

REPORT ON BOILERS.

MTI. Rpt.

No. 5819

5a.

Received at London Office 24 APR 1943

of writing Report Jan. 25 1943 When handed in at London Office 19... Port of QUEBEC, P.Q.

Survey held at LAUZON, P.Q. Date, First Survey 30th. March/42 Last Survey 17th. Dec. 1942

on the Steel Single Screw H.M.S. "FLINT". (Number of Visits) Gross 452 Tons Net 159

at LAUZON, P.Q. By whom built Geo. T. Davie & Sons Ltd. Yard No. 17 When built 1942

lines made at Walkerville, Ont. By whom made Canadian Bridge Co. Engine No. 102 When made 1942

ers made at Port Arthur Ont. By whom made Port Arthur Shipbldg. Co. Boiler No. 1471 When made 1942

inal Horse Power 156 Owners British Admiralty Port belonging to London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Worth Steel Co., Claymont U.S.A. & Steel Co. of Canada (Letter for Record 137)

al Heating Surface of Boilers 2650 sq. ft. Is forced draught fitted Yes Coal or Oil fired Coal

and Description of Boilers One single ended Multitubular Working Pressure 200 lbs.

ted by hydraulic pressure to 300 lbs. Date of test 17-6-42 No. of Certificate BC 6660 Can each boiler be worked separately 1 boiler only

Area of Firegrate in boiler 63.36 sq. ft. and Description of Safety valves to each boiler 1-2 1/8" double spring loaded BCT 4750 TP 410 WP 205 HMM 4/7/42

Area of each set of valves per boiler { per Rule 7.7 sq. ins. as fitted 9.8174 sq. ins. Pressure to which they are adjusted 200 lbs. Are they fitted with easing gear Yes

Case of donkey boilers, state whether steam from main boilers can enter the donkey boiler None fitted.

Smallest distance between boilers or uptakes and bunkers or woodwork P-19 1/2"-S-13 1/2" Steel casings Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plates open floors, 8" from boiler to the bottom of the boiler insulated Yes

greatest internal diameter of boilers 14' - 93/8" Length 11' - 6" Shell plates: Material O.H. Steel Tensile strength 65000 lb/sq. in.

Thickness 1-5/16" Are the shell plates welded or flanged No Description of riveting: circ. seams { end double zigzag riveting inter. - rivets -

g. seams Treble riveted butt strap Diameter of rivet holes in { circ. seams 1-3/8" dia. Pitch of rivets { 9 1/8" long. seams 1-3/8" dia. rivets -

Percentage of strength of circ. end seams { plate - rivets - Percentage of strength of circ. intermediate seam { plate - rivets -

Percentage of strength of longitudinal joint { plate 85.52% rivets 88.54% combined 88.77%

Thickness of butt straps { outer 1" thick inner 1-1/8" thick No. and Description of Furnaces in each Boiler Three Morrison Corrugated type.

Material open hearth steel Tensile strength 26/30 tons Smallest outside diameter 42-7/16"

Length of plain part { top 6 1/2" wings 11" center Thickness of plates { crown 19 1/32" Description of longitudinal joint lap welded bottom -

Dimensions of stiffening rings on furnace or c.c. bottom -

Stays in steam space: Material O.H. Steel Tensile strength 58240 lbs./sq. ins. Thickness 1.343" Pitch of stays 1-8 1/2" & 1-9 1/4"

How are stays secured screwed with nuts inside and outside - 6 threads per inch.

Stay plates: Material { front O.H. Steel Tensile strength { 58240 lbs./sq. ins. Thickness { .875" back O.H. Steel Tensile strength { 58240 lbs./sq. ins. Thickness { .781"

Pitch of stay tubes in nests 7 1/2" x 13 5/8" Pitch across wide water spaces 7 1/2" x 13 5/8"

Stays to combustion chamber tops: Material O.H. Steel Tensile strength 58240 lbs./sq. ins. Depth and Thickness of girder

Centre 8 1/2" - .9375 Length as per Rule 2 - 7/32 Distance apart 10 1/2" No. and pitch of stays

Pitch 2-9' 7/8" at center 3-9' 7/8" pitch on wings Combustion chamber plates: Material O.H. Steel Tensile strength 26/30 tons Thickness: Sides .781" Back .750" Top .781" Bottom .781"

Thickness of stays to ditto: Sides 10 1/2" wings Back 9 1/2" Top 9-7/8" Are stays fitted with nuts or riveted over fitted with nuts

Bottom plate at bottom: Material O.H. Steel Tensile strength 58240 lbs.

