

REPORT ON MACHINERY.

No. 4745

Received at London Office

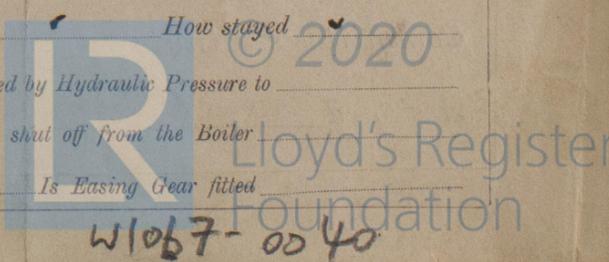
FEB 18 1938

Writing Report July 25 1938 When handed in at Local Office July 25 1938 Port of Vancouver B.C.
 Survey held at N. Vancouver Date, First Survey Nov 19. 37. Last Survey July 24 1938
 Book. T.S.S. CHELOHSIN (Number of Visits 12)
 Built at Dublin. By whom built Dublin Dock Yard Tons Gross 1134
Belfast By whom made Mc Coll & Co Ld Net 597
Sunderland. By whom made do Maccolly Pollock Ld When built 1911
 Registered Horse Power 182 Owners Union Steamships Ld Port belonging to Vancouver
 Horse Power as per Section 28 182 Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Twin Triple Inverted Cylinders No. of Cylinders 2 x 3 No. of Cranks 3
 of Cylinders 13.5 22. 36 Length of Stroke 24 Revs. per minute 140 Dia. of Screw shaft as per rule 7.34 Material of 045
as fitted 7.5 screw shaft
 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
 If the liner is in more than one length are the joints burned Yes If the liner does not fit tightly at the part
 on the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive light pi. If two
 are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 3.4 1/2
 Dia. of Tunnel shaft as per rule 6.63 Dia. of Crank shaft journals as per rule 6.96 Dia. of Crank pin 7 Size of Crank webs 3.75 x 5.125 Dia. of thrust shaft under
as fitted 6.94 as fitted 7 No. of Blades 4 State whether moveable no Total surface 22 feet
 Dia. of screw 8.25 Pitch of Screw 11 No. of Feed pumps 1 Diameter of ditto 2.5 Stroke 12 Can one be overhauled while the other is at work on each engine
 of Bilge pumps 1 Diameter of ditto 2.5 Stroke 12 Can one be overhauled while the other is at work " " "
 of Donkey Engines Two Sizes of Pumps 6x4.25x6 Lamin Duplex No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 3x4 Two In Holds, &c. 3" - 4"
General Weir pump fitted 8x6x21 (Single) on starting platform
 Bilge Injections 1 sizes 5 Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size Yes 3"
 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 no
 all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves (Blow down on cocks)
 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
 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
 pipes are carried through the bunkers hold & peak Suctions through tank space How are they protected wood covering in hold.
 all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from main deck

BOILERS, &c.—(Letter for record) 25.8 Manufacturers of Steel Spence's - Hawthorn on Japan - Furnaces Height in Deck to Keel
 Heating Surface of Boilers 4400 Is Forced Draft fitted no No. and Description of Boilers Two Cylindrical Multitubular.
 Working Pressure 185 Tested by hydraulic pressure to 265 Date of test Nov 2. 1937. No. of Certificate
 Can each boiler be worked separately Yes Area of fire grate in each boiler 52 No. and Description of Safety Valves to
 boiler Two Spring loaded Area of each valve 5.94 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes
 least distance between boilers or uptakes 7 1/2 bulkhead Mean dia. of boilers 14.9 Length 11.6 Material of shell plates 045
 thickness 1.375 Range of tensile strength 29.5 to 32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams ✓
 seams Three straps Diameter of rivet holes in long. seams 1.31 Pitch of rivets 9 width of butt straps 21"
 percentages of strength of longitudinal joint 84.2 Working pressure of shell by rules 203 Size of manhole in shell 16 x 12
 of compensating ring 30x33 x 1.31 No. and Description of Furnaces in each boiler 3 Nightingale Material 045 Outside diameter 43.2
 thickness of plain part top 19 Thickness of plates bottom 32 Description of longitudinal joint needed No. of strengthening rings 6 longitudinal
 Working pressure of furnace by the rules 200 Combustion chamber plates: Material 045, Thickness: Sides .687 Back .687 Top .687 Bottom .75
 of stays to ditto: Sides 9x9 Back 8 1/2 x 9 3/8 Top no If stays are fitted with nuts or riveted heads no Working pressure by rules 197
 Material of stays 045, Area at smallest part 2 Area supported by each stay 81 Working pressure by rules 222 End plates in steam space:
 Material 045, Thickness 1.25 Pitch of stays 19x19 How are stays secured Nuts & washers Working pressure by rules 185 Material of stays 045
 at smallest part 7.49 Area supported by each stay 361 Working pressure by rules 185 Material of Front plates at bottom 045
 thickness .875 Material of Lower back plate 045 Thickness .812 Greatest pitch of stays 17x12 Working pressure of plate by rules 200
 diameter of tubes 3.5 Pitch of tubes 4.5 Material of tube plates 045 Thickness: Front 1.25 Back .875 Mean pitch of stays 8.5 x 12.75
 across wide water spaces 14 Working pressures by rules 195 Girders to Chamber tops: Material 045 Depth and
 thickness of girder at centre 9x2 Length as per rule 37 Distance apart 9.5 Number and pitch of stays in each 3 x 8.625
 Working pressure by rules 187 Steam dome: description of joint to shell ✓ % of strength of joint
 Material ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓
 of rivets ✓ Working pressure of shell by rules ✓ Crown plates ✓ Thickness ✓ How stayed ✓

