

RECEIVED

6 JUN 1946

# REPORT ON BOILERS.

No. 70758

IN D.O.

Received at London Office 5 JUN 1946

Date of writing Report 21-5-1946 When handed in at Local Office 1-6-1946 Port of GLASGOW

No. in Reg. Book. Survey held at Paisley. Date, First Survey 28-7-44 Last Survey 14-5-1946

on the SING Se BEAVERLAKE (Number of Visits 8) Tons {Gross 9824 Net 5818}

Master Built at Port Glasgow By whom built Messrs Littlewood & Co Ltd Yard No. 1003 When built 1946

Engines made at Newcastle By whom made Messrs C.A. Parsons & Co Ltd Engine No. When made

Boilers made at Paisley By whom made Messrs A.F. Brown & Co Ltd Boiler No. 853 When made 1946

Nominal Horse Power Owners CANADIAN PACIFIC RAILWAY Port belonging to London

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

For heating purposes and make up feed.

Manufacturers of Steel Solvilles Ltd. (Letter for Record S ✓)

Total Heating Surface of Boilers 1224 sq ft INDUCED Is forced draught fitted yes ✓ Coal or Oil fired oil ✓

No. and Description of Boilers 1- Howden Johnson Working Pressure 100 lbs/sq in ✓

Tested by hydraulic pressure to 200 lbs Date of test 29-12-45 No. of Certificate 22093 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 2 1/4" Cast iron I.H.L. double ✓

Area of each set of valves per boiler {per Rule 6.66" ✓ as fitted 7.96" ✓ Pressure to which they are adjusted 100 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. } 2978

Smallest distance between boilers or uptakes and bunkers or woodwork No woodwork Is oil fuel carried in the double bottom under boilers yes ✓ } 2978

Smallest distance between shell of boiler and tank top plating 2'-11" Is the bottom of the boiler insulated yes ✓ } 2978

Largest internal dia. of boilers 10'-6" Length Int 6'-6" Shell plates: Material Steel ✓ Tensile strength 28-32 Tons ✓

Thickness 17/32" Are the shell plates welded or flanged No ✓ Description of riveting: circ. seams and DR ✓

long. seams T.R. & B.S. Diameter of rivet holes in {circ. seams 13/16" ✓ long. seams 3/4" ✓ Pitch of rivets {2.761" ✓ 4 5/8" ✓

Percentage of strength of circ. end seams {plate 70.5 ✓ rivets 57.8 ✓ Percentage of strength of circ. intermediate seam {plate 84.0 ✓ rivets 138.0 ✓ combined 95.3 ✓ Working pressure of shell by Rules -

Percentage of strength of longitudinal joint {plate 84.0 ✓ rivets 138.0 ✓ combined 95.3 ✓ Working pressure of shell by Rules -

Thickness of butt straps {outer 17/32" ✓ inner 17/32" ✓ No. and Description of Furnaces in each Boiler 1 Deighton ✓

Material Steel ✓ Tensile strength 26-30 Tons ✓ Smallest outside diameter 4'-0" ✓

Length of plain part {top ✓ bottom ✓ Thickness of plates {crown 1/2" ✓ bottom 1/2" ✓ Description of longitudinal joint Weld ✓

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules -

End plates in steam space: Material Steel ✓ Tensile strength 26-30 Tons ✓ Thickness 7/8" ✓ Pitch of stays 1'-4" x 1'-3 1/4" ✓

How are stays secured Nuts ✓ Working pressure by Rules -

Tube plates: Material {front back} Steel ✓ Tensile strength {26-30 Tons ✓ Thickness {7/8" ✓ 7/8" ✓

Mean pitch of stay tubes in nests 9 1/8" ✓ Pitch across wide water spaces 11-14" ✓ Working pressure {front back} -

Girders to combustion chamber tops: Material - Tensile strength - Depth and thickness of girder -

at centre - Length as per Rule - Distance apart - No. and pitch of stays in each -

Working pressure by Rules - Combustion chamber plates: Material -

Tensile strength - Thickness: Sides - Back - Top - Bottom -

Pitch of stays to ditto: Sides - Back - Top - Are stays fitted with nuts or riveted over -

Working pressure by Rules - TUBE Front plate at bottom: Material Steel ✓ Tensile strength 26-30 Tons ✓

Thickness 7/8" ✓ Lower back plate: Material Steel ✓ Tensile strength 26-30 Tons ✓ Thickness 7/8" ✓

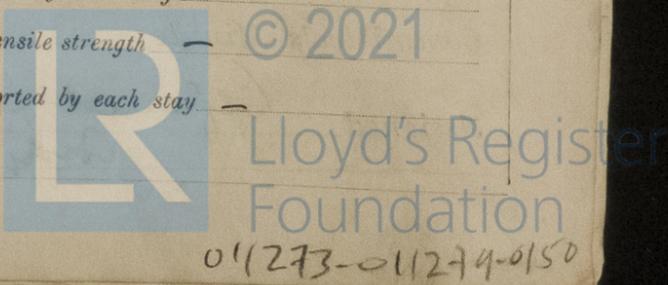
Pitch of stays at wide water space - Are stays fitted with nuts or riveted over

Working Pressure - Main stays: Material Steel ✓ Tensile strength 28-32 Tons ✓

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

Working pressure by Rules - Screw stays: Material - Tensile strength -

Diameter {At turned off part, or Over threads} - No. of threads per inch - Area supported by each stay -



011273-011274-0150

Working pressure by Rules - Are the stays drilled at the outer ends - Margin stays: Diameter { At turned off part, or Over threads }  
 No. of threads per inch - Area supported by each stay - Working pressure by Rules -  
 Tubes: Material *Steel & W.I.* External diameter { Plain } *2 1/2"* Thickness { *10 SWS* } No. of threads per inch *9*  
 Pitch of tubes *3 1/2" x 3 3/4"* Working pressure by Rules - Manhole compensation: Size of opening in shell plate *16" x 20"* Section of compensating ring *Flanged plate 3/4" thick* No. of rivets and diameter of rivet holes *52 - 13/16"*  
 Outer row rivet pitch at ends *4 5/8"* 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 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 pitch 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 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 casing gear - Working pressure as per Rules - 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 Sections 14 to 22 inclusive for boilers been complied with *Yes*  
 The foregoing is a correct description,  
**F. CRAIG & CO. LTD** Manufacturer.

Dates of Survey { During progress of work in shops - - - } *1946 Jul 28 1946 Aug 16 Nov 28 Dec 21, 24, 29* Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) *10-11-43*  
 { while building } { During erection on board vessel - - - } *1946 Feb 8 Aug 17* Total No. of visits *8*

Is this Boiler a duplicate of a previous case *Yes*. If so, state Vessel's name and Report No. *S.S. "BEAVERDELL"*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler has been constructed under special survey, in accordance with the Rule Requirements and approved plans. The materials and workmanship are good. This boiler has been dispatched to Greenock, for installation in Messrs Lithgows Ltd (Port Glasgow) Yard No. 1003.*

*This boiler has been satisfactorily installed in the vessel & its safety valves adjusted under steam to a safe working pressure*  
*Please see Greenock FE report for recommendations* *GRK N° 23407*  
*Charles J. Hunter*  
*Greenock*

Survey Fee ... .. £ *12: 5: -* When applied for, *4 JUN 1946*  
 Travelling Expenses (if any) £ : : When received, *19*

Committee's Minute *GLASGOW 4 JUN 1946*  
 Assigned *Referred for Consideration* *NRD*

