

REPORT ON BOILERS.

No. 43038

Received at London Office 13 AUG 1932

Date of writing Report 19 When handed in at Local Office 12.8.32 Port of HULL

No. in Reg. Book 1594 Survey held at Hull Date, First Survey 22.7.32 Last Survey 5.8.1932

on the Steam Trawler "SIR MARK SYKES" (E. CYMREA) (Number of Visits 5) Gross 277 Tons Net 113

Master Built at Ayr By whom built Ailsa S.S. Co Ltd Yard No. When built 1918

Engines made at Liverpool By whom made Fawcett Preston & Co Engine No. When made 1918

Boilers made at By whom made Boiler No. When made 1918

Nominal Horse Power Owners The Farnol Steam Fishing Co Ltd Port belonging to Hull

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel (Letter for Record S)

Total Heating Surface of Boilers 1616.8 Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers one single ended return tube Working Pressure 180 lbs.

Tested by hydraulic pressure to Date of test No. of Certificate Can each boiler be worked separately

Area of Firegrate in each Boiler 58.8 No. and Description of safety valves to each boiler Two spring loaded

Area of each set of valves per boiler per Rule as fitted 9.80" Pressure to which they are adjusted 180 lbs 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 Is the bottom of the boiler insulated

Largest internal dia. of boilers 162" Length 10'-6" Shell plates: Material Steel Tensile strength

Thickness 1 1/16" Are the shell plates welded or flanged Description of riveting: circ. seams end 5R inter.

long. seams T.R. 5RS Diameter of rivet holes in circ. seams 1 3/16" Pitch of rivets 4" long. seams 1 3/16" 4 7/8"

Percentage of strength of circ. end seams plate 75 rivets 72 Percentage of strength of circ. intermediate seam plate 85 rivets 92

Percentage of strength of longitudinal joint plate 85 rivets 92 combined Working pressure of shell by Rules 181 lbs.

Thickness of butt straps outer 1" inner 1" No. and Description of Furnaces in each Boiler one plain

Material Steel Tensile strength Smallest outside diameter 40 3/16"

Length of plain part top 45" bottom Thickness of plates crowns 25/32" bottom Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 208 lbs.

End plates in steam space: Material Steel Tensile strength Thickness 1 3/16" Pitch of stays 19" x 18"

How are stays secured double nuts + washers Working pressure by Rules 193 lbs.

Tube plates: Material Steel Tensile strength Thickness 1 1/16" 1 3/16"

Mean pitch of stay tubes in nests 9 1/2" Pitch across wide water spaces 14 1/2" Working pressure front back

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

at centre 8 1/4" x 13 1/4" Length as per Rule 26 1/2" Distance apart 9' + 9 1/2" No. and pitch of stays

in each 2 @ 9 1/2" Working pressure by Rules 250 lbs. Combustion chamber plates: Material Steel

Tensile strength Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1 1/16"

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

Working pressure by Rules 184 lbs. Front plate at bottom: Material Steel Tensile strength

Thickness 1 1/16" Lower back plate: Material Steel Tensile strength Thickness 3/32"

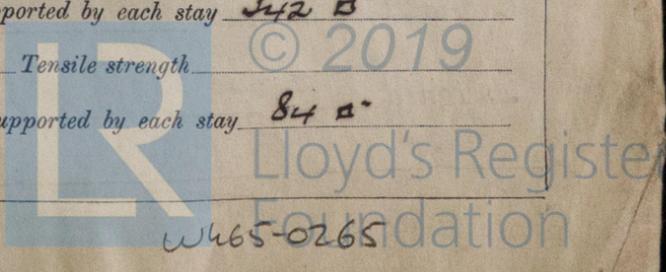
Pitch of stays at wide water space 14 1/2" x 9" Are stays fitted with nuts or riveted over nuts

Working Pressure 258 lbs. Main stays: Material Steel Tensile strength

Diameter At body of stay, or Over threads 3" No. of threads per inch 6 Area supported by each stay 342 sq"

Working pressure by Rules 196 lbs. Screw stays: Material Steel Tensile strength

Diameter At turned off part, or Over threads 1 7/8" + 1 3/4" No. of threads per inch 9 Area supported by each stay 84 sq"



Working pressure by Rules 206 Lbs. Are the stays drilled at the outer ends Yes Margin stays: Diameter At turned off part 1 7/8"
 No. of threads per inch 9 Area supported by each stay 100.6 Working pressure by Rules 200 Lbs.
 Tubes: Material Lin External diameter 9 1/2" Thickness 5/16" + 3/8" No. of threads per inch 9
 Pitch of tubes 9 1/2" Working pressure by Rules 215 Lbs. Manhole compensation: Size of opening in shell plate 15" x 11" Section of compensating ring 32 1/2" x 29" No. of rivets and diameter of rivet holes 32 @ 1 1/8"
 Outer row rivet pitch at ends 1 1/2" Depth of flange if manhole flanged 1 1/2" Steam Dome: Material Steel
 Tensile strength 45,000 Thickness of shell 1/2" Description of longitudinal joint Butt joint
 Diameter of rivet holes 1 1/8" Pitch of rivets 1 1/2" Percentage of strength of joint 100%
 Internal diameter 30" Working pressure by Rules 215 Lbs. Thickness of crown 1/2" No. and diameter of stays 12 @ 1 1/2"
 How connected to shell By stays Size of doubling plate under dome 15" x 11" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 1/8" @ 1 1/2"

Type of Superheater Water tube Manufacturers of Tubes Steel castings
 Number of elements 12 Material of tubes Steel Internal diameter and thickness of tubes 2 1/2" x 1/8"
 Material of headers Steel Tensile strength 45,000 Thickness 1/2" 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 200 Lbs.
 Pressure to which the safety valves are adjusted 200 Lbs. Hydraulic test pressure: tubes 240 Lbs. castings 240 Lbs. and after assembly in place 240 Lbs. 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
 The foregoing is a correct description,
 Manufacturer.

Dates of Survey During progress of work in shops - - 1932 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes
 while building During erection on board vessel - - July 22, 26, 28, 29, Aug 1 Total No. of visits 2

Is this Boiler a duplicate of a previous case No If so, state Vessel's name and Report No. "Sir John Hotham" (Hull 43003)
 (Please see note below).

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
 This boiler has been examined throughout & found in good condition. Its scantlings have been compared with those on the plan of the boiler sent with the above mentioned report. These found to agree generally, and the only material difference is in the stay pitches, which are underlined in red.
 The boiler was built under B.C. Survey, and the particulars are sent for the information of the Committee & with a view to the machinery being classed L.M.C. with date.

Survey Fee ... £ See J.E.(H.) When applied for, 19
 Travelling Expenses (if any) £ 10/6 When received, 19

Shadrach & G. E. Mills
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 26 AUG 1932

Assigned See J.E. Rep.

