

Rpt. 4.

REPORT ON MACHINERY.

No. 757

Date of writing Report Sept 3 1919 When handed in at Local Office Sept 3 1919 Received at London Office 10.7-10.1919
No. in Survey held at Vancouver, B.C. Date, First Survey July 31 1919 Last Survey Aug 27 1919
Reg. Book. on the Single Screw Steel S.S. War Company (Number of Vials 31)
Master D. M. Beath Built at Vancouver By whom built J. Coughlan & Sons Tons { Gross 5754.05
Engines made at Spokane, USA By whom made Hallidie & Co. when made 1919 Net 4247.40
Boilers made at Vancouver, B.C. By whom made Volcan Iron Works when made 1919
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 No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Geared Turbines, Parsons, Cross Compound Turbines, 4% HP No. of Cylinders 2 No. of Cranks 2
Dia. of Cylinders 12.5 Length of Stroke 14.1 Revs. per minute 90 Dia. of Screw shaft 14 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 Right Set 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 12.916 Dia. of Crank pin 13.5 Size of Crank webs Yes Dia. of thrust shaft under
collars 17-0 Pitch of Screw 13-0 No. of Blades 4 State whether moveable Yes Total surface 81.29 sq ft.
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 1/2 x 12 Duplex Can one be overhauled while the other is at work Yes
No. of Donkey Engines one Sizes of Pumps 12" x 12 x 12 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 4 of 3 1/2" Diam. In Holds, &c. Two in each hold 3 1/2" Dia.
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
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 Stewart & Lloyd's Ltd.
Total Heating Surface of Boilers 8325 sq ft. 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 July 19 1919 No. of Certificate 23
Can each boiler be worked separately Yes Area of fire grate in each boiler 63 sq ft. 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 5/8 Material of shell plates Steel
Thickness 1 5/16 Range of tensile strength 31.1 tons Are the shell plates welded or flanged Welded Descrip. of riveting: cir. seams Lap Double Butts Scot
long. seams Scot 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 x 22 1/2
Per centages of strength of longitudinal joint 89.407 Working pressure of shell by rules 193.6 Size of manhole in shell 12" x 16"
Size of compensating ring Yes No. and Description of Furnaces in each boiler 3 Moore's Material Steel Outside diameter 48 3/16
Length of plain part Yes Thickness of plates 1 5/16 Description of longitudinal joint Yes No. of strengthening rings Yes
Working pressure of furnace by the rules 195.9 Combustion chamber plates: Material Steel Thickness: Sides 1 1/16 Back 1 1/16 Top 1 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 Nuts 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:
Material Steel Thickness 1 1/16 Pitch of stays 16 1/4 How are stays secured Double nuts Working pressure by rules 191.5 Material of stays Steel
Area at smallest part 4.9 Area supported by each stay 264 Working pressure by rules 195 Material of Front plates at bottom Steel
Thickness 1 1/2 Material of Lower back plate Steel Thickness 1 1/2 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 1/2 Back 7/8 Mean pitch of stays 7 1/8
Pitch across wide water spaces 12 1/8 Working pressures by rules 191.9 Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 10 1/2 x 1/4 Length as per rule 3-0 Distance apart 7 1/2 Number and pitch of stays in each 30 of 7 1/2
Working pressure by rules 156 Steam dome: description of joint to shell Yes % of strength of joint —
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. Foster Date of Approval of Plan Yes Tested by Hydraulic Pressure to 630 lb
Date of Test 27/5/19 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

IS A DONKEY BOILER FITTED? *Yes*.

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied: *One Thrust Bearing complete, 2 Slides & nuts for Rotor Bearing, 2 Slides & nuts for Main Turbine, 2 Slides & nuts for Main Gear Bearing, 2 Slides & nuts for Pinion Bearing, one set of coupling Bolts each size 1/30 Bolt for Gearing Joint, 1/30 Bolt for Turbine Joint, Two Thermometers for oil Cooling System, one set of Bearing Bushes for one Gear wheel one set of Bearing Bushes for one Pinion, one set of Bearing Bushes for Rotor Bearing 1/2 set of Bushes for Kingsbury Thrust, 1 set of Feed Pump Valves, 1 set Bilge Pump Valves, one Bush for Lubricating oil Pump, Assorted Bolts & Nuts, Steel Bars & Plates, Spare Propeller Blade, Spare Tail Shaft, Spare Boiler Tubes, Set Spare Check Valves, Safety Valve Springs, Spare Super Heater Coils, Spare Condenser Tubes, Service.*
The foregoing is a correct description.

J. COUGHLIN & SONS

Manufacturer.

Dates of Survey while building: During progress of work in shops - *Feb. 3, 10, March, 5, 14, 20, 26, April 2, 8, 22, May, 5, 7, 13, 19, 21, 28,*
During erection on board vessel - *June, 18, July 4, 14, 16, 18, 22, 24, 28, 30, Aug. 1, 12, 15, 18, 22,*
Total No. of visits *Aug. 27, 1919, (31 visits)* Is the approved plan of main boiler forwarded herewith *Copy*

Dates of Examination of principal parts—Cylinders *✓* Slides *✓* Covers *✓* Pistons *✓* Rods *✓*
Connecting rods *✓* Crank shaft *✓* Thrust shaft *✓* Tunnel shafts *✓* Screw shaft *✓* Propeller *✓*
Stern tube *✓* Steam pipes tested *July 30* Engine and boiler seatings *July 30* Engines holding down bolts *Aug 1*
Completion of pumping arrangements *July 28* Boilers fixed *July 28* Engines tried under steam *August 13*
Completion of fitting sea connections *July 22* Stern tube *July 22* Screw shaft and propeller *July 24*
Main boiler safety valves adjusted *Aug. 22 1919* Thickness of adjusting washers *7/32, 5/16, 1/4, 3/8, 1/2*
Material of Crank shaft *Steel* Identification Mark on Do. *✓* Material of Thrust shaft *Steel* Identification Mark on Do. *✓*
Material of Tunnel shafts *Steel* Identification Marks on Do. *✓* Material of Screw shafts *Steel* Identification Marks on Do. *✓*
Material of Steam Pipes *Steel* Test pressure *570 lb. ✓*
Is an installation fitted for burning oil fuel *✓* Is the flash point of the oil to be used over 150°F. *✓*

Have the requirements of Section 49 of the Rules been complied with? *✓*

Is this machinery duplicate of a previous case? *Yes*. If so, state name of vessel *"War Coloumn"*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The Engines & Boilers of this Vessel have been built under Special Survey and installed under Special Survey, in accordance with approved plans, together with the Auxiliaries, Piping, Mountings, Fittings & Sea Connections Etc. The Material and workmanship are of Good Quality, on Completion of the machinery installed the vessel was tried under full Steam at Sea and found Satisfactory. Safety Valves were floated independently, Tail Shaft is a continuous Liner.*

Please refer to Portland Report No. 549, H.P. Turbine No. 11

Please refer to Pittsburgh Report No. 58.

Please refer to Portland Report No. 542, L.P. Turbine No. 8.

The Machinery and Boilers are eligible in my opinion to have the Record L. M. C. 8. 19 made in the Register Book in the case of this Vessel.

The amount of Entry Fee ... £ 15.00 :
Special ... £ 162.90 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :

When applied for, *Sept. 1919*
When received, *28/10/19*

Geo. C. McGowan
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 14 OCT. 1919

Assigned

+ LMC 8. 19

7.D.