

REPORT ON BOILERS.

No. 128063

Received at London Office.....

Date of writing Report.....19..... When handed in at Local Office.....19..... Port of.....

LIVERPOOL

No. in Reg. Book. Survey held at **BIRKENHEAD** Date, First Survey..... Last Survey..... **14/10/48** 19.....

on the **S.S. "TULIPFIELD" & "NORDLAND"** (Number of Visits.....) Tons } Gross..... Net.....

Master..... Built at **HAMBURG** By whom built **REIHERSTGSCHIFF** Yard No..... When built **1922**

Engines made at **HAMBURG** By whom made **REIHERST MASCHINENF.** Engine No..... When made **1922**

Boilers made at **"** By whom made **"** Boiler No..... When made **1922**

Nominal Horse Power **93** Owners **BRITISH WHEELER PROCESS LTD** Port belonging to **LIVERPOOL**

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

Manufacturers of Steel..... (Letter for Record.....)

Total Heating Surface of Boilers **1856 sq** Is forced draught fitted **NO** Coal or Oil fired **OIL**

No. and Description of Boilers **ONE CYLINDRICAL MULTITUBULAR** Working Pressure **200 lbs/sq"**

Tested by hydraulic pressure to..... Date of test..... No. of Certificate..... Can each boiler be worked separately.....

Area of Firegrate in each Boiler..... No. and Description of safety valves to each boiler **3" Double Improved H.L.**

Area of each set of valves per boiler } per Rule **5.40" x 2 = 10.80"** } as fitted **14.20"** Pressure to which they are adjusted **200 lbs/sq"** 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 **well clear** Is oil fuel carried in the double bottom under boilers **no**

Smallest distance between shell of boiler and tank top plating **30"** Is the bottom of the boiler insulated **yes**

Largest internal dia. of boilers **13'-3 1/2"** Length **10'-6"** Shell plates: Material **Steel** Tensile strength.....

Thickness **1 1/4"** Are the shell plates welded or flanged **no** Description of riveting: circ. seams { end **D.R. lap** } inter **FR. lap** } long. seams **D.B.S. (Wave)** Diameter of rivet holes in { circ. seams **1 1/4"** } long. seams **1 1/4"** Pitch of rivets { **16 1/2 - 8 1/4 - 4 1/8** }

Percentage of strength of circ. end seams { plate **69%** } rivets **40.2%** Percentage of strength of circ. intermediate seam { plate..... } rivets.....

Percentage of strength of longitudinal joint { plate..... } rivets **101%** Working pressure of shell by Rules **206 lbs/sq"**

Thickness of butt straps { outer **1 1/4"** } inner **1 1/4"** No. and Description of Furnaces in each Boiler **Three Morrison type**

Material **Steel** Tensile strength..... Smallest outside diameter **40.35"**

Length of plain part { top..... } bottom..... Thickness of plates { crown **.675"** } bottom..... Description of longitudinal joint **Welded**

Dimensions of stiffening rings on furnace or c.c. bottom..... Working pressure of furnace by Rules **245 lbs/sq"**

End plates in steam space: Material **Steel** Tensile strength..... Thickness **1 1/8"** Pitch of stays **16" x 16"**

How are stays secured **Nut and washer each side of plate** Working pressure by Rules **230 lbs/sq"**

Tube plates: Material { front **Steel** } back..... Tensile strength..... Thickness { **1.05"** } **1.0"** }

Mean pitch of stay tubes in nests **9 1/2"** Pitch across wide water spaces **14 1/2" x 4 1/2"** Working pressure { front **239 lbs/sq"** } back **280 lbs/sq"** }

Girders to combustion chamber tops: Material **Steel** Tensile strength..... Depth and thickness of girder

at centre **8 1/4" x (3 1/4" x 2)** Length as per Rule **25"** Distance apart **7 1/2"** No. and pitch of stays

in each **2 at 8"** Working pressure by Rules **380 lbs/sq"** Combustion chamber plates: Material **Steel**

Tensile strength..... Thickness: Sides **.675"** Back **23/32"** Top **.675"** Bottom **.675"**

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

Working pressure by Rules **248 lbs/sq"** Front plate at bottom: Material **Steel** Tensile strength.....

Thickness **1.05"** Lower back plate: Material **Steel** Tensile strength..... Thickness **1.05"**

Pitch of stays at wide water space **14 3/4" x 8"** Are stays fitted with nuts or riveted over **Nuts**

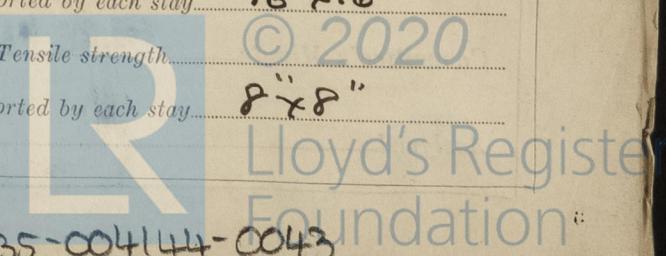
Working pressure **240 lbs/sq"** Main stays: Material **Steel** Tensile strength.....

Diameter { At body of stay **3" x 2 3/4"** } or Over threads..... No. of threads per inch **11** Area supported by each stay **16" x 16"**

Working pressure by Rules **210 lbs/sq"** Screw stays: Material **Steel** Tensile strength.....

Diameter { At turned off part **1 1/2" x 1 5/8"** } or Over threads..... No. of threads per inch **11** Area supported by each stay **8" x 8"**

675
1.250



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Working pressure by Rules 210 lbs Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part 1 3/4" or Over threads 1 3/4"

No. of threads per inch 11 Area supported by each stay 890" Working pressure by Rules 204 lbs

Tubes: Material Steel External diameter { Plain 3 5/8" Stay 3 1/2" Thickness { 1/8" 5/16" No. of threads per inch 11

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 231 lbs Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 4" x 1 1/4" No. of rivets and diameter of rivet holes 38 x 1 5/16"

Outer row rivet pitch at ends 4 1/4" Depth of flange if manhole flanged - Steam Dome: Material Steel

Tensile strength - Thickness of shell .55" Description of longitudinal joint D.R. Jap.

Diameter of rivet holes 1 5/16" Pitch of rivets 2 7/8" Percentage of strength of joint { Plate 67.5% Rivets 77.3%

Internal diameter 25" Working pressure by Rules 378 lbs Thickness of crown 1.3" No. and diameter of stays - Inner radius of crown 18 3/4" Working pressure by Rules 740 lbs

How connected to shell D.R. Size of doubling plate under dome 1 1/2" x 4" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 5/16" 3 3/8"

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 -

Area of each safety valve - Are the safety valves fitted to every part of the superheater which can be shut off from the boiler -

Rules - Pressure to which the safety valves are adjusted - Working pressure as per tubes - Are the safety valves fitted with easing gear - Hydraulic test pressure: forgings and castings - and after assembly in place - Are drain cocks of 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, - Manufacturer -

Dates of Survey while building { During progress of work in shops - During erection on 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 - If so, state Vessel's name and Report No. -

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

For the information of the Committee and eligible in my opinion such as could be accepted for classification LMC 10.48 TS CL(N) 9.48 Fitted for oil fuel flash point above 150°F 10.48.

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

On behalf of L. B. Trenchard
 Engineer Surveyor to Lloyd's Register of Shipping.
B. Bedford

Committee's Minute FEB 25 MAR 1949
 Assigned -

