

pt. 5a.
RECEIVED
5 DEC 1943

REPORT ON BOILERS.

17674
No. 17562.

14 DEC 1943

Received at London Office

Form of writing Report 10th Dec. 1943. When handed in at Local Office 13th Dec. 1943 Port of *infieldsbrough.*

No. in Surrey held at *Stockton-on-Tees.* Date, First Survey *11th March* Last Survey *1st Dec.* 1943.

(Number of Visits *19.*) Gross *8135*
Tons Net *4604*

on the *3/5 "EMPIRE MILNER"*

uilt at *Haverhill Hill - n. Tees.* By whom built *Gurness Shipbuilding Co. Ltd.* Yard No. *358* When built *1944-6*

ines made at *West Hartlepool* By whom made *Richardson Westgarth* Engine No. *2742* When made *1944*

lers made at *Stockton-on-Tees.* By whom made *Stockton C.E. & Riley Bros. Ltd.* Boiler No. *6816* When made *1943.*

iminal Horse Power Owners *Ministry of War Transport.* Port belonging to *Huddersburgh*

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *The Steel Co. of Scotland Ltd.* (Letter for Record *5.* ✓)

al Heating Surface of Boilers *2080* Is forced draught fitted *Yes.* Coal or Oil fired

, and Description of Boilers *1, SE. Multitubular Marine* Working Pressure *180 lbs p.s.i.*

sted by hydraulic pressure to *320 lbs p.s.i.* Date of test *1/12/43* No. of Certificate *7101.* Can each boiler be worked separately *Yes*

ea of Firegrate in each Boiler No. and Description of safety valves to each boiler *2 1/4" Double Spring High Lift.*

ea of each set of valves per boiler (per Rule *6.67* for *144* as fitted *7.95* Pressure to which they are adjusted *185 lbs* Are they fitted with easing gear *Yes*

case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *No.*

allest distance between boilers or uptakes and bunkers or woodwork *3'-6"* Is oil fuel carried in the double bottom under boilers *Yes*

allest distance between shell of boiler and tank top plating *18"* Is the bottom of the boiler insulated *Yes.*

argest internal dia. of boilers *13'-3 13/16"* Length *11'-6"* Shell plates: Material *Steel* Tensile strength *29-33.*

ickness *1 3/32"* Are the shell plates welded or flanged *No* Description of riveting: circ. seams (end *D.R.* inter. ✓)

ing. seams *TR. D.B.S.* Diameter of rivet holes in (circ. seams *1 3/16"* Pitch of rivets *3.54"* long. seams *1 3/16"* *8 3/16"*

ercentage of strength of circ. end seams (plate *66.9* rivets *44.7* Percentage of strength of circ. intermediate seam (plate rivets

ercentage of strength of longitudinal joint (plate *88.5* rivets *91.85* combined *87.36*

ickness of butt straps (outer *7/8"* inner *1"* No. and Description of Furnaces in each Boiler *3 Doughton Corrugated*

aterial *Steel* Tensile strength *26-30* Smallest outside diameter *3'-1 1/4"*

ength of plain part (top *✓* bottom *✓* Thickness of plates (crown *1/2"* Description of longitudinal joint *Welded.* bottom *✓*

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

nd plates in steam space: Material *Steel* Tensile strength *26-30* Thickness *15/32"* Pitch of stays *19" x 17 1/2"*

ow are stays secured *Fitted double nuts & washers.*

ube plates: Material (front *Steel* Tensile strength *26-30* Thickness *13/16"* back *✓* *11/16"*

ean pitch of stay tubes in nests *9 1/8"* Pitch across wide water spaces *13 1/2"*

rders to combustion chamber tops: Material *Steel* Tensile strength *28-32* Depth and thickness of girder

centre *8 3/8" - 2 @ 13/16"* Length as per Rule *2'-8"* Distance apart *10"* No. and pitch of stays

each *2 - 10"* Combustion chamber plates: Material *Steel*

ensile strength *26-30* Thickness: Sides *2 1/32"* Back *11/16"* Top *23/32"* Bottom *2 1/32"*

itch of stays to ditto: Sides *10" x 8"* Back *10 1/2" x 7 1/2"* Top *10" x 10"* Are stays fitted with nuts or riveted over *margin stays - Notted each end*

ont plate at bottom: Material *Steel* Tensile strength *26-30.* *Other " - Notted in cc's.*

ickness *13/16"* Lower back plate: Material *Steel* Tensile strength *26-30* Thickness *27/32"*

itch of stays at wide water space *15"* Are stays fitted with nuts or riveted over *No.*

ain stays: Material *Steel* Tensile strength *28-32*

iameter (At body of stay, *2 7/8"* No. of threads per inch *6* or Over threads *✓*

ew stays: Material *Steel* Tensile strength *26-30.*

iameter (At turned off part, *1 3/4"* No. of threads per inch *9.* or Over threads *✓*

Are the stays drilled at the outer ends

Margin stays: Diameter { At turned off part, or Over threads

No. of threads per inch

Tubes: Material

External diameter

Plain
Stay

Thickness

No. of threads per inch

Pitch of tubes

Manhole compensation: Size of opening in

shell plate

Section of compensating ring

No. of rivets and diameter of rivet holes

Outer row rivet pitch at ends

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

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 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

For and on behalf of
The foregoing is a correct description,
STEAM ENGINEERS & BOILER MAKERS LTD.

Manufacturer

Dates

During progress of

1943 - March 11, 29, April 30, May 12, June 4, 28,

of Survey

work in shops - -

July 26, 30, Aug. 13, Sept. 3, 27, Oct. 11, 20, 25 Nov. 3

Are the approved plans of boiler and superheater forwarded herewith

while

During erection on

building

board vessel - - -

9, 11, 19, Dec. 1.

(If not state date of approval.)

Total No. of visits

19.

Is this Boiler a duplicate of a previous case

Yes

If so, state Vessel's name and Report No.

Indulstraph. No. 17534.

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

This boiler has been constructed under special survey & in accordance with the Rule Requirements & approved plan.

The materials & workmanship are good & on completion the boiler was hydraulically tested to 320 lbs/sq in & found satisfactory.

This boiler is being forwarded to the Harmer Shipbuilding Co. Ltd. - Harmer Hall for Richardson's Westgate's Contract No. 2742

This boiler has now been securely fitted on board & examined under working conditions & found satisfactory

The SV's adjusted under steam to 185 lbs/sq in on completion.

Survey Fee

£ 13 : 18 : 0

When applied for,

12/7/44
13/12/1943

SUPERVISION

Travelling Expenses (if any) £

3 : 9 : 6

When received,

19

C. Norman Stuart

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 25 JUL 1944

Assigned

see minute
on 25 July



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Lloyd's Register
Foundation