

Rpt. 5a.

REPORT ON BOILERS.

No. 41576.

-7 JAN 1931

Received at London Office

HULL

Date of writing Report

5.1.31

1931

When handed in at Local Office

5 Jan 31

Port of

No. in Survey held at
Reg. Book.

HULL

Date, First Survey

7. August

Last Survey

29 Dec. 1930

(Number of Visits)

26.

Gross 362.10.

Tons

Net 140.53.

on the STEAM TRAWLER "LORD BEAVERBROOK"

Master Built at Selly By whom built Cochrane & Sons Yard No. 1099 When built 1930
Engines made at Hull By whom made Amos & Smith Ltd. Engine No. 621 When made 1930
Boilers made at Hull By whom made Amos & Smith Ltd. Boiler No. 621 When made 1930
Nominal Horse Power 96. Owners Pickering & Haldane's Steam Trawling Co Ltd belonging to Hull

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Iron Co Ltd (Letter for Record S.)
Total Heating Surface of Boilers 1698 sq ft Is forced draught fitted No Coal or Oil fired Coal
No. and Description of Boilers One single ended return tube Working Pressure 200 #
Tested by hydraulic pressure to 350 # Date of test 25.11.30 No. of Certificate 3815 Can each boiler be worked separately
Area of Firegrate in each Boiler 49.2 sq ft No. and Description of safety valves to each boiler 2 Spring loaded
Area of each set of valves per boiler { per Rule 9.8 sq in Pressure to which they are adjusted 200 # Are they fitted with easing gear yes
as fitted 9.8 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 7 Is oil fuel carried in the double bottom under boilers
Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated
Largest internal dia. of boilers 14' 0" Length 10' 8" Shell plates: Material Steel Tensile strength 29-33 tons
Thickness 1 9/16" Are the shell plates welded or flanged Description of riveting: circ. seams { end 8K.
inter. 3 1/4"
long. seams SK. 2/35 Diameter of rivet holes in { circ. seams 19/32 Pitch of rivets { 8 9/16"
long. seams
Percentage of strength of circ. end seams { plate 65.8 Percentage of strength of circ. intermediate seam { plate
rivets 42.6
Percentage of strength of longitudinal joint { plate 85.13 Working pressure of shell by Rules 201 #
rivets 90.8
combined 88.8
Thickness of butt straps { outer 1" No. and Description of Furnaces in each Boiler Three plain
inner 1 1/8"
Material Steel Tensile strength 26-30 tons Smallest outside diameter 41"
Length of plain part { top 76" Thickness of plates { crown 13/16" Description of longitudinal joint Welded
bottom 69" bottom 16"
Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 219 #
End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 3/16" Pitch of stays 18"
How are stays secured Double nuts & washers Working pressure by Rules 220 #
Tube plates: Material { front Steel Tensile strength 26-30 tons Thickness { 15/16"
back 48"
Mean pitch of stay tubes in nests 10.97" Pitch across wide water spaces 13 3/4" Working pressure { front 211 #
back 230 #
Girders to combustion chamber tops: Material Steel Tensile strength 29-33 tons Depth and thickness of girder
at centre 10 1/2" x 1 3/4" Length as per Rule 36 3/16" Distance apart 9" No. and pitch of stays
in each 3 @ 8 3/4" Working pressure by Rules 210 #
Tensile strength 26-30 tons Thickness: Sides 3/4" Back 11/32" Top 3/4" Bottom 3/4"
Pitch of stays to ditto: Sides 9" x 8 3/4" Back 9" x 8 1/2" Top 9" x 8 3/4" Are stays fitted with nuts or riveted over nuts
Working pressure by Rules 230 # Front plate at bottom: Material Steel Tensile strength 26-30 tons
Thickness 15/16" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 19/32"
Pitch of stays at wide water space 14" x 8 3/4" Are stays fitted with nuts or riveted over nuts
Working Pressure 228 # Main stays: Material Steel Tensile strength 28-32 tons
Diameter { At body of stay, 3 1/4" No. of threads per inch 6 Area supported by each stay 324 sq inches
or Over threads
Working pressure by Rules 240 # Screw stays: Material Steel Tensile strength 26-30 tons
Diameter { At turned off part, 1 7/8" + 1 3/4" No. of threads per inch 9 Area supported by each stay 87 sq inches
or Over threads

Working pressure by Rules 230 #0 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 1/8" or Over threads

No. of threads per inch 9 Area supported by each stay 94.75 sq" Working pressure by Rules 218 #0"

Tubes: Material Iron External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { 5/16" + 3/8" No. of threads per inch 9

Pitch of tubes 4 7/8" Working pressure by Rules 215 #0" Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 34" x 27" x 1 1/2" No. of rivets and diameter of rivet holes 32 @ 1 1/32"

Outer row rivet pitch at ends 8 9/16" Depth of flange if manhole flanged 3 1/2" Steam Dome: Material Iron

Tensile strength 22,000 Thickness of shell 5/16" Description of longitudinal joint Butt

Diameter of rivet holes 1 1/8" Pitch of rivets 4" Percentage of strength of joint { Plate 80% Rivets 80%

Internal diameter 24" Working pressure by Rules 215 #0" Thickness of crown 5/16" No. and diameter of stays 12 @ 1 1/8"

Inner radius of crown 12" Working pressure by Rules 215 #0"

How connected to shell By 2" x 1/2" x 1/4" flange Size of doubling plate under dome 16" x 12" x 1/2" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/8" @ 4"

Type of Superheater Water tube Manufacturers of Tubes Steel castings

Number of elements 12 Material of tubes Steel Internal diameter and thickness of tubes 3 1/2" x 5/16"

Material of headers Steel Tensile strength 22,000 Thickness 5/16" Can the superheater be shut off and the boiler be worked separately Yes

Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes

Area of each safety valve 1 sq. in. Are the safety valves fitted with easing gear Yes Working pressure as per Rules 215 #0"

Pressure to which the safety valves are adjusted 215 #0" Hydraulic test pressure: tubes 230 #0" and after assembly in place 215 #0" Are drain cocks or valves fitted to free the superheater from water where necessary Yes

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes For AMOS & SMITH LTD.

The foregoing is a correct description,
J. P. Harder Manufacturer.

Dates of Survey { During progress of work in shops - - - Jan 12
while building { During erection on board vessel - - - Jan 12

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes

Total No. of visits 1

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey and in accordance with the approved plan, the materials and workmanship being sound and good. It has been satisfactorily fitted on board, examined under steam and the safety valves adjusted to pressure state.

The approved plan & invoices were forwarded with report on sister vessel "Beachflower"

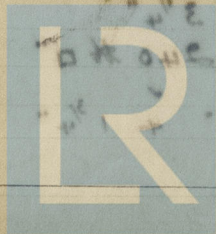
Charged on engine report sent herewith

Survey Fee £ 10 When applied for, 19
Travelling Expenses (if any) £ 0 When received, 19

B. Moffatt
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 13 JAN 1931

Assigned See other report



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