

23 FEB 1926

Rpt. 5a.

# REPORT ON BOILERS.

No. 44943

Received at London Office 26 Aug 1925

Date of writing Report *24 Aug 1925* When handed in at Local Office *24.8.1925* Port of *Glasgow*

No. in Survey held at Reg. Book. \_\_\_\_\_ Date, First Survey *5.5.25* Last Survey *21.8.1925*

on the *MS. S.S. Hoppu Barge "RUKAMAYATI"* (Number of Visits *19*) Gross Tons \_\_\_\_\_ Net Tons \_\_\_\_\_

Master \_\_\_\_\_ Built at *Leith* By whom built *Henry Robt. & Co. Yard No. 35* When built \_\_\_\_\_

Engines made at \_\_\_\_\_ By whom made \_\_\_\_\_ Engine No. \_\_\_\_\_ When made \_\_\_\_\_

Boilers made at *Glasgow* By whom made *Ross and Duncan* Boiler No. *1717* When made *1925*

Nominal Horse Power *(88)* Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *David Colville & Sons* (Letter for Record *S*)

Total Heating Surface of Boilers *1316.5 sq. ft.* Is forced draught fitted *no* Coal or Oil fired \_\_\_\_\_

No. and Description of Boilers *One Cyl. Mult. Single End.* Working Pressure *130 lb.*

Tested by hydraulic pressure to *245 lb.* Date of test *21.8.25* No. of Certificate *16913* Can each boiler be worked separately \_\_\_\_\_

Area of Firegrate in each Boiler *37.4 sq. ft.* No. and Description of safety valves to each boiler *Two Spring loaded*

Area of each set of valves per boiler { per Rule *11.35* as fitted *11.89* } Pressure to which they are adjusted *130 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 \_\_\_\_\_ Is oil fuel carried in the double bottom under boilers \_\_\_\_\_

Smallest distance between shell of boiler and tank top plating *1'-6"* Is the bottom of the boiler insulated *no*

Largest internal dia. of boilers *12'-0"* Length *10'-0"* Shell plates: Material *S* Tensile strength *28/32 T.*

Thickness *3/4"* Are the shell plates welded or flanged *no* Description of ribbing: circ. seams \_\_\_\_\_ inter. \_\_\_\_\_

long. seams *DBS/TR.* Diameter of rivet holes in { circ. seams *1"* long. seams *7/8"* } Pitch of rivets { *3/8"* *5/4"* }

Percentage of strength of circ. end seams { plate *68.0* rivets *57.1* } Percentage of strength of circ. intermediate seam { plate \_\_\_\_\_ rivets \_\_\_\_\_ }

Percentage of strength of longitudinal joint { plate *74.8* rivets *85.8* combined *91.1* } Working pressure of shell by Rules *132 lb.*

Thickness of butt straps { outer *3/4"* inner *3/4"* } No. and Description of Furnaces in each Boiler *Two Plain*

Material *S.* Tensile strength *26/30 T.* Smallest outside diameter *43 1/2"*

Length of plain part { top *73"* bottom *73"* } Thickness of plates { crown *11/16"* bottom \_\_\_\_\_ } Description of longitudinal joint *Weld.*

Dimensions of stiffening rings on furnace or c.c. bottom *None* Working pressure of furnace by Rules *151 lb.*

End plates in steam space: Material *S.* Tensile strength *26/30 T.* Thickness *25/32"* Pitch of stays *16 x 16"*

How are stays secured *D.N.W.* Working pressure by Rules *134 lb.*

Tube plates: Material { front *S* back *S* } Tensile strength { *26/30 T.* } Thickness { *23/32"* *5/8"* }

Mean pitch of stay tubes in nests *11/4 x 8 1/2"* Pitch across wide water spaces *13 1/4"* Working pressure { front *131 lb.* back *143* }

Girders to combustion chamber tops: Material *S* Tensile strength *28/32 T.* Depth and thickness of girder \_\_\_\_\_

at centre *6 7/8 x 1 1/2"* Length as per Rule *30 25/32"* Distance apart *9"* No. and pitch of stays \_\_\_\_\_

in each *2 @ 9 1/2"* Working pressure by Rules *132 lb.* Combustion chamber plates: Material *S*

Tensile strength *26/30 T.* Thickness: Sides *19/32"* Back *19/32"* Top *19/32"* Bottom *19/32"*

