

## REPORT ON BOILERS.

No. 15440

Received at London Office

-1 JUL 1935

Date of writing Report 29. 6. 1935 When handed in at Local Office 29. 6. 1935 Port of MIDDLESBROUGH

No. in Survey held at STOCKTON Date, First Survey 9. 4. 35 Last Survey 28. 6. 1935  
 Reg. Book. (Number of Visits 14) Tons { Gross 270.5  
 Net 117.94

on the steam trawler "WHITE PIONEER"

Master                      Built at Aburdeen By whom built J. Lewis & Sons Ltd. Yard No. 134 When built 1935

Engines made at Hullum By whom made White's Mar. Eng. Co. Engine No. 30 When made 1935

Boilers made at Stockton By whom made Stockton Chem. Eng. & Riley, Boiler Makers Boiler No. 6101 When made 1935

Nominal Horse Power 97 Owners White Traders, Ltd. Port belonging to Newcastle

## LITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company of Scotland (Letter for Record 3)

Heating Surface of Boilers 1580 sq. ft. Is forced draught fitted no Coal or Oil fired coal

and Description of Boilers 1 SB. Working Pressure 220 lbs.

Tested by hydraulic pressure to 380 lbs. Date of test 28. 6. 35 No. of Certificate 6878 Can each boiler be worked separately no

Area of Firegrate in each Boiler 42 sq. ft. No. and Description of safety valves to each boiler 2 spring loaded

Pressure of each set of valves per boiler { per Rule 8.92 as fitted 9.82 Pressure to which they are adjusted 220 lbs. Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler yes

Smallest distance between boilers or uptakes and bunkers or woodwork 10" Is oil fuel carried in the double bottom under boilers no

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

Largest internal dia. of boilers 13' 0" Length 10' 3" Shell plates: Material Steel Tensile strength 29/33

Thickness 1 1/4" Are the shell plates welded or flanged no Description of riveting: circ. seams { end D.R. inter. 33/4

Long. seams T.R.D.B.S. (5 welds) Diameter of rivet holes in { circ. seams 1 1/32" long. seams 1 1/4" Pitch of rivets { plate 8 1/2" rivets 8 1/2"

Percentage of strength of circ. end seams { plate 64.16 rivets 50.14 Percentage of strength of circ. intermediate seam { plate 85.3 rivets 85.88

Percentage of strength of longitudinal joint { plate 85.88 rivets 87.8 Working pressure of shell by Rules 220 lbs.

Thickness of butt straps { outer 1 1/16" inner 1 1/16" No. and Description of Furnaces in each Boiler 3 p. f.

Material Steel Tensile strength 26/30 Smallest outside diameter 3' 3"

Length of plain part { top 6' 2 3/16" bottom 6' 8" Thickness of plates { crown 1 1/16" bottom 1 1/16" Description of longitudinal joint weld. (electric)

Dimensions of stiffening rings on furnace or c.c. bottom                      Working pressure of furnace by Rules 223 lbs.

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 1/8" Pitch of stays 16 1/2" x 18"

How are stays secured D.N.W. Working pressure by Rules 238 lbs.

Tube plates: Material { front Steel back Steel Tensile strength { 26/30 Thickness { 1 1/8" Working pressure { front 228 lbs. back 263

Mean pitch of stay tubes in nests 9" x 9" Pitch across wide water spaces 14" x 4 1/2" Depth and thickness of girder                     

Girders to combustion chamber tops: Material Steel Tensile strength 26/32 Distance apart 9 1/2" No. and pitch of stays                     

at centre 9 1/2" x 7 1/4" (double) Length as per Rule 2' 7" Combustion chamber plates: Material Steel

in each 3 - 7 1/4" Working pressure by Rules 229 lbs. Thickness: Sides 1 1/16" Back 2 1/32" Top 1 1/16" Bottom 1 1/16"

Tensile strength 26/30 Are stays fitted with nuts or riveted over nuts

Pitch of stays to ditto: Sides 9 1/4" x 7 1/4" Back 8" x 8 1/4" Top 9 1/2" x 7 1/4" Working pressure by Rules 227 lbs.

Thickness 29/32 Front plate at bottom: Material Steel Tensile strength 26/30 Thickness 29/32

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

Working Pressure 253 lbs. Main stays: Material Steel Tensile strength 26/32

Diameter { At body of stay, 3" No. of threads per inch 6 Area supported by each stay 305 sq. in.

Working pressure by Rules 220 lbs. Screw stays: Material Steel Tensile strength 26/30

Diameter { At turned off part, 1 1/8" No. of threads per inch 9 Area supported by each stay 66.8 sq. in.

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Working pressure by Rules 227 lbs. Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads 1 7/8"  
No. of threads per inch 9 Area supported by each stay 88 Working pressure by Rules 242 lbs.  
Tubes: Material L.W. Wrought Iron External diameter { Plain 3 1/4" to 3 3/4" Thickness 8 WG No. of threads per inch 9  
Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules p. 230 lbs. s. 339 lbs. Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 9" x 1 1/4" No. of rivets and diameter of rivet holes 48 - 1 1/4"  
Outer row rivet pitch at ends 8 7/8" 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 { Plate Rivets —  
Internal diameter — Working pressure by Rules — Thickness of crown — No. and diameter of stays — Inner radius of crown — Working pressure by Rules —  
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 Sugden (uplance) Manufacturers of { Tubes Steel castings  
Number of elements 34 Material of tubes S.D. Steel Internal diameter and thickness of tubes 1" x 10 WG  
Material of headers steel Tensile strength — Thickness 13/16" 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 — Working pressure as per Rules appx. 220 lbs. Pressure to which the safety valves are adjusted — Hydraulic test pressure: tubes — castings — and after assembly in place 660 lbs. 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 and on behalf of Stockton Chemical Engineers & Riley Boilers Ltd.  
The foregoing is a correct description, Geo. B. Riley Manufacturer.

Dates of Survey { During progress of work in shops - - - Apr. 9. 17. 21 May 1. 8. 17. 22. 27. 31 Are the approved plans of boiler and superheater forwarded herewith Yes  
while building { During erection on board vessel - - - June 6. 13. 19. 25. 28 (If not state date of approval.)  
Aug 7. Sept 4. 5. 7. Total No. of visits 18

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The materials and workmanship are good. This boiler has been built under special survey in accordance with the Rules and approved Plan. It will be fitted aboard a vessel building at Aberdeen.  
The superheater has been securely fitted and tested by hydraulic pressure to 660 lbs. per sq. inch with satisfactory results.

This boiler, with superheater, has been efficiently installed on board the steam trawler "WHITE PIONEER", tried under working conditions, and found good. The safety valves have been adjusted under steam and tried for accumulation with satisfactory results.

P. Fitzgerald  
Aberdeen

Survey Fee ... .. £ 10-10-0 When applied for, 29. 6. 1935  
Travelling Expenses (if any) £ : : When received, Per Secy. letter C. 4. 20-8-35.

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

Committee's Minute TUE. 24 SEP 1935

TUE. 10 DEC 1935

Assigned see NWC 92985



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