

## REPORT ON OIL ENGINE MACHINERY.

No. 10371

Received at London Office

31 MAY 1956

writing Report 28th Feb. 1955 When handed in at Local Office 19 Port of MONTREAL

Survey held at Kingston Date, First Survey 6/1/55 Last Survey 11/2/ 19. 55  
Number of Visits 8Single  
on the Tonnage  
Screw vessel M.V. "BONAVISTA" Tons Gross 1074  
Net 575

Aberdeen By whom built Hall Russel &amp; Co. Ltd. Yard No. 852 When built 1956

made at Kingston By whom made Canadian Locomotive Co. Ltd. Engine No. C165 When made 1955

Boilers made at By whom made Boiler No. When made

Horse Power 1280 Owners CANADIAN NATIONAL RAILWAY CO. Port belonging to ST. JOHN'S N.F.L.

Power as per Rule 256 Is Refrigerating Machinery fitted for cargo purposes YES - NOT CLASSED Electric Light fitted YES.

For which vessel is intended OPEN SEA SERVICE.

2 ENGINES, &amp;c. — Type of Engines 2 Cycle Opposed Piston 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 1150 p.s.i. Diameter of cylinders 8 1/8" Length of stroke 10" No. of cylinders 8 No. of cranks 16

Indicated Pressure 85 Ahead Firing Order in Cylinders 1, 8, 2, 6, 4, 5, 3, 7 Span of bearings, adjacent to the crank, measured

from outer edge to inner edge 9 1/4" Is there a bearing between each crank Yes Revolutions per minute 720

Flywheel dia. 36" Weight 1920 lb. Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg. cm.<sup>2</sup>) Means of ignition Comprn. Kind of fuel used Diesel

Alloy Cast Iron Upper &amp; Lower

dia. of journals as per Rule 8" Crank pin dia. 6 3/4" Crank webs Mid. length breadth See Thickness parallel to axis

as fitted 8" Mid. length thickness Plan shrunk Thickness around eyehole

Main Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as fitted

as fitted as fitted as fitted

Main Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the (tube screw) shaft fitted with a continuous liner

as fitted as fitted as fitted

Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the

stern boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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-

combustible If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after

end of the shaft If so, state type Length of bearing in Stern Bush next to and supporting propeller

Pitch No. of blades Material whether moveable Total developed surface sq. feet

Moment of inertia of propeller (lbs. in<sup>2</sup> or Kg. cm.<sup>2</sup>) Kind of damper, if fitted

Means of reversing Engines Non-Reversing Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of

5/16" and Forced Thickness of cylinder liners 3/8" Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

1 - SW Circulating Cent. 430 U.S. Galls/Min

Cooling Water Pumps, No. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

1 - Jacket Cooling Cent. 430 U.S. Galls/Min

Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

No. and size connected to the Main Bilge Line How driven

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

arrangements

Pumps, No. and size Power Driven Lubricating Oil Pumps, including spare pump, No. and size One M.E. Driven Herringbone

independent means arranged for circulating water through the Oil Cooler Suctions, connected to both main bilge pumps and auxiliary

pumps, No. and size:—In machinery spaces In pump room

&amp;c.

Independent Power Pump Direct Suctions to the engine room bilges, No. and size

Are the bilge suction pipes in holds and tunnel well fitted with strum-boxes Are the bilge suction in the machinery spaces led from easily

accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Sea Connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed

high on the ship's side to be seen without lifting the platform plates Are the overboard discharges above or below the deep water line

Are the blow off cocks fitted with a spigot and brass covering plate

Are the pipes pass through the bunkers How are they protected

Are the pipes pass through the deep tanks Have they been tested as per Rule

Are the pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times

Arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery

or from one compartment to another Is the shaft tunnel watertight Is it fitted with a watertight door worked from

If the vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Air Compressors, No. No. of stages diameters stroke driven by

Main Air Compressors, No. No. of stages diameters stroke driven by

Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

Provision is made for first charging the air receivers

Filling Air Pumps, No. One Roote's Type diameter Rotary Capacity 4900 Cu. Ft./Min. driven by Main Engine

as per Rule No.

as fitted Position

Have the auxiliary engines been constructed under special survey Is a report sent herewith

009888-009895-0044



**AIR RECEIVERS:**—Have they been made under survey..... State No. of report or certificate.....  
Is each receiver, which can be isolated, fitted with a safety valve as per Rule.....  
Can the internal surfaces of the receivers be examined and cleaned..... Is a drain fitted at the lowest part of each receiver.....  
Injection Air Receivers, No..... Cubic capacity of each..... Internal diameter..... thickness.....  
Seamless, welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....  
Starting Air Receivers, No..... Total cubic capacity..... Internal diameter..... thickness.....  
Seamless, welded or riveted longitudinal joint..... Material..... Range of tensile strength..... Working pressure.....

**IS A DONKEY BOILER FITTED**..... 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..... Receivers..... Separate fuel tank.....  
(If not, state date of approval)  
Donkey boilers..... General pumping arrangements..... Pumping arrangements in machinery space.....  
Oil fuel burning arrangements.....  
Have Torsional Vibration characteristics been approved..... Yes..... Date of approval..... 5/2/55

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied.....  
State the principal additional spare gear supplied.....

The foregoing is a correct description.....  
G. D. Pascoe..... Canadian Locomotive Co y, Limited......  
Manufacturer.

Dates of Survey while building.....  
During progress of work in shops - - - 1955 Jan. 6, 7; Feb. 2, 3, 8, 9, 10, 11.  
During erection on board vessel - - -  
Total No. of visits.....  
Dates of examination of principal parts—Cylinders 6/1/55 Covers..... Pistons 6/1/55 Rods..... Connecting rods 6/1/55  
Crank shaft 6/1/55 Flywheel shaft 6/1/55 Thrust shaft..... Intermediate shafts..... Tube shaft.....  
Screw shaft..... Propeller..... Stern tube..... Engine seatings..... Engine holding down bolts.....  
Completion of fitting sea connections..... Completion of pumping arrangements..... Engines tried under working conditions.....  
Crank shaft, material Alloy Cast Iron Identification mark..... Upper Lloyd's 7496 6-28-54 J.F.K.  
Flywheel shaft, material..... Identification mark.....  
Thrust shaft, material..... Identification mark..... Lower Lloyd's 7511 8-5-54 J.F.K.  
Intermediate shafts, material..... Identification marks.....  
Tube shaft, material..... Identification mark..... Screw shaft, material..... Identification mark.....  
Identification marks on air receivers.....

Welded receivers, state Makers' Name.....  
Is the flash point of the oil to be used over 150°F.....  
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with.....  
Description of fire extinguishing apparatus fitted.....  
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo..... 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..... If so, state name of vessel.....

**General Remarks** (State quality of workmanship, opinions as to class, &c..... This Engine has been built under Special Survey.....  
accordance with the approved plans and Rules.  
The torsional vibration characteristics of the Engine have been approved for an engine service speed of 720 rpm.  
the corresponding propeller speed of approximately 206 rpm.  
The materials and workmanship are good and, in my opinion, the Engine is suitable for installation in a vessel to  
classed with this Society.

Engine stamped:- LLOYD'S 7307 11-2-55 W.H.

The amount of Entry Fee ... £ :  
Special ... £ 322 :  
Donkey Boiler Fee... £ :  
Travelling Expenses (if any) £ 50 :  
When applied for MAR 23 1955  
When received 19

Committee's Minute

Assigned



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Lloyd's Register  
Foundation