

## REPORT ON OIL ENGINE MACHINERY.

Vancouver No. 1047

New York No. 22535

Writing Report 23 Feb 1923 When handed in at Local Office + 10 Port of New York  
 Survey held at Auburn N.Y. Date, First Survey 27 May 1920 Last Survey 19 Feb 1923  
 on the <sup>Single</sup> ~~Twin~~ <sup>Triple</sup> Screw vessels C.P.R. can ferry "MOTOR PRINCESS" Number of Visits 7.14 19 May 1923  
 Tons { Gross 1242.63  
 Net 778.69  
 Built at Vancouver By whom built Yarrows Ltd Yard No. 666 When built 1923  
 es made at Auburn N.Y. By whom made Mc Intosh & Seymour Cap = Engine No. 1751/2 When made 1923  
 y Boilers made at Victoria By whom made Victoria Machinery Dept COLE Boiler No. 47 When made 1923  
 Horse Power 600 Owners Canadian Pacific Railway Co. Port belonging to Victoria BC  
 Horse Power as per Rule 200 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yls

NGINES, &c.—Type of Engines 2 Diesel ✓ 2 or 4 stroke cycle H ✓ Single or double acting single  
 pressure in cylinders 500 lbs ✓ No. of cylinders 6 each ✓ No. of cranks 6 each ✓ Diameter of cylinders 16 1/2" ✓  
 stroke 24" ✓ Revolutions per minute 200 ✓ Means of ignition Compression ✓ Kind of fuel used oil ✓  
 bearing between each crank yes ✓ Span of bearings (Page 92, Section 2, par. 7 of Rules) 21 1/2" ✓  
 between centres of main bearings 3' 5 1/2" x 3'-0" ✓ Is a flywheel fitted yes ✓ Diameter of crank shaft journals as per Rule 9.5 ✓  
 of crank pins 9 1/2" ✓ as fitted 9 1/2" ✓ Breadth of crank webs as per Rule 12.8" ✓ as fitted 13" ✓ Thickness of ditto as per Rule 5.4 ✓  
 as per Rule 9.5 ✓ as fitted 9 1/2" ✓ Diameter of tunnel shaft as per Rule 6.4" ✓ as fitted 7" ✓ Diameter of thrust shaft as per Rule 9.5 ✓  
 as per Rule 7.39 ✓ as fitted 7 1/2" ✓ Is the screw shaft fitted with a continuous liner the whole length of the stern tube yls ✓  
 end of the liner made watertight in the propeller boss yls ✓ If the liner is in more than one length are the joints burned Electric Welded ✓  
 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 yls ✓  
 s are fitted, is the shaft lapped or protected between the liners ✓ If without liners, is the shaft arranged to run in oil yls ✓  
 r gland fitted to stern tube Lignum vitae bearing ✓ Length of stern bush 2' 6" ✓ Diameter of propeller 8'-3" ✓  
 peller 7'-6" ✓ No. of blades 4 ✓ state whether moveable no ✓ Total surface 22 ✓ square feet  
 versing direct ✓ Is a governor or other arrangement fitted to prevent racing of the engine when declutched direct connected ✓ Thickness of cylinder liners 1 1/4" ✓  
 ders fitted with safety valves yes ✓ Means of lubrication Part forced Part gravity ✓ Are the exhaust pipes and silencers water cooled or lagged with yls ✓  
 material If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine yls ✓  
 sel yls ✓ No. of cooling water pumps 2 ✓ Is the sea suction provided with an efficient strainer which can be cleared yls ✓  
 rhauled while the other is at work ✓ No. of auxiliary pumps connected to the main bilge lines 2 ✓ How driven Steam ✓  
 6" x 5 1/2" x 6" ✓ No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 2-4" ✓  
 to 10 1/4" x 2 1/2" ✓ No. of ballast pumps 2 ✓ How driven yls ✓ Sizes of pumps yls ✓  
 ump fitted with a direct suction from the engine room bilges yls ✓ State size 4" ✓ Is a separate auxiliary pump suction fitted in yls ✓  
 nd size 2-4" ✓ Are all the bilge suction pipes fitted with roses yls ✓ Are the roses in Engine Room always accessible yls ✓  
 m Engine Room bulkheads always accessible yls ✓ Are all connections with the sea direct on the skin of the ship yls ✓  
 or cocks Sea cocks with valves ✓ Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates yls ✓  
 e 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 yls ✓  
 ks, valves and pumps in connection with the machinery accessible at all times yls ✓ Are the bilge suction pipes, cocks and valves arranged so as to prevent any yls ✓  
 tween the sea and the bilges yls ✓ Is the screw shaft tunnel watertight yls ✓ Is it fitted with a watertight door yls ✓  
 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork metal troughs ✓  
 compressors 1 each engine ✓ No. of stages 3 ✓ Diameters 2 3/4"-15"-16" ✓ Strokes 12" ✓ Driven by main engines ✓  
 mpression handles both engines ✓ No. of stages 3 ✓ Diameters 8" x 10" ✓ Stroke 8" ✓ Driven by Steam ✓  
 air compressors 1 ✓ No. of stages yls ✓ Diameters 5 1/2" x 2 1/2" ✓ Stroke yls ✓ Driven by yls ✓  
 ilary air compressors yls ✓ No. of stages yls ✓ Diameters yls ✓ Stroke yls ✓ Driven by yls ✓  
 air pumps yls ✓ Diameter yls ✓ Stroke yls ✓ Driven by yls ✓  
 any Diesel Engine crank shafts as per Rule yls ✓ as fitted yls ✓ Are the air compressors and their coolers made so as to be easy of access yes ✓  
 15 H.P. ✓ 2 reuses ✓ 11 1/8" ✓ 7200 cu in  
 VERS:—No of high pressure air receivers 2 ✓ Internal diameter 10" ✓ Cubic capacity of each 4300 ✓  
 Seamless, lap welded or riveted longitudinal joint seamless ✓ Range of tensile strength 35 tons minimum ✓  
 working pressure by Rules 1200 lbs ✓ No. of starting air receivers 1 ✓ Internal diameter 4'-0" ✓  
 264 ✓ Material O.H.-S ✓ Seamless, lap welded or riveted longitudinal joint Double Buttstrap ✓  
 ngth 26 to 32 in thickness 13/16" ✓ Working pressure by rules 382 lbs ✓ Is each receiver, which can be isolated, yls ✓  
 alve as per Rule yls ✓ Can the internal surfaces of the receivers be examined yls ✓ What means are provided for cleaning their yls ✓  
 Is there a drain arrangement fitted at the lowest part of each receiver yls ✓



