

Don
Port Dublin 68202
REPORT ON BOILERS.

No. 13354 A.

Received at London Office 26 OCT 1942

16 MAR 1944

Date of writing Report 19 When handed in at Local Office 19 Port of *Belfast.*
 No. in Survey held at *Belfast.* Date, First Survey Last Survey *2nd March 1944.*
 on the *M.V. "NORRISIA"* G.O. 8459. (Number of Visits) Gross Tons Net
 Built at *Belfast* By whom built *Harland & Wolff Ltd* Yard No. *1194* When built
 Engines made at By whom made Engine No. When made
 Boilers made at *Belfast.* By whom made *Harland & Wolff Ltd.* Boiler No. *8459* When made *1942*
 Nominal Horse Power Owners *Anglo Saxon Petroleum Co.* Port belonging to *London.*

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel *Colville Ltd.* (Letter for Record *S.* ✓)
 Total Heating Surface of Boilers *1918 sqft.* Is forced draught fitted *Yes.* ~~Coal or~~ Oil fired *EXHST GAS.*
 No. and Description of Boilers *1 Single Ended Multitubular.* Working Pressure *150 lbs/sq*
 Tested by hydraulic pressure to *275 lbs* Date of test *1.8.42* No. of Certificate *1191* Can each boiler be worked separately *Yes*
 Area of Firegrate in each Boiler No. and Description of safety valves to each boiler *2 1/4" dia. Double spring Improved H.L.*
 Area of each set of valves per boiler {per Rule *3.63.88 inches* 7-26 Pressure to which they are adjusted *150 lb.* 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 *well clear.* Is oil fuel carried in the double bottom under boilers *No.*
 Smallest distance between shell of boiler and tank top plating *3'-0"* Is the bottom of the boiler insulated *Yes.*
 Largest internal dia. of boilers *12'-6"* Length *11'-0"* Shell plates: Material *Steel* Tensile strength *29-33 tons*
 Thickness *7/8"* Are the shell plates welded or flanged *No* Description of riveting: circ. seams {end *DR* ✓
 Riveting, seams *TR DBS.* Diameter of rivet holes in {circ. seams *1 3/32"* ✓ Pitch of rivets {inter. *3.038"* ✓
 Percentage of strength of circ. end seams {plate *64* ✓ rivets *56.1* ✓ Percentage of strength of circ. intermediate seam {plate *84.6* ✓ rivets *106.7* ✓
 Percentage of strength of longitudinal joint {plate *106.7* ✓ rivets *40.5* ✓ combined *40.5* ✓ Working Pressure of Shell by Rules *154.6 lbs/sq*
 Thickness of butt straps {outer *1 1/16"* ✓ inner *1 3/16"* ✓ No. and Description of Furnaces in each Boiler *Two Corrugated "Seignior" Section*
 Material *Steel* Tensile strength *26-30 tons* Smallest outside diameter *42"*
 Length of plain part {top ✓ bottom ✓ Thickness of plates {crown *1/2"* ✓ Description of longitudinal joint *Five weld.*
 Dimensions of stiffening rings on furnace or c.c. bottom ✓
 End plates in steam space: Material *Steel* Tensile strength *26-30 tons* Thickness *1 3/16"* Pitch of stays *various*
 How are stays secured *Nuts and washers inside and outside.*
 Tube plates: Material {front *Steel* Tensile strength *26-30 tons* Thickness {*7/8"* ✓
 back *Steel* Tensile strength *26-30 tons* Thickness {*1 3/16"* ✓
 Mean pitch of stay tubes in nests *8.54"* Pitch across wide water spaces *13 1/2"*
 Girders to combustion chamber tops: Material *Steel* Tensile strength *28-32 tons* Depth and thickness of girder
 at centre *8 1/4" x 2" x 3/4"* Length as per Rule *29.94"* Distance apart *11"* No. and pitch of stays
 on each *3 @ 7 1/4"* Combustion chamber plates: Material *Steel*
 Tensile strength *26-30 tons* Thickness: Sides *3/4"* ✓ Back *3/4"* ✓ Top *3/4"* ✓ Bottom *3/4"* ✓
 Pitch of stays to ditto: Sides *8 1/4" x 9 3/4"* Back *8" x 9 1/4"* Top *7 1/4" x 11"* Are stays fitted with nuts or riveted over *marginal and girder stays riveted all others riveted over.*
 Front plate at bottom: Material *Steel* Tensile strength *26-30 tons*
 Thickness *7/8"* Lower back plate: Material *Steel* Tensile strength *26-30 tons* Thickness *1 3/16"*
 Pitch of stays at wide water space *13"* Are stays fitted with nuts or riveted over *Riveted over*
 Main stays: Material *Steel* Tensile strength *28-32 tons*
 Diameter {At body of stay, *2 1/2"* ✓ No. of threads per inch *6* ✓
 Over threads
 Crew stays: Material *Steel* Tensile strength *26-30 tons*
 Diameter {At turned off part, *1 1/2"* ✓ No. of threads per inch *9* ✓
 Over threads *1 5/8", 2"*

Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 1/8" or Over threads

No. of threads per inch 9

Tubes: Material weldless steel External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 10 LSG 1/4, 5/16, 3/8 No. of threads per inch 9

Pitch of tubes 3 3/4 x 3 7/8 Manhole compensation: Size of opening in shell plate 16 1/2 x 12 1/2 Section of compensating ring 2 [10 x 3/4 + 1 x 1] No. of rivets and diameter of rivet holes 28 @ 1 7/32"

Outer row rivet pitch at ends 9" Depth of flange if manhole flanged 3 3/8" port and plate 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 Yes

For HARLAND AND WOLFE LIMITED.

The foregoing is a correct description,

Manufacturer.

Dates of Survey { During progress of work in shops - - } while building { During erection on board vessel - - - }

Are the approved plans of boiler and superheater forwarded herewith no 26.5.41 (If not state date of approval.)

Total No. of visits

Is this Boiler a duplicate of a previous case

If so, state Vessel's name and Report No. 1160 G. Rpt H^o 13272 Belfast.

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

This boiler has been constructed under special survey in accordance with the rules and approved plans. The materials and workmanship are good, and the boiler has been satisfactorily subjected to hydraulic test.

This boiler has been efficiently installed on board the vessel.

T.D. Philston.

This boiler has been satisfactorily fitted on board. tried under full working conditions and found satisfactory. Safety valves adjusted under steam to 150 lbs per sq. inch with satisfactory results. Safety valve compression washers sizes Port Boiler Port & Starboard 13/32"
G. E. Murdoch, 6/3/44

Survey Fee £ 12 : 15 : - Travelling Expenses (if any) £ : :

When applied for, 24. 10. 1942 When received, 19

A. Shaw.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

14 MAR 1944

Assigned



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