

## REPORT ON BOILERS.

No. 51951.

Date of writing Report 25-1-1943. When handed in at Local Office 10 Port of HULL.

No. in Reg. Book. Survey held at HULL.

Date, First Survey 10. 8. 42. Last Survey 8. 3. 1943.

on the H.M.T.

LANCER.

(Number of Visits 73.) Gross 580. Net 182.

Built at BEVERLEY. By whom built Cook Welton & Gemmell Ltd. Yard No. 704. When built 1943

Engines made at HULL. By whom made Chas. D. Holmes & Co. Engine No. 1635. When made

Boilers made at HULL. By whom made Chas. D. Holmes & Co. Boiler No. 1635. When made

Nominal Horse Power 165. Owners THE ADMIRALTY. Port belonging to

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland. Ltd. (Letter for Record S)

Total Heating Surface of Boilers 2551 sq. ft. Is forced draught fitted Yes. Coal or Oil fired Coal

No. and Description of Boilers One S.B. Working Pressure 225 lb./sq. in.

Tested by hydraulic pressure to 388 lb./sq. in. Date of test 29-12-42. No. of Certificate 4174. Can each boiler be worked separately —

Area of Firegrate in each Boiler 64 sq. ft. No. and Description of safety valves to each boiler 3 1/2", Two Spring loaded

Area of each set of valves per boiler (per Rule 17.5. as fitted 19.24. Pressure to which they are adjusted 225 lb./sq. in. 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 12". Is oil fuel carried in the double bottom under boilers No.

Smallest distance between shell of boiler and tank top plating None. Is the bottom of the boiler insulated No.

Largest internal dia. of boilers 15'-9 1/16". Length 11'-0". Shell plates: Material Steel Tensile strength 31-35 tons/sq. in. end D.R. Lap.

Thickness 1 15/32". Are the shell plates welded or flanged No. Description of riveting: circ. seams (inter. —)

long. seams T.R., D.B.S. Diameter of rivet holes in (circ. seams 1 15/32" Pitch of rivets 3 7/8" (inter. —)

Percentage of strength of circ. end seams (plate 62.1% rivets 44.4% Percentage of strength of circ. intermediate seam (plate — rivets —)

Percentage of strength of longitudinal joint (plate 84.31% rivets 86.9% combined 85.98%)

Thickness of butt straps (outer 1 5/32" inner 1 9/32" No. and Description of Furnaces in each Boiler 3 c.f. Deighton

Material Steel Tensile strength 26-30 tons/sq. in. Smallest outside diameter 3'-10".

Length of plain part (top — bottom — Thickness of plates (crown 23/32" bottom 23/32" Description of longitudinal joint Welded

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

End plates in steam space: Material Steel Tensile strength 26-30 tons/sq. in. Thickness 1 1/4". Pitch of stays 19 1/4" x 19 1/8".

How are stays secured Nuts & large washers inside and outside. Nuts & washers inside

Tube plates: Material (front Steel back Steel Tensile strength (26-30 tons/sq. in. Thickness 3 1/32" 29/32"

Mean pitch of stay tubes in nests 10.67 Pitch across wide water spaces 14 1/4" x 9 1/2".

Girders to combustion chamber tops: Material Steel Tensile strength 29-33 tons/sq. in. Depth and thickness of girder at centre 9" x 7/8" Double Length as per Rule 32 1/4". Distance apart 9 1/4". No. and pitch of stays in each 3 @ 7 1/2".

Combustion chamber plates: Material Steel Tensile strength 26-30 tons/sq. in. Thickness: Sides 23/32" Back 23/32" Top 1 1/16" Bottom 15/16".

Pitch of stays to ditto: Sides 9 7/8" x 8" Back 9 1/2" x 8 1/4" Top 9 1/4" x 7 1/2" Are stays fitted with nuts or riveted over nuts.

Front plate at bottom: Material Steel Tensile strength 26-30 tons/sq. in. Thickness 3 1/32" Lower back plate: Material Steel Tensile strength 26-30 tons/sq. in. Thickness 29/32"

Pitch of stays at wide water space 14 1/2" x 9 1/2". Are stays fitted with nuts or riveted over Nuts.

Main stays: Material Steel Tensile strength 28-32 tons/sq. in.

Diameter (At body of stay, or Over threads 3 3/8". No. of threads per inch 8.

Screw stays: Material Steel Tensile strength 26-30 tons/sq. in.

Diameter (At turned off part, or Over threads 1 3/4". No. of threads per inch 10



Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part,  $1\frac{7}{8}$ , 2" & 2 $\frac{1}{8}$ " or Over threads  
No. of threads per inch 10.  
Tubes: Material 1/4 W. Iron. External diameter { Plain 3 $\frac{1}{2}$ " Stay 3 $\frac{1}{2}$ " Thickness { 7 W.G.  $\frac{7}{16}$ ,  $\frac{3}{8}$ ,  $\frac{7}{16}$ . No. of threads per inch 9.  
Pitch of tubes 4 $\frac{3}{4}$ " x 4 $\frac{3}{4}$ " Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 3'-8 $\frac{1}{4}$ " x 1 $\frac{15}{32}$ " of rivets and diameter of rivet holes 62 @ 1 $\frac{1}{2}$ " Dia.  
Outer row rivet pitch at ends 10.74" Depth of flange if Bottom manhole flanged 3 $\frac{1}{2}$ " Steam Dome: Material NONE Compensating plate fitted to accommodate Dome with was fitted.  
Tensile strength Thickness of shell Description of longitudinal joint { Plate Rivets  
Diameter of rivet holes Pitch of rivets Percentage of strength of joint  
Internal diameter Thickness of crown No. and diameter of stays  
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 NONE (Safety Valve applied with view to future conversion). 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 Yes.

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

Dates of Survey { During progress of work in shops - - - See machinery report attached. 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

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

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

This Boiler has been constructed under special survey in accordance with the approved plans and the Rules.

The Workmanship and materials are good and, when subjected to a hydraulic test of 388 lbs / sq. it was found satisfactory in every respect.

The above boiler examined under steam, safety valves adjusted to 225 lbs., accumulation test carried out afterwards examination on completion of all tests. W.S.S.

Survey Fee ... £ : : When applied for, 19  
Travelling Expenses (if any) £ : : When received, 19

J. P. ...  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

See Incl 28. 57951



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Lloyd's Register  
Foundation

Rpt. 13.

Date of writing

No. in Reg. B

Built at...

Owners...

Electrical

Is vessel

Have plan

Heating...

has the ge

trip switch

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are they

and oil...

material

semi-insu

Is the co

to pilot a

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Are com

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equaliser

Switch

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