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REPORT ON BOILERS.

No. 76785

Received at London Office

THU. JUN. 27 1923

Date of writing Report 19 When handed in at Local Office 6/6/1923 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Hebburn-on-Tyne Date, First Survey 16 April 1923 Last Survey 5 June 1923

Reg. Book. Palmer 1023 Main Boiler (S. Tyne Salvage Prince) (Number of Visits 10) Tons Gross Not

Master Libby Built at Libby By whom built Cochrane & Sons Ltd When built 1924

Engines made at Newbury By whom made Plant & Sons Ltd. When made

Boilers made at Hebburn-on-Tyne By whom made Palmer & Co Ltd. When made 1923

Registered Horse Power Owners Shelpe Towing Salvage Co Ltd Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel J. Spencer & Sons.

Letter for record S. Total Heating Surface of Boilers 1411 sq ft Is forced draft fitted No. and Description of Boilers One oil mouth Working Pressure 140 lbs Tested by hydraulic pressure to 260 lbs Date of test 5/8/23

No. of Certificate 19763 Can each boiler be worked separately Area of fire grate in each boiler 42 sq ft No. and Description of Safety valves to each boiler 2 Spring loaded Area of each valve 6 sq in Pressure to which they are adjusted

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 & uptakes and bunkers & woodwork 12 in Mean dia. of boilers 12-8 in Length 11-0 in

Material of shell plates Steel Thickness 3/32 in Range of tensile strength 28/32 tons Are the shell plates welded or flanged No

Description of riveting: cir. seams DR long. seams TRIBS Diameter of rivet holes in long. seams 4/8 in Pitch of rivets 6 1/2 in

Gap of plates or width of butt straps 1-2 1/2 in Per centages of strength of longitudinal joint 95.5% Working pressure of shell by rules 85.5%

No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 3-7/8 in Length of plain part 83 in Thickness of plates 3/32 in

Description of longitudinal joint Welded No. of strengthening rings Working pressure of furnace by the rules 145 lbs Combustion chamber plates: Material Steel Thickness: Sides 3/32 in Back 3/32 in Top 3/32 in Bottom 7/8 in Pitch of stays to ditto: Sides 9x9 in Back 9x9 in

Top 9 1/2 x 8 1/2 in stays are fitted with nuts or riveted heads Nuts Working pressure by rules 148 lbs Material of stays Steel Area at smallest part 1 1/2 in Area supported by each stay 91 sq in Working pressure by rules 154 lbs End plates in steam space: Material Steel Thickness 1 1/2 in

Pitch of stays 20 1/2 x 7 1/2 in How are stays secured DR & W Working pressure by rules 148 lbs Material of stays Steel Area at smallest part 5.8 in

Area supported by each stay 367 sq in Working pressure by rules 149 lbs Material of Front plates at bottom Steel Thickness 3/32 in Material of lower back plate Steel Thickness 1/8 in Greatest pitch of stays 13 1/2 x 9 in Working pressure of plate by rules 204 lbs Diameter of tubes 3 1/2 in

Pitch of tubes 4 3/4 x 4 3/4 in Material of tube plates Steel Thickness: Front 3/32 in Back 3/4 in Mean pitch of stays 10.6 in Pitch across wide inter spaces 14 x 9 1/2 in Working pressures by rules 142.5 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 x 1 1/2 in Length as per rule 2-9 in Distance apart 9 3/4 in Number and pitch of Stays in each 2 @ 8 1/2 in

Working pressure by rules 190 lbs Steam dome: description of joint to shell Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Date of Test Pressure to which each is adjusted Is Easing Gear fitted

VERTICAL DONKEY BOILER—No. Description Manufacturers of steel

Made at By whom made When made Where fixed Working pressure

Tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of safety valves

Description of safety valves Area of each Pressure to which they are adjusted If fitted with easing gear If steam from main boilers can enter the donkey boiler

Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile strength

Description of riveting long. seams Dia. of rivet holes Whether punched or drilled Pitch of rivets

Description of plating Per centage of strength of joint Working pressure of shell by rules Thickness of shell crown plates

No. of Stays to do. Dia. of stays Diameter of furnace Top Bottom Length of furnace

Thickness of furnace plates Description of joint Working pressure of furnace by rules Thickness of furnace crown plates

Radius of do. Stayed by Diameter of uptake Thickness of uptake plates

Thickness of water tubes

For Palmer & Co Ltd. The foregoing is a correct description, J. Cameron Manager, Hebburn Boiler Shop & Manufacturer.

During progress of work in shops 1923 April 16, 30, May 4, 9, 15, 18, 25, 29, June 1, 5.

During erection on board vessel 10

Total No. of visits 10

Is the approved plan of main boiler forwarded herewith Yes

Is the approved plan of donkey boiler forwarded herewith Yes

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler has been built under special survey. The materials & workmanship are good. on completion it was tested by hydraulic pressure to 200 lbs. & found sound & tight. The boiler is intended for Messrs. Buchanan, Kelly & Co. S.S. No. 793.*

This boiler has satisfactorily fitted on board, & its safety valves adjusted under steam.

Please see Hull Report upon the case attached.

John Mackenzie

Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee .. £	:	:	When applied for.
Special £	9-8-0	6/6/23	1923.
Donkey Boiler Fee £	:	:	When received.
Travelling Expenses (if any) £	:	26/7/23	23

Harbottle
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute
Assigned
TUE. APR. 1924

