

## REPORT ON BOILERS.

No. 41316

Received at London Office

28 OCT 1930

Date of writing Report 27.10.1930 When handed in at Local Office 27 Oct 1930 Port of HULL

No. in Reg. Book. 61507

Survey held at HULL

Date, First Survey 26 May

Last Survey 27 Oct 1930

(Number of Visits 27)

Gross 397.00  
Net 151.10

on the STEAM TRAWLER "KOPANES."

Master Built at Beverley By whom built Cook, Welton &amp; Gemmells Ltd No. 555 When built 1930

Engines made at Hull By whom made Amos &amp; Smith Ltd., Engine No. 616 When made 1930

Boilers made at Hull By whom made Amos &amp; Smith Ltd., Boiler No. 616 When made 1930

Nominal Horse Power 108 Owners Oddsson &amp; 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 1912 sq ft Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers One single ended return tube Working Pressure 210 lb/sq in

Tested by hydraulic pressure to 365 lb. Date of test 1.10.30 No. of Certificate 3806 Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler 51.25 sq ft No. and Description of safety valves to each boiler 2 Spring loaded

Area of each set of valves per boiler {per Rule 10.65 sq in as fitted 11.8 sq in Pressure to which they are adjusted 210 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 8" 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 174" Length 129" Shell plates: Material Steel Tensile strength 29/33 tons

Thickness 1 1/2" Are the shell plates welded or flanged Description of riveting: circ. seams {end 3 5/16" inter. 9 1/4"}

long. seams 2R. 2138. Diameter of rivet holes in {circ. seams 1 1/2" long. seams 1 1/2" Pitch of rivets {

Percentage of strength of circ. end seams {plate 65.8 rivets 42.5 Percentage of strength of circ. intermediate seam {plate 85.4 rivets 34.7}

Percentage of strength of longitudinal joint {plate 85.4 rivets 34.7 Working pressure of shell by Rules 211 lb/sq in

Thickness of butt straps {outer 1 1/2" inner 1 5/8" No. and Description of Furnaces in each Boiler Three plain

Material Steel Tensile strength 26/30 tons Smallest outside diameter 42 5/8"

Length of plain part {top 79" bottom Thickness of plates {crown 1 3/16" bottom 13/16" Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 218 lb/sq in

End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 1 3/16" Pitch of stays 20" x 18"

How are stays secured Double nuts &amp; washers Working pressure by Rules 211 lb/sq in

Tube plates: Material {front Steel back " Tensile strength 26/30 tons Thickness {1 5/16" 7/8"}

Mean pitch of stay tubes in nests 10.7" Pitch across wide water spaces 13 3/4" Working pressure {front 238 lb/sq in back 268 lb/sq in}

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

at centre 9 3/4" x 1 3/4" Length as per Rule 37" Distance apart 9" No. and pitch of stays

in each 3 @ 8" Working pressure by Rules 212 lb/sq in Combustion chamber plates: Material Steel

Tensile strength 26/30 tons Thickness: Sides 11/16" Back 11/16" 23/32 (c) Top 11/16" Bottom 3/4"

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

Working pressure by Rules 214 lb/sq in Front plate at bottom: Material Steel Tensile strength 26/30 tons

Thickness 1 5/16" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 7/8"

Pitch of stays at wide water space 13 3/4" x 8 1/2" Are stays fitted with nuts or riveted over Nuts

Working Pressure 254 lb/sq in 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 360 sq inches

Working pressure by Rules 210 lb/sq in 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 80 sq inches



Working pressure by Rules 238A Are the stays drilled at the outer ends ho Margin stays: Diameter <sup>At turned off part</sup> 1 7/8" + 2"  
No. of threads per inch 9 Area supported by each stay 95 sq inches Working pressure by Rules 224 A 0"  
Tubes: Material Iron External diameter <sup>Plain</sup> 3 1/4" Thickness <sup>Stay</sup> 5/16" + 3/8" No. of threads per inch 9  
Pitch of tubes 4 1/2" x 4 3/4" Working pressure by Rules 230 A 0" Manhole compensation: Size of opening 36 @ 1 1/2"  
shell plate 16" x 12" Section of compensating ring 1 1/2" x 34" x 27" No. of rivets and diameter of rivet holes 36 @ 1 1/2"  
Outer row rivet pitch at ends 9 1/4" Depth of flange if manhole flanged 9 1/4" Steam Dome: Material Iron  
Tensile strength 230 A 0" Thickness of shell 5/16" Description of longitudinal joint Plate  
Diameter of rivet holes 3/4" Pitch of rivets 3" Percentage of strength of joint 80%  
Internal diameter 24" Working pressure by Rules 230 A 0" Thickness of crown 5/16" No. and diameter of rivets 36 @ 1 1/2"  
stays 9 Inner radius of crown 12" Working pressure by Rules 230 A 0"  
How connected to shell Direct 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 36 @ 1 1/2"

Type of Superheater Water tube Manufacturers of W. & A. Smith  
Number of elements 12 Material of tubes Iron Internal diameter and thickness of tubes 3 1/4" x 5/16"  
Material of headers Iron Tensile strength 230 A 0" Thickness 5/16" Can the superheater be shut off and the boiler be worked separately Yes  
Area of each safety valve 1 1/2" Are the safety valves fitted with easing gear Yes Working pressure as per Rules 230 A 0"  
Rules 230 A 0" Pressure to which the safety valves are adjusted 230 A 0" Hydraulic test pressure 230 A 0"  
tubes Iron castings Iron and after assembly in place 230 A 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,  
Manager. Manufacture

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

Is this Boiler a duplicate of a previous case ho If so, state Vessel's name and Report No. See attached report on Machy.

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, tried under steam and its safety valves adjusted as above.

Charged on engine report sent herewith.

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

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

Committee's Minute

FRI 31 OCT 1930

Assigned

See F.E. Rpt.



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Foundation