

REPORT ON BOILERS.

28 OCT 1953
No. 25002.

Date of writing Report 3RD OCTOBER 53 When handed in at Local Office 8TH OCTOBER 1953 Port of GREENOCK
 Received at London Office.....
 No. in Reg. Book. 35195 Survey held at GREENOCK Date, First Survey 17/6/53 Last Survey 29/9/1953
 on the SINGLE SCREW MOTORSHIP "ALVA CAPE" (Number of Visits...✓) Tons { Gross 11252
 Net 6420.52
 Built at GREENOCK By whom built GREENOCK DOCKYARD CO., LTD. Yard No. 480 When built 9/1953
 Engines made at GREENOCK By whom made SCOTTS S. & E. CO., LTD. Engine No. 743 When made 9/1953
 Boilers made at GREENOCK By whom made J. G. KINCAID & CO. LTD. Boiler No. 410 When made 9/1953
 MN as per Rule. ✓ MACHINERY INSTALLED BY J. G. KINCAID & CO. LTD. C.N. NO 410
 Owners ALVA S.S. CO. LTD. Port belonging to LONDON

TWO MULTITUBULAR BOILERS ~~MAIN AUXILIARY OR~~ DONKEY.

Manufacturers of Steel COLVILLES LTD.
 Total Heating Surface of Boilers 2 X 3376 Sq. Ft. ✓ Of Superheaters ✓
 Total for Register Book 6752 Sq. Ft. ✓ Is forced draught fitted YES Coal or Oil fired PORT-OIL OR STEAM GAS
 No. and Description of Boilers TWO CYLINDRICAL MULTITUBULAR - S.E. ✓ Working Pressure 220 lbs/sq. in. ✓
 Tested by hydraulic pressure to 380 lbs/sq. in. Date of test 10/8/53 No. of Certificate 2718 Can each boiler be worked separately YES ✓
 Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler 1-2 1/2 DBL. SPRING IMPROVED HIGH LIFT ✓
 Area of each set of valves per boiler { per Rule 8.98 sq. in. ✓ Pressure to which they are adjusted 220 lbs/sq. in. Are they fitted with easing gear YES ✓
 as fitted 9.82 sq. in. ✓
 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 ON FLAT. ✓
 Smallest distance between shell of boiler and tank top plating ✓ Is the bottom of the boiler insulated YES ✓
 Largest internal dia. of boilers 16'-0" ✓ Length 12'-1 3/4" ✓ Shell plates: Material STEEL ✓ Tensile strength 29/33 TONS/sq. in. ✓
 If fusion welded, state name of welding Firm ✓ Have all the requirements of the Rules for Class I vessels been complied with ✓ Thickness 1 3/4" ✓ Are the shell plates welded or flanged ✓ Description of riveting: circ. seams { end DR ✓
 long. seams TROBS ✓ Diameter of rivet holes in { circ. seams 1 9/16" ✓ Pitch of rivets { inter. 4.47" ✓
 { long. seams 1 3/4" ✓ { plates 10 1/2" ✓
 Percentage of strength of circ. end seams { plates 65.04 ✓ Percentage of strength of circ. intermediate seam { plates ✓ ✓
 { rivets 44.3 ✓ { rivets ✓ ✓
 Percentage of strength of longitudinal joint { plates 85.4 ✓ { rivets 85.29 ✓
 { combined 87.98 ✓
 Thickness of butt straps { outer 1 5/8" ✓ No. and Description of Furnaces in each Boiler 3 DEIGHTON CORRUGATED ✓
 { inner 1 3/4" ✓ Tensile strength 26/30 TONS/sq. in. ✓ Smallest outside diameter 3'-11 7/8" ✓
 Material STEEL ✓ Thickness of plates 23/32" ✓ Description of longitudinal joint WELD ✓
 Length of plain part { top ✓ ✓ Dimensions of stiffening rings on furnace or c.c. bottom ✓
 { bottom ✓ ✓ End plates in steam space: Material STEEL ✓ Tensile strength 26/30 TONS/sq. in. ✓ Thickness 1 7/8" ✓ Pitch of stays 1'-9" MAX. X 1'-9" ✓
 How are stays secured DN ✓
 Tube plates: Material { front STEEL ✓ Tensile strength 26/30 TONS/sq. in. ✓ Thickness 7/8" ✓
 { back " ✓ { " " ✓
 Mean pitch of stay tubes in nests 8.659" ✓ Pitch across wide water spaces 1'-1 1/2" ✓
 Girders to combustion chamber tops: Material STEEL ✓ Tensile strength 29/33 TONS/sq. in. ✓ Depth and thickness of girder
 at centre 11" X 1 1/2" ✓ Length as per Rule 2'-10 15/32" ✓ WINGS - 9 3/8" CENTRES ✓
 in each NOTE. GIRDERS WELDED TO C.C. TOPS ✓ Distance apart CENTRE-7 1/4" ✓ No. and pitch of stays
EACH WITH 5-3" WELDS AT 8 5/8" CENTRES ✓ Combustion chamber plates: Material STEEL ✓
 Tensile strength 26/30 TONS/sq. in. ✓ Thickness: Sides 23/32" ✓ Back 23/32" ✓ Top 23/32" ✓ Bottom 7/8" ✓
 Pitch of stays to ditto: Sides 9 3/8" X 8 5/8" ✓ WINGS - 8 5/8" X 8 5/8" ✓ GIRDERS WELDED ✓ Are stays fitted with nuts YES - EXCEPT ✓
 { BACK CENTRE-8 5/8" X 7 1/8" ✓ Top WELDED ✓ AT SHELL ✓
 Front plate at bottom: Material STEEL ✓ Tensile strength 26/30 TONS/sq. in. ✓
 Thickness 7/8" ✓ Lower back plate: Material STEEL ✓ Tensile strength 26/30 TONS/sq. in. ✓ Thickness 7/8" ✓
 Pitch of stays at wide water space 1'-1" ✓ Are stays fitted with nuts YES ✓
 Main stays: Material STEEL ✓ Tensile strength 28/32 TONS/sq. in. ✓
 Diameter { At body of stay 3 3/8" ✓ No. of threads per inch 6 ✓
 { Over threads 3 5/8" ✓
 crew stays: Material STEEL ✓ Tensile strength 26/30 TONS/sq. in. ✓
 Diameter { At turned off part 1 3/4" ✓ No. of threads per inch 9 ✓
 { Over threads 1 3/4" ✓

