

Rpt. 5a.

REPORT ON BOILERS.

No. 41464

Received at London Office 20 DEC 1930

Date of writing Report

18.12.30

When handed in at Local Office

18 Dec 30

Port of

HULL

No. in Reg. Book. Survey held at

HULL

Date, First Survey

26 Aug

Last Survey

15 Dec 1930

on the

STEAM TRAWLER "BEACHFLOWER."

(Number of Visits 15)

Gross 374.67

Net 145.15

Master _____ Built at Selly By whom built Bochrane & Sons Yard No. 1098 When built 1930
Engines made at Hull By whom made Amos & Smith Ltd. Engine No. 620 When made 1930
Boilers made at Hull By whom made Amos & Smith Ltd. Boiler No. 620 When made 1930
Nominal Horse Power 96 Owners Yorkshire Steam Fishing Co Ltd Port 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 lb
Tested by hydraulic pressure to 350 lb Date of test 11-11-30 No. of Certificate 3812 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 9.80 as fitted 9.80 Pressure to which they are adjusted 200 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 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 3/32" Are the shell plates welded or flanged ✓ Description of riveting: circ. seams { end OK inter. ✓
long. seams 2R. D.S. Diameter of rivet holes in { circ. seams 19/32" Pitch of rivets { 3 1/4" 8 9/16"
Percentage of strength of circ. end seams { plate 65.8 rivets 42.6 Percentage of strength of circ. intermediate seam { plate 85.03 rivets ✓
Percentage of strength of longitudinal joint { rivets 90.8 combined 88.8 Working pressure of shell by Rules 201 lb
Thickness of butt straps { outer 1" inner 1 1/8" No. and Description of Furnaces in each Boiler Three plain
Material Steel Tensile strength 26-30 tons Smallest outside diameter 4 1/2"
Length of plain part { top 76" bottom 69" Thickness of plates { crown 13/16" bottom 16/16" Description of longitudinal joint Welded
Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 219 lb
End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 1/16" Pitch of stays 18"
How are stays secured Double nuts & washers Working pressure by Rules 220 lb
Tube plates: Material { front Steel back ✓ Tensile strength { 26-30 tons Thickness { 15/16" 7/8"
Mean pitch of stay tubes in nests 10.97" Pitch across wide water spaces 13 3/4" Working pressure { front 211 lb back 230 lb
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 lb Combustion chamber plates: Material Steel
Tensile strength 26-30 tons Thickness: Sides 3/4" Back 23/32" Top 3/4" + 23/32" 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 lb 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 29/32"
Pitch of stays at wide water space 14" x 8 3/4" Are stays fitted with nuts or riveted over nuts
Working Pressure 228 lb 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
Over threads ✓ Working pressure by Rules 240 lb 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
Over threads ✓

Working pressure by Rules 230 # Are the stays drilled at the outer ends no Margin stays: Diameter 1 7/8"
 No. of threads per inch 9 Area supported by each stay 97.75 # Working pressure by Rules 218 #
 Tubes: Material Iron External diameter 3 1/2" Thickness 3/16" + 3/8" No. of threads per inch 9
 Pitch of tubes 4 1/8" Working pressure by Rules 215 # Manhole compensation: Size of opening in
 shell plate 16" x 12" Section of compensating ring 34" x 24" x 1 3/4" No. of rivets and diameter of rivet holes 32 @ 1 3/4"
 Outer row rivet pitch at ends 8 9/16" Depth of flange if manhole flanged 3 1/2" Steam Dome: Material Iron
 Tensile strength 21,000 Thickness of shell 3/16" Description of longitudinal joint Butt
 Diameter of rivet holes 1 1/8" Pitch of rivets 4" Percentage of strength of joint 85%
 Internal diameter 30" Working pressure by Rules 215 # Thickness of crown 3/16" No. and diameter of
 stays 12 @ 1 1/2" Inner radius of crown 15" Working pressure by Rules 215 #
 How connected to shell By doubler plate Size of doubling plate under dome 16" x 12" 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 W. & A. Mitchell
 Number of elements 12 Material of tubes Iron Steel castings None
 Material of headers Iron Tensile strength 21,000 Thickness 3/16" 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 1/2" Are the safety valves fitted with easing gear Yes Working pressure as per
 Rules 215 # Pressure to which the safety valves are adjusted 215 # Hydraulic test pressure:
 tubes 230 # castings 230 # and after assembly in place 215 # 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,
For AMOS & SMITH LTD.
 SECRETARY Manufacturer.

Dates of Survey During progress of work in shops - - See attached report on Machy. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
while building During erection on board vessel - - Total No. of visits 1

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

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 the pressure stated

The approved plan & invoices forwarded herewith, refers also to the sister-vessel "Lord Beaverbrook", to be reported shortly.

Charged on engine report sent forward.

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

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

Committee's Minute TUE. 30 DEC 1930

Assigned See other Hull J.E. 41464