

REPORT ON BOILERS.

No. 54691

Received at London Office

-4 JUL 1934

Date of writing Report 19 When handed in at Local Office 30. 6. 1934 Port of Glasgow

No. in Reg. Book. Survey held at Date, First Survey 13. 2. 34 Last Survey 28. 6. 1934

on the S.S. "Thorn" (Number of Visits 30) Tons {Gross 347 Net 121

Master Built at Bowling By whom built Scott & Sons Yard No. 326 When built 1934

Engines made at Blydebank By whom made Ritchison Blair & Co. Ld Engine No. 187 When made 1934

Boilers made at Glasgow By whom made David Rowan & Co Boiler No. 393 When made 1934

Nominal Horse Power 79 Owners Frontier Tonn S.S. Co Ltd Port belonging to Newry

See S.S. Report No 54409.

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel (Letter for Record)

Total Heating Surface of Boilers Is forced draught fitted Coal or Oil fired Coal

No. and Description of Boilers Working Pressure 205

Tested by hydraulic pressure to Date of test No. of Certificate Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 1-double spring loaded

Area of each set of valves per boiler {per Rule 8.44 as fitted 9.8 Pressure to which they are adjusted 210 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 42' Is oil fuel carried in the double bottom under boilers No

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

Largest internal dia. of boilers Length Shell plates: Material Tensile strength

Thickness Are the shell plates welded or flanged Description of riveting: circ. seams {end inter. 4/7/34

long. seams Diameter of rivet holes in {circ. seams long. seams Pitch of rivets

Percentage of strength of circ. end seams {plate rivets Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate rivets combined Working pressure of shell by Rules

Thickness of butt straps {outer inner No. and Description of Furnaces in each Boiler

Material Tensile strength Smallest outside diameter

Length of plain part {top bottom Thickness of plates {crown bottom Description of longitudinal joint

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules

End plates in steam space: Material Tensile strength Thickness Pitch of stays

How are stays secured Working pressure by Rules

Tube plates: Material {front back Tensile strength Thickness

Mean pitch of stay tubes in nests Pitch across wide water spaces Working pressure {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 Rules Combustion chamber plates: Material

Tensile strength Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top Are stays fitted with nuts or riveted over

Working pressure by Rules Front plate at bottom: Material Tensile strength

Thickness Lower back plate: Material Tensile strength Thickness

Pitch of stays at wide water space Are stays fitted with nuts or riveted over

Working Pressure Main 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 _____ Margin stays: Diameter { At turned off part, or Over threads _____

No. of threads per inch _____ Area supported by each stay _____ Working pressure by Rules _____

Tubes: Material _____ External diameter { Plain _____ Stay _____ Thickness { _____ No. of threads per inch _____

Pitch of tubes _____ Working pressure by Rules _____ **Manhole compensation:** Size of opening in shell plate _____ Section of compensating ring _____ No. of rivets and diameter of rivet holes _____

Outer row rivet pitch at ends _____ Depth of flange if manhole flanged " _____ **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 _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter of stays _____ Inner radius of crown _____ Working pressure by Rules _____

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 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 _____ Working pressure as per Rules _____

Pressure to which the safety valves are adjusted _____ Hydraulic test pressure: _____

tubes _____, 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 _____

The foregoing is a correct description, _____

Manufacturers _____

Dates of Survey { During progress of work in shops - - } _____ Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) _____

{ During erection on board vessel - - - } _____ Total No. of visits _____

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 securely fitted on board and the safety valves adjusted under steam.*

J. S. Cairns

Survey Fee £ : : } When applied for, 19 _____

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

Jas. S. Cairns,
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 3 JUL 1934**

Assigned *See accompanying machinery report*

