

REPORT ON BOILERS.

No. 23455

Received at London Office. 56 OCT 1948

Date of writing Report. 24th SEPT 1948 When handed in at Local Office. 1st OCT 1948 Port of GREENOCKNo. in Reg. Book. Survey held at GREENOCK Date, First Survey 23rd MAY 1948 Last Survey 22-9-48 19

on the S/S. CIS BROUIG OIL ENG (Number of Visits 86) Tons Gross Net

Master Built at PORT GLASGOW By whom built W^m. HAMILTON & CO^{YD} Yard No. 477 When built 1948Engines made at GREENOCK By whom made JOHN G. KINCAID & CO^{LD} Engine No. K194 When made 1948

Boilers made at do By whom made do Boiler No. K194 When made 1948

Nominal Horse Power 880 Owners TH. BROUIG Port belonging to FARSUND, Norway

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel COLVILLES L^DTotal Heating Surface of Boilers 3506⁴ = 2 Boilers Is forced draught fitted. Yes (Letter for Record (S) 164 oil only)

No. and Description of Boilers Two SE cylindrical Working Pressure 150 lbs

Tested by hydraulic pressure to 275 Date of test 1-8-48 No. of Certificate 2482 Can each boiler be worked separately. Yes

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two 2 1/4" IHL

Area of each set of valves per boiler per Rule 6.6375 Pressure to which they are adjusted 153 lbs 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 13 in on U/DK

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

Largest internal dia. of boilers 13'-6" Length 10'-0" Shell plates: Material S Tensile strength 28/32 tons

Thickness 15/16 Are the shell plates welded or flanged No Description of riveting: circ. seams end DR inter. 3.121" Pitch of rivets 4.375"

Percentage of strength of circ. end seams plate 67.9 rivets 42.5 Percentage of strength of circ. intermediate seam plate 85.2 rivets 87.5

Percentage of strength of longitudinal joint rivets 87.6 Working pressure of shell by Rules 150.1 lbs

Thickness of butt straps outer 23/32 inner 27/32 No. and Description of Furnaces in each Boiler Three Dighton corrugated

Material S Tensile strength 26/30 tons Smallest outside diameter 3'-3 1/16"

Length of plain part top bottom Thickness of plates crown 15/32 bottom 3/32 Description of longitudinal joint Weld

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

Stays in steam space: Material S Tensile strength 26/30 tons Thickness 1 1/16 Pitch of stays 18" x 18"

Are stays secured DN Working pressure by Rules

Stays plates: Material front back S Tensile strength 26/30 tons Thickness 15/32

Pitch of stay tubes in nests 9'-8 1/25 Pitch across wide water spaces 1'-2" Working pressure front back

Access to combustion chamber tops: Material S Tensile strength 29/33 tons Depth and thickness of girder

Centre 7 3/4" x (3/8) = 2 1/16 Length as per Rule 2'-7 1/16 Distance apart 8 1/2" No. and pitch of stays

Each Two 2 10" Working pressure by Rules Combustion chamber plates: Material S

Tensile strength 26/30 tons Thickness: Sides 2 1/32 Back 19/32 Top 2 1/32 Bottom 2 1/32

Pitch of stays to ditto: Sides 10" x 8 1/2" Back 8 1/2" x 8 1/2" Top 10" x 8 1/2" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules Front plate at bottom: Material S Tensile strength 26/30 tons

Thickness 15/16 Lower back plate: Material S Tensile strength 26/30 Thickness 3/4"

Pitch of stays at wide water space 14" x 8 1/2" Are stays fitted with nuts or riveted over Nuts

Working pressure Main stays: Material S Tensile strength 28/32 tons

At body of stay 2 1/2" No. of threads per inch 6 Area supported by each stay

Over threads Screw stays: Material S Tensile strength 26/30 tons

At turned off part 1 1/2" x 1 5/8" No. of threads per inch 9 Area supported by each stay

Over threads

Working pressure by Rules. Are the stays drilled at the outer ends *No* ✓ Margin stays: Diameter { At turned off part, *1 5/8"* or Over threads. *✓*

No. of threads per inch. *9* ✓ Area supported by each stay. Working pressure by Rules.

Tubes: Material *Hot rolled steel* ✓ External diameter { Plain. *3"* ✓ Stay. *3"* ✓ Thickness { *9/16"* ✓ *1/4"* ✓ No. of threads per inch. *9* ✓

Pitch of tubes. *4 1/4" x 4 1/4"* ✓ Working pressure by Rules. Manhole compensation: Size of opening.

shell plate. *16 1/2" x 20 1/2"* ✓ Section of compensating ring. *2-9 1/2" x 2-5 1/2" x 1 1/2"* ✓ No. of rivets and diameter of rivet holes. *38 - 1 1/4"*

Outer row rivet pitch at ends. *8"* ✓ Depth of flange if manhole flanged. *McNeil type door* ✓ 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.

Inner radius of crown. Working pressure by Rules.

How connected to shell. Size of doubling plate under dome. Diameter of rivet holes and 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 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 of Rules.

Pressure to which the safety valves are adjusted. Hydraulic test pressure of tubes. forgings and castings. and after assembly in place. Are drain 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.

The foregoing is a correct description, for JOHN G. KINCAID & CO. LIMITED. *J. Kincaid* Chief Draughtsman.

Dates of Survey while building { During progress of work in shops - - } During erection on board vessel - - - } *SEE MACHINERY REPORT* 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. *No* ✓ If so, state Vessel's name and Report No.

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

These boilers have been built under Special Survey in accordance with the Rules & approved plans. The materials & workmanship are sound & good. The safety valves have been adjusted under steam for a working pressure of 150 lbs/sq. in.

For recommendations please see machinery report Govt FF N° 23455.

Survey Fee ... £ Travelling Expenses (if any) £ *See machinery report* When applied for. 19. When received. 19.