

REPORT ON BOILERS.

No. 21666.

Received at London Office

11 DEC 1941

Date of writing Report 17 DEC. 1941.

When handed in at Local Office 5th DEC. 1941.

Port of

GREENOCK

No. in Reg. Book. Survey held at

GREENOCK

Date, First Survey 6th MAY. 1940 Last Survey 25-11-41 19

36324 on the

"EMPIRE PICT"

(Number of Visits)

Gross 8145
Tons Net 4743

Built at Glasgow By whom built Blythwood S.B. Co L^{td} Yard No. 64 When built 1941
 Engines made at Greenock By whom made John G. Kincaid & Co L^{td} Engine No. K134 When made 1941
 Boilers made at Greenock By whom made John G. Kincaid & Co L^{td} Boiler No. K134 When made 1941
 Nominal Horse Power 490 Owners Ministry of War Transport Port belonging to Glasgow

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Company of Scotland L^{td}. (Letter for Record S)
 Total Heating Surface of Boilers 33029 Is forced draught fitted Yes Exh. Gas for Oil fired Yes
 No. and Description of Boilers Two cylindrical Working Pressure 150 lb./sq. in.
 Tested by hydraulic pressure to 275 lb. Date of test 7-3-41 No. of Certificate 2233 Can each boiler be worked separately Yes
 Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two 2" 14L
 Area of each set of valves per boiler { per Rule 6.25" as fitted 6.28" Pressure to which they are adjusted 150 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 15" Is oil fuel carried in the double bottom under boilers
 Smallest distance between shell of boiler and tank top plating Boiler on upper deck in ER Is the bottom of the boiler insulated Yes
 Largest internal dia. of boilers 12'-5 1/2" Length 11'-0" Shell plates: Material S Tensile strength 29/33 tons
 Thickness 7/8" Are the shell plates welded or flanged No Description of riveting: circ. seams { end DR inter. 2.873"
 Long. seams T.P. DBS Diameter of rivet holes in { circ. seams 15/16" long. seams 15/16" Pitch of rivets { 6.75"
 Percentage of strength of circ. end seams { plate 67.4 rivets 43.7 Percentage of strength of circ. intermediate seam { plate 86.0 rivets 86.8
 Percentage of strength of longitudinal joint { plate 86.0 rivets 86.8 combined 89.6
 Thickness of butt straps { outer 2 1/32" inner 25/32" No. and Description of Furnaces in each Boiler Two Deighton
 Material S Tensile strength 24/30 tons Smallest outside diameter 3'-9"
 Length of plain part { top bottom Thickness of plates { crown 1/2" bottom 1/2" Description of longitudinal joint Weld
 Dimensions of stiffening rings on furnace or c.c. bottom
 End plates in steam space: Material S Tensile strength 24/30 tons Thickness 1 1/32" Pitch of stays 19" x 16 1/2"
 How are stays secured DN
 Tube plates: Material { front S back S Tensile strength { 24/30 tons Thickness { 15/16" 1 1/16"
 Mean pitch of stay tubes in nests 9.5" Pitch across wide water spaces 13 1/2"
 Girders to combustion chamber tops: Material S Tensile strength 29/33 tons Depth and thickness of girder
 at centre 8 3/4" x 1 1/2" Length as per Rule 2'-9 1/4" Distance apart 8 1/2" No. and pitch of stays
 in each 3 @ 8" Combustion chamber plates: Material S
 Tensile strength 24/30 tons Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 3/4"
 Pitch of stays to ditto: Sides 8 x 9" Back 9 x 9" Top 8" x 8 1/2" Are stays fitted with nuts or riveted over Nuts
 Front plate at bottom: Material S Tensile strength 24/30 tons
 Thickness 15/16" Lower back plate: Material S Tensile strength 24/30 tons Thickness 7/8"
 Pitch of stays at wide water space 14" Are stays fitted with nuts or riveted over Nuts
 Main stays: Material S Tensile strength 28/32 tons
 Diameter { At body of stay, or Over threads 2 1/2" No. of threads per inch 6
 screw stays: Material S Tensile strength 26/30 tons
 Diameter { At turned off part, or Over threads 1 1/2" & 1 5/8" No. of threads per inch 9



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W1200-0074

Are the stays drilled at the outer ends No

Margin stays: Diameter { At turned off part, 1 3/4
or
Over threads

No. of threads per inch 9

Tubes: Material S

External diameter { Plain 2 1/2"
Stay 2 1/2"

Thickness { 9/16" 1 1/32"

No. of threads per inch 9

Pitch of tubes 3 7/8" x 3 3/4"

Manhole compensation: Size of opening in

shell plate 20" x 16"

Section of compensating ring 2' 5" x 2' 9" x 1"

No. of rivets and diameter of rivet holes 38 - 1/8"

Outer row rivet pitch at ends 8"

Depth of flange if manhole flanged

Steam Dome: Material

Tensile strength

Thickness of shell

Description of longitudinal joint

Diameter of rivet holes

Pitch of rivets

Percentage of strength of joint { Plate
Rivets

Internal diameter

Thickness of crown

No. and diameter of

stays

Inner radius of crown

How connected to shell

Size of doubling plate under dome

Diameter of rivet holes and pitch

of rivets in outer row in dome connection to shell

Type of Superheater

Manufacturers of

{ Tubes
Steel forgings
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

Pressure to which the safety valves are adjusted

Hydraulic test pressure

tubes

forgings and castings

and after assembly in place

Are drain cocks on

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 JOHN G. KINCAID & CO. LIMITED.

McCauley Director.

Manufacturer

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

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

Total No. of visits

Is this Boiler a duplicate of a previous case Yes

If so, state Vessel's name and Report No. EMPIRE JET GKN 21546

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

These boilers have been built under special survey in accordance with the Rules and approved plans. The materials & workmanship are sound & good. The safety valves have been adjusted under pressure 150 lbs/sq" accumulation 161.
These boilers are eligible in every respect to be fitted in a vessel classed in the Society's Register Book.

Survey Fee ... £ :
Travelling Expenses (if any) £ :

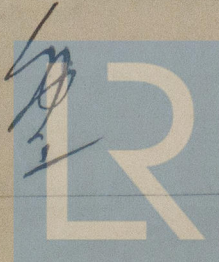
When applied for, 19
When received, 19

See Machinery report

Committee's Minute GLASGOW 9 - DEC 1941

Assigned SEE ACCOMPANYING MACHINERY REPORT.

Charles H. Hunter
Engineer Surveyor to Lloyd's Register of Shipping.



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