

REPORT ON BOILERS.

No. 4273

Received at London Office

FEB 10 1939

Date of writing Report 25 Nov. 1938 When handed in at Local Office

19

Port of Shanghai

No. in Survey held at Shanghai

Date, First Survey March 10th

Last Survey July 15th

1937

Reg. Book.

(Number of Visits 8)

Gross 3105

31850 on the

"PING WO"

Tons Net 1848

Master Built at Shanghai

By whom built New Engineering & S.B. Works Ltd and No. 445 When built 1922

Engines made at Shanghai

By whom made New Engineering & S.B. Works Ltd Engine No. When made 1922

Boilers made at Shanghai

By whom made - do - Boiler No. When made 1922

Nominal Horse Power

Owners Indo-China S.N. Co., Ltd. Port belonging to Shanghai

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

(Letter for Record S)

Total Heating Surface of Boilers

2155 Sq. ft. 4310 for 2 boilers

Is forced draught fitted Yes

Coal or Oil fired Coal

No. and Description of Boilers

2 Single ended multitubular wet bottom

Working Pressure 190 lb. sq. in.

Tested by hydraulic pressure to 380 lb. sq. in. Date of test

No. of Certificate

Can each boiler be worked separately Yes

Area of Firegrate in each Boiler

55.6 Sq. ft. No. and Description of safety valves to each boiler 2 Spring Loaded

Area of each set of valves per boiler

per Rule as fitted 28.295" = 10.34 Pressure to which they are adjusted 190 lb. sq. in. 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 2'-0"

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 13'-6"

Length 11'-6"

Shell plates: Material Steel

Tensile strength 28-32 TONS

Thickness 1 3/8"

Are the shell plates welded or flanged No

Description of riveting: circ. seams { end Double 3 1/2" Pitch inter.

long. seams

Trelle

Diameter of rivet holes in { circ. seams 1 1/4" long. seams

Pitch of rivets { 8 3/8" plate 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 rivets

Working pressure of shell by Rules

Thickness of butt straps { outer 15/16" inner 1 1/16"

No. and Description of Furnaces in each Boiler 3 Morrison's corrugated Furnace

Material Steel

Tensile strength 26 TO 30 TONS

Smallest outside diameter 3'-7 3/4" 40.0625

Length of plain part { top 6 3/4" bottom 6 3/4"

Thickness of plates { crown 1 7/32" bottom 1 7/32"

Description of longitudinal joint No

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

Working pressure of furnace by Rules

End plates in steam space: Material Steel

Tensile strength 26-30 TONS

Thickness 1 1/8"

Pitch of stays 16" x 18"

How are stays secured Nuts and Washers

Working pressure by Rules

Tube plates: Material { front Steel back Steel

Tensile strength

Thickness 1 1/16"

Mean pitch of stay tubes in nests 7 1/2" 9 3/8"

Pitch across wide water spaces

Working pressure { front back

Girders to combustion chamber tops: Material Steel

Tensile strength 28 TO 32 TONS

Depth and thickness of girder

at centre 2 (7 1/2" x 5/8")

Length as per Rule

28"

Distance apart 5 1/8" 8

No. and pitch of stays

in each 2, 8 1/2"

Working pressure by Rules

Combustion chamber plates: Material Steel

Tensile strength 26 TO 30 TONS

Thickness: Sides 5/8"

Back 5/8"

Top 5/8"

Bottom 3/4"

Pitch of stays to ditto: Sides 8 1/2" x 8"

Back 8 3/4" x 8"

Top 8 1/2" x 8"

Are stays fitted with nuts or riveted over Nuts & Riveted

Working pressure by Rules

Front plate at bottom: Material Steel

Tensile strength

Thickness 1 3/16"

Lower back plate: Material Steel

Tensile strength

Thickness 3/4"

Pitch of stays at wide water space

Are stays fitted with nuts or riveted over with nuts

Working Pressure

Main stays: Material Steel

Tensile strength

Diameter { At body of stay, 3" or Over threads

No. of threads per inch 7

Area supported by each stay

Working pressure by Rules

Screw stays: Material Steel

Tensile strength

Diameter { At turned off part, 1 5/8" or Over threads

No. of threads per inch 11

Area supported by each stay

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Working pressure by Rules _____ Are the stays drilled at the outer ends _____ Margin stays: Diameter { At turned off part. ^{1 3/4"} or Over threads ^{1 3/4"}

No. of threads per inch 11 Area supported by each stay _____ Working pressure by Rules _____

Tubes: Material Steel External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 9 W.G. 5/16 No. of threads per inch 11

Pitch of tubes _____ Working pressure by Rules _____ Manhole compensation: Size of opening in shell plate 16" x 12" Section of compensating ring 2-4" x 2-4" No. of rivets and diameter of rivet holes _____

Outer row rivet pitch at ends _____ Depth of flange if manhole flanged _____ 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 _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter of stays _____ Inner radius of crown _____ Working pressure by Rules _____

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 _____

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 and 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 _____ Working pressure as per Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure: _____

tubes _____ forgings and castings _____ and after assembly in place _____ Are drain cocks or 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 _____

The foregoing is a correct description,

Manufacturer. _____

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

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) _____

Total No. of visits _____

Is this Boiler a duplicate of a previous case _____ If so, state Vessel's name and Report No. _____

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

These boilers have worked satisfactorily since being installed in the vessel. They have been examined from time to time over a period of years by the Surveyors to this Society. The workmanship is sound. They are eligible, in my opinion, for Classification, with the kind of survey already assigned. Drawings of main & darter boiler forwarded.

Survey Fee See Rpt 1 £ : : } When applied for, 19
Travelling Expenses (if any) £ : : } When received, 19

G. Pinner
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute _____

TUE. 16 MAY 1939

Assigned _____

Noted



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