

REPORT ON BOILERS.

No. 24194

Received at London Office.....

Date of writing Report. 21/8/50 19... When handed in at Local Office. 25. AUGUST 1950. Port of GREENOCK

No. in Survey held at GREENOCK Date, First Survey. 10th August 1949. Last Survey. 26th July 1950

on the ERLING BORTHEN (Number of Visits...✓) Tons { Gross 9073.86 Net 5125.74

Built at PORT GLASGOW By whom built W. HAMILTON & Co L^o Yard No. 482 When built 1950

Engines made at GREENOCK By whom made JOHN G. KINCAID & Co. Engine No. K219 When made 1950

Boilers made at do By whom made do Boiler No. K219 When made 1950

Nominal Horse Power 880 Owners HARRY BORTHEN & Co Port belonging to GSLO

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel. COLVILLE L^o (Letter for Record S)

Total Heating Surface of Boilers 4022 sq ft = 2800 Of Superheaters ✓

Total for Register Book Is forced draught fitted Yes ✓ Coal or Oil fired Oil ✓

No. and Description of Boilers 2 cylindrical SE 25/4/50 Working Pressure 150 lb ✓

Tested by hydraulic pressure to 275 Date of test 5/5/50 No. of Certificate 2591 Can each boiler be worked separately. Yes ✓

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler 2 1/2" double spring 1HL CI.

Area of each set of valves per boiler { per Rule 7.6" as fitted 7.96" Pressure to which they are adjusted 152 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 Boilers on Tween deck Is the bottom of the boiler insulated. Yes ✓

Largest internal dia. of boilers 13' 9" ✓ Length 10' 9" ✓ Shell plates: Material S Tensile strength 29/33 ton ✓

If fusion welded, state name of welding Firm No Have all the requirements of the Rules for Class I vessels

Have complied with ✓ Thickness 15/16" Are the shell plates welded or flanged No ✓ Description of riveting: circ. seams { end DR ✓

Long. seams TPDBS ✓ Diameter of rivet holes in { circ. seams 1" ✓ Pitch of rivets { 3.066" ✓

Percentage of strength of circ. end seams { plate 67.4 rivets 43.2 Percentage of strength of circ. intermediate seam { plate 86.1 rivets 87.6

Percentage of strength of longitudinal joint { plate 89.4 rivets 89.4

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

Material S Tensile strength 24/30 ton ✓ Smallest outside diameter 3' 3 15/16" ✓

Length of plain part { top ✓ bottom ✓ Thickness of plates 15/32" ✓ Description of longitudinal joint Weld ✓

Dimensions of stiffening rings on furnace or c.c. bottom None ✓

End plates in steam space: Material S Tensile strength 24/30 ton ✓ Thickness 1/8" ✓ Pitch of stays 20" x 14" ✓

How are stays secured DN ✓

Tube plates: Material { front S back S Tensile strength { 24/30 ton ✓ Thickness { 29/32" ✓ 23/32" ✓

Mean pitch of stay tubes in nests 10.99" Pitch across wide water spaces 1' 2" ✓

Girders to combustion chamber tops: Material S Tensile strength 29/33 ton ✓ Depth and thickness of girder

At centre 9 1/2" x 11" x 2 1/2" Length as per Rule 2' 8 1/16" ✓ Distance apart 9 1/2" ✓ No. and pitch of stays

In each two @ 10 1/4" ✓ Combustion chamber plates: Material S

Tensile strength 24/30 ton ✓ Thickness: Sides 21/32" ✓ Back 19/32" ✓ Top 21/32" ✓ Bottom 21/32" ✓

Pitch of stays to ditto: Sides 10 1/4" x 9 1/2" Back 8 3/4" x 8 3/4" Top 10 1/4" x 9 1/2" Are stays fitted with nuts or riveted over. Nuts ✓

Front plate at bottom: Material S Tensile strength 24/30 ton ✓

Thickness 29/32" ✓ Lower back plate: Material S Tensile strength 24/30 ton ✓ Thickness 23/32" ✓

Pitch of stays at wide water space 14" x 8 3/4" Are stays fitted with nuts or riveted over. Nuts ✓

Main stays: Material S Tensile strength 28/32 ton ✓

Diameter { At body of stay 2 3/4" ✓ No. of threads per inch 6 ✓

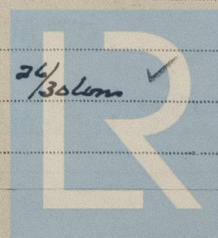
crew stays: Material S Tensile strength 24/30 ton ✓

Diameter { At turned off part 1 1/2" 21/32" ✓ No. of threads per inch 9

Over threads

At turned off part

Over threads



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Are the stays drilled at the outer ends No ✓ Margin stays: Diameter At turned off part 1 1/8"
or Over threads 1 1/8"
No. of threads per inch 9 ✓
Tubes: Material S External diameter 3" ✓ Plain 3" ✓ Stay 3" ✓ Thickness 9/16" ✓ No. of threads per inch 9 ✓
Pitch of tubes 4 1/4" x 4 1/2" ✓ Manhole compensation: Size of opening 46 on plan
shell plate 16 1/2" x 20 1/2" ✓ Section of compensating ring 2' 10" x 2' 6" x 15/16" ✓ No. of rivets and diameter of rivet holes 45 21"
Outer row rivet pitch at ends 7" ✓ 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
Internal diameter Thickness of crown No. and diameter
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
Number of elements Material of tubes Steel forgings
Material of headers Tensile strength Steel castings
Internal diameter and thickness of tubes
Can the superheater be shut off a
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
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

For JOHN G. KINCAID & CO. LTD.

The foregoing is a correct description,

J. Conway Chief Draughtsman.

Dates of Survey During progress of work in shops - - Are the approved plans of boiler and superheater forwarded herewith
while building During erection on board vessel - - (If not state date of approval.)
SEE MACHINERY REPORT Total No. of visits

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. "NORDBO" GRK N° 24025

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

These boilers have been constructed under Special survey in accordance with the Rules and approved plans. The materials & workmanship are sound & good. Their safety valves have been adjusted under steam for a working pressure of 150 lbs/sq. in.
For recommendations please see machinery report GRK N°

Survey Fee ... £ When applied for 19...
Travelling Expenses (if any) £ When received 19...

Charles N. Hunter

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute GLASGOW 30 AUG 1950

Assigned COMPANING MACHINERY REPORT



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