

REPORT ON BOILERS.

No. 50882.

Received at London Office OCT -7 1940

Date of writing Report 19 4 OCT 1940 When handed in at Local Office 19 4 OCT 1940 Port of HULL

No. in Survey held at 19 4 OCT 1940 Date, First Survey 19 2 40 Last Survey 3 9 19 40

Reg. Book. 19 4 OCT 1940 Number of Visits 32 Gross 452 Net 142

on the H.M.S. **PIROUETTE**

Built at Goole By whom built Goole S.B. & R. Co. Ltd. Goole. Yard No. 352 When built 1940-9

Engines made at Hull. By whom made Amos & Smith Ltd. Engine No. 675 When made 1940-9

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

Nominal Horse Power 156 Owners The Admiralty Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel (Letter for Record S)

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

No. and Description of Boilers One - S-B. Working Pressure 200 lbs/sq in

Tested by hydraulic pressure to 350 lbs/sq in Date of test 5.7.40 No. of Certificate 4031 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 65 sq ft No. and Description of safety valves to each boiler 2 - spring loaded.

Area of each set of valves per boiler (per Rule 15.4 sq in as fitted 16.6 sq in) Pressure to which they are adjusted 200 lbs/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 Yes

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 lons/sq in

Thickness 15/16" Are the shell plates welded or flanged Description of riveting: circ. seams (end D.R. Peh 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% rivets 44.7%) Percentage of strength of circ. intermediate seam (plate 85.6% rivets 88.5% combined 88.8%)

Percentage of strength of longitudinal joint (plate 85.6% rivets 88.5% combined 88.8%)

Thickness of butt straps (outer 1 1/8" inner 1 1/8") No. and Description of Furnaces in each Boiler 3 - cf Daighion section

Material Steel Tensile strength 26/30 lons/sq in Smallest outside diameter 3' - 6 7/16"

Length of plain part (top 19/32" 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 lons/sq in Thickness 1 1/32" Pitch of stays 21 x 20" more

How are stays secured Nuts inside & out

Tube plates: Material (front Steel back Steel) Tensile strength 26/30 lons/sq in Thickness 7/8" 25/32"

Mean pitch of stay tubes in nests 9 1/16" Pitch across wide water spaces 13 5/8"

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 lons/sq in Depth and thickness of girder at centre 8 1/4" x 17/8" Length as per Rule 2' - 7 15/32" Distance apart 10 3/4" No. and pitch of stays in each 2 - 9 7/8"

Combustion chamber plates: Material Steel Tensile strength 26/30 lons/sq in Thickness 25/32" Back 3/4" Top 25/32" Bottom 25/32"

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

Front plate at bottom: Material Steel Tensile strength 26/30 lons/sq in Thickness 7/8"

Lower back plate: Material Steel Tensile strength 26/30 lons/sq in Thickness 7/8"

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

Main stays: Material Steel Tensile strength 28/32 lons/sq in

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 lons/sq in

Diameter (At turned off part, or over threads) 17/8" No. of threads per inch 9

Are the stays drilled at the outer ends

Margin stays : Diameter { At turned off part,
 or
 Over threads

No. of threads per inch

Tubes : Material

External diameter { Plain
 Stay

Thickness { 8. W. G.
 1/4, 5/16, 3/8, 7/16

No. of threads per inch

Pitch of tubes

Manhole compensation: Size of opening in

shell plate

Section of compensating ring

No. of rivets and diameter of rivet holes

Outer row rivet pitch at ends

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

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

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

The foregoing is a correct description,

Manufacturer.

Dates

During progress of

of Survey

work in shops - - -

while

building

board vessel - - -

1940
Feb. 19, Mar. 7, Apr. 3, 8, 10, 11, 20, 25, 30,
May 2, 9, 23, 24, 30, June 4, 13, 15, 18, 19, 26,
July 5, 6, 10, 22, 24, 30, Aug. 2, 7,
22, 27, 29, Sept 3.

Are the approved plans of boiler and superheater forwarded herewith

(If not state date of approval.)

17.10.39.

Total No. of visits

32.

Is this Boiler a duplicate of a previous case

If so, state Vessel's name and Report No. H.M.T FANDANGO 7/10/19 50789

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 & the Rules. The workmanship & materials are good, and when subjected to a hydraulic test of 350 lbs/sq. it was found satisfactory in every respect.

Survey Fee £

When applied for, 19

Travelling Expenses (if any) £

When received, 19

Committee's Minute

Assigned

See F.E. Mackay 7/11



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