Rpt. 5a.

REPORT ON BOILERS.

No. 4276

Received at London Office JAN 14 1939

Date of writing Report ____ 19 ____ When handed in at Local Office ____ 19 ____ Port of Shanghai

No. in Reg. Book. 33775 Survey held at Shanghai Date, First Survey March 24th Last Survey July 21st 1937

(Number of Visits S.H.D.)

on the "SIANG WO" Tons Gross 2595 Net 1515

Master ____ Built at Hong Kong By whom built Hong Kong & Whampoa Dock Co, Ltd. Yard No. 625 When built 1926

Engines made at Hong Kong By whom made Hong Kong & Whampoa Dock Co, Ltd. Engine No. ____ When made 1926

Boilers made at Shanghai By whom made Shanghai Dock & Engineering Co., Ltd Boiler No. ____ When made 1926

Nominal Horse Power 310 Owners Indo-China S. N. Co, Ltd Port belonging to Shanghai.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel — (Letter for Record ____)

Total Heating Surface of Boilers 1816 □' ✓ Is forced draught fitted Yes Coal or Oil fired Coal

No. and Description of Boilers Two. Multitubular Scotch **Working Pressure** 200 lbs □" ✓

Tested by hydraulic pressure to 350 lbs □" ✓ Date of test April 1933 No. of Certificate ____ Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 51 □' ✓ No. and Description of safety valves to each boiler Two. Cockburn's ✓

Area of each set of valves per boiler { per Rule — 10·55 □" as fitted 7·1 □" ? } Pressure to which they are adjusted 200 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 3" Deck casing 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'-0" ✓ Length 10'-10¼" ✓ **Shell plates:** Material Steel Tensile strength 30 T/□" ✓

Thickness 1⅛" ✓ Are the shell plates welded or flanged Flanged Description of riveting: circ. seams { end Double ✓ inter. — }

long. seams Triple ✓ Diameter of rivet holes in { circ. seams 1 3/16" ✓ long. seams 1 3/16" ✓ } Pitch of rivets { 3½" ✓ 8¼" ✓ }

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 — 202 lb/□"

Thickness of butt straps { outer 15/16" ✓ inner 1 1/16" ✓ } **No. and Description of Furnaces in each Boiler** Three, Morison ✓

Material Steel ✓ Tensile strength ____ Smallest outside diameter 3'-2¼" ✓

Length of plain part { top 5 1/8" ✓ bottom 5 1/8" ✓ } Thickness of plates { crown 5/8" ✓ bottom 5/8" ✓ } Description of longitudinal joint —

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 — Thickness 1⅛" ✓ Pitch of stays 1'-6½" ✓

How are stays secured Washers & Nuts ✓ Working pressure by Rules —

Tube plates: Material { front Steel ✓ back Steel ✓ } Tensile strength { — — } Thickness { 7/8" ✓ ¾" ✓ }

Mean pitch of stay tubes in nests 7¾" 9 11/16" Pitch across wide water spaces 2¼" 13½" Working pressure { front — back — }

Girders to combustion chamber tops: Material Steel ✓ Tensile strength — Depth and thickness of girder at centre 9" ✓ 11/16" ✓ Length as per Rule 2'-9¾" 2'-7" Distance apart 8¾" ✓ No. and pitch of stays in each 3 & 2 1/8" 7 3/8" Working pressure by Rules — 206 lb/in² **Combustion chamber plates:** Material Steel ✓

Tensile strength — Thickness: Sides 11/16" ✓ Back 5/8" ✓ Top 11/16" ✓ Bottom 11/16" ✓

Pitch of stays to ditto: Sides 8¾" × 7⅜" ✓ Back 8" × 8" ✓ Top 7⅜" × 8¾" ✓ Are stays fitted with nuts or riveted over Nuts ✓

Working pressure by Rules — **Front plate at bottom:** Material Steel ✓ Tensile strength — Thickness 1 7/8" ✓

Lower back plate: Material Steel ✓ Tensile strength — Thickness 13/16" ✓

Pitch of stays at wide water space 9" 1'-1¼" Are stays fitted with nuts or riveted over Nuts ✓

Working Pressure — **Main stays:** Material Steel ✓ Tensile strength —

Diameter { At body of stay, or Over threads 3" ✓ } No. of threads per inch 6 ✓ Area supported by each stay —

Working pressure by Rules — **Screw stays:** Material 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 —

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

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

Tubes: *Material* Steel ✓ *External diameter* {*Plain* 2 3/4" ✓, *Stay* 2 3/4" ✓} *Thickness* {No. 9. B.W.G ✓, 1/4, 5/16" + 3/8"} *No. of threads per inch* 9 ✓

Pitch of tubes 3 7/8" ✓ *Working pressure by Rules* ________ **Manhole compensation:** *Size of opening in*

shell plate 16" x 12" ? 21" x 17" *Section of compensating ring* 2' 9 1/2" x 3'-1 1/4" thickness? *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 while building {*During progress of work in shops* - - ; *During erection on board vessel* - - -} *Are the approved plans of boiler and superheater forwarded herewith* under separate cover. (If not state date of approval.)

Total No. of visits 4.

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 Surveyors to this Society. The workmanship is sound.

See correspondence between Mr. Cox & the Secretary regarding Classification of Indo-China S. N. Co.'s River steamers

London: Boilers examined internally & externally together with all mountings doors & fastenings & found in good condition. They are, in my opinion, eligible for Classification with the record of Survey already assigned.

Survey Fee See Hall Report & correspondence regarding fees. } When applied for, 17 July 1937

Travelling Expenses (if any) £ : : } When received, 21 July 1937

G. Pickering

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 21 FEB 1939

Assigned Noted