

REPORT ON BOILERS.

No. 11408

16 NOV 1934

Received at London Office

Date of writing Report 10 When handed in at Local Office 15 11 19 34 Port of Belfast

No. in Reg. Book 75139 Survey held at Belfast Date, First Survey _____ Last Survey _____ 19 _____ Visits included in F.E. machinery _____

on the Tw. Sc. M/V. "DORSET" (Number of Visits _____) Gross 10500 Tons Net 6000

Built at Belfast By whom built Workman Clark (1918) L^d Yard No. 534 When built 1934

Engines made at Winterthur By whom made Sulzer Bros L^d Engine No. 6442 6450 When made 1934

Boilers made at Belfast By whom made Workman Clark (1918) L^d Boiler No. 534 When made 1934

Owners Federal Steam Navigation Co. L^d Port belonging to _____

ARTICULAR DONKEY BOILER.

Made at Belfast By whom made Workman Clark (1918) L^d Boiler No. 534 When made 1934 Where fixed Shelter Dk Engine Room

Manufacturers of Steel Colvilles L^d Glasgow

Total Heating Surface of Boiler 2400 Is forced draught fitted Yes Coal or Oil fired or Exh. gases _____

Description of Boilers Two Clarkson Shibley Type Waste heat Working pressure 120 lbs

Tested by hydraulic pressure to 230 lbs/sq in Date of test 29-8-34 No. of Certificate 981

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler Two spring loaded high lift

Area of each set of valves per boiler per rule 2 @ 3.55 Pressure to which they are adjusted 120 lbs Are they fitted with easing gear Yes

State whether steam from main boilers can enter the donkey boiler ✓ Smallest distance between boiler or uptake and bunkers _____

Is oil fuel carried in the double bottom under boiler ✓ Smallest distance between base of boiler and tank top plating _____

Is the base of the boiler insulated ✓ Largest internal dia. of boiler 8'-4 1/2" Height 24'-3"

Shell plates: Material Steel Tensile strength 28-32 tons Thickness 9/16"

Are the shell plates welded or flanged at butt ends Description of riveting: circ. seams Top Single, End Bot Double, Inter Single Long. seams Double

Dia. of rivet holes in circ. seams 63/64" Pitch of rivets 2 1/4" x 3" Percentage of strength of circ. seams plate 56%, rivets 48.4% of Longitudinal joint plate 76.5%, rivets 74.6%

Working pressure of shell by rules 121 lbs Thickness of butt straps outer 1/2", inner 1/2"

Shell Crown: Whether complete hemisphere, dished partial spherical, or flat Dished part spherical Material Steel

Tensile strength 26-30 Thickness 15/16" Radius 7'-6" Working pressure by rules 126 lbs

Description of Furnace: Plain, spherical, or dished crown Dished Material Steel Tensile strength 26-30 tons

Thickness 1 3/16" External diameter top Length as per rule ✓ Working pressure by rules ✓

Pitch of support stays circumferentially ✓ and vertically ✓ Are stays fitted with nuts or riveted over ✓

Diameter of stays over thread ✓ Radius of spherical or dished furnace crown 7'-6" Working pressure by rule 160 lbs

Thickness of Ogee Ring ✓ Diameter as per rule ✓ Working pressure by rule ✓

Combustion Chamber: Material Steel Tensile strength 26-30 Thickness of top plate 1 3/16"

Radius if dished 5'-0" Working pressure by rule 162 lbs Thickness of back plate 1 3/8" Diameter if circular 5'-6"

Length as per rule 12'-9 1/4" Pitch of stays ✓ Are stays fitted with nuts or riveted over ✓

Diameter of stays over thread ✓ Working pressure of back plate by rules ✓

Tube Plates: Material front Tensile strength back Thickness Mean pitch of stay tubes in nests

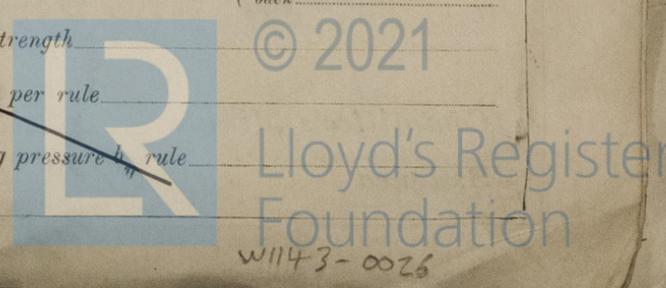
If comprising shell, Dia. as per rule front Pitch in outer vertical rows back Dia. of tube holes FRONT stay BACK stay

Is each alternate tube in outer vertical rows a stay tube ✓ Working pressure by rules front back

Girders to combustion chamber tops: Material _____ Tensile strength _____

Depth and thickness of girder at centre _____ Length as per rule _____

Distance apart _____ No. and pitch of stays in each _____ Working pressure by rule _____



W1143-0026

Crown stays: Material _____ Tensile strength _____ Diameter { at body of stay, _____ or _____ over threads. _____
 No. of threads per inch _____ Area supported by each stay _____ Working pressure by rules _____

Screw stays: Material _____ Tensile strength _____ Diameter { at turned off part, _____ or _____ over threads. _____ No. of threads per inch _____
 Area supported by each stay _____ Working pressure by rules _____ Are the stays drilled at the outer ends _____

Tubes: Material Steel External diameter { plain 4" _____ or _____ } Thickness { 5 B.W.G. _____ }
 No. of threads per inch Pitch of tubes 4 3/8 Vertical 6.3" 6.5" 6.9" } circumferentially Working pressure by rules

Manhole Compensation: Size of opening in shell plate 16 x 12 Section of compensating ring 4 3/4 x 1 1/2 No. of rivets and diameter of rivet holes 40 - 15/16 Outer row rivet pitch at ends 3.28 Depth of flange if manhole flanged

Uptake: External diameter 3' 5 1/2" Thickness of uptake plate 3/4"

Cross Tubes: No. External diameters { _____ } Thickness of plates _____

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

The foregoing is a correct description,
 pro WORKMAN CLARK (1928) LIMITED.
B. Cunningham *aka* Secretary. Manufacturer.

Dates of Survey { During progress of work in shops - - } _____ Is the approved plan of boiler forwarded herewith yes
 while building { During erection on board vessel - - } _____ (If not state date of approval.)
 Total No. of visits _____

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. Deerham N^o

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers were constructed under Special Survey and in accordance with the approved plan. They were tested by hydraulic pressure in accordance with the Rules, and efficiently installed and fastened on an upper deck in the Main engine room. The safety valves were adjusted under steam, no appreciable accumulation was noted during the test under oil firing and exhaust gas firing conditions. The workmanship and materials are good and the boilers in my opinion are eligible for use on a classed vessel.

Survey Fee See Rpt 46th 16.10 : When applied for, 15-11-1934
 Travelling Expenses (if any) £ _____ : When received, _____ 19 _____

Committee's Minute
 Assigned

TUE. 20 NOV 1934
See other Bel. JE 11408

Charles J. Hunter
 Engineer Surveyor to Lloyd's Register of Shipping.

