

# REPORT ON OIL ENGINE MACHINERY.

No. 9371  
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of writing Report 2nd Feb. 1949 When handed in at Local Office 19 Port of San Francisco and Seattle

No. in Survey held at Portland, Oregon Date, First Survey 17th June 48 Last Survey 29th Jan. 19 49  
 Reg. Book. Single Motor "NELLY" ex "Long Island" ex "Mormacmail" Number of Visits 19  
 entered on the Motor Screw vessel "NELLY" ex "Long Island" ex "Mormacmail" Tons {Gross 7886  
Triple {Net 4682  
Quadruple

built at Chester, Pa. By whom built Sun S.B. & D.D. Corp. ~~XXXXXX~~ (PF 1091 When built 1940  
 (PA 1090  
 (SF 1088  
 (SA 1089)  
 Engines made at St. Louis, Mo. By whom made Busch-Sulzer Bros. Diesel Engine No. Eng. Co. When made 1940  
 Donkey Boiler made at New York By whom made Foster Wheeler Corp. Boiler No WHB 164 When made 1940  
 Brake Horse Power 8900 Owners Carribbean Land & Shipping Corp Port belonging to Panama  
 Nom. Horse Power as per Rule 2060  $MN = 2670$  Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes  
 Trade for which Vessel is intended Freighter

**OIL ENGINES, &c.**—Type of Engines Vertical enclosed Trunk Piston 2 or 4 stroke cycle 2 Single or double acting Single  
electro-magnetic coupled S.R.gears (4-units-P & S for'd & aft)  
 Maximum pressure in cylinders 750 lbs. Diameter of cylinders 20.5" Length of stroke 27.5 No. of cylinders 28 (7 cylinders each eng) No. of cranks 28  
 Mean Indicated Pressure 110 lbs.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 23.875 Is there a bearing between each crank Yes  
 revolutions per minute 240 S.R. Gear reduced to 85 R.P.M. Flywheel dia. 96" Weight 17.5 tons (est) when magnetically coupled. Means of ignition Comp. Kind of fuel used Light Diesel  
 Crank Solid forged as per Rule. Crank pin dia. 13.75 Crank Webs shrunk Mid length breadth 20" Thickness parallel to axis -  
 Shaft, XXXXXX dia. of journals as fitted 13.75 Mid length thickness 6.375" Thickness around eyehole -

Flywheel Shaft, diameter as per Rule. Intermediate Shafts, diameter as per Rule. Thrust Shaft, diameter at collars as per Rule.  
 as fitted -- as fitted 19" as fitted 13.375 (no torque)

Tube Shaft, diameter as per Rule. Screw Shaft, diameter as per Rule. Is the {tube} shaft fitted with a continuous liner {Yes} Yes  
 as fitted -- as fitted 23-1/8" as fitted --

Bronze 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 propeller boss Yes  
 as fitted 1-1/6" as fitted 1-1/6" 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-corrosive --  
 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 tube shaft No If so, state type -- Length of Bearing in Stern Bush next to and supporting propeller 7'-8 1/2"

Propeller, dia. 21'-8" Pitch 21.7 ft. No. of blades 4 Material bronze whether Moveable fixed Total Developed Surface 166.4 sq. feet  
 Method of reversing Engines Direct & shaft reversal by magnetic couplings Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication forced  
 Thickness of cylinder liners 1.25" Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine --

Cooling Water Pumps, No. 3 fresh & 3 salt water all 1300 GPM centrifugal Electric driven Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes  
 Bilge Pumps worked from the Main Engines, No. - Diameter - Stroke - Can one be overhauled while the other is at work -  
 Pumps connected to the Main Bilge Line {No. and Size 2 vert. centrifugal 6" dia. each  
 How driven Electric motors  
 Is the 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 arrangements --

Ballast Pumps, No. and size 1-6" vertical Centrifugal Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 3 rotary 750 GPM each  
 Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 4 - 3" dia.; 2 - 6"; 1 - 10" (Emergency circ. pump) In Pump Room -  
 In Holds, &c. 3" dia. port and starboard in each hold and deep tank  
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 - 3"; 1 - 10"  
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions 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 Yes  
 Are all Sea Connections fitted direct on the skin of the ship Yes Are they fitted with Valves or Cocks Valves  
 Are they fixed sufficiently 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 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 pass through the bunkers none How are they protected --  
 What pipes pass through the deep tanks none Have they been tested as per Rule --  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes  
 Is the 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 spaces, or from one compartment to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from above upper deck

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork --  
 Main Air Compressors, No. Two No. of Stages two Diameters 6.5"; 4" Stroke 5" Driven by Elect. motors  
 Auxiliary Air Compressors, No. One No. of stages two Diameters 5"; 4-3/8" Stroke 5" Driven by Elect. motor  
 Small Auxiliary Air Compressors, No. - No. of stages - Diameters - Stroke - Driven by -  
 What provision is made for first Charging the Air Receivers Battery cranked emergency Diesel generator driving compressor motors

Scavenging Air Pumps, No. 4 centrifugal blowers each engine Diameter - Stroke - Driven by gears from crankshaft  
 Auxiliary Engines crank shafts, diameter as per Rule. No. Three  
 as fitted 8" Position Star. for'd inbd; star. for'd outbd & starb'd aft on engine room floor level  
 Have the Auxiliary Engines been constructed under special survey No Is a report sent herewith No

**AIR RECEIVERS:**—Have they been made under survey.  No  Yes State No. of Report or Certificate July 1948 Tested to 1200 lbs.

