

REPORT ON BOILERS.

No. 39816.

30 APR 1929

Received at London Office

HULL.

When handed in at Local Office 29 April 1929 Port of Hull
 Date, First Survey 10 Jan'y Last Survey 27 April 1929
 (Number of Visits 15.) Gross 329.65
 Tons Net 170.51.
 No. in Survey held at Hull
 No. on the Steam Trawler "VARANGA"
 Built at Brimley By whom built Cook, Weller & Hemmings Card No. 514 When built 1929
 By whom made Charles S. Holmes & Co. Ltd Engine No. 1359 When made 1929
 By whom made do Boiler No. 1359 When made 1929
 Owners Letten Bros. Port belonging to Brimley
 Nominal Horse Power 96.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel W. K. Smith, Glasgow & Limerick 9/5.
 Total Heating Surface of Boilers 1698 sq. ft. Is forced draught fitted No
 No. and Description of Boilers One single ended return tube 1 St. Working Pressure 200 lbs.
 Tested by hydraulic pressure to 350 lb. Date of test 28.2.29 No. of Certificate 3698 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 2 Spring loaded
 Area of each set of valves per boiler {per Rule 9.8 sq. ft. as fitted 9.8 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 No
 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 5/8" inter. 3/4"
 Pitch of rivets 8 3/16" Plate 1 9/32" Rivets 1 9/32"
 Percentage of strength of circ. end seams {plate 65.8 rivets 57.2 Percentage of strength of circ. intermediate seam {plate 85.03 rivets 80.8 combined 88.8
 Working pressure of shell by Rules 201 lbs.
 Thickness of butt straps {outer 1 1/8" inner 1 1/8" No. and Description of Furnaces in each Boiler One Plain. 3 p.f.
 Material Steel Tensile strength 28/30 Tons. Smallest outside diameter 41"
 Length of plain part {top 76" bottom 69" Thickness of plates {crown 13/16" bottom 13/16" 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 28/30 Tons. Thickness 13/16" Pitch of stays 18"
 How are stays secured Double nuts & washers. Working pressure by Rules 220 lbs.
 Tube plates: Material {front Steel Tensile strength 28/30 Tons. Thickness 7/8" Working pressure {front 211 lbs back 230
 Lean pitch of stay tubes in nests 10.97" Pitch across wide water spaces 13 3/4" Working pressure {front 211 lbs back 230
 Orders to combustion chamber tops: Material Steel Tensile strength 28/32 Tons. Depth and thickness of girder 9"
 Distance apart 9" No. and pitch of stays 3/4"
 Centre 10 1/2" x 1 3/4" Length as per Rule 36 3/16" Working pressure by Rules 210 lbs. Combustion chamber plates: Material Steel
 Each 3 @ 8 3/4" Thickness: Sides 3/4" Back 23/32" Top 3/4" + 23/32" Bottom 3/4"
 Tensile strength 28/30 Tons. Are stays fitted with nuts or riveted over
 Pitch of stays to ditto: Sides 9" x 8 3/4" Back 9" x 8 3/4" Top 9" x 8 3/4" Front plate at bottom: Material Steel Tensile strength 28/30 Tons
 Working pressure by Rules 230 lbs. Lower back plate: Material Steel Tensile strength 28/30 Tons Thickness 29/32"
 Thickness 15/16" Are stays fitted with nuts or riveted over
 Pitch of stays at wide water space 14" x 8 3/4" Tensile strength 28/32 Tons
 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.
 Over threads 248 lbs. Screw stays: Material Steel Tensile strength 28/30 Tons
 Working pressure by Rules 248 lbs. No. of threads per inch 10 Area supported by each stay 78.9 sq. in.
 Diameter {At turned off part, 1 7/8" + 1 3/4" No. of threads per inch 10

Working pressure by Rules 230 Lbs. Are the stays drilled at the outer ends ho Margin stays: Diameter 17/8"
No. of threads per inch 10 Area supported by each stay 97.75 sq. in. Working pressure by Rules 218 Lbs.
Tubes: Material Sm External diameter 3 1/2" 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 4'-9" dia. No. of rivets and diameter of rivet holes 16 @ 1 3/32"
Outer row rivet pitch at ends 10 Depth of flange if manhole flanged - Steam Dome: Material Steel
Tensile strength 16,300 Tons Thickness of shell 3/4" Description of longitudinal joint S.R. Lap.
Diameter of rivet holes 1 3/32" Pitch of rivets 2 1/4" Percentage of strength of joint 54
Internal diameter 33" Working pressure by Rules 226 Lbs. Thickness of crown 7/8" No. and diameter of
stays 2 @ 2 1/4" Inner radius of crown - Working pressure by Rules 4'-9" dia x 1 3/32" Diameter of rivet holes and pitch
How connected to shell J. Riveted Size of doubling plate under dome 4'-9" dia x 1 3/32"
of rivets in outer row in dome connection to shell 16 @ 1 3/32"

Type of Superheater

Number of elements _____ Material of tubes _____ Manufacturers of _____ Tubes _____
Material of headers _____ Tensile strength _____ Steel castings _____
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 See attached report Are the approved plans of boiler and superheater forwarded herewith ✓
while building on Hachy. 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 plan. The materials & workmanship are sound & good. It has been satisfactorily fitted on board, examined under working conditions & its safety valves adjusted under steam as above.

Survey Fee £
Travelling Expenses (if any) £

When applied for, ✓ 192
When received, ✓ 192

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

Committee's Minute

FRI. 3 MAY 1929

Assigned

See report attached



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Lloyd's Register
Foundation

Rpt. 13.

REP

Date of writing Report

No. in Survey Reg. Book.

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Owners

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