

# REPORT ON OIL ENGINE MACHINERY.

No. 2394H.

Received at London Office

23 MAY 1956

of writing Report 19 56 When handed in at Local Office 14 5 19 56 Port of ABERDEEN

in Survey held at ABERDEEN. Date, First Survey 8. 11. 56 Last Survey 30. 4. 19 56

Book 519 on the Single Screw vessel M.V. "BONAVISTA" Tons Gross 117.4 Net 57.5

at ABERDEEN By whom built HALL RUSSELL & CO. LD. Yard No. 852 When built 1956

ines made at KINGSTON - ONT. By whom made CANADIAN LOCOMOTIVE CO. LD. Engine No. C.165 When made 1955

key Boilers made at By whom made Boiler No. When made

ce Horse Power Maximum 1280 Owners CANADIAN NATIONAL RAILWAY CO. Port belonging to ST. JOHN'S M.F.L. Service 256 Is Refrigerating Machinery fitted for cargo purposes YES - NOT CLASSIFIED Electric Light fitted YES

le for which vessel is intended OPEN SEA SERVICE

ENGINES, &c. - Type of Engines FAIRBANKS - MORSE OPPOSED PISTON 2 or 4 stroke cycle 2. Single or double acting SINGLE.

num pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks

Indicated Pressure Span of bearings (i.e., distance between inner edges of bearings in

of a crank) Is there a bearing between each crank Revolutions per minute Maximum Service

heel dia. Weight Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) Means of ignition Kind of fuel used

Solid forged dia. of journals as per Rule. Crank pin dia. Crank webs Mid. length breadth Thickness parallel to axis

Semi built dia. of journals as fitted SEE MONTREAL REPORT Crank webs Mid. length thickness shank Thickness around eye-hole

All built as per Rule. Intermediate Shafts, diameter as fitted 7 1/4" Thrust Shaft, diameter at collars as fitted

Shaft, diameter as per Rule. Screw Shaft, diameter as fitted 8 3/8" - 8" Is the shaft fitted with a continuous liner YES.

ze Liners, thickness in way of bushes as per Rule 9/16" Thickness between bushes as fitted 17/32" Is the after end of the liner made watertight in the

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

e 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-

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

of stern tube No. If so, state type. Length of bearing in Stern Bush next to and supporting propeller 3'-0"

eller, dia. 9'-0" Pitch 7'-04" M. No. of blades 4 Material STAINLESS whether moveable No Total developed surface 30 sq. feet

ent of inertia of propeller including EX trained water (lbs. in<sup>2</sup> or Kg. cm<sup>2</sup>) 1975,000 Kind of damper, if fitted.

ethod of reversing Engines NON-REVERS. Is a governor or other arrangement fitted to prevent racing of the engine YES. Means of

ocation FORCED. Thickness of cylinder liners 5/16" - 3/8" Are the cylinders fitted with safety valves YES. Are the exhaust pipes and silencers water cooled

ged with non-conducting material LAGGED. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

to the engine. Cooling Water Pumps, No. and how driven ONE - F.W. (ME) ONE - F.W. (E.D) ONE - S.W. (ME) ONE - S.W. (E.D) Working F.W. 1 @ 430 US GPM.

@ 430 US GPM. Spare F.W. 1 @ 500 US GPM. S.W. 1 @ 500 US GPM. Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES.

Pumps worked from the Main Engines, No. and capacity NONE Can one be overhauled while the other is at work

ps connected to the Main Bilge Line No. and capacity of each 1 - BILGE PUMP @ 34 T.P.H. 1 - C.S. @ 50 T.P.H. 1 - S.W. CAC @ 110 T.P.H. 1 - S.O.S. @ 34 T.P.H.

How driven ALL ELECTRICALLY

e cooling water led to the bilges No. If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

gements. Power Driven Lubricating Oil Pumps, including spare pump, No. and size ONE @ 250 US GPM (ME) ONE @ 250 " (S.T.BY)

wo independent means arranged for circulating water through the Oil Cooler YES. Branch Bilge Suctions

nd size: - In machinery spaces ONE 2 1/2" P.S.F. ONE 2 1/2" S.S.F. ONE 2 1/2" P.S.A. ONE 2" TUNNEL WELL In Pump Room ONE 2" E.R. C/D.

lds, &c. N.I. HOLD 1 - 2 1/2" P.S. N.I. HOLD C/D. 1 - 2" N.I. HOLD 1 - 2" P.S. N.I. HOLD C/D. 1 - 2" BUNKER C/D. 1 - 2" P.S. N.I. HOLD 1 - 2 1/2" P.S. AND A.F.T.

et Bilge Suctions to the engine room bilges, No. and size ONE 3" STAR. ONE 2 1/2" PORT. ONE 5" PORT. ONE 2" TUNNEL (S.O.S. PUMP)

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

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

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

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

hey 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

t pipes pass through the bunkers NONE How are they protected

t pipes pass through the deep tanks NONE Have they been tested as per Rule YES.

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

e 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

s, or from one compartment to another YES. Is the shaft tunnel watertight YES. Is it fitted with a watertight door YES. worked from UPPER DK.

