

REPORT ON BOILERS.

No. 53538

Received at London Office 1 JUL 1946

Date of writing Report 31.5.46 When handed in at Local Office 19

Port of Hull

No. in Surrey held at Reg. Book. Selly Hull

Date, First Survey 14.11.45 Last Survey P.S. 1946

on the Single Screw tug DANUBE VII

(Number of Visits) Gross 237 Net NIL

Built at Selly By whom built Leochrane & Sons Ltd. Yard No. 1312 When built 1946

Engines made at Hull By whom made G.D. Holmes & Co. Ltd. Engine No. 1717 When made 1946

Boilers made at Hull By whom made G.D. Holmes & Co. Ltd. Boiler No. 1711 When made 1946

Nominal Horse Power Owners The Selly Dredging & Contracting Co. Ltd. Port belonging to London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Frodingham (Letter for Record S)

Total Heating Surface of Boilers 2490 ft² Is forced draught fitted No Coal or Oil fired Oil

No. and Description of Boilers Single end cylindrical multitubular Working Pressure 200 lbs/sq

Tested by hydraulic pressure to 350 lbs/sq Date of test 1.3.46 No. of Certificate 4263 Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two D.S. ordinary 3/4"

Area of each set of valves per boiler per Rule 14.5 as fitted 15.3 Pressure to which they are adjusted 205 lbs 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 9" Is oil fuel carried in the double bottom under boilers No D.B.T. under br.

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

Largest internal dia. of boilers 15'-6" Length 11'-6" Shell plates: Material Steel Tensile strength 31-35 tons/sq

Thickness 15/16 15/16 Are the shell plates welded or flanged No Description of riveting: circ. seams end DR lap inter. 33/4"

long. seams T.R.D.B.S. Diameter of rivet holes in circ. seams 13/8" long. seams 13/8" Pitch of rivets 9/8"

Percentage of strength of circ. end seams plate 63.3 rivets 44.7 Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 84.9 rivets 86.2 combined 87

Thickness of butt straps outer 1" inner 1/8" No. and Description of Furnaces in each Boiler 3 Dighton Type

Material Steel Tensile strength 26-30 tons Smallest outside diameter 45.86

Length of plain part top bottom Thickness of plates crown bottom 21/32" Description of longitudinal joint Welded

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

End plates in steam space: Material Steel Tensile strength 26-30 tons/sq Thickness 1 7/32" Pitch of stays 19 x 18.5"

How are stays secured D. nuts washers

Tube plates: Material front back steel Tensile strength 26-30 tons/sq Thickness 1 5/16"

Mean pitch of stay tubes in nests 11.1" Pitch across wide water spaces 14 1/2"

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

at centre 9 1/2" x 2 x 7/8" Length as per Rule 35 5/16" Distance apart 9" No. and pitch of stays

in each 3 at 8 1/2" Combustion chamber plates: Material Steel

Tensile strength 26-30 tons Thickness: Sides 23/32" Back 23/32" Top 1 1/16" Bottom 1"

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

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

Thickness 1" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 3 1/32"

Pitch of stays at wide water space 14 1/2" x 8 3/4" Are stays fitted with nuts or riveted over nuts

Main stays: Material Steel Tensile strength 28-32 tons

Diameter At body of stay, or Over threads 3 1/8" No. of threads per inch 8

Screw stays: Material Steel Tensile strength 26-30

Diameter At turned off part, or Over threads 1 3/4" to 2 1/8" No. of threads per inch 10



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DANUBE VII

Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part. or Over threads 1 1/2"

No. of threads per inch 10

Tubes: Material Seamless steel External diameter { Plain } 3 1/2" Thickness { 8 SWG } No. of threads per inch 9

Pitch of tubes 4 7/8" x 4 3/4" Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 34" x 27" x 1 5/16" No. of rivets and diameter of rivet holes 32 - 1 3/8" dia.

Outer row rivet pitch at ends 9" Depth of flange if manhole flanged Bot. only 3/4" Steam Dome: Material 10A - NO FLANGE

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 _____

How connected to shell _____ Inner radius of crown _____

of rivets in outer row in dome connection to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and pitch _____

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 _____

Area of each safety valve _____ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler _____

Pressure to which the safety valves are adjusted _____ Are the safety valves fitted with casing gear _____

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 or _____

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

The foregoing is a correct description,
 FOR CHARLES D. HOLMES & CO., LTD.
W.R. Evans Manufacturer.
 Manager

Dates of Survey { During progress of work in shops - - } 1945 Sept. 14, has 9, 10, 17, Dec. 6, 19, Are the approved plans of boiler and superheater forwarded herewith 30.5.45.
 { During erection on board vessel - - - } Jan. 10, 23, Feb. 7, 23, Mar. 1, 20, 21. 9p. 11 (If not state date of approval.)
see machinery report. Total No. of visits in shops - 14

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

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

This boiler has been constructed and installed under special survey in accordance with the Secretary's letters, the approved plans & the Rules. The materials and workmanship are good. Boiler tested by hydraulic pressure of 350 lb, examined and tested under steam and found satisfactory on completion of all tests.

Survey Fee ... £ See machy When applied for, 19
 Travelling Expenses (if any) £ Sept When received, 19

W.S. Shields
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 19 JUL 1945

Assigned See F.E. machy. rpt.

