

REPORT ON MACHINERY.

No. 746.

Received at London Office

Date of writing Report July 23 1919 When handed in at Local Office July 23 1919 Port of Vancouver, B.C.
 No. in Survey held at Vancouver, B.C. Date, First Survey Dec. 30/18, Last Survey July 16 1919
 Reg. Book. on the Single Screw Steel S.S. War Column (Number of Visits 29) Tons } Gross 5752.45
 Master D. Gillies Built at Vancouver, B.C. By whom built J. Coughland Sons When built 1919
 Engines made at Spokane, Wash. By whom made Hallidie & Co. L^{td} when made 1919
 Boilers made at Vancouver, B.C. By whom made Vulcan Iron Works when made 1919
 Shaft Registered Horse Power 2500. Owners Imperial Munitions Board Port belonging to London.
 Nom. Horse Power as per Section 28 577 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Geared Turbines Parsons Cross Compound Turbines 1 H.P. No. of Cranks 2
Double Reduction Astern & Forward H.P. 10 L.P. 12
 Dia. of Cylinders 12.5 Length of Stroke 13.0 Revs. per minute 90 Dia. of Screw shaft 14.1 Material of screw shaft 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 Yes 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 Yes If two liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 4'-8"
 Dia. of Tunnel shaft 12.5 Dia. of Crank shaft journals 13.5 Dia. of Crank pin 13.5 Size of Crank webs 14.1 Dia. of thrust shaft under collars 12.9 Dia. of screw 12.0 Pitch of Screw 13'-0" No. of Blades 4 State whether moveable Yes Total surface 81 Sq Feet
 No. of Feed pumps 20 Diameter of ditto 8" Stroke 16" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 20 Diameter of ditto 8" Stroke 16" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines one Sizes of Pumps 12x12x12" No. and size of Suctions connected to both Bilge and Donkey pumps Two in each hold. 3 1/2" Diam
 In Engine Room 4 of 3 1/2" Diam In Holds, &c. Yes
 No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size Yes, 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 Yes
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves & Cocks
 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 Below
 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 None How are they protected Yes
 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 S) Manufacturers of Steel Stewarts & Lloyds L^{td}
 Total Heating Surface of Boilers 8325 Is Forced Draft fitted Yes No. and Description of Boilers 3 Scotch Marine
 Working Pressure 190 lb Tested by hydraulic pressure to 300 lb Date of test May 1/19 No. of Certificate 20
 Can each boiler be worked separately Yes Area of fire grate in each boiler 63 No. and Description of Safety Valves to each boiler Two of Marine Area of each valve 9.06 Pressure to which they are adjusted 190 lb Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 14 9/8" Length 11-5 1/2" Material of shell plates Steel
 Thickness 1 5/16 Range of tensile strength 31.1 Tons Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams Lap Riveted
 long. seams Double Butted Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9.358 Lap of plates or width of butt straps 14 1/2 + 2 1/2"
 Per centages of strength of longitudinal joint rivets 89.407 Working pressure of shell by rules 193.6 Size of manhole in shell 12" x 16"
 plate 85.306 Size of compensating ring 3 Morrison Material Steel Outside diameter 48 3/16"
 Length of plain part top 1932 Thickness of plates crown 1932 Description of longitudinal joint Yes No. of strengthening rings Yes
 bottom 1932 Working pressure of furnace by the rules 195.9 Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 7/8"
 Pitch of stays to ditto: Sides 8" Back 7 1/8" Top 7 1/2" If stays are fitted with nuts or riveted heads Yes Working pressure by rules 194
 Material of stays Steel Area at smallest part 1.761 Area supported by each stay 57 Working pressure by rules 194 End plates in steam space: Double
 Material Steel Thickness 1 1/16" Pitch of stays 16 1/4" How are stays secured nuts Working pressure by rules 191.5 Material of stays Steel
 Area at smallest part 4.9 Area supported by each stay 364 Working pressure by rules 191.5 Material of Front plates at bottom Steel
 Thickness 1 5/16" Material of Lower back plate Steel Thickness 1 5/16" Greatest pitch of stays 7 1/8" Working pressure of plate by rules 194
 Diameter of tubes 2 1/2" Pitch of tubes 3 7/8" Material of tube plates Steel Thickness: Front 1 5/16" Back 3/4" Mean pitch of stays 7 1/8"
 Pitch across wide water spaces 12 7/8" Working pressures by rules 191.9 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 10 x 3 1/4" Length as per rule 3'-0" Distance apart 7 1/2" Number and pitch of stays in each 30/7 1/2"
 Working pressure by rules 136 Steam dome: description of joint to shell Yes % of strength of joint Yes
 Diameter Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes
 Pitch of rivets Yes Working pressure of shell by rules Yes Crown plates Yes Thickness Yes How stayed Yes

SUPERHEATER. Type Foster Date of Approval of Plan Yes Tested by Hydraulic Pressure to 630 lb
 Date of Test 20/2/19 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes
 Diameter of Safety Valve 1 1/2" Pressure to which each is adjusted 210 lb Is Easing Gear fitted Yes



