

REPORT ON OIL ENGINE MACHINERY.

Received at London Office **23 AUG 1955**

Date of writing Report 22.7.1955 When handed in at Local Office 19 Port of Düsseldorf

No. in Survey held at Köln-Deutz Date, First Survey 6.4.55 Last Survey 7.7.1955
Reg. Book. " Lavapaca " Number of Visits 1

Single on the Twin Triple Quadruple Screw vessel Lavapaca Tons { Gross... Net... } 27

Built at Bremerhaven By whom built Rickmerswerft Yard No. (222) When built 1955

Engines made at Köln-Deutz By whom made Klöckner-Humboldt-Deutz A.G. Engine No. 1483631-638 When made 7.55

Donkey Boilers made at - By whom made - Boiler No. - When made -

Brake Horse Power { Maximum 1650 Service 1650 Owners - Port belonging to -

M.N. as per Rule 330 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -

Trade for which vessel is intended -

OIL ENGINES, &c. — Type of Engines Airless Injection Heavy Oil Engine RBV8M 366 with supercharging or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 65 kg/cm² Diameter of cylinders 420 mm Length of stroke 660 mm No. of cylinders 8 No. of cranks 8

Mean Indicated Pressure 9.9 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in way of a crank) 520 mm Is there a bearing between each crank yes Revolutions per minute { Maximum 250 Service 250 }

Flywheel dia. 1600 mm Weight 6300 kg Moment of inertia of flywheel (lbs. in² or Kg. cm²) 10000 kgm² Means of ignition compr. Kind of fuel used Diesel

Crank Shaft, { Solid forged dia. of journals as per Rule, appr. 15.10.54 as fitted 270 mm Crank pin dia. 265 mm Crank webs Mid. length breadth 460 mm Thickness parallel to axis - Semi built All built Mid. length thickness 130 mm shrunk Thickness around eye-hole - }

Flywheel Shaft, diameter as per Rule, appr. 23.4.51 as fitted 260 mm Thrust Shaft, diameter at collars as per Rule, - as fitted -

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

Bronze 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 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. - 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 vibration damper

Method of reversing Engines with air Is a governor or other arrangement fitted to prevent racing of the engine yes Means of lubrication forced Thickness of cylinder liners 35 mm Are the cylinders fitted with safety valves yes Are the exhaust manifolds yes Are the exhaust manifolds water cooled yes

Are the exhaust manifolds lagged with non-conducting material - 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 - Working F.W. -

S.W. - 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 - Can one be overhauled while the other is at work -

Pumps connected to the Main Bilge Line { No. and capacity of each No other information than above. 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 driven by main engine capacity 165/150 ltrs/min.

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. - No. of stages - diameters - stroke - driven by -

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 -

Reversing 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 -

Main engine only required. Report No. -



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AIR RECEIVERS:—Have they been made under survey yes State No. of report or certificate No. Df. C. 55/107
 State full details of safety devices each receiver is fitted with a safety valve
 Can the internal surfaces of the receivers be examined and cleaned yes Is a drain fitted at the lowest part of each receiver -
 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. two Total cubic capacity 2000 ltrs. Internal diameter 620 mm thickness 15 mm
 Seamless, welded or riveted longitudinal joint welded Material SM Steel Range of tensile strength 41-47 Working pressure 30 kg/cm

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 appr. 15.10.54 Receivers appr. 16.7.53 Separate fuel tanks -
 (If not, state date of approval)
 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 letter of the 21st April 1955

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes State if for "short voyages" only no
 State the principal additional spare gear supplied -

The foregoing is a correct description Kloekner-Humboldt-Deutz Manufacturer.
Adhanggesellschaft

Dates of Survey while building
 During progress of work in shops 1955: April 6.12.15.25.29., May 6., June 8.13.23.28., July 7.,
 During erection on board vessel -
 Total No. of visits 11
 Dates of examination of principal parts—Cylinders 12.4.25.4 Covers 6.5.13.6 Pistons 13.6 Rods - Connecting rods 29.4.13
 Crank shaft 29.4.13.6 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 8.6.55
 Crank shaft, material SM Steel Identification mark Lloyds Dsf. 434 HS 282 Flywheel shaft, material - Identification mark -
 Thrust shaft, material - Identification mark - Intermediate shafts, material SM Steel Identification marks Lloyds 13A HK
 Tube shaft, material - Identification mark - Screw shaft, material - Identification mark -
 Identification marks on air receivers Lloyds Test Dsf. No. 100-6788, 100-6789.
T.P. 48.5 Atm.
W.P. 30 Atm.
29.4.55 W.S. Wilhelm Siebel, Freudenberg

Welded receivers, state Makers' Name Wilhelm Siebel, Freudenberg
 Is the flash point of the oil to be used over 150°F -
 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 - MARITUS

Is this machinery duplicate of a previous case yes If so, state name of vessel J.L. Meyer Papenburg Yard No. 46 (Report No. 142)

General Remarks (State quality of workmanship, opinions as to class, Speed restrictions, &c.)
 This engine has been constructed under special survey of tested materials and is in accordance with the Secretary's letters approved plans and Rules requirements. The material and the workmanship are good and the engines when tested in the shops under full and overload conditions were found to function satisfactorily. The governor tests were also satisfactory. This engine is suitable, in opinion, for main propelling purpose and when satisfactorily installed and reported will be eligible to receive the notation LMC (with date).
 Explosion relief devices have been fitted in accordance with the Rules Chapter H Section 8 Par. 8

The amount of Entry Fee ... £DM 1.560.-
 Running Test ... DM 100.-
 Special ... £ : :
 Donkey Boiler Fee... £ : :
 Travelling Expenses (if any) £DM ... 166.-
 A/C D 6358
 Committee's Minute
 Assigned See Rpt. 46
 When applied for 19
 When received 19
 FRIDAY 10 FEB 1956
 Engineer Surveyor to Lloyd's Register of Shipping
 Lloyd's Register Foundation

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