Is each receiver, which can be isolated, fitted with a safety valve as per Rule  Yes  No

Can the internal surfaces of the receivers be examined and cleaned  Yes  No Is a drain fitted at the lowest part of each receiver  Yes  No

Injection Air Receivers, No. None Cubic capacity of each \_\_\_\_\_ Internal diameter \_\_\_\_\_ thickness \_\_\_\_\_

Seamless, lap welded or riveted longitudinal joint \_\_\_\_\_ Material \_\_\_\_\_ Range of tensile strength \_\_\_\_\_ Working pressure \_\_\_\_\_ by Rules \_\_\_\_\_

Starting Air Receivers, No. 5 Total cubic capacity 660 cu. ft. Internal diameter 4 @ 42" Working pressure \_\_\_\_\_ by Rules \_\_\_\_\_

Seamless, lap welded or riveted longitudinal joint welded Material steel Range of tensile strength 60/72000lbs Working pressure \_\_\_\_\_ by Rules \_\_\_\_\_

Actual 4 @ 1.25" thickness 1 @ .75" Actual 500

**IS A DONKEY BOILER FITTED?**  Yes  No If so, is a report now forwarded?  Yes  No

Is the donkey boiler intended to be used for domestic purposes only  Yes  No

**PLANS.** Are ~~approved~~ plans forwarded herewith for Shafting  Yes  No Receivers  No Separate Fuel Tanks  No

(If not, state date of approval)

Donkey Boilers  No General Pumping Arrangements  Yes Pumping Arrangements in Machinery Space  Yes

Oil Fuel Burning Arrangements \_\_\_\_\_

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied  Yes except spare propeller which has been ordered but not received

State the principal additional spare gear supplied None

The following drawings accompany this report:—

|  |                     |
|--|---------------------|
| Bilge, Ballast O F storage and O F transfer systems—Albina Eng.&Mach. Wks. Drawing No. A 285 |                     |
| Diagram of Fuel Oil transfer system -  | " " " " " No. C 966 |
| Arrangement of shafting -  | " " " " " No. C 976 |
| One line diagram of Electrical Distribution System -   | " " " " " No. A 166 |

The foregoing is a correct description

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }  
 { During erection on board vessel - - - }  
 Total No. of visits \_\_\_\_\_

Dates of Examination of principal parts—Cylinders 17 June 48 Covers 17 June 48 Pistons 17 June 48 Rods \_\_\_\_\_ Connecting rods 17 June 48

Crank shaft 17 June 48 Flywheel shaft \_\_\_\_\_ Thrust shaft 17 June 48 Intermediate shafts 17 June 48 Tube shaft \_\_\_\_\_

Screw shaft 18 Jan. 49 Propeller 18 Jan. 49 Stern tube 18 Jan. 49 Engine seatings 17 June 48 Engines holding down bolts 17 June 48

Completion of fitting sea connections \_\_\_\_\_ Completion of pumping arrangements \_\_\_\_\_ Engines tried under working conditions 28 Jan. 49

Crank shaft, Material forged steel Identification Mark \_\_\_\_\_ Flywheel shaft, Material \_\_\_\_\_ Identification Mark \_\_\_\_\_

Thrust shaft, Material forged steel Identification Mark \_\_\_\_\_ Intermediate shafts, Material forged steel Identification Marks \_\_\_\_\_

Tube shaft, Material \_\_\_\_\_ Identification Mark \_\_\_\_\_ Screw shaft, Material forged steel Identification Mark \_\_\_\_\_

Identification Marks on Air Receivers All starting air receivers made to the Rules and inspection of the American Bureau of Shipping. Each receiver has now been examined internally and tested to 1200 lbs. and found satisfactory.

Is the flash point of the oil to be used over 150° F.  Yes  No

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with  Yes  No

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo  No  Yes 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  No  Yes If so, state name of vessel \_\_\_\_\_

**General Remarks** (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel was not built to Survey but was constructed and installed in the vessel under the supervision of the Surveyors to the American Bureau of Shipping. The engines, their magnetic couplings and single reduction gears have been completely opened up and examined throughout and replaced in good order. The workmanship and materials used are good. The machinery has been tested under full working conditions and found satisfactory and, in our opinion, be favorably considered by the Committee for Classification with Lloyd's Register of Shipping and may then be entitled to records of LMC (C.S.) 1,49; T.S. (C.L.) 1, 49 and D.B.S. 1, 49, subject to a spare propeller being supplied at the earliest opportunity.

The amount of Entry Fee ... £ -- : -- : } When applied for, \_\_\_\_\_

Special ... £ : : } \_\_\_\_\_ 19

Donkey Boiler Fee ... £ : : } When received, \_\_\_\_\_

Travelling Expenses (if any) £ : : } \_\_\_\_\_ 19

James F. Robertson E. M. Maitland  
 Engineer Surveyors to Lloyd's Register of Shipping.



Committee's Minute

NEW YORK MAY 18 1949

Assigned LMC - 1, 49

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