Thickness .875 Lower back plate: Material O.H. Steel Tensile strength 58240 lbs. Thickness -

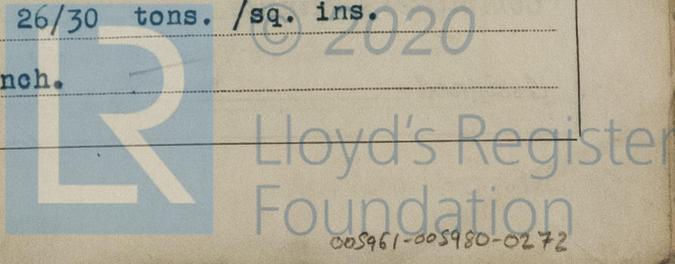
Pitch of stays at wide water space - Are stays fitted with nuts or riveted over fitted with nuts & washers

Main stays: Material O.H. Steel Tensile strength 28/30 tons. /sq. in.

Diameter { At body of stay 3-1/8" dia. No. of threads per inch 6 threads per inch. { Over threads 3-1/2" dia. Tensile strength 26/30 tons. /sq. ins.

Lower stays: Material Steel Tensile strength -

Diameter { At turned off part 2" & 1 7/8" dia. No. of threads per inch 9 threads per inch. { Over threads -



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Are the stays drilled at the outer ends. No Margin stays: Diameter { At turned off part or Over threads } 2" dia.

No. of threads per inch 9 threads per inch.

Tubes: Material Seamless Steel External diameter { Plain 2 3/4" Stay 2 3/4" } Thickness { 8 w.g. swelled 1/8" at for'd end for Nut 5/16" & 1/2" without Nut. } No. of threads per inch 9

Pitch of tubes 7 1/2" x 7 1/2" Section of compensating ring Rectangular 2-11 1/2" x 2-7 1/2" No. of rivets and diameter of rivet holes 32 - 1-15/32 Dia

shell plate 16" x 12" McNeil No. of rivets and diameter of rivet holes 32 - 1-15/32 Dia

Outer row rivet pitch at ends 10 1/8" Depth of flange if manhole flanged 5" Steam Dome: Material -

Tensile strength - Thickness of shell - Description of longitudinal joint -

Diameter of rivet holes - Pitch of rivets - Percentage of strength of joint { Plate - Rivets - }

Internal diameter - Thickness of crown - No. and diameter of stays - Inner radius of crown -

How connected to shell - Size of doubling plate under dome - Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell -

Type of Superheater None fitted Manufacturers of { Tubes - Steel forgings - Steel castings - }

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 - Hydraulic test pressure tubes - forgings and castings - and after assembly in place - Are drain cock valves fitted to free the superheater from water where necessary -

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with. Yes

The foregoing is a correct description,

Manufactured

Dates of Survey { During progress of work in shops - } B.C. Survey Are the approved plans of boiler and superheater forwarded herewith No (If not state date of approval.)

while building { During erection on board vessel - } Mar. 1942, 1, April 7, May 8, June 7, July 10, Aug. 14, Sept. 9, Oct. 12, Nov. 10, (1942) No. of visits 78

per month: -

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. HMS "DOCHET" MTL Rpt. 586

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

The above Boiler was built under special survey of British Corporation Register of Shipping and Aircraft, to the requirements of their Society's rules and in accordance with approved plans.

The workmanship is good and materials were made at an approved works & tested as required by the mentioned Society's rules & to their Surveyors.

In my opinion, this boiler is eligible to be classed in the Society when satisfactorily installed and tried out under steam, and the safety valves adjusted to the required pressure to the satisfaction of this Society's Surveyors.

The boiler of this vessel has now been tested to 300 lb. per sq. in. after properly fitted on board on completion tried out under full working condition and found to be satisfactory.

The safety valves have been tried out under steam, set at the pressure as stated overleaf and thickness of washers noted, valves were tested for accumulation.

In my opinion this vessel is eligible for record of B.S. date 12/42

Survey Fee 200.00 : When applied for, Mch. 29 1943
 Installation 150.00 :
 Travelling Expenses (if any) incl. in Hull Rpt. : When received, 19

R. H. Harvey
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. 7 MAY 1943
 Assigned See FE machg rft