

REPORT ON OIL ENGINE MACHINERY.

5-JUL 1956

Received at London Office

of writing Report 10.4. 1956 When handed in at Local Office 19 Port of Köln

in Survey held at Köln-Deutz Date, First Survey 5.3.56 Last Survey 5.4. 1956

Book. "Zingaw" Number of Visits 6

Single on the Twin Triple Quadruple Screw vessel Tons Gross - Net -

at Mainz-Kastel By whom built Chr. Ruthof Yard No. 1399 When built 2079345-50

Engines made at Köln-Deutz By whom made Klöckner-Humboldt-Deutz Engine No. 4.56

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

Indicated Horse Power { Maximum 230 Service 46 Owners - Port belonging to -

as per Rule 46 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -

ade for which vessel is intended Ferry- Water Boat for the Rangoon River

ENGINES, &c. - Type of Engines Airl. Inj. Heavy Oil SA6M 428 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 60 kg/cm² Diameter of cylinders 220 mm Length of stroke 280 mm No. of cylinders 6 No. of cranks 6

Indicated Pressure 5.96 kg/cm² Span of bearings (i.e., distance between inner edges of bearings in of a crank) 241 mm Is there a bearing between each crank yes Revolutions per minute { Maximum 650 Service 500

flywheel dia. 950 mm Weight 795 kg Moment of inertia of flywheel (lbs. in² or Kg. cm²) 470 kgm² Means of ignition compr. Kind of fuel used Diesel

ank shaft, { Solid forged as per Rule appr. 5.2.51 dia. of journals 150 mm Crank pin dia. 130 mm Crank webs Mid. length breadth 225 mm shrunk Thickness parallel to axis -

{ Semi built as fitted 150 mm Mid. length thickness - Thickness around eyehole -

{ All built as fitted -

Wheel Shaft, diameter as per Rule - Intermediate Shafts, diameter as per Rule - Thrust Shaft, diameter at collars as per Rule -

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

onze 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

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

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-

rosive - If two liners are fitted, is the shaft lapped or protected between the liners - Is an approved Oil Gland fitted at the after

d of stern tube - If so, state type - Length of bearing in Stern Bush next to and supporting propeller -

opeller, dia. - Pitch - No. of blades - Material - whether moveable - Total developed surface - sq. feet

ment of inertia of propeller including entrained water (lbs. in² or Kg. cm²) - Kind of damper, if fitted vibration damper

Method of reversing Engines forced not reversible Is a governor or other arrangement fitted to prevent racing of the engine yes Means of

abrication Thickness of cylinder liners 15 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

ck to the engine - Cooling Water Pumps, No. and how driven one by M.E. equipped with reboiler

W. S.W. Spare F.W. - S.W. - Is the sea suction provided with an efficient strainer which can be cleared within the vessel -

ge Pumps worked from the Main Engines, No. and capacity one capacity 6.2 m³/h. Can one be overhauled while the other is at work -

umps connected to the Main Bilge Line { No. and capacity of each - How driven -

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

angements -

allast Pumps, No. and capacity - Power Driven Lubricating Oil Pumps, including spare pump, No. and size one driven by M.E. capacity 46.5 ltr. p.m.

re two independent means arranged for circulating water through the Oil Cooler - Branch Bilge Suctions -

o. and size: - In machinery spaces - In pump room -

holds, &c. -

irect Bilge Suctions to the engine room bilges, No. and size -

re 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

ossible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges. -

re all Sea Connections fitted direct on the skin of the Ship - Are they fitted with valves or cocks - Are they fixed

efficiently 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 -

re 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 -

hat pipes pass through the bunkers - How are they protected -

hat pipes pass through the deep tanks - Have they been tested as per Rule -

re all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times -

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

aces, or from one compartment to another - Is the shaft tunnel watertight - Is it fitted with a watertight door - worked from -

a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork -

ain Air Compressors, No. - No. of stages - diameters - stroke - driven by -

uxiliary Air Compressors, No. - No. of stages - diameters - stroke - driven by -

small Auxiliary Air Compressors, No. - No. of stages - diameters - stroke - driven by -

That provision is made for first charging the air receivers -

avenging Air Pumps or Blowers, No. - How driven -

uxiliary Engines Have they been made under survey - Engine Nos. -

Makers' name Main engine only supplied. Position of each in engine room -

Report No. -

27-11-56

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AIR RECEIVERS:—Have they been made under survey yes State No. of report or certificate
 State full details of safety devices each receiver head has been equipped with a safety valve.
 Can the internal surfaces of the receivers be examined and cleaned 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 240 ltrs. Internal diameter 304 mm thickness 8 mm
 Seamless, welded or riveted longitudinal joint welded Material SM.Steel Range of tensile strength 47/53 kg/mm² 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 appr.5.2.51 Receivers appr.5.2.53 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 calculations have been forwarded to London for approval on the 23rd May, 1956
 Date and particulars of approval 5.7.56

SPARE GEAR.
 Has the spare gear required by the Rules been supplied yes State if for "short voyages" only -
 State the principal additional spare gear supplied -

The foregoing is a correct description,
 Klackner-Humboldt-Deutz Manufacturer.

Dates of Survey while building
 During progress of work in shops 1956 March 5 to 10
 During erection on board vessel -
 Total No. of visits 6

Dates of examination of principal parts—Cylinders 10.3.22.3 Covers 10.3.22.3 Pistons 22.3. Rods - Connecting rods 9.3.22
 Crank shaft 5.3.22.3. 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 21.3.
 Crank shaft, material SM.Steel Identification mark Lloyd's HLN.942 H.D. 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 LLOYD'S TEST HNO. T.P. 48.5 ATM, W.P. 30 ATM. No. 14176 H.L. 15.2.56
LLOYD'S TEST HNO. T.P. 48.5 ATM, W.P. 30 ATM. No. 14179 H.L. 15.2.56

Welded receivers, state Makers' Name Ruhrstahl A.G., Brackwede
 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 -
 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, 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 Rule Requirements. The materials and workmanship are good and the engine, when tested in the shops under full and overload conditions was found to function satisfactorily. The governor tests were also satisfactory. This engine in my opinion is suitable for main propelling purposes 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, Pa. 8

The amount of Entry Fee ... £DM : 300.-
 Running Tests ... DM : 100.-
 Special ... £ : :
 Donkey Boiler Fee... £ : :
 Travelling Expenses (if any) £DM : 40.-

When applied for 19
 When received 19

Committee's Minute 416 R 295
 Assigned Sir Rpt. 1.
 THURSDAY 21 MAY 1956

