

REPORT ON BOILERS.

No. 40935.

21 JUN 1930

Date of writing Report

20-6-30

When handed in at Local Office

20 June 30

Port of

Received at London Office

HULL

No. in
Reg. Book.

Survey held at

Hull

Date, First Survey

17 Dec/29

Last Survey

7 June 30

on the Steam Trawler "KINGSTON CYANITE"

(Number of Visits)

N.

Gross

365.42

Tons

Net

149.05

Master

Built at

Beverly

By whom built

W. H. Bennett & Co. Ltd

Yard No.

5241

When built

1930

Engines made at

Hull

By whom made

Charles B. Holmes & Co. Ltd

Engine No.

1391

When made

1930

Boilers made at

Hull

By whom made

do

Boiler No.

1391

When made

1930

Nominal Horse Power

96

Owners

Kingston Steam Trawling Co. Ltd

Port belonging to

Hull

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Wickwarth & Bagnall & Co. Ltd

(Letter for Record)

S

Total Heating Surface of Boilers

1698 sq. ft.

Is forced draught fitted

Yes

Coal or Oil fired

Coal

No. and Description of Boilers

One single ended return tube

15B

Working Pressure

200 lbs.

Tested by hydraulic pressure to

350 lbs.

Date of test

7.4.30

No. of Certificate

3441

Can each boiler be worked separately

Yes

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.

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

4"

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

1"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

14'-0"

Length

10'-8"

Shell plates: Material

Steel

Tensile strength

20/30 Tons

Thickness

1 1/2"

Are the shell plates welded or flanged

Yes

Description of riveting: circ. seams

and

inter.

long. seams

T.R. 20/30

Diameter of rivet holes in

circ. seams

1 1/2"

long. seams

Pitch of rivets

3 1/2"

8 1/2"

Percentage of strength of circ. end seams

plate

65.8

rivets

51.2

Percentage of strength of circ. intermediate seam

plate

85.0

rivets

-

Percentage of strength of longitudinal joint

plate

85.0

rivets

90.8

combined

88.8

Working pressure of shell by Rules

201 lbs.

Thickness of butt straps

outer

1"

inner

1 1/2"

No. and Description of Furnaces in each Boiler

Three plain

Material

Steel

Tensile strength

20/30 Tons

Smallest outside diameter

41"

Length of plain part

top

76"

bottom

69"

Thickness of plates

crown

13/16"

bottom

1 1/2"

Description of longitudinal joint

Butt

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

20/30 Tons

Thickness

1 1/2"

Pitch of stays

18"

How are stays secured

Double nuts & washers

Working pressure by Rules

220 lbs.

Tube plates: Material

front

Steel

back

-

Tensile strength

20/30 Tons

Thickness

1 1/2"

7/8"

Mean pitch of stay tubes in nests

10.94"

Pitch across wide water spaces

13 1/4"

Working pressure

front

211 lbs.

back

230

Girders to combustion chamber tops: Material

Steel

Tensile strength

20/30 Tons

Depth and thickness of girder

at centre

10 1/2" x 1 1/4"

Length as per Rule

36 3/16"

Distance apart

9' x 11"

No. and pitch of stays

in each

3 @ 8 1/4"

Working pressure by Rules

210 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

20/30 Tons

Thickness: Sides

3/4"

Back

2 3/32"

Top

3/4" x 2 3/32"

Bottom

3/4"

Pitch of stays to ditto: Sides

9' x 8 1/4"

Back

9' x 8 1/2"

Top

9' x 8 1/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

230 lbs.

Front plate at bottom: Material

Steel

Tensile strength

20/30 Tons

Thickness

1 1/2"

Lower back plate: Material

Steel

Tensile strength

20/30 Tons

Thickness

1 1/2"

19/32"

Pitch of stays at wide water space

14' x 8 1/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

228 lbs.

Main stays: Material

Steel

Tensile strength

20/30 Tons

Diameter

At body of stay,

or

over threads

3 1/4"

No. of threads per inch

8

Area supported by each stay

324 sq. in.

Working pressure by Rules

245 lbs.

Screw stays: Material

Steel

Tensile strength

20/30 Tons

Diameter

At turned off part,

or

over threads

1 7/8" x 1 3/4"

No. of threads per inch

10

Area supported by each stay

79.8 sq. in.

REPORT ON BOILERS

Working pressure by Rules 230 Lbs. Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part, 1 7/8" or Over threads 1 7/8"
No. of threads per inch 10 Area supported by each stay 97.75 sq. in. Working pressure by Rules 218 Lbs.
Tubes: Material Iron External diameter { Plain 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 54 in x 1 3/2" No. of rivets and diameter of rivet holes 16 @ 1 3/2"
Outer row rivet pitch at ends 10.3" Depth of flange if manhole flanged Yes Steam Dome: Material Steel
Tensile strength 36,000 Lbs. Thickness of shell 3/4" Description of longitudinal joint S.R. Lap.
Diameter of rivet holes 1 1/2" Pitch of rivets 2 1/2" Percentage of strength of joint { Plate 54.0 Rivets 43.5
Internal diameter 38" Working pressure by Rules 226 Lbs. Thickness of crown 7/8" No. and diameter of stays 2 @ 2 1/2" Inner radius of crown — Working pressure by Rules —
How connected to shell Riveted Size of doubling plate under dome 54 in x 1 3/2" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 3/2" @ 10.3"

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.
John Cooper Manufacturer.

Dates of Survey { During progress of work in shops - - } See attached report on Machinery. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building { During erection on board vessel - - } 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, tried under steam, & its safety valves adjusted under steam.

Survey Fee £ : When applied for, 192
Travelling Expenses (if any) £ : When received, 192

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

Committee's Minute FRI. 27 JUN 1930
Assigned See F.E. Rpt.