

REPORT ON OIL ENGINE MACHINERY.

No. 33445 B

Received at London Office 12 MAY 1951

Date of writing Report 3/4 1951 When handed in at Local Office 19 Port of Rotterdam
No. in Survey held at Amsterdam Date, First Survey 11/1 50 Last Survey 29/5 1951
Reg. Book. 9/197 on the Single Screw vessel M.V. ZEENDERT B Tons Gross 489.57
Triple
Quadruple
Built at Amsterdam By whom built van der Haagen & Co. Lemmer Yard No. 259 When built 1951
Engines made at Amsterdam By whom made Amsterdam Engine No. 10039 When made 1950
Donkey Boilers made at Amsterdam By whom made Amsterdam Boiler No. 10541 When made 1950
Brake Horse Power 500 Owners Gebr. Brouwer N.V. Port belonging to Amsterdam
M.N. Power as per Rule 112 NHP = 101 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
Trade for which vessel is intended Ocean going services

OIL ENGINES, &c. — Type of Engines Heavy oil engines 2 or 4 stroke cycle 4 Single or double acting single
Maximum pressure in cylinders 45 kg/cm² Diameter of cylinders 290 mm Length of stroke 175 mm No. of cylinders 8 No. of cranks 8
Mean Indicated Pressure 7.4 kg/cm² Ahead Firing Order in Cylinders 1-3-7-5-8-6-2-4 Span of bearings, adjacent to the crank, measured from inner edge to inner edge 419 mm Is there a bearing between each crank yes Revolutions per minute 320
Flywheel dia. 1300 mm Weight 1900 kg Moment of inertia of flywheel (lbs. in² or Kg. cm²) 1905 Means of ignition comp. Kind of fuel used heavy oil
Crank Shaft, Solid forged dia. of journals as per Rule Crank pin dia. 107 mm Crank webs Mid. length breadth 150 mm Thickness parallel to axis shrunk
Semi built as fitted 107 mm Mid. length thickness 105 mm Thickness around eye hole shrunk
All built
Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as fitted
Tube Shaft, diameter as per Rule Screw Shaft, diameter as fitted Is the tube shaft fitted with a continuous liner no
Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as fitted 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 yes
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 yes If two liners are fitted, is the shaft lapped or protected between the liners yes Is an approved Oil Gland or other appliance fitted at the after end of tube shaft yes If so, state type comp. with ring 150 mm Length of bearing in Stern Bush next to and supporting propeller 615 mm
Propeller, dia. 1900 mm Pitch 1150 mm No. of blades 3 Material bronze whether moveable no Total developed surface 10.50 sq. feet
Moment of inertia of propeller (lbs. in² or Kg. cm²) 81 Kind of damper, if fitted yes
Method of reversing Engines by hand Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication from Thickness of cylinder liners 30 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled yes
Are the exhaust pipes 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 12 1/2" 12 1/2" = I.M.E. & I.M.E. Bilge (also Ballast pump)
Cooling Water Pumps, No. 2 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. one Diameter 110 mm Stroke 70 mm Can one be overhauled while the other is at work yes
Pumps connected to the Main Bilge Line No. and size one 2 1/2" How driven main engine attached 1 rotary 2 oil and engine
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 yes
Ballast Pumps, No. and size one rotary 2 1/2" Power Driven Lubricating Oil Pumps, including spare pump, No. and size space 12 1/2" 80 l/min 2 1/2" 80 l/min
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 1/2" 2 1/2" 1 1/2" 1 1/2" In pump room 12 1/2"
In holds, &c. cofferdam from 12 1/2" (both) connected to rotary pump 2 1/2" bilge line by 2 1/2" line engine as forepeak flat.
Independent Power Pump Direct Suctions to the engine room bilges, No. and size 2 1/2" + 2 x 2 1/2"
Are all 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 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 & 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 above
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 yes
What pipes pass through the deep tanks none Have they been tested as per Rule yes
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 yes
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes
Main Air Compressors, No. one No. of stages 2 diameters 155/40 mm stroke 100 mm driven by main engine
Auxiliary Air Compressors, No. 1 No. of stages 1 diameters 110/95 mm stroke 85 mm driven by main engine
Small Auxiliary Air Compressors, No. one No. of stages 2 diameters 110/95 mm stroke 85 mm driven by oil engine
What provision is made for first charging the air receivers small aux air compressor driven by hand started engine
Scavenging Air Pumps, No. 1 diameter 110 mm stroke 110 mm driven by main engine
Auxiliary Engines crank shafts, diameter as per Rule No. one Position at the stern in the main engine
Have the auxiliary engine been constructed under special survey yes Is a report sent herewith yes

