

VED
1949

REPORT ON OIL ENGINE MACHINERY.

No. 3778

Note: Engine No 71289 has been fitted in "Moby Dick" 1/51

Received at London Office

Writing Report 30-9-1949 When handed in at Local Office 19 Port of Groningen
Survey held at Harlingen Date, First Survey 5-2-1948 Last Survey 16-9-1949
Number of Visits 23

Single on the Twin Triple Quadruple Screw vessel "Orca"
Tons Gross 499.94 Net 362.54

By whom built Glasgow Messrs Brown
By whom made Colchester Darcy Paxman & Co
Yard No. unknown When built during war 1940/45
Engine No. 5871279 When made. "

Boilers made at — By whom made — Boiler No. — When made —
Horse Power 2 x 375 Owners "N.V. Orca"
Port belonging to Rotterdam
Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
For which vessel is intended coasting

Engines &c. — Type of Engines Paxman-Ricardo heavy oil 2 or 4 stroke cycle 4 Single or double acting single
Cylinder pressure in cylinders +60 kg/cm²
Indicated Pressure 6.5 kg/cm² Diameter of cylinders 7" Length of stroke 7 3/4" No. of cylinders 2 x 6 No. of cranks 6
Pitch of bearings, adjacent to the crank, measured from inner edge to inner edge 6 9/16" Is there a bearing between each crank yes

Revolutions per minute 1000 Flywheel dia. 18 1/2" Weight ± 60 kg Means of ignition Compress Kind of fuel used Diesel oil
Solid forged dia. of journals as per Rule 4 1/2" Crank pin dia. 4 1/8" Crank webs Mid. length breadth 7 1/2" Thickness parallel to axis
Semi built as fitted 4 1/2" Crank webs Mid. length thickness 7 1/2" Thickness around eye hole
All built as fitted 4 1/2" Crank webs Mid. length thickness 7 1/2" Thickness around eye hole

Propeller Shaft, diameter as per Rule / as fitted Intermediate Shafts, diameter as per Rule / as fitted
Screw Shaft, diameter as per Rule / as fitted 3 9/16" Is the (tube) shaft fitted with a continuous liner no
Liners, thickness in way of bushes as per Rule / as fitted Thickness between bushes as per Rule / as fitted Is the after end of the liner made watertight in the stern tube —
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-conductive —
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 no If so, state type — Length of bearing in Stern Bush next to and supporting propeller 15"

Propeller dia. 1000 mm Pitch 675 mm No. of blades 3 Material bronze whether moveable solid Total developed surface sq. feet
of reversing Engines revers gear Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of operation forced Thickness of cylinder liners 3/16" Are the cylinders fitted with safety valves no Are the exhaust pipes and silencers water cooled
ed with non-conducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned
the engine funnel Cooling Water Pumps, No. 1 each (+ 1 spare of 60 m³/h and 1 spare of 30 m³/h; see ballast.) Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Pumps worked from the Main Engines, No. — Diameter — Stroke — Can one be overhauled while the other is at work —
connected to the Main Bilge Line { No. and size 1 x ± 60 m³/h 1 x ± 30 m³/h
How driven el. motor el. motor
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 [1 spare ready interchangeable

Pumps, No. and size 1 x 60 m³/h, 1 x 30 m³/h Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 each m.e. +
Independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary
pumps, No. and size: — In machinery spaces 2 x φ 3" + 1 x φ 2 1/2" steering gear 2 x φ 2 1/2"
In pump room
&c. 2 x φ 3" (1 forward, 1 aft) + hand pump φ 2" (crew space, chain locker)

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 2 x φ 3" Are the bilge suction pipes in holds and tunnel well fitted with strum-boxes yes Are the bilge suction pipes 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
Sea Connections fitted direct on the skin of the Ship yes Are they fitted with valves or cocks valves Are they fixed
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
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 —
Pipes pass through the bunkers none How are they protected —
Pipes pass through the deep tanks none Have they been tested as per Rule —

Pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times yes
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
space or from one compartment to another yes Is the shaft tunnel watertight mach: aft 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 —
Auxiliary Air Compressors, No. one No. of stages for charging typhoon receivers diameters — stroke — driven by belt driven by el. motor
Provision is made for first charging the air receivers Bistard engine can be started by hand

Working Air Pumps, No. — diameter — stroke — driven by —
Main Engines crank shafts, diameter as per Rule 4 cyl. Paxman Ricardo; 3 cyl. Bistard
as fitted — Position centre line portside
auxiliary engines been constructed under special survey no Is a report sent herewith no

Register Foundation

4. B

AIR RECEIVERS:—Have they been made under survey no (engines el. start) 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.....
Typhoon Starting Air Receivers, No...... one Total cubic capacity..... 120 litres Internal diameter..... 300 mm thickness..... 10 mm
 Seamless, lap welded or riveted longitudinal joint..... ends e.w. Material..... SM steel Range of tensile strength..... tested at 60 at Working pressure.....
 [receiver originally tested by Dutch Authorities for WP = 60 at]

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 Receivers..... Separate fuel tank.....
 (If not, state date of approval)
 Donkey boilers..... General pumping arrangements..... 15-4-48 Pumping arrangements in machinery space..... yes
 Oil fuel burning arrangements.....

SPARE GEAR.

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

The foregoing is a correct description, [Signature] Manufacturer.

Dates of Survey while building on board
 During progress of work in shops..... 1948 : 5, 11, 18-2; 21-7; 3, 9, 13-8; 8, 29-9; 19, 20-10
 During erection on board vessel..... 16-11; 20, 21, 27-12; 1949: 5, 18-1; 20-5; 26-8; 7, 9, 13, 20-10
 Total No. of visits..... 23

Dates of examination of principal parts—Cylinders..... 8/29-9-48 Covers..... 8/29-9-48 Pistons..... 8/29-9-48 Rods..... Connecting rods.....
 Crank shaft..... 8-9-48 Flywheel shaft..... Thrust shaft..... 27-12-48 Intermediate shafts..... Tube shaft.....
 Screw shaft..... 18-2-48 Propeller..... 18-2-48 Stern tube..... Engine seatings..... 3-8-48 Engine holding down bolts..... 16-9-48
 Completion of fitting sea connections..... 8-9-48 Completion of pumping arrangements..... 16-9-48 Engines tried under working conditions..... 16-9-48
 Crank shaft, material..... Identification mark..... Flywheel shaft, material..... Identification mark.....
 Thrust shaft, material..... Identification mark..... Intermediate shafts, material..... Identification marks.....
 Tube shaft, material..... Identification mark..... Screw shaft, material..... Identification mark.....
 Identification marks on air receivers.....

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..... 3 x 9 litres
 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.....
 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..... yes If so, state name of vessel..... "Stientje Mensinga"

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

The amount of Entry Fee £ please see Special Survey Report
 Special £
 Donkey Boiler Fee... .. £
 Travelling Expenses (if any) £
 Committee's Minute.....
 Assigned..... Deferred



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