

# REPORT ON OIL ENGINE MACHINERY.

Received at London Office 31 OCT 1944

Date of writing Report 30th June, 1944 When handed in at Local Office 30th June, 1944 Port of Vancouver, B. C.

No. in Survey held at Vancouver, B. C. Date, First Survey 21st Mar., 1943 Last Survey 21st June, 1944

Reg. Book. Number of Visits 47

on the ~~Triple~~ <sup>Single</sup> Screw vessel Wooden M.V. H.M.C.S. "LAVALLEE" Tons { Gross 168.19 Net 62.70

Built at Vancouver, B.C. By whom built A.C. Benson Shipyard, Ltd. Yard No. 748 When built 1944

Engines made at Vancouver, B. C. By whom made Vivian Diesels & Munitions Engine No. 2449 When made 1944

Donkey Boilers made at 400 Normal By whom made -- Boiler No. -- When made --

Indicated Horse Power 500 Supercharged Owners Department of National Defence (Naval Service) Port belonging to Not registered

Norm. Horse Power as per Rule 78.9 79 Is Refrigerating Machinery fitted for cargo purposes -- Is Electric Light fitted Yes

Trade for which Vessel is intended Government Service - Minesweeping.

OIL ENGINES, &c.—Type of Engines Heavy Oil 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 800 lbs. per Sq. Inch. Diameter of cylinders 9" Length of stroke 12" No. of cylinders 10 No. of cranks 10

Mean Indicated Pressure 150 lbs. per sq. inch Is there a bearing between each crank Yes

Revolutions per minute 500 Flywheel dia. 30" Weight 900 lbs. Means of ignition Compression Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

Kind of fuel used Diesel Oil F.P. above 150 F. Kind of fuel used Diesel Oil

**AIR RECEIVERS:**—Have they been made under survey. Yes ✓ State No. of Report or Certificate Nos. 10394 & 10396.  
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule Fusible plugs in Receivers & safety valve in pipe line to receivers.  
 Can the internal surfaces of the receivers be examined and cleaned. Yes ✓ Is a drain fitted at the lowest part of each receiver Yes ✓  
**Injection Air Receivers,** No. \_\_\_\_\_ Cubic capacity of each \_\_\_\_\_ Internal diameter \_\_\_\_\_ thickness \_\_\_\_\_  
 Seamless, lap welded or riveted longitudinal joint \_\_\_\_\_ Material \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Working pressure \_\_\_\_\_  
**Starting Air Receivers,** No. Two ✓ Total cubic capacity 17.27 Cu.Ft. each. Internal diameter 24" thickness 3/8"  
 Seamless, lap welded or riveted longitudinal joint Butt Welded Material O.H. Steel Range of tensile strength 26-30 tons Working pressure \_\_\_\_\_ Actual 274 lbs.  
 Actual 250 lbs.

**IS A DONKEY BOILER FITTED?** No ✓ If so, is a report now forwarded? --  
 Is the donkey boiler intended to be used for domestic purposes only --  
**PLANS.** Are approved plans forwarded herewith for Shafting Crank Shaft approved N.Yk. Oct. 1/42  
 (If not, state date of approval) N.Yk. Nov. 18/42 Approved N.Yk. 16-10-42 Separate Fuel Tanks Approved Vcr. 2-11-42  
**Donkey Boilers.** \_\_\_\_\_ General Pumping Arrangements \_\_\_\_\_ Pumping Arrangements in Machinery Space Approved N.Yk. 16-2-43.  
 Oil Fuel Burning Arrangements \_\_\_\_\_

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied As per list forwarded with Vancouver Report No. 6181.  
 State the principal additional spare gear supplied \_\_\_\_\_

The foregoing is a correct description

*Will Vician* Manufacturer.

Dates of Survey while building { During progress of work in shops - 1943. July 3, 5, 6, 7, 9, 14, 15, 20, 22, 23, 24, 26, 27, 28.  
 During erection on board vessel - 1943. March 21. May 28. June 28. July 26. Aug 9, 14, 16. Oct. 7, 15. Nov. 3, 9, 26, 29, Dec 29  
 Total No. of visits 49  
1944. Jan. 3, 14, 22, 24, Feb. 15, 21, 26. Mar. 10, 15, 28, 29. Apr. 3, 28. May 8, 10, 11, June 1, 8, 9, 14, 21.

