {end 3/4" inter. 3/4"}

long. seams T.R. S.B.S. Diameter of rivet holes in {circ. seams 1 3/32" long. seams 1 3/32" Pitch of rivets {8 3/16"}

Percentage of strength of circ. end seams {plate 65.8 rivets 51.2} Percentage of strength of circ. intermediate seam {plate 85.03 rivets 90.8}

Percentage of strength of longitudinal joint {plate 88.8 rivets 88.8} Working pressure of shell by Rules 201 lbs.

Thickness of butt straps {outer 1" inner 1 1/8" No. and Description of Furnaces in each Boiler One plain 3 p.f.

Material Steel Tensile strength 26/30 Tons. Smallest outside diameter 41"

Length of plain part {top 76" bottom 69" Thickness of plates {crown 1 3/16" bottom 1 3/16" Description of longitudinal joint welded}

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 219 lbs.

End plates in steam space: Material Steel Tensile strength 26/30 Tons. Thickness 1 3/16" Pitch of stays 18"

How are stays secured 5N. & washers. Working pressure by Rules 220 lbs.

Tube plates: Material {front Steel back .. Tensile strength {26/30 Tons Thickness {1 5/16" 7/8"}

Mean pitch of stay tubes in nests 10.97" Pitch across wide water spaces 13 3/4" Working pressure {front 211 lbs. back 230 lbs.}

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

at centre 10 1/2" } x 1 3/4" Length as per Rule 36 3/16" Distance apart 9" No. and pitch of stays

in each 3 @ 8 3/4" Working pressure by Rules 210 lbs. Combustion chamber plates: Material Steel

Tensile strength 26/30 Tons. Thickness: Sides 3/4" Back 2 3/32" Top 3/4" 2 3/32" Bottom 3/4"

Pitch of stays to ditto: Sides 9' x 8 3/4" Back 9' x 8 3/4" Top 9' x 8 3/4" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 230 lbs. Front plate at bottom: Material Steel Tensile strength 26/30 Tons

Thickness 1 5/16" Lower back plate: Material Steel Tensile strength 26/30 Tons Thickness 2 3/32"

Pitch of stays at wide water space 14' x 8 3/4" Are stays fitted with nuts or riveted over nuts

Working Pressure 228 lbs. Main stays: Material Steel Tensile strength 28/32 Tons

Diameter {At body of stay, 3 1/4" No. of threads per inch 8 Area supported by each stay 324 sq in

Working pressure by Rules 248 lbs. Screw stays: Material Steel Tensile strength 26/30 Tons

Diameter {At turned off part, 1 7/8" x 1 3/4" No. of threads per inch 10 Area supported by each stay 78.9 sq in

Working pressure by Rules 230 lbs ✓ Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part, 1 7/8 ✓
or Over threads
No. of threads per inch 10 Area supported by each stay 97.75 sq Working pressure by Rules 218 lbs ✓
Tubes: Material Iron External diameter { Plain 32 ✓ Thickness { 5/16 ✓ No. of threads per inch 9
Pitch of tubes 4 7/8 Working pressure by Rules 215 lbs ✓ Manhole compensation: Size of opening in
shell plate 16" x 12" ✓ Section of compensating ring 34" x 27" x 1 9/32 No. of rivets and diameter of rivet holes 32 @ 1 1/2" ✓
Outer row rivet pitch at ends 8 3/16 ✓ Depth of flange if manhole flanged ✓ 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 Manufacturers of { Tubes
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 Working pressure as per
Rules Pressure to which the safety valves are adjusted Hydraulic test pressure:
tubes, 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 23 inclusive for boilers been complied with

The foregoing is a correct description,
For **CHARLES D. HOLMES & CO., LTD.** Manufacturer.

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built
under special survey & in accordance with the approved plans.
The materials & workmanship are sound & good. It has been
satisfactorily fitted on board, tried under steam, and its
safety valves adjusted under steam as above.

Charge on engine report
Survey Fee £ : When applied for, 192
Travelling Expenses (if any) £ : When received, 192

John Mackenzie
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 15 MAR 1929

Assigned