Are the stays drilled at the outer ends. No ✓ Margin stays: Diameter { At turned off part, ✓
or
Over threads. 1 1/8"

No. of threads per inch. 9 ✓

Tubes: Material H.R. STEEL ✓ External diameter { Plain. 2 1/2" ✓
Stay. 2 1/2" ✓ Thickness { 9 H.C. ✓
5/16" x 3/8" ✓ No. of threads per inch. 9 ✓

Pitch of tubes. 3 3/4" x 3 3/4" ✓ Manhole compensation: Size of opening in
shell plate. 17 1/8" x 21 1/8" ✓ Section of compensating ring. 2 (11.79 x 1.5615) ✓ No. of rivets and diameter of rivet holes. 38 - 1 9/16"

Outer row rivet pitch at ends. 10 5/8" ✓ Depth of flange if manhole flanged. 4 3/8" ✓ 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. _____ Thickness of crown. _____ No. and diameter of
stays. _____ Inner radius of crown. _____

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. 17 1/2"
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. _____

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 THE APPROPRIATE SECTIONS
Sections 14 to 22 inclusive for boilers been complied with. YES ✓

For JOHN G. KINCAID & COY. LIMITED.
The foregoing is a correct description,

Chief Draughtsman. Manufacturer.

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith. YES
while building { During erection on board vessel - - } (If not state date of approval.)

SEE ACCOMPANYING MACH. REPORT. Total No. of visits. _____

Is this Boiler a duplicate of a previous case. No ✓ If so, state Vessel's name and Report No. _____

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) THE BOILERS HAVE CONSTRUCTED UNDER
SPECIAL SURVEY IN ACCORDANCE WITH THE RULES AND APPROVED PLANS.
THE MATERIALS AND WORKMANSHIP ARE GOOD. THE BOILERS HAVE BEEN EFFICIENTLY
INSTALLED ON BOARD THE VESSEL AND THE SAFETY VALVES WERE ADJUSTED
UNDER STEAM TO 220 ^{lbs}/sq. in. A SATISFACTORY ACCUMULATION TEST WAS CARRIED OUT

COMPRESSION RINGS:-	PORT BOILER	STARBOARD BOILER
PORT VALVE	<u>1 5/32"</u>	<u>7/16"</u>
STARBO. "	<u>1/2"</u>	<u>7/16"</u>

SEE MACHINERY REPORT.

Survey Fee ... £ : : When applied for.19.

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

H. K. Taylor.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute. _____

Assigned. _____

GLASGOW

27 OCT 1953



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Lloyd's Register
Foundation