

REPORT ON BOILERS.

No. 4333

FEB 10 1939

Received at London Office

Date of writing Report 20 Dec. 1938 When handed in at Local Office

10

Port of Shanghai

No. in Reg. Book.

Survey held at

Shanghai

Date, First Survey

17 Feb 1937

Last Survey 23 April 1938

(Number of Visits 6)

Gross Tons
Net

on the T.S.S. "KUNG WO"

Master N. Cook Built at Hong Kong By whom built Hong Kong & Whampoa Dock Co. Ltd. Yard No. When built 1922

Engines made at Hong Kong By whom made Hong Kong & Whampoa Dock Co. Ltd. Engine No. 339-40 When made 1922

Boilers made at Hong Kong By whom made - do - Boiler No. 606.7.8 When made 1922

Nominal Horse Power Owners Indo-China Stm. Nav. Co., Ltd. Port belonging to Hong Kong

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

(Letter for Record)

Total Heating Surface of Boilers 8106 sq.ft. Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers Three: Multitubular Scotch Boilers (Single ended) Working Pressure 190 lbs./sq. in.

Tested by hydraulic pressure to 335 lb/sq. in. Date of test No. of Certificate Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 69 sq.ft. No. and Description of safety valves to each boiler Two 3 1/2" dia.

Area of each set of valves per boiler {per Rule. as fitted} 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 No donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork 10" Is oil fuel carried in the double bottom under boilers -

Smallest distance between shell of boiler and tank top plating 1'-3" Is the bottom of the boiler insulated

Largest internal dia. of boilers 15'-6" Length 12'-0" Shell plates: Material Mild Steel Tensile strength Double riveted

Thickness 1-3/8" Are the shell plates welded or flanged Description of riveting: circ. seams {end inter.} None

long. seams Double Butt Strap Diameter of rivet holes in {circ. seams 1-7/16" B.E.P. 1-3/16" F.E.P. 1-24 B.E.P. 3.54 F.E.P. long. seams 1-7/16" Pitch of 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 combined} Working pressure of shell by Rules

Thickness of butt straps {outer 1-1/16" inner 1-3/16"} No. and Description of Furnaces in each Boiler Three: Deighton's.

Material Mild Steel Tensile strength Smallest outside diameter 4'-2 1/4"

Length of plain part {top 5 1/4" bottom 5 1/4"} Thickness of plates {crown 5/8" bottom 5/8"} Description of longitudinal joint Fire welded

Dimensions of stiffening rings on furnace or c.c. bottom None Working pressure of furnace by Rules

End plates in steam space: Material Mild Steel Tensile strength Thickness 1" Pitch of stays 17 1/2" & 17 1/2"

How are stays secured Nuts inside & outside

Working pressure by Rules

Tube plates: Material {front Mild Steel back -} Tensile strength

Thickness 31/32" 3/4"

Mean pitch of stay tubes in nests 8 1/2" Pitch across wide water spaces 8 1/4"

Working pressure {front back}

Girders to combustion chamber tops: Material Mild Steel Tensile strength

Depth and thickness of girder

at centre 10" x 7/8" Length as per Rule Distance apart 10 1/2"

No. and pitch of stays

in each A. 6 1/4" x 10 1/2" Working pressure by Rules Combustion chamber plates: Material Mild Steel

Tensile strength Thickness: Sides 23/32" Back 11/16" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 9" x 9" Back 8 1/2" x 8 1/2" Top 10 1/2" x 6 1/4" Are stays fitted with nuts or riveted over with nuts

Working pressure by Rules Front plate at bottom: Material Mild Steel Tensile strength

Thickness 7/8" Lower back plate: Material Steel Tensile strength Thickness 27/32"

Pitch of stays at wide water space 9 1/4" x 8 1/2" Are stays fitted with nuts or riveted over Nuts

Working Pressure Main stays: Material Mild Steel Tensile strength

Diameter {At body of stay, or Over threads} 2-7/8" No. of threads per inch 6 Area supported by each stay

Working pressure by Rules Screw stays: Material Mild Steel Tensile strength

Diameter {At turned off part, or Over threads} 1-5/8" No. of threads per inch 9 Area supported by each stay

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007150-007160-0131

Working pressure by Rules _____ Are the stays drilled at the outer ends **No** Margin stays: Diameter { At turned off part, or Over threads. **1-7/8"**

No. of threads per inch **9** Area supported by each stay _____ Working pressure by Rules _____

Tubes: Material **L.W. Iron** External diameter { Plain **2 1/4"** Stay **2 1/4"** Thickness { **9 W.G. .144** **5/16"** No. of threads per inch **10**

Pitch of ~~stays~~ **8" x 11-5/8"** Working pressure by Rules _____ Manhole compensation: Size of opening in shell plate **20" x 16"** Section of compensating ring **3'-2" x 2'-10"** No. of rivets and diameter of rivet holes **36** **1-7/16" dia.**

Outer row rivet pitch at ends **5"** Depth of flange if manhole flanged **3 1/2"** Steam Dome: Material **None**

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 **None** 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, in my opinion, eligible for Classification, with Areas of Survey already assigned.

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

L. R. R. R. R.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 16 MAY 1939

Assigned

Noted



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