IS A DONKEY BOILER FITTED?

yes

If so, is a report now forwarded?

no

HYDRAULIC TESTS:

yes (from Vancouver)

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS					
COVERS					
JACKETS					
PISTON WATER PASSAGES					
MAIN COMPRESSORS—1st STAGE					
2nd					
3rd					
AIR RECEIVERS—STARTING	23 <sup>rd</sup> February 1923	382	623	LLOYDS TEST 623 W.P. 382 23-2-23 EE	found satisfactory
INJECTION		850		ICC 3A, Interstate Commerce Commission	
AIR PIPES	19 <sup>th</sup> May 1923	examined	under full working pressure		
FUEL PIPES	"	"	" working conditions		
FUEL PUMPS	"	"	"		
SILENCER	"	"	"		
WATER JACKET					
SEPARATE FUEL TANKS	9 <sup>th</sup> February 1923	tested	with water pressure as for rule & found satisfactory		

PLANS. Are approved plans forwarded herewith for shafting (If not, state date of approval)

yes

Receivers

yes

Separate Tanks

no

SPARE GEAR 1 cyl. cover complete with all valves etc fitted, 1 complete set of valves, seats & springs for 1 cylinder, 6 fuel needle valves, 1 piston complete with rings, in addition 1 set of piston rings, 1 set of gear wheels for cam shaft, 2 connecting rod top end bolts, bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set crankshaft coupling bolts, 1 set thrust shaft coupling bolts, 1 complete set air compressor rings, 1 set air compressor valves, 1 fuel pump complete & 1 set parts for same, a quantity of piping with unions etc, assorted bolts & nuts, including one set cylinder cover studs & nuts.

The foregoing is a correct description.

Wm. Dutoch & Seymour Corp. Manufacturer.

Dates of Survey while building: During progress of work in shops - 1920 May 27 Oct 1 1921 May 16 Dec 9 1923 Jan 11, 29, Feb 19  
During erection on board vessel - 1923 March 7, 19 April 11, 25, 30, May 9, 14, 15, 19  
Total No. of visits 7. 9 = Total 16

Dates of Examination of principal parts—Cylinders 11/1/23 Covers 29/1/23 Pistons 29/1/23, Rods - Connecting rods 11/1/23  
Crank shaft 11/1/23 Thrust shaft 11/1/23 Tunnel shafts 7/3/23 Screw shaft 7/3/23 Propeller 27/3/23 Stern tube 22/2/23 Engine seatings 7/3/23  
Engines holding down bolts 15/5/23 Completion of pumping arrangements 15/5/23 Engines tried under working conditions 19/2/23  
Completion of fitting sea connections 19<sup>th</sup> March 1923 Stern tube 10<sup>th</sup> March 1923 Screw shaft and propeller 19<sup>th</sup> March 1923  
Material of crank shaft Steel Identification Mark on Do. E60-61 CD Material of thrust shaft steel Identification Mark on Do. 473 JA  
Material of tunnel shafts Steel Identification Marks on Do. N°1161 CH N°1162 CH Material of screw shafts Steel Identification Marks on Do. (N°1157) (N°1158) (N°1159) (N°1160)  
Is the flash point of the oil to be used over 150° F. yes

Is this machinery duplicate of a previous case. If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. These Diesel motors have been built under

Special Survey in accordance with the Rules & approved plans, & the workmanship & material good. They have been satisfactorily tried under full load & they are now in good & safe working condition.

They have been forwarded to Vancouver to be fitted on board, & when this has been done in accordance with the Rules & approved plans, & when they have been satisfactorily tried under full power, they will be eligible, in my opinion, to receive the notation + LMC with date as recommended by Vancouver surveyor. These engines have now been fitted on board the vessel in accordance with the Rules & approved plans & have been tried out at sea under full power & found satisfactory & are eligible in my opinion to receive notation + LMC 5-2

The amount of Entry Fee ... £ : When applied for, 1 Mar 1923  
Special ... £ \$250.00  
Donkey Boiler Fee ... £ \$83.00  
Travelling Expenses (if any) £ 145.50  
Committee's Minute FRI JUL 13 1923

John S. Heck.  
Engineer Surveyor to Lloyd's Register of Shipping.

Note: Particulars shown in red are in each case in connection with survey held at Vancouver.

FRI 20 JUN 1924  
TUES. 18 AUG 1925

Assigned

See Tex. Rpt 1046

Lloyd's Register Foundation