

## REPORT ON WATER TUBE BOILERS.

No. 8049

Received at London Office MAY 10 1938

Date of writing Report 7<sup>th</sup> April 1938When handed in at Local Office 8<sup>th</sup> April 1938

Port of Hong Kong

No. in  
Reg. Bk.

Survey held at Glasgow + Hong Kong

Date, First Survey H.K. Nov. 1<sup>st</sup> 1937 Last Survey H.K. April 4<sup>th</sup> 1938

on the Twin Screw Steamer "LIWO"

(Number of Visits 7)

Tons { Gross 707.28  
Net 341.78

Master Built at Hong Kong

By whom built The Hongkong + Whampoa Dock Co. Ltd. When built 1938

Engines made at Hong Kong

By whom made The Hongkong + Whampoa Dock Co. Ltd. When made 1938

Boilers made at Scotland

By whom made Yarrow + Co. Ltd.

When made 1937

Registered Horse Power 175

Owners Indo-China Steam Navigation Co.

Port belonging to Hong Kong

## WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.

(Letter for Record "L") Date of Approval of plan 3-3-37 Manufacturers of Steel Steel Co. of Scotland Ltd.

of Boilers Two Yarrow

Working Pressure 250 lbs

Number and Description or Type

No. of Certificate 19991

Can each boiler be worked separately Yes

Total Heating Surface of Boilers 5000 sq ft

Is forced draught fitted Yes

Area of fire grate (coal) in each Boiler 63 sq ft

Total grate area of boilers in vessel including

Main and Auxiliary 126 sq ft

No. and type of burners (oil) in each boiler None

No. and description of safety valves on

each boiler 1-2 1/4" double High Lift approved

Area of each valve 3.97 sq ft

Pressure to which they are adjusted 250 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 9"

Height of Boiler 13'-4"

Width and Length 13'-8" x 10'-1"

Steam Drums:—Number in each boiler 1

Inside diameter 3'-6 3/4"

Material of plates Steel

Thickness 1 9/16" x 9/16"

Range of Tensile Strength 26-30 Tons

Are drum shell plates welded or flanged No

Description of riveting

Cir. seams D.R.

long. seams DR-DBS

Diameter of rivet holes in long. seams 13/16"

Pitch of Rivets 3 13/32"

Lap of plate or width of butt straps 8 1/4" x 7 3/4"

Thickness of straps 13/32" x 29/64"

Percentage strength of long. joint:—Plate 75 Rivet 90

Diameter of tube holes in drum 1.503" x 1.26"

Pitch of tube holes 1 5/8" diag.

Percentage strength of shell in way of tubes 33.3

If Drum has a flat side state method of staying No

Depth and thickness of girders at centre

(if fitted) Yes

Distance apart

Number and pitch of stays in each

Working pressure

by rules 26 1/4 lbs

Steam Drum Heads or Ends:—Material Steel

Thickness 7/8" x 3/4"

Radius or how stayed 3'-0"

Size of Manhole or Handhole 16" x 12"

Water Drums:—Number in each boiler 2

Inside Diameter 23"

Material of plates Steel

Thickness 1 3/8" x 5/8"

Range of tensile strength 26-30 Tons

Are drum shell plates welded

or flanged No

Description of riveting:—Cir. seams S.R.

long. seams DR-DBS

Diameter of Rivet Holes in

long. seams 15/16"

Pitch of rivets 2 35/64"

Lap of plates or width of butt straps 5 7/8" x 5 1/2"

Thickness of straps 7/16"

Percentage strength of long. joint:—Plate 63 Rivet 72

Diameter of tube holes in drum 1.503" x 1.26"

Pitch of tube holes 1 5/8" diag.

Percentage strength of drum shell in way of tubes 33.3

Water Drum Heads or Ends:—Material Steel

Thickness 3/4"

Radius or how stayed 21.5"

Size of manhole or handhole 16" x 12"

Headers or Sections:—Number

Material

Thickness

Tested by Hydraulic Pressure to

Material of Stays

Area at smallest part

Area supported by each stay

Working Pressure by Rules

Tubes:—Diameter 1 1/2" x 1 1/4"

Thickness 138" x 112"

Per Boiler 128" x 1 1/2"

Number 970 x 1 1/4"

Steam Dome or Collector:—Description of Joint to Shell

Percentage strength of Joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diameter of Rivet Holes

Pitch of Rivets

Working Pressure of shell

by Rules

Crown or End Plates:—Material

Thickness

How stayed

## SUPERHEATER.

Type None

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is easing gear fitted

Is a drain cock or valve fitted at lowest point of superheater

Number, diameter, and thickness of tubes

Spare Gear. Tubes 177

Gaskets or joints:—Manhole 8

Handhole

Handhole plates

THE HONGKONG &amp; WHAMPOA DOCK Co., Ltd.

The foregoing is a correct description,

Manufacturer.

Is the approved plan of boiler forwarded herewith office.

Dates of Survey During progress of See Glasgow Report N° 58741

while work in shops -- 1937

1938

building During erection on

Nov. 1, 4, 30, Dec. 8, Mar 24 + 30, April 4<sup>th</sup>

Total No. of visits H.K. - 7.

## GENERAL REMARKS

(State quality of workmanship, opinions as to class, &amp;c.) These boilers have been built under special survey at Glasgow + have now been installed in the vessel in accordance with the Society's Rules. Materials + workmanship are good. Boilers were examined under full working conditions + accumulation trials carried out with satisfactory results + it is recommended that the vessel be classed with Lloyd's Machinery Certificate + the record of + L.M.C. 4-38 be made in the Register Book.

Survey Fee ...

£

When applied for.

19

Travelling Expenses (if any) £

See Machinery Report

When received.

19

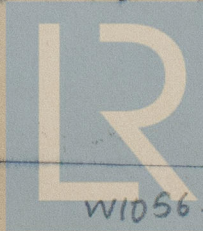
Committee's Minute

Assigned

TUE. 17 MAY 1938

See H.K. L.C. 8049

Engineer Surveyor to Lloyd's Register of Shipping.



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