SUPERHEATER. Type none. Date of Approval of Plan no. Tested by Hydraulic Pressure to
 of Test no. Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
 diameter of Safety Valve no. Pressure to which each is adjusted no. Is Easing Gear fitted no.



IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - Crosshead brasses & bolts. Bottom end brasses & bolts. 2 main bearing bolts. 1 set coupling bolts. Feed & bilge pump valves. Air pump rods & bucket. 1 set piston springs. Assorted bolts & nuts, etc. of various sizes. Also spares kept in owner's workshop at Vancouver, including screw shaft & 2 propellers.

The foregoing is a correct description,

Manufacturer.

Dates of Survey: During progress of work in shops - Nov 18, 19, 21, 23, 24, Dec 2, 7, 31, Jan 6, 11, 17, 19, 23, 1938. During erection on board vessel - building. Total No. of visits: 12. Is the approved plan of main boiler forwarded herewith? No.

Dates of Examination of principal parts: Cylinders Nov 19, Dec 2, Slides Nov 19, Dec 2, Covers Nov 19, Dec 2, Pistons Nov 19, Dec 2, Rods Nov 19, Dec 2. Connecting rods Nov 19, Dec 2, Crank shaft Nov 19, Dec 2, Thrust shaft Dec 9, Tunnel shafts Dec 9, Screw shaft Dec 2, Propeller Nov 19. Stern tube ✓, Steam pipes tested Nov 19, Dec 7, Engine and boiler seatings Dec 9, Engines holding down bolts Dec 9. Completion of pumping arrangements Dec 9, Boilers fixed, Engines tried under steam 23.1.38. Completion of fitting sea connections Nov 19, Stern tube, Screw shaft and propeller. Main boiler safety valves adjusted Jan 6, 39, Thickness of adjusting washers P 1/16, 9/16, S 1/16, 1/2. Material of Crank shaft No marks, Identification Mark on Do., Material of Thrust shaft, Identification Mark on Do. Material of Tunnel shafts No marks, Identification Marks on Do., Material of Screw shafts, Identification Marks on Do. Material of Steam Pipes Copper & Aluminium Bbs Steel, Test pressure Copper 400 ✓, Steel 555 ✓. 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 49 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 machinery and boilers were built and installed under the Special Survey of the British Corporation. Now examined All cylinders covers, pistons, slides, piston & connecting rods - crank pins & brasses, all main bearings and brasses - crank shafts, thrust shafts and line shafting. Main condenser opened, examined & tested. Attached air-feed & bilge pumps examined. Separate circulating pump and separate feed pump examined. Examined headplate, seatings and holding down bolts. Bilge and pumping arrangements and connections examined and found to comply with rules and in good condition. Holding down bolts examined. Engines tested under working conditions. Main steam, Aux steam & feed pipes removed, annealed & tested to rule requirements. Note Both screw shafts were drawn and examined Jan 15, 1937, and in my opinion this may be accepted (Letter from Canadian Steamship Inspector attached).essel was placed on dry dock. All sea connections opened up & examined and the fastenings of sea connections. Stern tube and propeller examined, near down. S. to P. line ✓. The main boilers have been opened up, cleaned & examined on fire and water side, and found in good working condition. All mountings opened up & examined.

The amount of Entry Fee ... £ 15.00 : When applied for, Jan 25 1938. Special ... £ 120.00 : Donkey Boiler Fee ... £ : When received, 16.3 19.38 £ 73.3. Travelling Expenses (if any) £ 12.50 :

A Scott & McKinnon (acting) Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 4 MAR 1938

Assigned Dec 1. 38 Fitted for oil fuel 2. above 150° F 2 SB 185 lb

Certificate (if required) to be sent to Vancouver B.C. The Surveyors are requested not to write on or below the space for Committee's Minute.

