

REPORT ON BOILERS.

4 MAY 1944

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of HULL

FEB 1944

No. in Survey held at HULL.

Date, First Survey 24. 1. 44

Last Survey 21. 4. 1944

on the STEAM TUG [EMPIRE JILAS

A/MS 711

(Number of Visits 19)

Gross 274.35 Tons Net NIL

Built at SELBY. By whom built Cochrane & Sons Ltd

Yard No. 1279. When built 1944

Engines made at HULL. By whom made Angus & Smith Ltd

Engine No. 737. When made

Boilers made at HULL. By whom made Angus & Smith Ltd

Boiler No. 737. When made

Nominal Horse Power 132

Owners Ministry of War Transport

Port belonging to

managed by Overseas Touring & Salvage Co. Ltd. London.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colville's and Appleby Fodding and Steel Co Ltd (Letter for Record S)

Total Heating Surface of Boilers 2390 sq ft Is forced draught fitted No Coal or Oil fired OIL FUEL

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

Tested by hydraulic pressure to 350 lb/sq in Date of test 8.2.44 No. of Certificate 4219 Can each boiler be worked separately

Area of Firegrate in each Boiler (or) No. and Description of safety valves to each boiler 2 Spring Loaded Ordinary

Area of each set of valves per boiler (per Rule 13.90) as fitted 14.137 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

Smallest distance between boilers or uptakes and bunkers or woodwork 1'-6" 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 Yes

Largest internal dia. of boilers 15'-6 1/4" Length 11'-6" Shell plates: Material Steel Tensile strength 29-33 tons/sq in

Thickness 1 3/8" Are the shell plates welded or flanged No Description of riveting: circ. seams end D.R. Lap

long. seams T.R. D.B.S. Diameter of rivet holes in circ. seams 1 13/32" Pitch of rivets 4 3/16" 9 7/8"

Percentage of strength of circ. end seams plate 66.4% rivets 42.7% Percentage of strength of circ. intermediate seam plate 85.4% rivets 85% combined 90.15%

Percentage of strength of longitudinal joint plate 85.4% rivets 85% combined 90.15%

Thickness of butt straps outer 1 1/16" inner 1 3/16" No. and Description of Furnaces in each Boiler 3 C.F. Deighton Section

Material Steel Tensile strength 26-30 tons/sq in Smallest outside diameter 3'-11 3/8"

Length of plain part top bottom Thickness of plates crown 1 1/16" bottom Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom NONE

End plates in steam space: Material Steel Tensile strength 26-30 tons/sq in Thickness 1 3/16" Pitch of stays 18 3/4" x 18 1/2" mean

How are stays secured Nuts inside and out

Tube plates: Material front Steel back Steel Tensile strength 26-30 tons/sq in Thickness 1 5/16" 7/8"

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

Girders to combustion chamber tops: Material Steel Tensile strength 29-33 tons/sq in Depth and thickness of girder

at centre 9 1/2" x 7/8" double Length as per Rule 2'-11" Distance apart 9" No. and pitch of stays

in each 3 at 8 3/4" Combustion chamber plates: Material Steel

Tensile strength 26-30 tons/sq in Thickness: Sides 3/4" Back 23/32" Top 23/32" Bottom 3/4"

Pitch of stays to ditto: Sides 9 1/2" x 8 3/4" Back 9 1/2" x 8 1/2" Top 9" x 8 3/4" Are stays fitted with nuts or riveted over Nuts

Front plate at bottom: Material Steel Tensile strength 26-30 tons/sq in

Thickness 1 5/16" Lower back plate: Material Steel Tensile strength 26-30 tons/sq in Thickness 7/8"

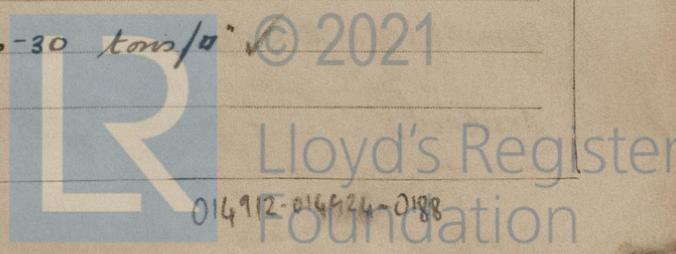
Pitch of stays at wide water space 14 1/4" x 8 1/2" Are stays fitted with nuts or riveted over Nuts

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

Diameter At body of stay, or Over threads 3 1/4" No. of threads per inch 6

Screw stays: Material Steel Tensile strength 26-30 tons/sq in

Diameter At turned off part, or Over threads 1 3/4" No. of threads per inch 9



AS IN RECEIPTS HEREIN OR THE REVERSE OF THE SHEET

MADE AND PRINTED IN ENGLAND

Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 17/5" & 2" or Over threads

No. of threads per inch 9 ✓

Tubes: Material Iron ✓ External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { 8 wa 5/16" No. of threads per inch 9

Pitch of tubes 4 3/4" ✓ Manhole compensation: Size of opening in shell plate 16" x 12" ✓ Section of compensating ring 1 3/8" x 15 ✓ No. of rivets and diameter of rivet holes 28 at 1 13/32"

Outer row rivet pitch at ends 9 7/8" ✓ Depth of flange if manhole ^{bottom} flanged 3 3/8" ✓ 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 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 _____ 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 Yes

For AMOS & SMITH LDD.
The foregoing is a correct description,
A.R. Dewney Manufacturer.
DIRECTOR

Dates of Survey { During progress of work in shops - - - 1944 Jan. 24, Feb. 8, 23, 24, 29, Mar. 7, 13. Are the approved plans of boiler and superheater forwarded herewith 3.7.41. (If not state date of approval.)
while building { During erection on board vessel - - - See machinery dept. Total No. of visits 19.

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. Empire Pat, Hull Rpt No. 5166H

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

The Boiler has been constructed under Special Survey in accordance with the Rules and the approved plan.

The workmanship and materials are good and when subjected to an hydraulic test of 350 lb/sq" it was found satisfactory in every respect.

This boiler installed in Empire Silas at Hull, examined under steam, safety valves adjusted as overhaul, accumulation test held and found satisfactory on completion of all tests.

W.S. Shields

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

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

Committee's Minute FRI. 12 MAY 1944

Assigned See fe machinery rpt

