

REPORT ON MACHINERY.

No. 5927

Date of writing Report Nov. 9th. 1925 When handed in at Local Office 12th. Nov. 1925 Port of Hong Kong
Received at London Office 14 DEC 1925
No. in Survey held at Hong Kong Date, First Survey 8th. Aug. 1924 Last Survey 29th. Sept. 1925
Reg. Book. on the S.S. "CHANGTE", Hull No. 618, Engine No. 364. (Number of Visits 68)
Master Built at Hong Kong By whom built Hongkong & Whampoa Dock Co. Ltd. Tons { Gross 4323.75
Net 2579.49
Engines made at Hong Kong By whom made Hongkong & Whampoa Dock Co. Ltd. when made 1925.
Boilers made at Hong Kong By whom made Hongkong & Whampoa Dock Co. Ltd. when made 1925.
Registered Horse Power Owners G.S. Yuill & Co. Ltd. Sydney. Port belonging to Hong Kong
Nom. Horse Power as per Section 28 638 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple expansion, surface condensing of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 27"-46"-77" Length of Stroke 48" Revs. per minute 90 Dia. of Screw shaft as per rule 15.19" Material of Steel
Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight
in the propeller boss Yes If the liner is in more than one length are the joints burned - If the liner does not fit tightly at the part
between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive - If two
liners are fitted, is the shaft lapped or protected between the liners - Length of stern bush 5'-6"
Dia. of Tunnel shaft as per rule 13.77" Dia. of Crank shaft journals as per rule 14.46" Dia. of Crank pin 15 1/2" Size of Crank webs 34 1/2 x 6 1/2" Dia. of thrust shaft under
collars 15" Dia. of screw 17 ft. variable Pitch of Screw 17 to 19 ft. No. of Blades 4 State whether moveable Yes Total surface 90
No. of Feed pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
No. of Donkey Engines 16 Sizes of Pumps See note No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 2.3" In Holds, &c. 2-2 1/2" in No. 1 Fore hold, 2-2 1/2" in No. 1 aft
hold, 1-2 1/2" in cofferdam 120-121, 2-2 1/2" No. 2 hold, 1-2 1/2" in cofferdam 54-55, 2-2 1/2" in No. 3 hold, 2-2 1/2" in
No. 4 hold, 1-2 1/2" in Tunnel wall.
No. of Bilge Injections one size 10" Connected to condenser, or to circulating pump Cir. pp. Is a separate Donkey Suction fitted in Engine room & size 2-3 1/2"
Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible -
Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line above
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes
What pipes are carried through the bunkers oil fuel Forward bilge & tank suction How are they protected -
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Upper deck

BOILERS, &c.—(Letter for record Kobe 22/8/24(S) Manufacturers of Steel Wm. Beardmore & Co. Ltd. 3SB
Total Heating Surface of Boilers 9633 Is Forced Draft fitted Yes No. and Description of Boilers 3 cylindrical multitubular
Working Pressure 200 lbs. Tested by hydraulic pressure to 350 lbs. Date of test 13/1/25 No. of Certificate 151-2-3.
Can each boiler be worked separately Yes Area of fire grate in each boiler 72 No. and Description of Safety Valves to
each boiler 2-4" Cock burn high lift. Area of each valve 12.56 Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 16 ft Length 12 ft. Material of shell plates Steel
Thickness 1 3/32" Range of tensile strength 29 to 33 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double lap
long. seams Triple butt Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 10" Lap of plates or width of butt straps 1'-9 3/16"
Per centages of strength of longitudinal joint 85.6% Working pressure of shell by rules 202 lbs. Size of manhole in shell 16"x12"
Size of compensating ring 39"x35"x1 1/32" No. and Description of Furnaces in each boiler 3 Fox Material Steel Outside diameter 49 3/8"
Length of plain part top - bottom - Thickness of plates crown 11/16" Description of longitudinal joint Welded No. of strengthening rings None
Working pressure of furnace by the rules 204 lbs. Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 7/8"
Pitch of stays to ditto: Sides 8 1/2 x 9 1/4" Back C-8 x 9 1/16" Top 8 1/2 x 9 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 200 lbs
Material of stays Steel Area at smallest part 16" Area supported by each stay S-78.625" Working pressure by rules S-271 lbs T-209 lbs
Dia. over thread 1 1/8" How are stays secured Nuts Working pressure by rules B-258 lbs T-271 lbs
Material Steel Thickness 1, 3/32" Pitch of stays 14"x18 1/2" Working pressure by rules 206 lbs Material of stays Steel
Area at smallest part 2 1/2" Area supported by each stay 259" inside & outside 206 lbs Material of Front plates at bottom Steel
Thickness 31/32" Material of Lower back plate Steel Thickness 31/32" Greatest pitch of stays 13 1/4 x 9 5/16" Working pressure of plate by rules 280 lbs
Diameter of tubes 2 1/4" Pitch of tubes 4"x3 3/8" Material of tube plates Steel Thickness: Front 31/32" Back 13/16" Mean pitch of stays 8"x11 1/8"
Pitch across wide water spaces 13 1/4" Working pressures by rules W.W. space 246 lbs Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 10"x1 1/8" Length as per rule 2'-10 1/2" Distance apart 9 1/4" Number and pitch of stays in each 3 at 8 1/2"
Working pressure by rules 204 lbs Steam dome: description of joint to shell None % of strength of joint -
Diameter - Thickness of shell plates - Material - Description of longitudinal joint - Diam. of rivet holes -
Pitch of rivets - Working pressure of shell by rules - Crown plates - 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 DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— See List attached.