Dates of Examination of principal parts—Cylinders 7-7-43 Covers 20-7-43 Pistons 7-7-43 Rods -- Connecting rods 15-7-43  
 Crank shaft and Flywheel shaft and Thrust shaft 15-7-43 Intermediate shafts 29-11-43 Tube shaft --  
 Screw shaft 29-11-43 Propeller 29-11-43 Stern tube 26-11-43 Engine seatings 9-8-43 Engines holding down bolts 3-4-44  
 Completion of fitting sea connections 28-5-43 Completion of pumping arrangements 8-6-44 Engines tried under working conditions 14-6-44  
 Crank shaft, Material O.H. Steel Identification Mark 5655 Flywheel shaft, Material do Identification Mark do  
 Thrust shaft, Material -- Identification Mark -- Intermediate shafts, Material O.H. Steel Identification Mark do  
 Tube shaft, Material -- Identification Mark -- Screw shaft, Material O.H. Steel Identification Mark do  
 Lloyd's No. 3225 & 3219  
 E.E.R. 9-2-43  
 Lloyd's No. 3231  
 E.E.R. 9-2-43

Description of fire extinguishing apparatus fitted.

**CO Sprinkler system fitted, also 6 Fomene & 7 Pyrene** Identification Marks on Air Receivers  
2 portable extinguishers fitted in E.R. Galley accommodation Lloyd's Test 10394  
 spaces & Battery Room. Lloyd's Test 10396  
 Is the flash point of the oil to be used over 150° F. Yes T.P. 425 lbs. T.P. 425 lbs.  
 W.P. 250 lbs. W.P. 250 lbs.  
 3-11-43 J.A.S. 3-11-43 J.A.S.

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with Yes ✓  
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No ✓ If so, have the requirements of the Rules been complied with --  
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with --

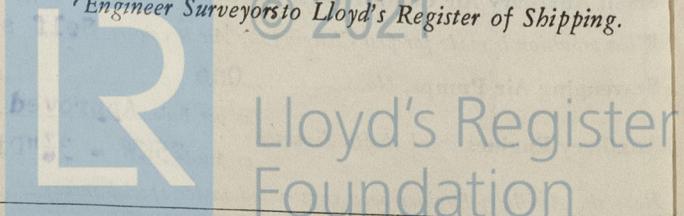
Is this machinery duplicate of a previous case Yes ✓ If so, state name of vessel H.M.C.S. "DAERWOOD" (Vcr. Report No. 6181)

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
The machinery of this vessel has been constructed under special survey in accordance with the Rules and approved plans & New York letters. The materials have been tested, found efficient, and the workmanship throughout is good. It has been efficiently installed on board and tried under full working conditions with satisfactory results. Sixteen stops and starts were made with engines, using one air receiver only without replenishing. Mean speed was 11.5 knots @ 500 R.P.M. and engine slow speed was between 100 & 120 R.P.M. The time taken from full ahead to full astern was approximately 10 seconds. This machinery is eligible in our opinion to have the notations of Oil Eng. \*L.M.C. 6,44 and Screw Shaft (C.L.) 6,44 in the Register Book. All the requirements of Sections 20 and 34 of the Rules, so far as they are applicable have been complied with. Additional cooling water connections to main engine from 25 K.W. Generator and fire main pipe line fitted.

The amount of Entry Fee ... \$ 10.00 }  
 Special (Shipbuilders) \$ 20.00 }  
 Shipbuilders Expenses \$ 5.00 }  
 Donkey Boiler Fee ... £ }  
 Engine builders fee \$ 120.00 }  
 Travelling Expenses (if any) £ }  
 (Eng. builders) \$ 5.00 }  
 When applied for, 3rd July 1944  
 When received, 19

Committee's Minute \_\_\_\_\_  
 Assigned + LMC 6,44 Oil Eng. C.L.

*L.B. Buchanan & W.W. Nichol*  
 Engineer Surveyors to Lloyd's Register of Shipping.



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