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Rpt. 5a.
AR 1946

REPORT ON BOILERS.

Serial No. 34478
In No. 18001

Received at London Office 6 - MAR 1946

Date of writing Report 19 When handed in at Local Office 4: 3: 1946 Port of Middlesbrough

No. in Reg. Book. Survey held at Stockton-on-Tees Date, First Survey 7: 9: 45 Last Survey 22: 2: 1946

on the "BRITISH MARQUIS." (Number of Visits 16) Gross 8563 Tons Net 4908

Built at Sunderland By whom built Wm Leaford & Sons L^d Yard No. 435 When built 1946

Engines made at Sunderland By whom made Wm Leaford & Sons L^d Engine No. 435 When made 1946

Boilers made at Stockton-on-Tees By whom made Stockton C.E. & Riley Boilers L^d Boiler No. 6928. When made 1946.

Nominal Horse Power Owners British Danks Co L^d Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Furness Steel Co. L^d (Letter for Record Exhaust Gas + Coal or Oil fired S. Y.)

Total Heating Surface of Boilers 2020 sq ft Is forced draught fitted Yes Working Pressure 150 psi

No. and Description of Boilers 1 S.E. marine Can each boiler be worked separately Yes

Tested by hydraulic pressure to 275 lb. Date of test 22/2/46 No. of Certificate 765. Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 imp. high lift

Area of each set of valves per boiler {per Rule 7.65 to 14.10 Pressure to which they are adjusted 150 Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler - Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 12'-10 3/16" Length 11'-6" Shell plates: Material Steel Tensile strength 29-33

Thickness 29/32" Are the shell plates welded or flanged No. Description of riveting: circ. seams {end D.R. Lap. inter. 3-127"

long. seams TR-DAS Diameter of rivet holes in {circ. seams 1 1/16" Pitch of rivets {inter. 7 1/16"

Percentage of strength of circ. end seams {plate 66.6% rivets 48.7 Percentage of strength of circ. intermediate seam {plate 84.9 rivets 103

Percentage of strength of longitudinal joint {plate 84.9 rivets 103 combined

Thickness of butt straps {outer 23/32" inner 27/32" No. and Description of Furnaces in each Boiler 2 Deighton Corrugated

Material Steel Tensile strength 26-30 Smallest outside diameter 8'-10"

Length of plain part {top Thickness of plates {crown 1/2" Description of longitudinal joint welded

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

End plates in steam space: Material Steel Tensile strength 26-30 Thickness 1" Pitch of stays 18" x 17"

How are stays secured Double nuts & washers screwed into both plates

Tube plates: Material {front Steel Tensile strength {26-30 Thickness {7/8" back 3/4"

Mean pitch of stay tubes in nests 9 1/8" Pitch across wide water spaces 13 1/2"

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 Depth and thickness of girder

at centre 7"-2 25/8" Length as per Rule 2'-3 1/2" Distance apart 9" No. and pitch of stays

in each 2 @ 9" Combustion chamber plates: Material Steel Tensile strength 26-30

Thickness: Sides 2 1/32" Back 1 9/32" Top 2 1/32" Bottom 2 1/32"

Pitch of stays to ditto: Sides 10" x 9" Back 9 1/2" x 8 1/4" Top 9" x 9" Are stays fitted with nuts or riveted over Auto.

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

Lower back plate: Material Steel Tensile strength 26-30 Thickness 3/4"

Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over Auto.

Main stays: Material Steel Tensile strength 28-32

Diameter {At body of stay, or Over threads 2 3/4" No. of threads per inch 6

Screw stays: Material Steel Tensile strength 26-30

Diameter {At turned off part, or Over threads 1 1/2" No. of threads per inch 9



Are the stays drilled at the outer ends Yes

No. of threads per inch 9

Margin stays: Diameter 1 3/4" (At turned off part, or Over threads)

Tubes: Material Lowland Steel External diameter 2 1/2" (Plain) 2 1/2" (Stay) Thickness 10 S.W.G. No. of threads per inch 9

Pitch of tubes 3 3/4" x 3 3/4"

Manhole compensation: Size of opening 52 - 1 1/4"

shell plate 21" x 17" Section of compensating ring 8 3/4" x 1 1/8" No. of rivets and diameter of rivet holes

Outer row rivet pitch at ends 7 1/6" Depth of flange if manhole flanged - 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

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 at 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 casing gear _____

Pressure to which the safety valves are adjusted _____

tubes _____ forgings and castings _____ and after assembly in place _____ Hydraulic test pressure _____

valves fitted to free the superheater from water where necessary _____ Are drain cocks _____

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with _____

The foregoing is a correct description,
H. J. Orsley Manufacturer

Dates of Survey During progress of work in shops - - - 1945 Sep: 7-13 Oct: 19-31 Nov 14 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

while building During erection on board vessel - - - 23-29 Dec: 14-20-28 (1946) Jan 11-16 Feb: 7-14-19-22 Total No. of visits 16

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.)

This boiler has been constructed under special survey & in accordance with the Rule Requirements & approved plan.

The materials & workmanship are good & on completion the boiler was hydraulically tested to 275 lbs p.s.i. & found satisfactory.

This boiler is being forwarded to Sunderland for Wm. Kemp's Contract No. 735.

This boiler has been securely fixed on board the vessel. Fitted to burn oil fuel (F.P. above 150°F). Safety valves adjusted & working pressure as above.

For recommendation please see Machy. Rpt.
Doct. Haas.

Survey Fee £ 20 : 5 : } When applied for, 5/3/46 19

Travelling Expenses (if any) £ : : } When received, _____ 19

H. J. Orsley
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 14 JUN 1946

Assigned See F.E. machy. rpt.

