Rpt. 5a.

REPORT ON BOILERS.

No. 52396.

Received at London Office 24 APR 1944

Date of writing Report 5.4.44. 19 — When handed in at Local Office 20 APL 1944 19 — Port of HULL

No. in Reg. Book. — Survey held at HULL. — Date, First Survey 4.12.43. — Last Survey 17.4. 1944

(Number of Visits 26)

on the H.M. DAN LAYER GILSAY. — Tons Gross 458.6 Net 143.9

Built at BEVERLEY — By whom built Cook Welton & Gemmell Ltd. — Yard No. 729. — When built 1944

Engines made at HULL. — By whom made Chas. D. Holmes Ltd — Engine No. 1676. — When made "

Boilers made at HULL — By whom made Chas. D. Holmes Ltd — Boiler No. 1674. — When made "

Nominal Horse Power 156. — Owners THE ADMIRALTY. — Port belonging to —

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

Manufacturers of Steel Steel Company of Scotland — (Letter for Record S.

Total Heating Surface of Boilers 2650 ☐ft. — Is forced draught fitted Yes. — Coal or Oil fired Coal

No. and Description of Boilers One S.B. — **Working Pressure** 200 lbs/☐"

Tested by hydraulic pressure to 350 lbs/☐" — Date of test 21-12-43. — No. of Certificate 4216. — Can each boiler be worked separately —

Area of Firegrate in each Boiler 63 ☐ft. — No. and Description of safety valves to each boiler 2 - Spring Loaded High Lift

Area of each set of valves per boiler { per Rule 7.7. ☐" / as fitted 9.8. ☐" } — Pressure to which they are adjusted 200 lbs/☐" — 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 2'-0" — 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 14'-9 3/8" — Length 11'-6" — **Shell plates;** Material Steel — Tensile strength 29-33 tons/☐"

Thickness 15/16" — Are the shell plates welded or flanged No — Description of riveting: circ. seams { end D.R. lap / inter. NONE }

long. seams T.R. D.B.S. — Diameter of rivet holes in { circ. seams 1 3/8" / long. seams 1 3/8" } — Pitch of rivets { 4" / 9 1/2" }

Percentage of strength of circ. end seams { plate 65.6% 64.9 / rivets 44.7% 45.8 } — Percentage of strength of circ. intermediate seam { plate — / rivets — }

Percentage of strength of longitudinal joint { plate 85.5% / rivets 88.5% / combined 86.8% }

Thickness of butt straps { outer 1" / inner 1 1/8" } — **No. and Description of Furnaces in each Boiler** 3 of Deighton Section

Material Steel — Tensile strength 26-30 tons/☐" — Smallest outside diameter 3'-6 7/16"

Length of plain part { top — / bottom — } — Thickness of plates { crown / bottom } 19/32" — Description of longitudinal joint Weld

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

End plates in steam space: Material Steel — Tensile strength 26-30 tons/☐" — Thickness 1 11/32" — Pitch of stays 21" × 20"

How are stays secured Nuts inside and out

Tube plates: Material { front Steel / back Steel } — Tensile strength { 26-30 tons/☐" / 26-30 tons/☐" } — Thickness { 7/8" / 25/32" }

Mean pitch of stay tubes in nests 9 11/16" — Pitch across wide water spaces 13 5/8"

Girders to combustion chamber tops: Material Steel — Tensile strength 28-32 tons/☐" — Depth and thickness of girder at centre 8 1/4" × 1 7/8" — Length as per Rule 2'-6 29/32" — Distance apart 10 3/4" — No. and pitch of stays in each 2 @ 9 1/2"

Combustion chamber plates: Material Steel — Tensile strength 26-30 tons/☐" — Thickness: Sides 25/32" — Back 3/4" — Top 25/32" — Bottom 25/32"

Pitch of stays to ditto: Sides 10 3/4" × 9 7/8" — Back 9 1/4" × 9 7/8" — Top 10 3/4" × 9 1/2" — Are stays fitted with nuts or riveted over Nuts

Front plate at bottom: Material Steel — Tensile strength 26-30 tons/☐"

Thickness 7/8" — **Lower back plate:** Material Steel — Tensile strength 26-30 tons/☐" — Thickness 7/8"

Pitch of stays at wide water space 14 1/2" × 9 7/8" — Are stays fitted with nuts or riveted over Nuts

Main stays: Material Steel — Tensile strength 28-32 tons/☐"

Diameter { At body of stay, or Over threads 3 1/8" } — No. of threads per inch 6

Screw stays: Material Steel — Tensile strength 26-30 tons/☐"

Diameter { At turned off part, or Over threads 1 7/8" } — No. of threads per inch 9

007448-0076SS+0214

GILSAY.

Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part, ✓ / Over threads ✓ 2" ✓

No. of threads per inch 9 ✓ ✓

Tubes: Material Steel ✓ External diameter { Plain 2 3/4" ✓ / Stay 2 3/4" ✓ ✓ } Thickness { 8 W.G ✓ / 5/16 ✓ 3/8" ✓ } No. of threads per inch ✓ 9 ✓

Pitch of tubes 3 7/8" x 3 7/8" ✓ ✓ **Manhole compensation:** Size of opening in shell plate 12" x 16" ✓ ✓ Section of compensating ring 1 5/16" ✓ x 20" ✓ No. of rivets and diameter of rivet holes ✓ 15 @ 1 5/32" ✓

Outer row rivet pitch at ends 10 1/8" ✓ Depth of flange if bottom manhole flanged 3 1/4" ✓ **Steam Dome:** Material NONE ✓

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 None 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.
W. R. Evans
Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1943. Dec. 4.9.16.21. 1944 Jan. 14.24. Feb. 3. Are the approved plans of boiler and superheater forwarded herewith 14-5-43 (If not state date of approval.)

{ During erection on board vessel - - - } See machinery report. Total No. of visits 21.

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. H.M.T. Ailsa Craig

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

This boiler has been constructed under Special Survey in accordance with the approved Admiralty Plans and the Rules.
The workmanship and materials are good. and when subjected to an hydraulic test of 350 lbs/□" it was found satisfactory in every respect.

Boiler installed in H.M.T. GILSAY at Hull, examined under steam, safety valves adjusted as overleaf, accumulation test held and found satisfactory on completion of all tests. W. S. Shields.

Survey Fee ... ... £ : : | When applied for, ____ 19

Travelling Expenses (if any) £ : : | When received, ____ 19

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

Committee's Minute THURS 4 MAY 1944

Assigned See machy rpt