

REPORT ON BOILERS.

No. 56014

4 - OCT 1949

Received at London Office

5 OCT 1949

Date of writing Report

19

When handed in at Local Office

19

Port of HULL.

No. in Reg. Book. Survey held at

HULL.

Date, First Survey

22. 6. 49

Last Survey

25. 8. 1949

(Number of Visits

16)

Gross

712

Tons

Net

262.

22619 on the Steam Trawler "PRINCE CHARLES".

Master - Built at Beverley By whom built Cook, Welton & Gemmell, Ltd. Yard No. 804 When built 1949

Engines made at Hull By whom made C.D. Holmes & Co., Ltd. Engine No. 1780 When made 1949

Boilers made at -do- By whom made -do- Boiler No. 1780 When made 1949

Nominal Horse Power M.N. 230 Owners Boston Deep Sea Fishing & Ice Co., Ltd. Port belonging to Hull

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby-Frodingham Steel Co., Ltd.

(Letter for Record S)

Total Heating Surface of Boilers Blr. ✓ Spt ✓ 2831 + 1140 = 3971 sq. ft. Is forced draught fitted Yes ✓ Coal or Oil fired Oil ✓

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

Tested by hydraulic pressure to 390 lb. ✓ Date of test 15.7.49 No. of Certificate 4331 Can each boiler be worked separately -

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 1 D. Sp. 3½" ✓

Area of each set of valves per boiler {per Rule as fitted} 19.2 ✓ Pressure to which they are adjusted 230 lb. ✓ 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 20" ✓ 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 16'0" ✓ Length 11'0" ✓ Shell plates: Material S.M. Stl. Tensile strength 31/35 tons ✓

Thickness 1½" ✓ 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 85.6% ✓ {combined 85.7% ✓ Working pressure of shell by Rules -

Thickness of butt straps {outer 1.5/32" ✓ {inner 1.9/32" ✓ No. and Description of Furnaces in each Boiler 3- Deighton Type Corrugation

Material Steel ✓ Tensile strength 26/30 tons ✓ Smallest outside diameter 3'11.1/32" ✓

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 -

End plates in steam space: Material steel ✓ Tensile strength 26/30 tons ✓ Thickness 1.17/64" ✓ Pitch of stays 18½" x 19½" ✓

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 9½" x 9½" ✓ Pitch across wide water spaces 14½" ✓ Working pressure {front - ✓ {back - ✓

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

at centre 9½" - 2 @ 7/8" tk. ✓ Length as per Rule 2'-10½" ✓ Distance apart 9½" ✓ No. and pitch of stays

in each 3 - 8½" ✓ 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 9½" x 8½" ✓ Back 9½" x 8½" ✓ Top 9½" x 8½" ✓ 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 inches

Pitch of stays at wide water space 14½" x 8½" ✓ 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" ✓ {Over threads - ✓ 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" ✓ {Over threads - ✓ 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 { ^{At turned off part.} _{For} 1 7/8" & 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 { 7/16" ✓ _{W.G.} 3/8" ✓ No. of threads per inch 9 ✓
 Pitch of tubes 4 3/4" x 4 3/4" ✓ Working pressure by Rules - Manhole compensation: Size of opening in
 shell plate 16" x 12" ✓ Section of compensating ring 4' 11 1/2" D x 1 1/2" Tk. No. of rivets and diameter of rivet holes 106 - 1 1/2" ✓
 Outer row rivet pitch at ends 10 1/2" ✓ 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 1/4" ✓ 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 - 2.3/8" ✓ 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" D x 1 1/2" 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

Steel forgings

Steel castings

See Manchester Certificates

Nos. C.7488 & C.7639.

Number of elements 48 ✓

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 easing gear Yes ✓

Working pressure as per

Rules 225 lb. ✓

Pressure to which the safety valves are adjusted ✓ 230 lb.

Hydraulic test pressure:

tubes - forgings and castings -

and after assembly in place 675 lb.

Are drain cocks or

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,

W. Deland

Manufacturer.

Dates of Survey { During progress of work in shops - - }
 while building { During erection on board vessel - - }

1949. June 22. July 1.5.8. 12.13. 15.20.22.

Aug 12,

Are the approved plans of boiler and superheater forwarded herewith 16.10.49
 (If not state date of approval.)

see machinery report

Total No. of visits

16,

Is this Boiler a duplicate of a previous case Yes

If so, state Vessel's name and Report No. "ST. CHAD" - Hull Report No. 55133.

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.

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

When applied for, 19
 When received, 19

W. Chambers.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 4 NOV 1949

Assigned *See F.E. Mch. rpt.*



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