The foregoing is a correct description.

WONGLOONG & WHAMPOA DOCK Co., Ltd.

R. M. Dyer

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1924 Aug. 8, 12, 18, 26 Sept. 4, 8, 9, 12, 19, 25, 30 Oct. 3, 8, 11, 22, 27, 28, 30 Nov. 3, 7, 12, 18, 22 Dec. 1, 9, 15, 29 1925 Jan. 8, 13, 28 Feb. 5, 10, 12, 14, 20, 23, 26 Mar. 2, 4, 14, 19, 23, 25 Apr. 9, 24, 27, 28, 29 May. 5, 6, 8, 20, 21, 29, 30 Jun. 8, 9, 18 July 13, 30 Aug. 4, 18, 25 Sept. 9, 16, 26, 29. } During erection on board vessel - - - } Total No. of visits 68

Is the approved plan of main boiler forwarded herewith No

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 28/1/25 Slides 12/2/25 Covers 12/2/25 Pistons 28/1/25 Rods 28/1/25

Connecting rods 28/1/25 Crank shaft 2/3/25 Thrust shaft 28/1/25 Tunnel shafts 2/3/25 Screw shaft 2/3/25 Propeller 2/3/25

Stern tube 2/3/25 Steam pipes tested 21/5/25 Engine and boiler seatings 4/3/25 Engines holding down bolts 30/5/25

Completion of pumping arrangements 9/6/25 Boilers fixed 24/4/25 Engines tried under steam 26/9/25

Completion of fitting sea connections 4/3/25 Stern tube 14/3/25 Screw shaft and propeller 26/3/25

Main boiler safety valves adjusted 9/6/25 Thickness of adjusting washers Ford. P3/8 S5/16 Port P13/32 S3/8, Starbd. P11/32 S11/32.

Material of Crank shaft Steel Identification Mark on Do. Lloyd's No. 704 Material of Thrust shaft Steel Identification Mark on Do. Lloyd's No. 755

Material of Tunnel shafts Steel Identification Marks on Do. Lloyd's No. 704 Material of Screw shafts Steel Identification Marks on Do. Lloyd's No. 704

Material of Steam Pipes S. D. Steel Test pressure 600 lbs.

Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150°F. Yes

Have the requirements of Section 35 of the Rules been complied with Yes

Is this machinery duplicate of a previous case No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.

The materials have been tested by the Surveyors to this Society and constructed as shown and amended on approved plans now in London Office.

The workmanship is good and it is recommended that the vessel be classed with Lloyd's Machinery Certificate and the record of L.M.C.9-25. be made in the Register Book.

IDENTIFICATION MARKS ON BOILERS

No.151 HKg.
Lloyd's Test
350 lbs.
W.P.200 lbs.
T.S.M.13.1.25

No.152 HKg.
Lloyd's Test
350 lbs.
W.P.200 lbs.
T.S.M.28.1.25

No.153 HKg.
Lloyd's Test
350 lbs.
W.P.200 lbs.
T.S.M.14.2.25

Identification marks on spare crank & spare Tail Shaft:- LLOYD'S No.905.

NOTE:- Two sets oil fuel pumps 4"x 8" with heaters complete (Wallsend Howden);
Two Wairs feed pumps 9"x 12"x 24"; One Wairs General Service pump 6"x 8½"x 13"
One 14" centrifugal circulating pump; One Auxiliary centrifugal circulating pump, 6"
Two Wairs O.F. Transfer pumps 8"x 7"x 18"; One Vertical duplex. ballast pump 10"x 12"x 10".
One vertical duplex. sanitary pump 6"x 6"x 6"; One vertical duplex. Fresh water pump 6"x 6"x 6"
One vertical duplex. Fire pump 7"x 4½"x 8; One 75" Forced draught fan, 2 engines 8"x 6".
1-20 K.W. } dynamos & one Emergency 5 K.W. dynamo.

The amount of Entry Fee ... £ 103.00. When applied for,

Special ... £ 1829.00. 22/10/1925

Donkey Boiler Fee ... £ : When received,

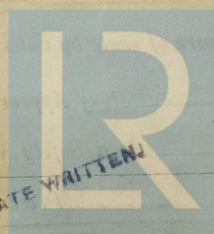
Travelling Expenses (if any) £ 200.00. 28/10/1925
Electric Light £ 428.00.

Committee's Minute

Assigned

+ L.R. 6.9.25. F.D. C.L.
Lined for oil fuel 9.25
S.P. above 180°F.

W. Morrison + for L. Young
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation