

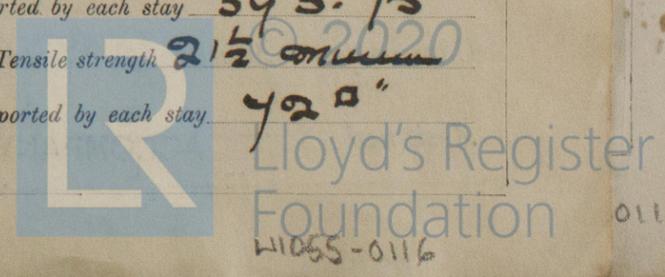
REPORT ON BOILERS.

Received at London Office JUN 15 1938

Date of writing Report 11th June, 1938 When handed in at Local Office 11th June, 1938 Port of Greenock
 No. in Survey held at Greenock Date, First Survey 24th August, 1937 Last Survey 10th June, 1938
 Reg. Book. S/S on the EL. HIND (Number of Visits) Tons { Gross 5318.86 Net 3224.96
 Master J.M. Built at Glasgow By whom built Lithgow & Co. Ltd Yard No. 912 When built 1938
 Engines made at Greenock By whom made John Lithgow & Co. Ltd Engine No. 698 When made 1938
 Boilers made at ditto By whom made ditto Boiler No. 698 When made 1938
 Nominal Horse Power _____ Owners Sciudia S & Co. Ltd Port belonging to Roubaix

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

Manufacturers of Steel Bolwell Brothers & Co. Ltd (Letter for Record)
 Total Heating Surface of Boilers 4563 sq ft Is forced draught fitted yes Fuel or Oil fired oil
 No. and Description of Boilers 3 Single Ended Working Pressure 220
 Tested by hydraulic pressure to 380 Date of test 4-3-38 No. of Certificate 2143 Can each boiler be worked separately yes
 Area of Firegrate in each Boiler 64.4 sq ft No. and Description of safety valves to each boiler one Double Seated
 Area of each set of valves per boiler { per Rule 13.4 sq ft as fitted 14.12 sq ft Pressure to which they are adjusted 225 Are they fitted with easing gear yes
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler None fitted
 Smallest distance between boilers or uptakes and bunkers or woodwork 1-9" Is oil fuel carried in the double bottom under boilers No
 Smallest distance between shell of boiler and tank top plating 2-0" Is the bottom of the boiler insulated yes
 Largest internal dia. of boilers 14-10 9/16" Length 11-6" Shell plates: Material S Tensile strength 29.33
 Thickness 1 7/16" Are the shell plates welded or flanged Description of riveting: circ. seams { end DR inter. —
 long. seams TR. D B S Diameter of rivet holes in { circ. seams 1 15/32" Pitch of rivets { 4.158
 { long. seams 1 7/16" { 9.812
 Percentage of strength of circ. end seams { plate 64.6 rivets 44.84 Percentage of strength of circ. intermediate seam { plate — rivets —
 Percentage of strength of longitudinal joint { plate 85.3 rivets 85.9 Working pressure of shell by Rules 221
 { combined 84.48
 Thickness of butt straps { outer 1 3/32" inner 1 7/32" No. and Description of Furnaces in each Boiler 3 Morrison
 Material S Tensile strength 26.30 Smallest outside diameter 3-9 1/2"
 Length of plain part { top — bottom — Thickness of plates { crown 3/4" bottom — Description of longitudinal joint weld
 Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 243
 End plates in steam space: Material S Tensile strength 26.30 Thickness 1 1/32" Pitch of stays 21.18 3/4"
 How are stays secured DN. Washers Working pressure by Rules 222
 Tube plates: Material { front S back S Tensile strength { 26-30 Thickness { 1 1/16"
 Mean pitch of stay tubes in nests 8-5" Pitch across wide water spaces 13 1/2" Working pressure { front 241 back 232
 Girders to combustion chamber tops: Material S Tensile strength 29.33 Depth and thickness of girder
 at centre 10-3 3/4" (2) Length as per Rule 2-9 5/8" Distance apart 8 1/4" No. and pitch of stays
 in each 3 at 8" Working pressure by Rules 230 Combustion chamber plates: Material S
 Tensile strength 26.30 Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 3/16"
 Pitch of stays to ditto: Sides 8-8 1/4" Back 8-9" Top 8-8 1/4" Are stays fitted with nuts or riveted over Nuts
 Working pressure by Rules 229 Front plate at bottom: Material S Tensile strength 26.30
 Thickness 7/8" Lower back plate: Material S Tensile strength 26.30 Thickness 7/8"
 Pitch of stays at wide water space 14" Are stays fitted with nuts or riveted over Nuts
 Working Pressure 226 Main stays: Material S Tensile strength 28.32
 Diameter { At body of stay, 3 1/4" No. of threads per inch 6 Area supported by each stay 393.75 sq in
 { Over threads —
 Working pressure by Rules 236 Screw stays: Material Iron Tensile strength 21 1/2
 Diameter { At turned off part, 1 3/4" No. of threads per inch 9 Area supported by each stay 420 sq in
 { Over threads —



Working pressure by Rules **248** Are the stays drilled at the outer ends **No** Margin stays: Diameter **17/8" + 2"**
 No. of threads per inch **9** Area supported by each stay **96 3/4 #** Working pressure by Rules **221**
 Tubes: Material **Iron** External diameter **2 1/2** Thickness **7/16** No. of threads per inch **9**
 Pitch of tubes **3 7/8 + 3 1/16"** Working pressure by Rules **241** Manhole compensation: Size of opening in
 shell plate **16 1/2 + 20 1/2"** Section of compensating ring **3-1 + 28 1/2 + 1 15/32"** No. of rivets and diameter of rivet holes **42 at 1 15/32"**
 Outer row rivet pitch at ends **10"** Depth of flange if manhole flanged **3 1/2"** Steam Dome: Material
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint
 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 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 Working pressure as per
 Rules 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**

The foregoing is a correct description,
 For JOHN G. KINCAID & CO. LIMITED.
 Director. Manufacturer.

Dates of Survey { During progress of work in shops - - }
 { During erection on board vessel - - - }
 Are the approved plans of boiler and superheater forwarded herewith **Yes**
 (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. **S/S "Jalabirishua" Ent. Reg. No. 20484**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **These boilers have been built under Special Survey in accordance with the approved plans & the workmanship & material are of good quality. This Report accompanies that of the Machinery**

Surveyor **Charles Douglas Mackay**
 Travelling Expenses (if any) £ : :
 When applied for, 19
 When received, 19

W. Gordon Mitchell
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 14 JUN 1938**

Assigned **SEE ACCOMPANYING MACHINERY REPORT.**

