

REPORT ON BOILERS.

No. 42944

WFD. 15 AUG. 1923

Received at London Office

Date of writing Report 1923 When handed in at Local Office 12/87 1923 Port of Glasgow

No. in Survey held at Reg. Book. Date, First Survey 8/12/22 Last Survey 8/87 1923 (Number of Visits 46.)

on the S.S. "Kumrahal" Tons {Gross 5419 Net 3380}

Master Built at Glasgow By whom built G. Connell Yard No. 397 When built 1923

Engines made at Glasgow By whom made Dunsmuir & Jackson Engine No. 546 When made 1923

Boilers made at do By whom made do Boiler No. 546 When made 1923

Nominal Horse Power 475 Owners Asiatic S. N. Co. Port belonging to London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Skills & Co. of Scotland (Letter for Record S.)

Total Heating Surface of Boilers 1169 sq ft Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers One single ended multitubular Working Pressure 110

Tested by hydraulic pressure to 215 Date of test 13.4.23 No. of Certificate 16231 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 41 sq ft No. and Description of safety valves to each boiler Fair - spring loaded

Area of each set of valves per boiler {per Rule 11.69 sq ft as fitted 14.12 sq ft} Pressure to which they are adjusted 110 lbs Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No

Smallest distance between boilers or uptakes and bunkers or woodwork 2 in fidley Is oil fuel carried in the double bottom under boilers Yes

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 12'-0" Length 10'-6" Shell plates: Material S. Tensile strength 28-32

Thickness 3/4" Are the shell plates welded or flanged No Description of riveting: circ. seams {end D.R. inter none} long. seams T.R. Lap. Diameter of rivet holes in {circ. seams 1 1/8" long. seams 1 1/8" Pitch of rivets {3.58 47/32}

Percentage of strength of circ. end seams {plate 68.5 rivets 60.7} Percentage of strength of circ. intermediate seam {plate 73.3 rivets 77.4} Working pressure of shell by Rules 111

Percentage of strength of longitudinal joint {plate 73.3 rivets 77.4} Working pressure of shell by Rules 111

Thickness of butt straps {outer none inner none} No. and Description of Furnaces in each Boiler Two plain

Material S. Tensile strength 26-30 Smallest outside diameter 3'-10 1/4"

Length of plain part {top 6'-5 1/2" bottom 6'-10 1/2"} Thickness of plates {crown 1 1/16" bottom 1 1/16" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom T bar 6" x 3" x 1/2" Working pressure of furnace by Rules 135

End plates in steam space: Material S Tensile strength 26-30 Thickness 7/8" Pitch of stays 18" x 17 3/8"

How are stays secured I.N. Working pressure by Rules 111

Tube plates: Material {front S back S} Tensile strength {26-30 " - " Thickness {25/32" 25/32"}

Mean pitch of stay tubes in nests 12 3/4" Pitch across wide water spaces 14" x 14 3/4" Working pressure {front 111 back 111}

Girders to combustion chamber tops: Material Iron Tensile strength 24 Depth and thickness of girder at centre 7" x 1 1/2" Length as per Rule 31 1/16" Distance apart 9 1/4" No. and pitch of stays in each 2 @ 10" Working pressure by Rules 119 Combustion chamber plates: Material S

Tensile strength 26-30 Thickness: Sides 1 1/16" Back 19/32" Top 1 1/16" Bottom 1 1/16"

Pitch of stays to ditto: Sides 10" x 10" Back 10" x 9 1/2" Top 10" x 9 1/4" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 146 Front plate at bottom: Material S Tensile strength 26-30

Thickness 25/32" Lower back plate: Material S Tensile strength 26-30 Thickness 1 1/16"

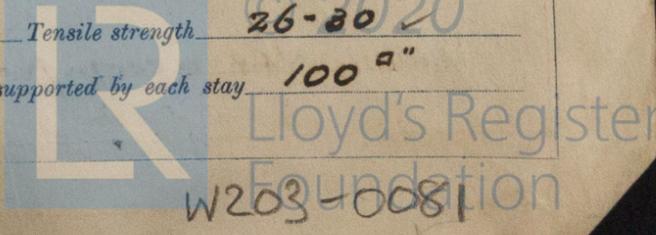
Pitch of stays at wide water space 14 3/4" x 10" Are stays fitted with nuts or riveted over nuts

Working Pressure 119 Main stays: Material S Tensile strength 28-32

Diameter {At body of stay, 2 1/4" or Over threads} No. of threads per inch 6 Area supported by each stay 312.78 sq in

Working pressure by Rules 110 Screw stays: Material S Tensile strength 26-30

Diameter {At turned off part, 1 5/8" or Over threads} No. of threads per inch 9 Area supported by each stay 100 sq in



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Working pressure by Rules 121 Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 1 3/4" or ^{Over threads} 1 3/4"
 No. of threads per inch 9 Area supported by each stay 127.6" Working pressure by Rules 142
 Tubes: Material I External diameter ^{Plain} 3" ^{Stay} 3" Thickness 8.L.S.G 3/8", 5/16" No. of threads per inch 9
 Pitch of tubes 4 1/4" Working pressure by Rules 164 Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 32 1/4" x 30 1/4" x 1 1/8" No. of rivets and diameter of rivet holes 32 - 1 1/8"
 Outer row rivet pitch at ends 5 1/4" Depth of flange if manhole flanged 3" 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 _____
 How connected to shell _____ Inner radius of crown _____ Working pressure by Rules _____
 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 _____
 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 DUNSMUIR & JACKSON, Limited.
 The foregoing is a correct description,
James Jackson Director, Manufacturer.

Dates of Survey ^{During progress of work in shops - -} See accompanying Are the approved plans of boiler and superheater forwarded herewith no
^{while building} ^{During erection on board vessel - - -} Machy Report. (If not state date of approval.) See sister vessel
 Total No. of visits _____ NURJEHAN. Gl. Rpt 42781

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey in accordance with the Society's Rules and approved plan, the materials and workmanship are good. The boiler has been satisfactorily fitted on board the S.S. "Kermahal" see Gl. Report N^o 42944.

Survey Fee £ 4 : 4 : 0 When applied for, 11.8.23
 Travelling Expenses (if any) £ _____ When received, 10/8/23

James Jackson
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 14 AUG 1923

Assigned See accompanying machinery report.



14.8.23