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

on Air Compressors, No. NONE No. of stages stroke driven by

iliary Air Compressors, No. TWO No. of stages TWO diameters 4 1/2" - 1 5/8" stroke 3 1/2" driven by ELECT MOTOR

ll Auxiliary Air Compressors, No. NONE No. of stages stroke driven by

t provision is made for first charging the air receivers HAND STARTING DIESEL GENERATOR.

enging Air Pumps or Blowers, No. ONE ROTARY How driven M.E. 50KW - 383181

iliary Engines Have they been made under survey YES. Engine Nos. 100KW - 388783-4 20KW - 385995

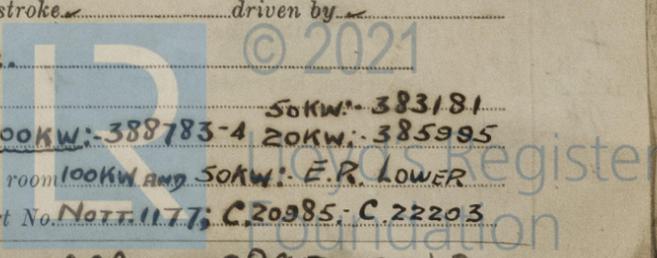
Makers name RUSTON & HORNSBY Position of each in engine room 100KW AND 20KW - E.R. LOWER

FORM P. S. SIDES 20KW - EMERGENCY GEN. R.M. UPPER DECK PORT SIDE. Report No. NOTT. 1177; C20985 - C 22203

009888 - 009895 - 0043



in Reverse Resolution Sent 31/5/56



AIR RECEIVERS:—Have they been made under survey **YES**. State No. of report or certificate **To Be Taken When Recd. N<sup>o</sup> C. 12396-7**  
 State full details of safety devices **RELIEF VALVE AND FUSIBLE PLUG ON EACH**  
 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. **NONE**. Cubic capacity of each  Internal diameter  thickness   
 Seamless, welded or riveted longitudinal joint  Material  Range of tensile strength  Working pressure   
 Starting Air Receivers, No. **FOUR**. Total cubic capacity **152 cu ft.** Internal diameter **29"** thickness **3/16" ENDS**  
 Seamless, welded or riveted longitudinal joint **WELDED**. Material **M. STEEL**. Range of tensile strength **26/30 T.P.** Working pressure **250**

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 **YES**. (If not, state date of approval) Receivers **No**. Separate fuel tanks   
 Donkey boilers  General pumping arrangements **YES**. Pumping arrangements in machinery space **YES**.  
 Oil fuel burning arrangements **YES**.  
 Have Torsional Vibration characteristics been approved **YES**. Date and particulars of approval **5-2-55 FOR ME. SPEED OF 72 AND PROP. - 20VG**

SPARE GEAR.

Has the spare gear required by the Rules been supplied **YES**. State if for "short voyages" only **No**  
 State the principal additional spare gear supplied **ONE FORK AIRFLEX COUPLING**

For HALL RUSSELL & Co., Ltd.

*[Signature]*  
 Director & General Manager

The foregoing is a correct description, Machinery Installation Contractors, Manufacturer.

Dates of Survey while building  
 During progress of work in shops - **1956 Nov. 8. Dec 19. 23. 1956 Jan. 19. 20.**  
 During erection on board vessel - **1956 Jan. 26 Feb. 24. Mar 4. 20. Apr 11. 13. 23. 25. 26. 24. 30**  
 Total No. of visits **16**

Dates of examination of principal parts—Cylinders  Covers  Pistons  Rods  Connecting rods   
 Crank shaft  Flywheel shaft  Thrust shaft  Intermediate shafts **20-3-56** Tube shaft   
 Screw shaft **20-1-56** Propeller **26-4-56** Stern tube **19-1-56** Engine seatings **20-1-56** Engine holding down bolts **20-3-56**  
 Completion of fitting sea connections **20-4-56** Completion of pumping arrangements **23-4-56** Engines tried under working conditions **23-4-56**  
 Crank shaft, material  Identification mark  Flywheel shaft, material  Identification mark   
 Thrust shaft, material  Identification mark  Intermediate shafts, material **SM/ING STL** Identification marks **9031**  
 Tube shaft, material  Identification mark  Screw shaft, material **SM/ING STL** Identification mark **LR N<sup>o</sup> 9**  
 Identification marks on air receivers **L.R. N<sup>o</sup> 12396/7; 12400, 12402. W.P. 250 T.P. 500 B.H.M. 31-1-55 etc.**

Welded receivers, state Makers' Name **EMPIRUM WELDING & ENG<sup>g</sup>. 6, LD - BIRMINGHAM.**  
 Is the flash point of the oil to be used over 150°F **YES**.  
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with **YES**.  
 Full description of fire extinguishing apparatus fitted in machinery spaces **AS PER DRG. N<sup>o</sup> E. 77 852 HEREWITH.**  
 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   
 What is the special notation desired **"STRENGTHENED FOR NAVIGATION IN ICE"**  
 If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with **YES**.

Is this machinery duplicate of a previous case **No**. If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.)  
**This vessel's machinery has been constructed and installed under Special Survey in accordance with approved Secretary's letters and Rules of the Society.**  
**The workmanship and materials are good.**  
**Upon completion, the machinery was examined under working conditions during sea trials when all parts were found satisfactory; the machinery is eligible, in my opinion for Classification with the records of L.M.C. A-560 T.S. (CL)**  
**Crankcase explosion relief devices not fitted - See Lidon letter dated 7<sup>th</sup> July**

The amount of Entry Fee ... **£49 0**  
 Special ... **£** When applied for **14. 5. 19 56.**  
 Donkey Boiler Fee... **£** When received **19**

*[Signature]*  
 T. Morris  
 Engineer Surveyor to Lloyd's Register of Shipping

Travelling Expenses (if any) **£ 4 10.**  
 Committee's Minute **GLASGOW 22 MAY 1956**  
 Assigned **+ L.M.C. H. 56. Oil Engine**

Certificate (if required) to be affixed to the space for Committee's Minute.  
 The Surveyors are requested not to write on or below the space for Committee's Minute.  
 25.5.56  
 A.R.

