

REPORT ON BOILERS.

No. 73410
THU. AUG. 12 1920

Received at London Office

Date of writing Report 11. 8. 1920 When handed in at Local Office Newcastle-on-Tyne Port of Newcastle-on-Tyne
 No. in Survey held at Newcastle-on-Tyne Date, First Survey 2nd Mar. 1920 Last Survey 6th Aug. 1920
 Reg. Book. Horizontal Multitubular Boiler, No 979, for "Crossbill" (Number of Visits 6) Gross Tons Net Tons
 on the Horizontal Multitubular Boiler, No 979, for "Crossbill"
 Master G. Yarmouth Built at G. Yarmouth By whom built Crestree & Co Ltd No 179 When built 1920
 Engines made at G. Yarmouth By whom made Palmer's Shipbuilding & Iron Co Ltd When made 1920
 Boilers made at Helburn By whom made Palmer's Shipbuilding & Iron Co Ltd When made 1920
 Registered Horse Power Owners A. & W. Paul Ltd, Ipswich Port belonging to Ipswich

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY. Manufacturers of Steel Johny Spencer & Sons, Helburn
 (Letter for record S.) Total Heating Surface of Boilers 1120 ϕ Is forced draft fitted no. No. and Description of Boilers 1. Horizontal Multitubular
 Working Pressure 140 lbs Tested by hydraulic pressure to 280 lbs Date of test 6/8/20
 No. of Certificate 9445 Can each boiler be worked separately ✓ Area of fire grate in each boiler 35 ϕ No. and Description of safety valves to each boiler 2 Spring loaded Area of each valve 4.9 ϕ Pressure to which they are adjusted ✓ 144 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 12 ϕ inside dia. of boilers 12'-0" Length 10'-0"
 Material of shell plates Steel Thickness 13/16" Range of tensile strength 29-33 Are the shell plates welded or flanged no
 Descrip. of riveting: cir. seams DR-L.J. long. seams TR-B.S. Diameter of rivet holes in long. seams 1" Pitch of rivets 5 1/4"
 Lap of plates or width of butt straps 1'-3 1/2" Per centages of strength of longitudinal joint rivets 82.5% Working pressure of shell by rules 140 lbs Size of manhole in shell 16" x 12" Size of compensating ring 7' x 13/16" No. and Description of Furnaces in each boiler 2 Plain Material Steel Outside diameter 3'-7 3/8" Length of plain part top 6'-1" bottom 6'-1" Thickness of plates crown 3/4" bottom 3/4"
 Description of longitudinal joint Welded. No. of strengthening rings nil. Working pressure of furnace by the rules 176 lbs Combustion chamber plates: Material Steel Thickness: Sides 19/32" Back 19/32" Top 19/32" Bottom 13/16" Pitch of stays to ditto: Sides 9 1/2 x 8 1/2" Back 9 x 9"
 Top 9 1/2 x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 150 lbs Material of stays Steel Area at smallest part 1.45 Area supported by each stay 81.70 Working pressure by rules 142 End plates in steam space: Material Steel Thickness 29/32"
 Pitch of stays 16 1/2 x 16 1/2" How are stays secured DN & W. Working pressure by rules 143 lbs Material of stays Steel Area at smallest part 4.11
 Area supported by each stay 2.44 Working pressure by rules 151 lbs Material of Front plates at bottom Steel Thickness 7/8" Material of Lower back plate Steel Thickness 13/16" Greatest pitch of stays 13" x 9" Working pressure of plate by rules 182 lbs Diameter of tubes 3 1/2"
 Pitch of tubes 4 7/8 x 4 3/4" Material of tube plates Steel Thickness: Front 7/8" Back 3/4" Mean pitch of stays 11 9/16" Pitch across wide water spaces 14" Working pressures by rules 140 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 1/4" x 7/16" Length as per rule 30 1/4" Distance apart 9 1/2" Number and pitch of Stays in each 2 - 8 1/2"
 Working pressure by rules 171 lbs. Steam dome: description of joint to shell % of strength of joint
 Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
 Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to
 Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
 Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted
Palmer's Shipbuilding & Iron Co., Ltd.
 The foregoing is a correct description,
A. Cameron Manufacturer.
 Manager Boiler Shop Dept.

Dates of Survey 1920 Mar. 2. Apr. 17. May 31. Jul. 9. 20. Aug. 6 Is the approved plan of boiler forwarded herewith Yes
 while building work in shops board vessel Total No. of visits 6

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
This main boiler has been constructed under special survey, & the materials & workmanship are sound & good

Survey Fee £ 3 : 15 : When applied for, 11 Aug. 1920
 Travelling Expenses (if any) £ : When received, 27.9.20
A. B. Fabmin N. Stuart
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned
 TUE. JAN. 4 1921
 Lloyd's Register Foundation
 002916-002922-0025

5-20
6-7-20
6-8-20
24-8-20
10-20
63 abt.
62 abt.
If not, state whether, and when, one will be sent?
In a Report also sent on the Hull of the Ship?
and
ilist
steam
the

Ref
12/8/20