

REPORT ON BOILERS.

No. 46439

Received at London Office

24 APR 1936

Port of HULL

Survey held at Hull Date, First Survey 4th Feb 1936 Last Survey 23rd April 1936

on the Steam Trawler "Admiral Drake" (Number of Visits V.) Tons {Gross 418 Net 162

Built at Selly By whom built Cochran & Sons Ltd Yard No. 1154 When built 1936

Machines made at Hull By whom made Charles D. Holmes & Co Ltd Engine No. 1489 When made 1936

Boilers made at do By whom made do Boiler No. 1489 When made 1936

Indicated Horse Power 105 Owners C.H. Smith & Co (Hull) Ltd Port belonging to Hull

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

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

Total Heating Surface of Boilers 1940 sq ft Is forced draught fitted No Coal or Oil fired Coal

Number and Description of Boilers One Single Ended Working Pressure 200 lbs

Tested by hydraulic pressure to 350 lbs Date of test 2/4/36 No. of Certificate 3935 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 53.7 sq ft No. and Description of safety valves to each boiler Two 2 3/4" dia, Spring loaded

Area of each set of valves per boiler {per Rule 11.3" as fitted 11.9" 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 9" Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating ✓ Is the bottom of the boiler insulated No

Largest internal dia. of boilers 14'-6" Length 10'-8" Shell plates: Material Steel Tensile strength 29/33 Tons

Thickness 1 9/32 Are the shell plates welded or flanged No Description of riveting: circ. seams {end D.R. inter. ✓

Long. seams T.R. D.B.S Diameter of rivet holes in {circ. seams } 1 1/32 Pitch of rivets { 3 3/4 } 9 1/2

Percentage of strength of circ. end seams {plate 64.3 rivets 46.8 Percentage of strength of circ. intermediate seam {plate 85.5 rivets 88.5 Working pressure of shell by Rules 202 lbs

Percentage of strength of longitudinal joint {plate 85.5 rivets 88.5 combined 88.7

Thickness of butt straps {outer 1" inner 1 1/8" No. and Description of Furnaces in each Boiler 3 Plain, with Gourlay necks

Material Steel Tensile strength 26/30 Tons Smallest outside diameter 3'-6 1/2"

Length of plain part {top 6'-3" bottom 5'-6" Thickness of plates {crown 13/16 bottom 13/16 Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 206 lbs

End plates in steam space: Material Steel Tensile strength 26/30 Tons Thickness 1 5/8" Pitch of stays 19 3/4" x 18 1/4"

How are stays secured Double Nuts and Washers Working pressure by Rules 203 lbs

Tube plates: Material {front } Steel Tensile strength { 26/30 Tons Thickness { 15/16 } 7/8

Mean pitch of stay tubes in nests 10.7" Pitch across wide water spaces 14" Working pressure {front 209 lbs back 242 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 29/33 Tons Depth and thickness of girder

at centre 10" by 2 @ 7/8" Length as per Rule 36 1/4" Distance apart 9" wings, 9 1/2" centre No. and pitch of stays

in each 3 @ 8" Working pressure by Rules 233 lbs Combustion chamber plates: Material Steel

Tensile strength 26/30 Tons Thickness: Sides 23/32 Back 11/16 Top 11/16 Bottom 23/32

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

Working pressure by Rules 204 lbs Front plate at bottom: Material Steel Tensile strength 26/30 Tons

Thickness 15/16 Lower back plate: Material Steel Tensile strength 26/30 Tons Thickness 7/8

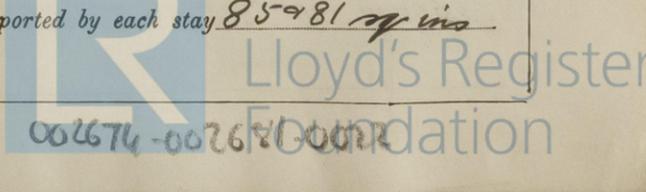
Pitch of stays at wide water space 14 1/4" Are stays fitted with nuts or riveted over Nuts

Working Pressure 227 lbs Main stays: Material Steel Tensile strength 28/32 Tons

Diameter {At body of stay, } 3 1/4" No. of threads per inch 8 Area supported by each stay 361 sq ins

