

REPORT ON OIL ENGINE MACHINERY.

No. 19334

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Date of writing Report 2 Nov 1954 When handed in at Local Office 19 Port of Amsterdam
No. in Reg. Book Survey held at Amsterdam Date, First Survey 24-8-53 Last Survey 18-1-54 Number of Visits 10

Single on the Twin Triple Quadruple Screw vessel "Eibergen"
Built at Groningen By whom built van Diepen Yard No. 928 When built 1954
Engines made at Amsterdam By whom made H.V. Werkspoor Engine No. 1682 When made 1954
Donkey Boilers made at - By whom made - Boiler No. - When made -
Brake Horse Power { Maximum 650 Service Owners Furness Port belonging to
M.N. as per Rule Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted Yes
Trade for which vessel is intended Ocean going

OIL ENGINES, &c. - Type of Engines TMA5-336 2 or 4 stroke cycle 4 Single or double acting Single
Maximum pressure in cylinders 50 kg/cm² Diameter of cylinders 330 mm Length of stroke 600 mm No. of cylinders 6 No. of cranks 6
Mean Indicated Pressure 7.29 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 394 mm Is there a bearing between each crank Yes Revolutions per minute { Maximum 320 Service
Flywheel dia. 1400 mm Weight 11400 kg Moment of inertia of flywheel (lbs. in² or Kg.cm²) 3.75325 Means of ignition Confs Kind of fuel used Diesel

Crank Shaft, Solid forged dia. of journals as per Rule 245 mm Crank pin dia. central 240 mm Crank webs Mid. length breadth 4.20 mm Thickness parallel to axis shrunk Mid. length thickness 1.40 mm Thickness around eyehole
Flywheel Shaft, diameter as per Rule 230 mm Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule 130 mm
Tube Shaft, diameter as fitted Screw Shaft, diameter as fitted Is the tube screw shaft fitted with a continuous liner No

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 - 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 fitted at the after end of stern tube - If so, state type Length of bearing in Stern Bush next to and supporting propeller

Propeller, dia. 1900 mm Pitch No. of blades Material whether moveable Total developed surface sq. feet
Moment of inertia of propeller including entrained water (lbs. in² or Kg.cm²) Kind of damper, if fitted
Method of reversing Engines Dir. Is a governor or other arrangement fitted to prevent racing of the engine Yes Means of lubrication Greases Thickness of cylinder liners 10 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled 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. and how driven Two h. z. Working F.W. One rotating

S.W. One rotating Spare F.W. S.W. Is the sea suction provided with an efficient strainer which can be cleared within the vessel
Bilge Pumps worked from the Main Engines, No. and capacity One rotating 30 t/h. Can one be overhauled while the other is at work
Pumps connected to the Main Bilge Line No. and capacity of each How driven
Is the cooling water led to the bilges - 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 capacity Power Driven Lubricating Oil Pumps, including spare pump, No. and size One gear wheel 126 lpm
Are two independent means arranged for circulating water through the Oil Cooler Branch Bilge Suctions
No. and size: - In machinery spaces In pump room
In holds, &c.

Direct Bilge Suctions to the engine room bilges, No. and size
Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes 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
Are all Sea Connections fitted direct on the skin of the Ship Are they fitted with valves or cocks Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the overboard discharges above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate
What pipes pass through the bunkers How are they protected
What pipes pass through the deep tanks 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

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 Is the shaft tunnel watertight Is it fitted with a watertight door worked from
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. One No. of stages two diameters 180/150 mm stroke 100 mm driven by M.E.
Auxiliary Air Compressors, No. No. of stages diameters stroke driven by
Small Auxiliary Air Compressors, No. No. of stages diameters stroke driven by

What provision is made for first charging the air receivers
Scavenging Air Pumps or Blowers, No. How driven
Auxiliary Engines Have they been made under survey Engine Nos. Makers name Position of each in engine room Report No.



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AIR RECEIVERS:—Have they been made under survey Yes ✓ State No. of report or certificate Dusseldorf 2457/32
 State full details of safety devices Spring loaded valves ✓
 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 1900 L Internal diameter 600 mm thickness 11 mm
 Seamless, welded or riveted longitudinal joint Seamless Material 1/2" Steel Range of tensile strength 40 kg/cm² Working pressure 30 kg/cm²

IS A DONKEY BOILER FITTED — 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 1-1-54 Receivers 1/3 54 Separate fuel tanks —
 Donkey boilers — General pumping arrangements — Pumping arrangements in machinery space —
 Oil fuel burning arrangements —

Have Torsional Vibration characteristics been approved Yes Date and particulars of approval 8-3-54. p. 1325

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes State if for "short voyages" only Short voyages
 State the principal additional spare gear supplied —

The foregoing is a correct description,
WERKSPOR N.V. Q 002 Manufacturer.

Dates of Survey while building
 During progress of work in shops — 24/8, 21/9, 28/9, 19/10, 30/11, 18/12 53; 6/1, 15/1, 18/1 54
 During erection on board vessel —
 Total No. of visits 9
 Dates of examination of principal parts—Cylinders 24/8 19/10 Covers 2/9 28/9 Pistons 18/12 Rods — Connecting rods 30/11
 Crank shaft 2/9 6/1 Flywheel shaft — Thrust shaft — Intermediate shafts — Tube shaft —
 Screw shaft — Propeller — Stern tube — Engine seatings — Engine holding down bolts —
 Completion of fitting sea connections — Completion of pumping arrangements — Engines tried under working conditions 15/1 54
 Crank shaft, material 1/2" Steel Identification mark Clayton 18ms 2P 30 71 Flywheel shaft, material, — Identification mark —
 Thrust shaft, material 1/2" Steel Identification mark HA 10-9-53 Intermediate shafts, material — Identification marks —
 Tube shaft, material — Identification mark KK-Avt 5-11-53 Screw shaft, material — Identification mark —
 Identification marks on air receivers: Clayton Test 7P 30 atm WP 30 atm 457-8-53 and Clayton Test 7P 30 atm WP 30 atm 475-2-52

Welded receivers, state Makers' Name —
 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 —
 Full description of fire extinguishing apparatus fitted in machinery spaces —
 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 —
 What is the special notation desired —
 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 Jan H'gel van Dispen

General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.)
The engine has been built under Special Survey in accordance with the approved plans, Secretarial letters and the Society's Rules. Materials have been tested as required and workmanship found good. The engine has been tried under full working conditions on maker's testbed and found satisfactory and merits in my opinion the approval of the Committee to grant the vessel where the engine is intended for a record + LMC with date when installed and tried on board. The engine has been shipped to Watershuizen.
Copy cert. of crankshaft, thrustshaft and airreceivers attached

The amount of Entry Fee ... £ 473.-
 Special ... £ :
 Donkey Boiler Fee... £ :
 Travelling Expenses (if any) £ :
 When applied for 19
 When received 19
 Engineer Surveyor to Lloyd's Register of Shipping. J. H. Bouwman

Committee's Minute FRIDAY 14 MAY 1954
 Assigned See Gen. F.E. Rpt.

Certificates (if required) to be sent to
 The Surveyors are requested not to write on or below the space for Committee's Minute.
 23.4.54

Rpt. 13.
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