Pitch of stays to ditto: Sides *9 1/2 x 9"* Back *9 1/2 x 9"* Top *9 1/2 x 9"* Are stays fitted with nuts or riveted over *Nuts*

Working pressure by Rules *142 lb.* Front plate at bottom: Material *S.* Tensile strength *26/30 T.*

Thickness *23/32"* Lower back plate: Material *S.* Tensile strength *26/30 T.* Thickness *11/16"*

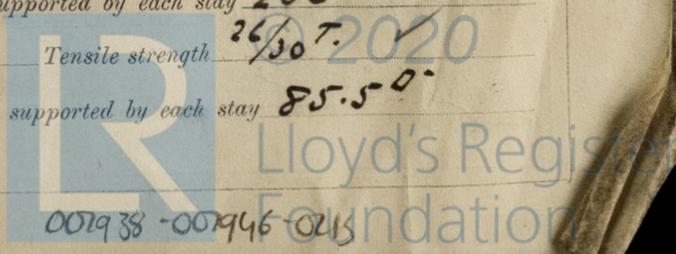
Pitch of stays at wide water space *14 x 9"* Are stays fitted with nuts or riveted over *Nuts*

Working Pressure *136 lb.* Main stays: Material *S.* Tensile strength *28/32 T.*

Diameter { At body of stay *2 3/8"* or *2 3/8"* } No. of threads per inch *6* Area supported by each stay *256 sq. in.*

Working pressure by Rules *154 lb.* Screw stays: Material *S* Tensile strength *26/30 T.*

Diameter { At turned off part \_\_\_\_\_ or *1 1/2"* } No. of threads per inch *9* Area supported by each stay *85.5 sq. in.*



Working pressure by Rules 147 lb Arc the stays drilled at the outer ends 20 ✓ Margin stays: Diameter { At turned off part, 7/8 ✓  
 No. of threads per inch 9 Area supported by each stay 105.50 ✓ Working pressure by Rules 143 lb  
 Tubes: Material 2 ✓ External diameter { Plain 3 3/4 ✓ Thickness 9 wg. ✓ No. of threads per inch 9 ✓  
 Pitch of tubes 4 1/2 x 4 1/4 ✓ Working pressure by Rules 184 lb ✓ Manhole compensation: Size of opening in  
 shell plate 16 x 12 ✓ Section of compensating ring 14 x 3/4 ✓ No. of rivets and diameter of rivet holes 38 - 7/8 ✓  
 Outer row rivet pitch at ends 5 7/8 ✓ Depth of flange if manhole flanged ✓ Steam Dome: Material none ✓  
 Tensile strength \_\_\_\_\_ Thickness of shell \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_  
 Diameter of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Percentage of strength of joint { Plate \_\_\_\_\_  
 Internal diameter \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Rivets \_\_\_\_\_  
 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**

Number of elements \_\_\_\_\_ Material of tubes \_\_\_\_\_ Manufacturers of { Tubes \_\_\_\_\_ Steel castings \_\_\_\_\_  
 Material of headers \_\_\_\_\_ Tensile strength \_\_\_\_\_ Internal diameter and thickness of tubes \_\_\_\_\_  
 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 23 inclusive for boilers been complied with \_\_\_\_\_

The foregoing is a correct description,  
Ross & Duncan Manufacturer.

Dates of Survey { During progress of work in shops - - - 1925. May 5. 8. 12. 14. 19. 21. 26. 29. Are the approved plans of boiler and superheater forwarded herewith Yes ✓  
 while building { During erection on board vessel - - - June 4. 9. 12. 15. Aug 6. 10. 14. 29. 31. (If not state date of approval.)  
 Aug 12. 21. Total No. of visits 19.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) The above Boiler has been constructed under special survey in accordance with the Rules and approved plan. The materials and workmanship employed in its construction are sound and good. It will be fitted on board the vessel to Lighthouse.

This boiler has now been fitted on board the vessel in an efficient manner, boiler examined under steam and safety valves adjusted to 130 lbs per sq. inch and all found satisfactory.

A. L.  
24/8/25.

Survey Fee ... .. £ 8 16 0 When applied for, 25 AUG 1925  
 Travelling Expenses (if any) £ ✓ When received, 27. 8. 1925

J. W. Law A. Morris  
 Engineer Surveyor to Lloyd's Register of Shipping

FRI. 26 FEB 1926

Committee's Minute GLASGOW 25 AUG 1925

Assigned TRANSMIT TO LONDON glb

