

REPORT ON BOILERS.

No. 44173

Received at London Office 1 NOV 1933

Date of writing Report 31 OCT 1933 Port of HULL

No. in Survey held at Hull Date, First Survey 1-8-33 Last Survey 26.10.1933

g. Book. on the Steam Trawler "LORENZO"

(Number of Visits) Gross 424.11 Tons Net 168.34

Master Built at Burnley By whom built Cook, Bolton & Gamble Ltd Yard No. 549 When built 1933

Engines made at Hull By whom made Charles D. Holmes & Co Ltd Engine No. 1442 When made 1933

Boilers made at Hull By whom made do Boiler No. 1442 When made 1933

Nominal Horse Power 111 Owners Huleys Bros Ltd Port belonging to Hull

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Apperby & Co Ltd (Letter for Record S)

Total Heating Surface of Boilers 1940 sq. ft. Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers One single ended Working Pressure 210 lbs.

Tested by hydraulic pressure to 365 lbs. Date of test 15.9.33. No. of Certificate 3864 Can each boiler be worked separately

Area of Firegrate in each Boiler 53.7 sq. ft. No. and Description of safety valves to each boiler Two spring loaded

Area of each set of valves per boiler per Rule 10.8 sq. ft. as fitted 11.86 Pressure to which they are adjusted 210 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 9 1/4" 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 144" Length 10'-8" Shell plates: Material Steel Tensile strength 29/33 Tons

Thickness 1 1/32" Are the shell plates welded or flanged Description of riveting: circ. seams end 5R. inter. 3 3/4"

long. seams T.R. 58.8 Diameter of rivet holes in circ. seams 1 3/8" Pitch of rivets 9 1/4"

Percentage of strength of circ. end seams plate 63.2 rivets 46.4 Percentage of strength of circ. intermediate seam plate 85.13 rivets 86.8

Percentage of strength of longitudinal joint plate 84.6 rivets 84.6 Working pressure of shell by Rules 212 lbs.

Thickness of butt straps outer 1 1/32" inner 15/32" No. and Description of Furnaces in each Boiler Three plain

Material Steel Tensile strength 26/30 Tons. Smallest outside diameter 42.5"

Length of plain part top 45" bottom Thickness of plates crown 53/64" bottom 1/64" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 212 lbs.

End plates in steam space: Material Steel Tensile strength 26/30 Tons Thickness 1 3/16" Pitch of stays 19 1/4" x 18 1/4"

How are stays secured Double nuts & washers Working pressure by Rules 212 lbs.

Tube plates: Material front Steel back Tensile strength 26/30 Tons Thickness 15/16" 7/8"

Mean pitch of stay tubes in nests 10.4" Pitch across wide water spaces 14" Working pressure front 230 lbs. back 222

Girders to combustion chamber tops: Material Steel Tensile strength 29/33 Tons. Depth and thickness of girder

at centre 10" x 1 3/4" Length as per Rule 36 7/32" Distance apart 9" No. and pitch of stays

in each 3 @ 8" Working pressure by Rules 227 lbs. Combustion chamber plates: Material Steel

Tensile strength 26/30 Tons. Thickness: Sides 3/4" Back 23/32" Top 23/32" Bottom 3/4"

Pitch of stays to ditto: Sides 10" x 8 1/2" Back 9 1/8" x 8 1/4" Top 9" x 8" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 215 lbs. Front plate at bottom: Material Steel Tensile strength 26/30 Tons Thickness 15/16" 7/8"

Lower back plate: Material Steel Tensile strength 26/30 Tons Thickness 7/8"

Pitch of stays at wide water space 14 1/2" x 8 1/4" Are stays fitted with nuts or riveted over nuts

Working Pressure 211 lbs. Main stays: Material Steel Tensile strength 26/32 Tons

Diameter At body of stay, 3 1/4" No. of threads per inch 8 Area supported by each stay 360 sq. in.

Over threads Working pressure by Rules 220 lbs. Screw stays: Material Steel Tensile strength 26/30 Tons

Diameter At turned off part, 1 1/4" No. of threads per inch 10 Area supported by each stay 85 sq. in.

Working pressure by Rules 212 Lbs. Are the stays drilled at the outer ends *ho* Margin stays: Diameter { At turned off part, *17/8"* or *1 1/2"* Over threads *17/8"* *1 1/2"*
No. of threads per inch *10* Area supported by each stay *98 sq"* Working pressure by Rules 217 Lbs. *8 Lbs.*
Tubes: Material *Iron* External diameter { Plain *3 1/2"* Thickness { *5/16"* + *3/8"* No. of threads per inch *9*
Pitch of tubes *4 3/4"* Working pressure by Rules 215 Lbs. Manhole compensation: Size of opening in
shell plate *16' x 12"* Section of compensating ring *5 1/2 dia x 1 1/32"* No. of rivets and diameter of rivet holes *16 @ 1 1/32"*
Outer row rivet pitch at ends *10.4"* Depth of flange if manhole flanged *0.5430* Steam Dome: Material *Steel*
Tensile strength *26 1/30 Tons* Thickness of shell *3/4"* Description of longitudinal joint *S.R. Lap*
Diameter of rivet holes *1 1/32"* Pitch of rivets *2 1/4"* Percentage of strength of joint { Plate *54.0* Rivets *43.8*
Internal diameter *33"* Working pressure by Rules Thickness of crown *7/8"* No. and diameter of
stays *2 @ 2 1/4"* Inner radius of crown *✓* Working pressure by Rules
How connected to shell *Riveted* Size of doubling plate under dome *5 1/2' x 1 1/32"* Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell *1 1/32" @ 10.4"*

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 22 inclusive for boilers been complied with

The foregoing is a correct description,
FOR CHARLES D. HOLMES & CO., LTD. Manufacturer.
J. Cooper

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

Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *Arab 44134*

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, tried under steam, & its safety valves adjusted as above.*

Charged on engine report
Survey Fee *£* : : When applied for, *19*
Travelling Expenses (if any) *£* : : When received, *19*

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

Committee's Minute **FRI. 3 NOV 1938**

Assigned *See other sub J.E. Rpt*