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UN 1951
D.O. Report

REPORT ON OIL ENGINE MACHINERY.

No. 61
61 JUN 1951
16 JUN 1951

Received at London Office

When handed in at Local Office 19 Port of Augsburg
Survey held at Augsburg Date, First Survey 2nd August 1949 Last Survey 20th April 1951
Book. M.T. GRONLAND Number of Visits 95
Single on the Twin Triple Quadruple Screw vessel. Tons Gross Net
At Hamburg By whom built Deutsche Werft A.G. Yard No. When built 1951
Engines made at Augsburg By whom made Maschinenf. Augsburg-Nurnberg AG Engine No. 503000 When made 1951
Key Boilers made at By whom made Boiler No. When made
Horse Power 8000 / 6650 Owners Shipping trade "det Dansk-Franske" Port belonging to Kopenhagen
Power as per Rule 2123 Is Refrigerating Machinery fitted for cargo purposes. Is Electric Light fitted.
Use for which vessel is intended Tanker service

ENGINES, &c. — Type of Engines D 8 Z 70/120 N° 503000 2 or 4 stroke cycle 2 Single or double acting double
Maximum pressure in cylinders 48-50 atm Diameter of cylinders 700 mm Length of stroke 1200 mm No. of cylinders 8 No. of cranks 8
Indicated Pressure 8000 BHP / 5.3 atm / n = 117 Ahead Firing Order in Cylinders 1. 8. 2. 4. 6. 3. 5. 7. Span of bearings, adjacent to the crank, measured
inner edge to inner edge 1020 mm Is there a bearing between each crank Yes Revolutions per minute at 8000 / 117 r.p.m.
Flywheel dia. 700 mm Weight 4000 kg Moment of inertia of flywheel (16lbs. in² or Kg.cm.²) 17000 kg/m² Means of ignition div. inj. Kind of fuel used gas oil

Journal dia. 700 mm dia. of journals 525 mm as per Rule 525 mm as fitted. Crank pin dia. 524.5 mm Crank webs Mid. length breadth 310 mm Thickness parallel to axis 310 mm
All built. Mid. length thickness 310 mm shrunk Thickness around eyehole 238.5 mm

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 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 tube shaft. 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
Kind of damper, if fitted.
Method of reversing Engines comp. air Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of

Are the cylinders fitted with safety valves. Are the exhaust pipes and silencers water cooled
lagged with non-conducting material. If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned
to the engine. Cooling Water Pumps, No. Is the sea suction provided with an efficient strainer which can be cleared within the vessel.
Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work.

Pumps connected to the Main Bilge Line No. and size 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
arrangements.
Independent Power Pump Direct 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
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.
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.

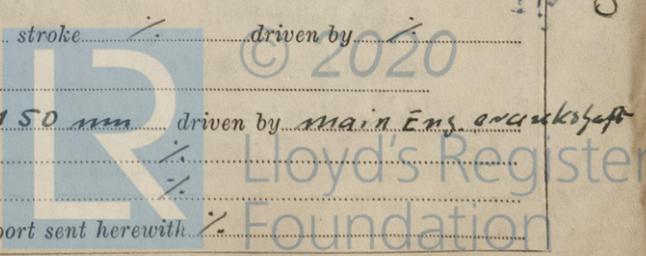
How are they protected.
Have they been tested as per Rule.
Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times.
the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from 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 on a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork.

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

Is a provision made for first charging the air receivers.
Reversing Air Pumps, No. 1. Tandem / 700 mm diameter 1650 mm stroke 1150 mm driven by main Eng. overcrank shaft
Auxiliary Engines crank shafts, diameter as per Rule as fitted. Position
Have the auxiliary engines been constructed under special survey. Is a report sent herewith.

DM
24/7/51
Excel
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G.H.K.
8/10/51
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AIR RECEIVERS: — Have they been made under survey... State No. of report or certificate...
 Is each receiver, which can be isolated, fitted with a safety valve as per Rule...
 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.... Total cubic capacity... Internal diameter... thickness...
 Seamless, welded or riveted longitudinal joint... Material... Range of tensile strength... Working pressure...

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... Separate fuel tanks...
 Donkey boilers... General pumping arrangements... Pumping arrangements in machinery space...
 Oil fuel burning arrangements...
 Have Torsional Vibration characteristics been approved... Date of approval...

SPARE GEAR.

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

Maschinenfabrik Augsburg-Nürnberg A.G.

Manufacturer.

Dates of Survey while building...
 During progress of work in shops...
 During erection on board vessel...
 Total No. of visits...
 Dates of examination of principal parts—Cylinders... Covers... Pistons... Rods... Connecting rods...
 Crank shaft... 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...
 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...
 Welded receivers, state Makers' Name...
 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...
 Description of fire extinguishing apparatus fitted...
 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.)... This hoary oil main engine has been constructed under special survey in accordance with the Secretary's letters and instructions... and other wise in conformity with the Rules. The material used in the construction is... and the workmanship was found to be satisfactory. Subject main engine has been tested running on Makers Test-Bed with satisfactory results. In my opinion the vessel for which this main engine... will be eligible for the notation of + L.S.C. (with date) when the whole... has been satisfactorily fitted aboard and tried under full working conditions.

The amount of Entry Fee...
 2/3 Special Survey... 5082.00
 Donkey Boiler Fee... 160.00
 Travelling Expenses (if any) £ 50.00
 Committee's Minute...
 Assigned...
 When applied for... 19...
 When received... 19...
 FRI. 16 MAY 1952

Engineer Surveyor to Lloyd's Register of Shipping
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Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.