

REPORT ON BOILERS.

No. 56874

Received at London Office

12 OCT 1950

Date of writing Report 19 When handed in at Local Office 5 - OCT 1950 Port of HULL.

No. in Reg. Book. 95030 Survey held at HULL. Date, First Survey 3. 5. 50 Last Survey 11. 9. 19 50

(Number of Visits 13) Gross Tons 810 Net Tons 289

on the Steam Trawler "PRINCESS ELIZABETH".

Master - Built at Beverley By whom built Cook, Welton & Gemmell, Ltd. Yard No. 824 When built 1950

Engines made at Hull By whom made C.D. Holmes & Co., Ltd. Engine No. 1799 When made -do-

Boilers made at -do- By whom made -do- Boiler No. 1799 When made -do-

Nominal Horse Power 11N 234 Owners St. Andrew's Steam Fishing Co., Ltd. Port belonging to Hull

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby-Frodingham Steel Co. (Letter for Record S)

Total Heating Surface of Boilers 2875 + 1152 = 4027 sq. ft. Is forced draught fitted Yes Coal or Oil fired oil

No. and Description of Boilers One S.E. multitubular Working Pressure 225 lb.

Tested by hydraulic pressure to 390 lb. Date of test 29.6.50. No. of Certificate 4350 Can each boiler be worked separately -

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 1 pair of D. 3 1/2" Pressure to which they are adjusted 230 lb. Are they fitted with easing gear Yes

Area of each set of valves per boiler {per Rule as fitted} 19.2 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 2'3" Is oil fuel carried in the double bottom under boilers none

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

Largest internal dia. of boilers 16'-2 31/32" Length 11'0" Shell plates: Material S.M. Steel Tensile strength 31/35 tons

Thickness 1.33/64" Are the shell plates welded or flanged No Description of riveting: circ. seams {end 2 R.L. inter. -}

long. seams 3 R.D.B.S. Diameter of rivet holes in {circ. seams 1.15/32" long. seams 1.1/2" Pitch of rivets {3.7/8" 9.9/16"}

Percentage of strength of circ. end seams {plate 62.2% rivets 43.3% Percentage of strength of circ. intermediate seam {plate - rivets -}

Percentage of strength of longitudinal joint {plate 84.31% rivets 84.7% combined 85.55% Working pressure of shell by Rules -

Thickness of butt straps {outer 1.11/64" inner 1.19/64" No. and Description of Furnaces in each Boiler 3 Deighton Type Corrugated.

Material steel Tensile strength 26/30 tons Smallest outside diameter 4'0"

Length of plain part {top - bottom - Thickness of plates {crown 47/64" bottom - Description of longitudinal joint welded

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

Head plates in steam space: Material steel Tensile strength 26/30 tons Thickness 1.9/32" Pitch of stays 19 1/2" x 19 1/2"

How are stays secured double nuts and washers Working pressure by Rules -

Tube plates: Material {front steel back -do- Tensile strength {26/30 tons -do- Thickness {31/32" 29/32"}

Mean pitch of stay tubes in nests 9 1/2" x 9 1/2" Pitch across wide water spaces 14 1/2" Working pressure {front - back -}

Girders to combustion chamber tops: Material steel Tensile strength 29/33 tons Depth and thickness of girder at centre 9 1/2" - 2 3/8" Th. Length as per Rule 2-10 1/2" Distance apart 9" No. and pitch of stays in each 3 @ 8 1/2"

Working pressure by Rules - Combustion chamber plates: Material steel

Tensile strength 26/30 tons Thickness: Sides 3/4" Back 23/32" Top 23/32" Bottom 15/16"

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

Working pressure by Rules - Front plate at bottom: Material steel Tensile strength 26/30 tons

Thickness 31/32" Lower back plate: Material steel Tensile strength 26/30 tons Thickness 29/32"

Pitch of stays at wide water space 14 1/2" x 9 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure - Main stays: Material steel Tensile strength 28/32 tons

Diameter {At body of stay, 3.3/8" No. of threads per inch 8 Area supported by each stay -

Working pressure by Rules - Screw stays: Material steel Tensile strength 26/30 tons

Diameter {At turned off part, 1.3/4" No. of threads per inch 10 Area supported by each stay -

Working pressure by Rules - Are the stays drilled at the outer ends No Margin stays: Diameter { 1 1/2" 2" 2 1/2" }
No. of threads per inch 10 Area supported by each stay Working pressure by Rules -
Tubes: Material seamless steel External diameter { Plain 3 1/2" Stay 3 1/2" } Thickness { 7 W.G. 5/16" 3/8" } No. of threads per inch 9
Pitch of tubes 4 1/2" 4 3/4" Working pressure by Rules Manhole compensation: Size of opening in
shell plate 16" x 12" Section of compensating ring 36 1/2" x 1 33/64" No. of rivets and diameter of rivet holes 106 - 1 1/2"
Outer row rivet pitch at ends 10 3/4" Depth of flange if manhole flanged 3 1/2" in dome Steam Dome: Material steel
Tensile strength 26/30 tons Thickness of shell 3/4" Description of longitudinal joint S.R.L.
Diameter of rivet holes 1.1/32" Pitch of rivets 2 1/2" Percentage of strength of joint { Plate 54% Rivets 43.8% }
Internal diameter 2'9" Working pressure by Rules - Thickness of crown 15/16" No. and diameter of
stays 2 - 2 1/2" Inner radius of crown flat Working pressure by Rules -
How connected to shell D.R. Size of doubling plate under dome 4'11 1/2" x 1 33/64" Tk. Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell 1 1/2" - 4"

Type of Superheater ME LE SCO R.B. Type Manufacturers of Tubes See Manchester
Steel forgings Certificates
Steel castings Nos. C.9014/5.
Number of elements 53 Material of tubes steel Internal diameter and thickness of tubes
Material of headers steel Tensile strength - Thickness - 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 3.14 sq.in. Are the safety valves fitted with casing gear Yes Working pressure as per
Rules 225 lb. Pressure to which the safety valves are adjusted 230 lb. Hydraulic test pressure
tubes 675 lb. forgings and castings 675 lb. and after assembly in place 675 lb/sq.in. Are drain cocks on
valves fitted to free the superheater from water where necessary Yes
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

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

W.R. Evans Manufacturer

Dates of Survey { During progress of work in shops - -) 1950. May 3. 26. 31; June 2. 26. 28. 29. 30.
while building { During erection on board vessel - -) see machinery report Are the approved plans of boiler and superheater forwarded herewith 29.8.49
(If not state date of approval.) Total No. of visits 13.

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "LIFEGUARD" - Hull Report No. 56174.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The boiler has been constructed and installed under Special Survey in accordance with the Secretary's letters, approved plans and the Rules.

The materials and workmanship are good.

The boiler was examined under hydraulic test of 390 lb/sq.in. on completion and found sound and tight.

The safety valves were adjusted under steam to 230 lb/sq.in. and an accumulation test held.

Survey Fee ... £ see machinery report
Travelling Expenses (if any) £ report.

When applied for, 19
When received, 19

N. Chambers.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 27 OCT 1950

Assigned

See F.E. Welch. rpt.



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Foundation