

REPORT ON OIL ENGINE MACHINERY.

No. 27376⁶

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Port of Rotterdam

No. in Survey held at Rotterdam
Reg. Book.Date, First Survey 20th July 1937 Last Survey 27th Sept 1938

Number of Visits 90

on the ^{Single} ~~Twin~~ ^{Screw} ~~Triple~~ ^{Quadruple} vessel N.V. NOORDAMTons { Gross 5239
Net 3102.

Built at Rotterdam By whom built N.V. J. Smit Jr. Yard No. 515 When built 1938
 Engines made at Rotterdam By whom made N.V. J. Smit Jr. Engine No. 531/2 When made 1938
 Donkey Boilers made at Amman By whom made "Cochran & Co" Boiler No. 13950/1 When made 1937
 Brake Horse Power 12800 Owners "Ned. Amerik. Stoom. Mij" Port belonging to Rotterdam
 Nom. Horse Power as per Rule 2 x 1245 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes
 Trade for which vessel is intended Seagoing services.

IL ENGINES, &c.—Type of Engines Burmeister, Wain heavy duty 2 or 4 stroke cycle 2 Single or double acting single

Maximum pressure in cylinders 680 mm Diameter of cylinders 620 mm Length of stroke 1150 mm No. of cylinders 2 x 12 No. of cranks 2 x 12

Mean Indicated Pressure 94 lbs Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 870 mm Is there a bearing between each crank yes

Revolutions per minute 125 Flywheel dia. ✓ Weight ✓ Means of ignition Compression Kind of fuel used Diesel oil

Crank Shaft, { Solid forged
Semi built
All built } dia. of journals as per Rule ✓ as fitted 450 mm Crank pin dia. 450 mm Crank Webs Mid. length breadth 800 mm Thickness parallel to axis 280 mm
 as fitted 150 mm hole Mid. length thickness 280 mm Thickness around eye hole 215 mm

Flywheel Shaft, diameter as per Rule ✓ as fitted ✓ Intermediate Shafts, diameter as per Rule ✓ as fitted 385 mm Thrust Shaft, diameter at collars as per Rule ✓ as fitted 420 mm
 as fitted 150 mm hole

Tube Shaft, diameter as per Rule ✓ as fitted ✓ Screw Shaft, diameter as per Rule ✓ as fitted 420 mm Is the { tube
screw } shaft fitted with a continuous liner { yes

Bronze Liners, thickness in way of bushes as per Rule ✓ as fitted 21 mm Thickness between bushes as per Rule ✓ as fitted 21 mm Is the after end of the liner made watertight in the

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

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 tight fit

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 1850 mm

Propeller dia. 4925 mm Pitch 4950 mm No. of blades three Material bronze whether Moveable no Total Developed Surface 5,7520 M² sq. feet

Method of reversing Engines by air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication

forged Thickness of cylinder liners 42 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine up in funnel

Cooling Water Pumps, No. 3 à 650 t/h 1 à 40 t/h 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. none Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓

Pumps connected to the Main Bilge Line { No. and Size 3 à 130 t/h
How driven electrically

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 2 rotary à 130 t/h Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 3 rotary 250 t/h

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 2 à 3" eng. room wells, 2 à 4", 6 à 6", 2 à 8" (Cofferdam 97/100 12 1/2" In Pump Room deft Port found 12 1/2" 12 1/2" 12 1/2")

In Holds, &c. holds No. 1, 2, 3, 4, 5 each 2 à 3", hold No. 6, 4 à 3" 2 à 12 1/2" Hold No. 12 1/2" 12 1/2" 12 1/2" Hold No. 12 1/2" 12 1/2" 12 1/2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 6 à 6" 2 à 20" 5 1/2" 12 1/2" 5 1/2" 12 1/2" 5 1/2" 12 1/2" 5 1/2" 12 1/2"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces

ed 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 and cocks

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 top of eng. room

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. ✓ No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Auxiliary Air Compressors, No. 2 2 cyl. No. of stages 2 Diameters 194 x 210 mm Stroke 160 mm Driven by electrically

Small Auxiliary Air Compressors, No. one 1 cyl. No. of stages 2 Diameters 80 x 90 mm Stroke 100 mm Driven by aux engine

What provision is made for first Charging the Air Receivers small aux air compressor driven by hand started aux engine

Scavenging Air Pumps, No. 2 x 4 rotary blowers Diameter 690 mm Capacity stroke 14 x 7 mm Driven by main engine

Auxiliary Engines crank shafts, diameter as per Rule ✓ as fitted 180 mm No. 4 Position 2 Port and 2 Starboard in eng. room

Have the Auxiliary Engines been constructed under special survey yes Is a report sent herewith yes

