

## REPORT ON BOILERS.

No. 44130.

Received at London Office

26 AUG 1936

Date of writing Report

19

When handed in at Local Office

25 AUG 1936

Port of

HULL

No. in Survey held at

Hull

Date, First Survey

29<sup>th</sup> April, 1936

Last Survey

12<sup>th</sup> August 1936

Reg. Book.

68602 on the

Steel Sc K. "Ocean Monarch"

(Number of Visits

Tons

Gross 440.47

Net 168.17

Master

Built at

Selly

By whom built

Bochrae &amp; Sons Ltd.

Yard No.

1165

When built

1936.8

Engines made at

Hull

By whom made

Charles D. Holmes &amp; Co. Ltd.

Engine No.

1496

When made

1936

Boilers made at

Hull

By whom made

Charles D. Holmes &amp; Co. Ltd.

Boiler No.

1496

When made

1936

Nominal Horse Power

114

Owners

Ocean Steam Fishing Co. Ltd.

Port belonging to

Hull

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel { Appleby, Frodingham Steel Co. Ltd.  
Steel Company of Scotland (Letter for Record "S")

Total Heating Surface of Boilers

2030 sq. ft.

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One single ended return tube

Working Pressure

210 #

Tested by hydraulic pressure to

365 #

Date of test

25/6/36

No. of Certificate

3944

Can each boiler be worked separately

Area of Firegrate in each Boiler

57.54 sq. ft.

No. and Description of safety valves to each boiler

2 Spring loaded.

Area of each set of valves per boiler

{ per Rule 11.28 sq. inch

{ as fitted 14.13

Pressure to which they are adjusted

210 #

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

10 1/2"

Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating

Largest internal dia. of boilers

177"

Length

10'8"

Shell plates: Material

Steel

Tensile strength

30-34 tons

Thickness

1 1/32"

Are the shell plates welded or flanged

Description of riveting: circ. seams

{ end

OK

long. seams

T.R. 8155

Diameter of rivet holes in

{ circ. seams 1 3/8"

{ long. seams

Pitch of rivets

3 3/4"

9 1/4"

Percentage of strength of circ. end seams

{ plate 63.40

{ rivets 52.10

Percentage of strength of circ. intermediate seam

{ plate

{ rivets

Percentage of strength of longitudinal joint

{ plate 85.13

{ rivets 86.00

{ combined 87.30

Working pressure of shell by Rules

215 #

Thickness of butt straps

{ outer 1 1/32"

{ inner 1 5/32"

No. and Description of Furnaces in each Boiler

Three plain

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

43.5"

Length of plain part

{ top 72"

{ bottom

Thickness of plates

{ crown 53/64"

{ bottom 53/64"

Description of longitudinal joint

Welded.

Dimensions of stiffening rings on furnace or c.c. bottom

Working pressure of furnace by Rules

210 #

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 3/16"

Pitch of stays 19 1/2" x 17 1/2"

How are stays secured

Double nuts and washers

Working pressure by Rules

210 #

Tube plates: Material

{ front Steel

{ back

Tensile strength

26-30 tons

Thickness

15/16"

7/8"

Mean pitch of stay tubes in nests

11"

Pitch across wide water spaces

14"

Working pressure

{ front 215 #

{ back 229 #

Girders to combustion chamber tops: Material

Steel

Tensile strength

29-33 tons

Depth and thickness of girder

at centre

10 @ 1 3/4"

Length as per Rule

35.219 #

Distance apart

9 3/4"

No. and pitch of stays

in each

3 @ 8 1/4"

Working pressure by Rules

217 #

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

24/32"

Back

23/32"

Top

23/32"

Bottom

24/32"

Pitch of stays to ditto: Sides

10" x 8 1/4"

Back

9 1/2" x 8 1/4"

Top

9 3/4" x 8 1/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

222 #

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

28/32"

Pitch of stays at wide water space

14" x 8 1/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

214 #

Main stays: Material

Steel

Tensile strength

28 tons (min)

Diameter { At body of stay,

{ or Over threads

3 1/4"

No. of threads per inch

8

Area supported by each stay

341 sq. inches

Working pressure by Rules

249 #

Screw stays: Material

Steel

Tensile strength

26-30 tons

Diameter { At turned off part,

{ or Over threads

1 3/4"

No. of threads per inch

10

Area supported by each stay

78.4 sq. inches

Working pressure by Rules 232 #0 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads } 1 7/8" 2" + 2 1/8"  
No. of threads per inch 10 Area supported by each stay 97 sq inches Working pressure by Rules 220 #0  
Tubes: Material Iron External diameter { Plain Stay } 3 1/2" Thickness { 8 wg. } 5/16" + 3/8" No. of threads per inch 9  
Pitch of tubes 4 3/4" X 4 3/4" Working pressure by Rules 215 #0 Manhole compensation: Size of opening in shell plate 16 X 12" Section of compensating ring 57 1/2" dia X 1 1/32" No. of rivets and diameter of rivet holes 118 @ 1 3/8"  
Outer row rivet pitch at ends 4' 5 1/4" p.c. Depth of flange if manhole flanged 2 1/4" Steam Dome: Material Steel  
Tensile strength 26-30 tons Thickness of shell 2 1/32" 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 Rivets } 54.00 43.80  
Internal diameter 33" Working pressure by Rules 230 #0 Thickness of crown 28/32" No. and diameter of stays 1 @ 2 1/4" Inner radius of crown ✓ Working pressure by Rules ✓  
How connected to shell Riveted Size of doubling plate under dome 4' 9 1/2" dia X 1 1/32" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 3/8" 4' 5 1/4" p.c. (16 rivets)

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 Yes.

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

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

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. Scally Wyke 45795

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

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

L. Moffatt  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI, 28 AUG 1936  
Assigned See Sub J.C. H7130