

REPORT ON WATER TUBE BOILERS.

No. 8541

Received at London Office

APR 12 1940

Date of writing Report 4th Mar. 1940 When handed in at Local Office 4th Mar. 1940 Port of Hongkong

No. in Survey held at Hongkong Date, First Survey 19th Dec. 1939 Last Survey 2nd Mar. 1940

Reg. Blk. on the Steel Single Screw Steamer "KARVAH" (Number of Visits 12) Tons { Gross 1341.90
Net 514.55
~~608.33~~

Master Built at Hongkong By whom built The H.K. + Whampoa Dock Co. Ltd When built 1940

Engines made at Wallsend By whom made North Eastern Mar. Eng. Co. (1938) Ltd When made 1939

Boilers made at Renfrew By whom made Babcock + Wilcox Ltd When made 1939

Registered Horse Power Owners The Newcastle + Hunter River S.S. Co. Ltd Port belonging to Newcastle, N.S.W.

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

(Letter for Record W.T. Spt) Date of Approval of plan 30/3/39 + 19/4/39 Number and Description or Type 19-6-39

of Boilers 2 Babcock + Wilcox type Working Pressure 235 lbs. Tested by Hydraulic Pressure to 405 lbs. Date of Test 31-1-40

No. of Certificate Can each boiler be worked separately yes Total Heating Surface of Boilers 3576 sq. ft.

Is forced draught fitted yes Area of fire grate (coal) in each Boiler 67 sq. ft. Total grate area of boilers in vessel including Main and Auxiliary 134 sq. ft. No. and type of burners (oil) in each boiler none No. and description of safety valves on each boiler one - 2" double spring, Improved high lift Area of each valve 3.14" Pressure to which they are adjusted 235 lbs.

Are they fitted with easing gear yes In case of donkey boilers state whether steam from main boilers can enter the donkey boiler none

Smallest distance between boilers or and bunkers or Height of Boiler 11'-0" approx Width and Length 8' x 10' approx

Steam Drums:—Number in each boiler one Inside diameter 3'-6" Material of plates Steel Thickness 9/16 + 1/16"

Range of Tensile Strength 28-32 Tons Are drum shell plates welded or flanged no Description of riveting:—

Cir. seams D.R. Lap long. seams DR, DBS Diameter of rivet holes in long. seams 29/32" Pitch of Rivets 3.4801"

Lap of plate or width of butt straps 9 3/8 out 9 1/2" Thickness of straps 9/16" Percentage strength of long. joint:—Plate 73.96 Rivet 97.08

Diameter of tube holes in drum 4.047" Pitch of tube holes 7" Percentage strength of shell in way of tubes 42

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 235 lbs. Steam Drum Heads or Ends:—Material Steel Thickness 7/8" Radius or how stayed 3'-0" rad.

Size of Manhole or Handhole 15" x 11" Water Drums:—Number in each boiler Inside Diameter

Material of plates Thickness Range of tensile strength Are drum shell plates welded or flanged Description of riveting:—Cir. seams long. seams Diameter of Rivet Holes in long. seams Pitch of rivets Lap of plates or width of butt straps Thickness of straps

Percentage strength of long. joint:—Plate Rivet Diameter of tube holes in drum Pitch of tube holes

Percentage strength of drum shell in way of tubes Water Drum Heads or Ends:—Material Thickness

Radius or how stayed Size of manhole or handhole Headers or Sections:—Number 12 per boiler

Material Steel Thickness 1 1/2" + 7/16" Tested by Hydraulic Pressure to 405 lbs. Material of Stays Tubes:—Diameter 4" @ 1 1/2% @ 1 3/8%

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 one

Percentage strength of Joint Solid drawn Diameter 6" x 6" Thickness of shell plates 3/4" Material Steel

Description of longitudinal joint Diameter of Rivet Holes Pitch of Rivets Working Pressure of shell by Rules 235 lbs. Crown or End Plates:—Material Thickness How stayed

SUPERHEATER. Type Babcock + Wilcox Date of Approval of Plan 30/3/39 Tested by Hydraulic Pressure to 405 lbs.

Date of Test 12-9-38 + 31-1-40 Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler yes

Diameter of Safety Valve 2" Single, Improved high lift Pressure to which each is adjusted 225 lbs. Is easing gear fitted yes

Is a drain cock or valve fitted at lowest point of superheater yes Number, diameter, and thickness of tubes 104 @ 1 1/2% @ 9 w.g. (per boiler)

Spare Gear. Tubes 8-1 1/2" Gaskets or joints:—Manhole 6 Handhole 900-4 1/2" Handhole plates 6-3 5/8"

8-4" 110-3 5/8" 14-4 1/2"

8-1 1/8" 10-3 3/4" 2-3 3/4"

2-4"

HONGKONG & WHAMPOA DOCK CO. LTD
The foregoing is a correct description,
Loch. Manufacturer.

CHIEF MANAGER

Dates of Survey while building { During progress of work in shops -- Dec. 19, 27, Jan. 2, 5, 10, 16, 23, 29, 31 Is the approved plan of boiler forwarded herewith no

{ During erection on board vessel -- Feb 22, 26 - March 7 Total No. of visits Hongkong, 12

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed in accordance with the Rules + approved plans (See Glasgow Report No. 61661) + have been reassembled + tested by hydraulic pressure as a whole, + fitted on board the vessel in accordance with the Rules. Boilers examined under full working conditions, safety valves adjusted + accumulation tests carried out with satisfactory results. Boilers fitted with Smith-Babcock Mechanical Stokers.

Survey Fee as per Machinery Report. When applied for, 4th Mar. 1940

Travelling Expenses (if any) £7-18/- = 812/8 When received, 2.5.40

J. S. Morrison
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI 19 APR 1940**

Assigned See H.K. J.C. 8541