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AIR RECEIVERS:—Have they been made under survey *yes* State No. of report or certificate *Adam C 9741*
Is each receiver, which can be isolated, fitted with a safety valve as per Rule *fusible plugs, safety valves in air piping*
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, welded or riveted longitudinal joint *✓* Material *✓* Range of tensile strength *✓* Working pressure *✓*
Starting Air Receivers, No. *2 ✓* Total cubic capacity *1040 lbs* Internal diameter *500 mm* thickness *12 mm*
Seamless, welded or riveted longitudinal joint *welded* Material *steel* Range of tensile strength *27.9-28.9* Working pressure *Actual 20.6*
IS A DONKEY BOILER FITTED *yes* If so, is a report now forwarded *yes* *Glasgow report no 30469*
Is the donkey boiler intended to be used for domestic purposes only *no*
PLANS. Are approved plans forwarded herewith for shafting *23/10/50* Receivers *27/10/50 Adam* Separate fuel tanks *✓*
(If not, state date of approval)
Donkey boilers *✓* General pumping arrangements *10/9/50* Pumping arrangements in machinery space *10/9/50*
Oil fuel burning arrangements *10/9/50*
Have Torsional Vibration characteristics been approved *yes* Date of approval *20/6/50*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *yes*
State the principal additional spare gear supplied *✓*
Freezing quench arrangement in eng room: waterline with connection, and 45 L foam extinguisher with hose connection, 2-9 L pails from extinguishers, steam-heating line round donkey boiler. Pumping 2-9 L from extinguishers.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops - *1950. 22/11, 11/12*
During erection on board vessel - *1951. 24/11, 31/11, 28/12, 9/1, 13/1, 19/1*
Total No. of visits *8*

Dates of examination of principal parts—Cylinders *✓* Covers *✓* Pistons *✓* Rods *✓* Connecting rods *✓*
Crank shaft *✓* Flywheel shaft *✓* Thrust shaft *6-7-50* Intermediate shafts *✓* Tube shaft *✓*
Screw shaft *22/11/50* Propeller *23/11/50* Stern tube *24/11/50* Engine seatings *11/12/50* Engine holding down bolts *24/1/51*
Completion of fitting sea connections *11/12/50* Completion of pumping arrangements *19/1/51* Engines tried under working conditions *✓*
Crank shaft, material *✓* Identification mark *✓* Flywheel shaft, material *✓* Identification mark *✓*
Thrust shaft, material *steel* Identification mark *440YDS* Intermediate shafts, material *✓* Identification marks *✓*
Tube shaft, material *✓* Identification mark *✓* Screw shaft, material *steel* Identification mark *440YDS*
Identification marks on air receivers *Nº 1128 and 1132*
440YDS TEST 40.5 KGS WP 30 KGS
ANB 3-V-50
Shore propeller 440YDS 199 MB 15-9-50
spare propeller cast iron

Welded receivers, state Makers' Name *H.V. De Plaschelle & Co.*
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*
Description of fire extinguishing apparatus fitted *above stated*
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.) *The machinery has been constructed under special survey in accordance with the approved plans, Society's Rules and Secretary's letters, materials tested as required and workmanship good, and has been tried under full working condition and found in good working and manoeuvring order, and is in my opinion eligible to be classed in the Society's Registerbook + LMC 3-51 oil engines O.G.*
DB 100 lb. In the eng. room on P.S. is also fitted a 60 HP 6 oil ticker driven by driving one of the cargo pumps and a 4 KW generator. This is intended for harbour purposes only and is therefore considered to be not essential.

The amount of Entry Fee ... £
Special ... £ *215.-* When applied for *30/4 1957*
Donkey Boiler Fee ... £ When received *19*
Travelling Expenses (if any) £ *76.20*
Engineer Surveyor to Lloyd's Register of Shipping. *R. Williams*

Committee's Minute *TUES. 17 JUL 1951*
Assigned *+ LMC 3.51 Oil Eng. (with endorsement)*
O.G. DB 100 lb.



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