Rpt. 5b.

REPORT ON BOILERS.

No. 11.726

Han B.

Received at London Office 30 APR 1936

Date of writing Report 10 When handed in at Local Office 29. 4. 1936 Port of Belfast

See T.E. Machinery report

No. in Reg. Book 38784 Survey held at Belfast Date, First Survey Last Survey 19.

on the M.V. KANIMBLA (Number of Visits ✓) Tons Gross 10984.56 Net 6584.79

Built at Belfast By whom built Harland & Wolff Ltd Yard No. 955 When built 1936

Engines made at Belfast By whom made Harland & Wolff Ltd Engine No. 955 When made 1936

Boilers made at Belfast By whom made Harland & Wolff Ltd Boiler No. 955 When made 1936

Owners McIlwraith McEacharn Ltd. Port belonging to Melbourne, Australia

VERTICAL DONKEY BOILER.

Made at Belfast ✓ By whom made Harland & Wolff Ltd ✓ Boiler No. 955 ✓ When made 1936 ✓ Where fixed Upper Dk in E.R. ✓

Manufacturers of Steel Colvilles Ltd ✓

Total Heating Surface of Boiler 850 sq ft Is forced draught fitted No ✓ Coal ~~&~~ Oil fired Exh gas Yes ✓

No. and Description of Boilers One Clarkson Thimble tube Bigato 850 **Working pressure** 100 lbs ✓

Tested by hydraulic pressure to 200 lbs ✓ Date of test 21-2-36 No. of Certificate 1013

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

Area of each set of valves per boiler { per rule 9.24 sq in / as fitted 11.87 sq in ✓ } Pressure to which they are adjusted 100 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

or woodwork ✓ 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 7'-11" ✓ Height 19'-6" ✓

Shell plates: Material Steel ✓ Tensile strength 28-32 tons ✓ Thickness 15/32 ✓

Are the shell plates ~~welded or flanged~~ at ends of butt straps ✓ Description of riveting: circ. seams { end SR ✓ / inter. SR ✓ } long. seams DR ✓

Dia. of rivet holes in { circ. seams 55/64" ✓ / long. seams 35/32 ✓ } Pitch of rivets { 2" ✓ / 2 7/8 ✓ } Percentage of strength of circ. seams { plate 54.7 / rivets 42.1 } of Longitudinal joint { plate 72.8 / rivets 109.6 / combined 100 }

Working pressure of shell by rules 101.5 Thickness of butt straps { outer 7/16 ✓ / inner 7/16 ✓ }

Shell Crown: Whether ~~complete hemisphere~~, dished partial spherical, ~~or flat~~ Yes ✓ Material Steel ✓

Tensile strength 26/30 ✓ Thickness 13/16" ✓ Radius 6'-0" ✓ Working pressure by rules 135.4.

Description of Furnace: ~~Plain, spherical, or~~ dished crown Yes ✓ Material Steel ✓ Tensile strength 26/30 ✓

Thickness 3/4" ✓ Internal ~~External~~ diameter { top / bottom 5'-0" ✓ } 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 4'-6" ✓ Working pressure by rule 115.6.

Thickness of Ogee Ring 1 3/32" ✓ Diameter as per rule { D 7'-9" / d 5'-3 3/5" } Working pressure by rule

Combustion Chamber: Material Steel ✓ Tensile strength 26/30 ✓ Thickness of top plate 3/4" ✓

Radius if dished 4'-6" ✓ Working pressure by rule 43/8 ✓ Thickness of ~~back~~ tube plate 1 1/4" ✓ Diameter if circular 5'-2½" ✓

Length as per rule 9'-10 7/8" ✓ Pitch ~~of stays~~ Thimbles 8¾ VP. 7.698 HP. ✓ Are stays fitted with nuts or riveted over ✓

Diameter of ~~stays over thread~~ Thimbles 4" ✓ 9B46. ✓ Working pressure of ~~back~~ tube plate by rules 271 lbs

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

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

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

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* _____ *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* 16" × 12" ✓ *Section of compensating ring* 4" 5/8 × 3/4" ✓ *No. of rivets and diame*

of rivet holes 40 – 25/32" ✓ *Outer row rivet pitch at ends* 3·3" ✓ *Depth of flange if manhole flanged* 3 1/8" Steel Cover

Uptake: *External diameter* 2' 11 3/4" ✓ *Thickness of uptake plate* 5/8" ✓

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,

FOR HARLAND AND WOLFF, LIMITED

A. G. Marshall

Manufacture

Assistant Secretary

GP

Dates of Survey while building { *During progress of work in shops* - - } _____ *Is the approved plan of boiler forwarded herewith* _____ (If not state date of approval.)

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

Is this Boiler a duplicate of a precious case. No *If so, state Vessel's name and Report No.* —

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

This boiler has been constructed to approved design under Special survey. The materials and workmanship are good. The boiler has been tested by hydraulic pressure in accordance with the Rules and efficiently installed on an upper deck in the Main motor room. The Safety valves were adjusted under steam and a satisfactory accumulation test was made. In our opinion the boiler is eligible for use on a classed vessel.

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Survey Fee ... ... £ See engineer report : : | **When applied for,** ..... 19 .....

Travelling Expenses (if any) £ : : | **When received,** ..... 19 .....

Charles H Hunter

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Assigned FRI. 15 MAY 1936 See Rel T.E. 11726

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