

REPORT ON WATER TUBE BOILERS.

No. 4272

Received at London Office

JAN 14 1939

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

No. in Survey held at Shanghai Date, First Survey March 2nd. Last Survey July 16th. 19 37

Reg. Bk. 27862 on the "KIA WO" (Number of Visits 8) Tons { Gross 1311
Net 694

Master Built at Shanghai By whom built Kiangnan Dock & Eng. Works When built 1925

Engines made at Shanghai By whom made Kiangnan Dock & Eng. Works When made 1925

Boilers made at Glasgow By whom made Fairfield & Co. When made 1917

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

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Unknown

(Letter for Record) Date of Approval of plan Number and Description or Type of Boilers Two Garrow type Working Pressure 235 lbs Tested by Hydraulic Pressure to 360 lbs Date of Test Mar. 1935

No. of Certificate - Can each boiler be worked separately Yes Total Heating Surface of Boilers 6990 sq. ft. (2 boilers)

Is forced draught fitted Area of fire grate (coal) in each Boiler Oil fuel Total grate area of boilers in vessel including Main and Auxiliary - No. and type of burners (oil) in each boiler 5 Wallend Howden No. and description of safety valves on each boiler 1 7/8" double full bore type Area of each valve Pressure to which they are adjusted 225 LBS sq"

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 1'-3" Height of Boiler 10'-8" Width and Length 15'-11 1/4" x 11'-8 5/8"

Steam Drums:—Number in each boiler one Inside diameter 4'-2" Material of plates S.M.M.S. Thickness 5/8" & 1 1/2"

Range of Tensile Strength Tube plates 26-30 Shell plates 28-32 Are drum shell plates welded or flanged No Description of riveting:—

Cir. seams D.R. long. seams D.R. double butt strap Diameter of rivet holes in long. seams 27/32" Pitch of Rivets 3 5/16"

Lap of plate or width of butt straps 8 1/2" Thickness of straps 1/2" Percentage strength of long. joint:—Plate 74.50 Rivet 89.7

Diameter of tube holes in drum 1 1/8" & 1 1/2" Pitch of tube holes 1 1/16" & 2 1/16" Percentage strength of shell in way of tubes 33 & 27.41%

If Drum has a flat side state method of staying Depth and thickness of girders at centre (if fitted) - Distance apart - Number and pitch of stays in each - Working pressure by rules -

Steam Drum Heads or Ends:—Material S.M.M.S. Thickness min. 1 1/8" F. End. min. 1 1/8" B. End. Radius or how stayed 4'-3" (outside)

Size of Manhole or Handhole 16" x 12" Water Drums:—Number in each boiler Two Inside Diameter 2'-6"

Material of plates S.M. mild steel Thickness 5/8" & 1 1/2" Range of tensile strength 26-30 Are drum shell plates welded or flanged No Description of riveting:—Cir. seams D.R. long. seams D.R. double butt strap Diameter of Rivet Holes in long. seams 27/32" Pitch of rivets 3 5/16" Lap of plates or width of butt straps 8 1/2" Thickness of straps 1/2"

Percentage strength of long. joint:—Plate 72.3 Rivet 99 Diameter of tube holes in drum 1 1/8" & 1 1/2" Pitch of tube holes 1 1/16" & 2 1/16"

Percentage strength of drum shell in way of tubes 33 & 27.41% Water Drum Heads or Ends:—Material S.M.M.S. Thickness F.E. 1" B.E. 1 1/8"

Radius or how stayed 2'-7" (outside) 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 -

Thickness - Number - 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 - 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 - Gaskets or joints:—Manhole - Handhole - Handhole plates -

The foregoing is a correct description,

Manufacturer.

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

Is the approved plan of boiler forwarded herewith Yes

Total No. of visits

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 Report 9 also correspondence between Mr. Cox & the Secretary regarding Classification of Indo-China S.N. Co's River steamers.

Survey Fee ... £ : : When applied for, 19

Travelling Expenses (if any) £ : : When received, 19

See Rpt. 1, & correspondence between Mr. Cox & the Secretary

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUE. 21 FEB 1939

noted



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Foundation

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