AIR RECEIVERS:—Have they been made under survey *yes* State No. of Report or Certificate *✓*
Is each receiver, which can be isolated, fitted with a safety valve as per Rule *yes*
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. *2* Total cubic capacity *35 M³* Internal diameter *1654 mm* thickness *23 mm*
Seamless, lap welded or riveted longitudinal joint *✓* Material *S.M. steel* Range of tensile strength *49-55 kg/cm²* Working pressure *25 kg/cm²*

IS A DONKEY BOILER FITTED? *yes two* If so, is a report now forwarded? *yes*
Is the donkey boiler intended to be used for domestic purposes only *no*
PLANS. Are approved plans forwarded herewith for Shafting *12/57, 4/5/57* Receivers *25/5/57* Separate Fuel Tanks *27/5/57*
Donkey Boilers *✓* General Pumping Arrangements *27/5/57* Pumping Arrangements in Machinery Space *27/5/57*
Oil Fuel Burning Arrangements *27/5/57*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*
State the principal additional spare gear supplied *1 cylinder complete with liner, 1 cylinder cover, 12 exhaust valves complete, 4 starting valves complete, 1 piston complete, 6 sets of piston rings, 2 main bearing trunks, 1 set of top end trunks, 1 crankpin bearing, 1 fuel pump complete etc.*

The foregoing is a correct description,

Manufacturer.

A. J. B. B. B.

Dates of Survey while building
During progress of work in shops: *1937 July 20, Aug 3, Sept 10, 14, 21, Oct 4, 14, 20, Nov 10, 12, 22, 30, Dec 3, 6, 9, 10, 14, 15, 17, 21, 24, 27, Jan 3, 4, 5, 7, 12, 13, 17, 21, 24, Feb 2, 17, 21, 22, 24, March 3, 4, 9, 12, 14, 22, 24, 25, 28 April 1, 4, 6, 7, 8, 9, 14, 20, May 1-5-10, 11, 20*
During erection on board vessel: *1937 March 12, 22, 24, April 7, May 11, 20, 23, 28, 31, June 1, 8, 16, 23, 28 July 1, 4, 7, 13, 17, 21, 26*
Total No. of visits *90*

Dates of Examination of principal parts—Cylinders *1937 21/1, 21/2, 17/2* Covers *1937 21/1, 21/2, 17/2* Pistons *1937 21/1, 21/2, 20/3* Rods *✓* Connecting rods *1937 20/1, 20/2, 21/3, 21/4*
Crank shaft *1937 15/1, 5/1, 21/1, 21/2* Flywheel shaft *✓* Thrust shaft *1937 10/1, 21/2, 5/1, 4/1* Intermediate shafts *1937 20/1, 3/1, 4/1, 10/1, 4/3, 7/4* Tube shaft *✓*
Screw shaft *1937 3/1, 10/1, 14/1, 6/2, 21/1, 4/1, 12/1, 20/1* Propeller *1937 7/1, 19/1, 30* Stern tube *1937 12/1, 23/1, 30/1, 13/1, 13/1* Engine seatings *7/4, 11/5, 30* Engines holding down bolts *16/6, 16/1, 17/5, 30*
Completion of fitting sea connections *12/5/30* Completion of pumping arrangements *17/5/30* Engines tried under working conditions *23-24/5/30*
Crank shaft, Material *S.M. steel* Identification Mark *as per attached list* Flywheel shaft, Material *✓* Identification Mark *✓*
Thrust shaft, Material *S.M. steel* Identification Mark *✓* Intermediate shafts, Material *S.M. steel* Identification Marks *✓*
Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *S.M. steel* Identification Mark *✓*
Identification Marks on Air Receivers *LLOYD'S TEST 39 K.G. WP 15 K.G. E.L.K. 20-12-37.* *LLOYD'S TEST 56 ATM WP 18 ATM. C.V. 15-2-30*

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*
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo *yes vegetable oil* If so, have the requirements of the Rules been complied with *yes*
If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *no*
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, &c.) *The machinery has been made under special survey in accordance with the Society's Rules, approved plans and Secretary's letters, materials tested as required and workmanship throughout good, and has been satisfactorily fitted on board. The machinery has been tried under full working condition and was found in a good working and manoeuvring order and is in my opinion eligible to be recorded in the Society's Registerbook + L.M.C 9-30 C.L. oil engines DB 100 lbs.*

The amount of Entry Fee *£ 42. —* When applied for, *4.10.1938*
Special *£ 1947. —*
Donkey Boiler Fee *£ 100.00* When received, *18/10.1938*
Travelling Expenses (if any) *£ 46.50*

Committee's Minute

Assigned

+ L.M.C 9.38 C.L.
Oil engines 2 DB. 100 lb.

A. J. B. B. B.
Engineer Surveyor to Lloyd's Register of Shipping.