

5a.

REPORT ON BOILERS.

No. 51861.

11 JAN 1943

RETAIN

Received at London Office

3. 11. 16. 29

9. Dec. 3. 9. 11

Writing Report 14-7-42

When handed in at Local Office

Port of HULL

Survey held at HULL.

Mackerel

Date, First Survey 7. 1. 42.

Last Survey 14. 12. 19 42.

on the H.M.T. ~~MACKEREL~~ now "CORNCRAKE"

(Number of Visits 51.)

Gross 384

Tons Net 133

at SELBY.

By whom built Cochrane & Co Ltd

Yard No. 1246. When built 1942

es made at HULL.

By whom made Amos & Smith Ltd

Engine No. 708 When made

s made at HULL.

By whom made Amos & Smith Ltd

Boiler No. 708. When made

al Horse Power 125

Owners The Admiralty

Port belonging to

TUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs. Appleby, Frodingham Steel Co. Ltd

(Letter for Record S)

Test 6/7 Heating Surface of Boilers 1873 sq ft

Is forced draught fitted Yes

Coal or Oil fired Coal

and Description of Boilers One S. B.

Working Pressure 210 lb/sq in

by hydraulic pressure to 365 lb/sq in date of test 16. 6. 42. No. of Certificate 4149. Can each boiler be worked separately

of Firegrate in each Boiler 50 sq ft. No. and Description of safety valves to each boiler 2. Spring loaded.

of each set of valves per boiler {per Rule 12. 57 lb. as fitted 14. 12. lb. Pressure to which they are adjusted 210 lb/sq in Are they fitted with easing gear Yes.

e of donkey boilers, state whether steam from main boilers can enter the donkey boiler

est distance between boilers or uptakes and bunkers or woodwork 9".

Is oil fuel carried in the double bottom under boilers No.

est distance between shell of boiler and tank top plating none

Is the bottom of the boiler insulated No.

st internal dia. of boilers 14'-3 1/2" Length 10'-6"

Shell plates: Material Steel Tensile strength 31-35 lb/sq in

Are the shell plates welded or flanged No.

Description of riveting: circ. seams {end D.R. Cap. inter. 3 1/2".

seams T.R.D.B.S.

Diameter of rivet holes in {circ. seams 1 5/16" long. seams 1 1/32"

Pitch of rivets 9/8"

age of strength of circ. end seams {plate 64.9% rivets 42.8%

Percentage of strength of circ. intermediate seam {plate 85.1% rivets 85.8% combined 87.66%

age of strength of longitudinal joint {plate 85.1% rivets 85.8% combined 87.66%

ess of butt straps {outer 3 1/32" inner 1 3/32"

No. and Description of Furnaces in each Boiler 3 cf. Deighlan Section

Tensile strength 26-30 ton/sq in Smallest outside diameter 3'-6 3/4"

of plain part {top - bottom - Thickness of plates {crown 5/8" bottom 5/8"

Description of longitudinal joint Weld

ions of stiffening rings on furnace or c.c. bottom None

lates in steam space: Material Steel

Tensile strength 26-30 ton/sq in Thickness 1 3/32" Pitch of stays 17" x 17 1/2"

re stays secured Nuts and Washers inside and out.

plates: Material {front Steel back Steel

Tensile strength {26-30 ton/sq in 26-30 ton/sq in

Thickness 7/8"

pitch of stay tubes in nests 9 1/4" x 9"

Pitch across wide water spaces 14" x 9"

s to combustion chamber tops: Material Steel

Tensile strength 29-33 ton/sq in

Depth and thickness of girder

9" x 7/8" I-Beam Length as per Rule 2'-10 23/32"

Distance apart 8"

No. and pitch of stays

3 @ 8 1/4"

Combustion chamber plates: Material Steel

strength 26-30 ton/sq in Thickness: Sides 23/32" Back 23/32" Top 21/32" Bottom 25/32"

of stays to dritto: Sides 8 1/2" x 9 3/8" Back 9 1/4" x 9" Top 8 1/4" x 8" Are stays fitted with nuts or riveted over Nuts.

plate at bottom: Material Steel

Tensile strength 26-30 ton/sq in

ess 15/16"

Lower back plate: Material Steel

Tensile strength 26-30 ton/sq in Thickness 7/8"

of stays at wide water space 14" x 9"

Are stays fitted with nuts or riveted over Nuts.

stays: Material Steel

Tensile strength 28-32 ton/sq in

At body of stay, or Over threads 3"

No. of threads per inch 6

stays: Material Steel

Tensile strength 26-30 ton/sq in

At turned off part, or Over threads 1 3/4"

No. of threads per inch 9

W376-0227

© 2020

Lloyd's Register Foundation

"MACKEREL" "CORNCRAKE"

Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1 3/4" or 1 7/8" Over threads 2"

No. of threads per inch 9

Tubes: Material L.W. Iron External diameter { Plain 3 1/4" Stay 3 1/4" Thickness { 8 W.G. 3/16", 3/8", 7/16" No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 5/8" Manhole compensation: Size of opening 12" (x 16") Section of compensating ring 35 5/8" x 1 1/4" No. of rivets and diameter of rivet holes 122 @ 1 1/32"

shell plate 12" (x 16") Outer row rivet pitch at ends 10.45" Depth of flange if manhole flanged 3 3/8" Steam Dome: Material Steel

Tensile strength 26-30 tons Thickness of shell 3/4" Description of longitudinal joint S. R. Lap.

Diameter of rivet holes 1 1/32" Pitch of rivets 2 1/4" Percentage of strength of joint { Plate 54% Rivets 43.8%

Internal diameter 2' 9" Thickness of crown 7/8" No. and diameter of stays 2 @ 2 1/4" Inner radius of crown Flat

How connected to shell Riveted Size of doubling plate under dome 4' 9 1/2" x 1 1/4" Diameter of rivet holes and of rivets in outer row in dome connection to shell 1 1/32 @ 10.45 Pitch.

Type of Superheater NONE.

Manufacturers of

Number of elements. Material of tubes. Internal diameter and thickness of tubes.

Material of headers. Tensile strength. Thickness. Can the superheater be shut off 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 easing gear.

Pressure to which the safety valves are adjusted.

tubes forgings and castings and after assembly in place.

valves fitted to free the superheater from water where necessary.

Hydraulic test pressure.

Are drain cocks.

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,

A. S. Shields Manufacturer

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

See machinery report attached.

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 No. If so, state Vessel's name and Report No. H.M.T. CRATLING.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This Boiler has been constructed under special survey in accordance with the approved Admiralty plans and the Rules.

The Workmanship and Material are good and, when subjected to a hydraulic test of 365 lbs. 10". It was found satisfactory in every respect.

Safety valves adjusted to 210 lbs. after installing in H.M.T. "CORNCRAKE" and boiler found satisfactory during and after basin trials.

W. S. Shields.

Survey Fee ... £ : : When applied for, 19

Travelling Expenses (if any) £ : : When received, 19

Committee's Minute

JAN. 22 JAN 1943

Assigned

See H.M.T. 51861

J. P. Allen

Engineer Surveyor to Lloyd's Register of Shipping



© 2020

Lloyd's Register Foundation