Working pressure by Rules 203 lbs Screw stays: Material Steel Tensile strength 26/30 Tons

Diameter {At turned off part, } 1 3/4" No. of threads per inch 10 Area supported by each stay 85.981 sq ins



Working pressure by Rules $225 \frac{lb}{sq\ in}$ Are the stays drilled at the outer ends No Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part,} \\ \text{or} \\ \text{Over threads} \end{array} \right. 1 \frac{7}{8} \times 2 \frac{1}{2}$
 No. of threads per inch 10 Area supported by each stay 104.6 sq ins Working pressure by Rules $203 \frac{lb}{sq\ in}$
 Tubes: Material Iron External diameter $\left\{ \begin{array}{l} \text{Plain} \\ \text{Stay} \end{array} \right. 3 \frac{1}{2}$ Thickness $\left\{ \begin{array}{l} 8 \text{ W. 6} \\ 5/16 \times 3/8 \end{array} \right.$ No. of threads per inch 9
 Pitch of tubes 4 3/4" x 4 3/4" Working pressure by Rules $215 \frac{lb}{sq\ in}$ Manhole compensation: Size of opening
 shell plate 16" x 12" Section of compensating ring 4'-9 1/2" x 1 9/32" No. of rivets and diameter of rivet holes 122 @ 1 1/2"
 Outer row rivet pitch at ends 10.45" Depth of flange if manhole flanged Steam Dome: Material Steel
 Tensile strength 26/30 Tons Thickness of shell 3/4" Description of longitudinal joint SR Lap
 Diameter of rivet holes 1 1/2" Pitch of rivets 2 1/4" Percentage of strength of joint $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right. \left. \begin{array}{l} 54.4 \\ 44. \end{array} \right.$
 Internal diameter 2'-9" Working pressure by Rules $231 \frac{lb}{sq\ in}$ Thickness of crown 7/8" No. and diameter
 stays 2 @ 2 1/4" Inner radius of crown Working pressure by Rules Ample
 How connected to shell D.R. Lap Joint Size of doubling plate under dome 4'-9 1/2" x 1 9/32" Diameter of rivet holes and pitch
 of rivets in outer row in dome connection to shell 1 1/2" dia by 10.45"

Type of Superheater Smoke Tube Type Manufacturers of $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right. \left. \begin{array}{l} \text{The Superheater Co. Ltd. Manchester} \\ \text{do} \end{array} \right.$
 Number of elements 26 Material of tubes Steel Internal diameter and thickness of tubes 1 7/23 mm.
 Material of headers Forged Steel Tensile strength 26/30 Tons Thickness 5/8" Can the superheater be shut off
 the boiler be worked separately Yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes
 Area of each safety valve 1.77 sq ins. Are the safety valves fitted with easing gear Yes Working pressure as
 Rules 396 lb/sq in. Pressure to which the safety valves are adjusted 200 lb/sq in. Hydraulic test pressure
 tubes 1000 lb/sq in. castings 600 lb/sq in. and after assembly in place Are drain cocks or valves fitted
 to free the superheater from water where necessary Yes
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

P. The foregoing is a correct description,
Harold Sheardson Manufacturer
 DIRECTOR.

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of} \\ \text{work in shops} \end{array} \right. \left. \begin{array}{l} \text{See Mch'y Report} \\ \text{Herewith.} \end{array} \right.$ Are the approved plans of boiler and superheater forwarded herewith Yes
 while building $\left\{ \begin{array}{l} \text{During erection on} \\ \text{board vessel} \end{array} \right. \left. \begin{array}{l} \text{Herewith.} \\ \text{Total No. of visits} \end{array} \right. \left. \begin{array}{l} \text{Yes.} \\ \text{✓} \end{array} \right.$
 (If not state date of approval.)

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Cape Corrientes. Hull Rpt N^o 46366

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. It has been out-fitted, fitted on board, tried under steam, and the safety valves adjusted as above.

Survey Fee charged on Mch'y Rpt & Herewith: : : When applied for, 19
 Travelling Expenses (if any) £ : : When received, 19

A. W. B. Edwards
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 28 APR 1936
 Assigned See minute on J.E. Rpt.

