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4 MAY 1949

# REPORT ON OIL ENGINE MACHINERY.

No. 6282

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Writing Report 25<sup>th</sup> April 1949 When handed in at Local Office 27<sup>th</sup> April 1949 Port of OSLO  
Survey held at Harvør and Oslo Date, First Survey 18/7 - 1947 Last Survey 18/12 - 1948  
Number of Visits 10

ook. 4 on the Single Twin Triple Quadruple Screw vessel. " ESSO 5 " (ex. "Landing Craft G. 26")  
By whom built Fleming and Ferguson Ltd Yard No. 673 When built 1944  
By whom made Davey, Paxman & Co. Ltd Engine No. 71693 When made 1944  
By whom made E. & J. V. & S. Boiler No. ✓ When made ✓  
Boilers made at ✓ Owners Østlandske Petroleumsselskab Port belonging to Oslo  
Horse Power 380 exchange Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
Power as per Rule ✓ for which vessel is intended prepared: Oslo fjord and best coast to Kristiansand

ENGINE, &c. — Type of Engines V-type lean oil engine 2 or 4 stroke cycle 4 Single or double acting SA  
num pressure in cylinders 84.6 lb./in<sup>2</sup> Diameter of cylinders 7" Length of stroke 7 3/4" No. of cylinders 12 No. of cranks 6  
Indicated Pressure ✓ Ahead Firing Order in Cylinders 1 2 3 4 5 6 7 8 9 10 11 12 Span of bearings, adjacent to the crank, measured  
inner edge to inner edge 7.1" Is there a bearing between each crank yes Revolutions per minute 1100  
heel dia. Bitch coupling Moment of inertia of flywheel (16lbs. in<sup>2</sup> or Kg.cm.<sup>2</sup>) ✓ Means of ignition comp. Kind of fuel used sea oil  
Solid forged ✓ dia. of journals as per Rule Crank pin dia. 4 1/2" Crank webs Mid. length breadth 7" Thickness parallel to axis ✓  
Semi built ✓ as fitted 4 1/2" Mid. length thickness 19/16" Thickness around eyehole ✓  
All built ✓ as fitted 7" Thrust Shaft, diameter at collars as per Rule

heel Shaft, diameter as per Rule Intermediate Shaft, diameter as fitted 7" Is the {tube} shaft fitted with a continuous liner no  
e Shaft, diameter as per Rule Screw Shaft, diameter as fitted 3.66" Is the {screw} shaft fitted with a continuous liner no  
ize 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  
eller boss ✓ If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓

he 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-  
osive ✓ 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  
of tube shaft no If so, state type at shaft bracket Length of bearing in Stern Bush next to and supporting propeller 15"  
peller, dia. 3'-0" Pitch 1'-8 1/16" No. of blades 3 Material mang. bronze Whether moveable no Total developed surface 4.56 sq. feet

ment of inertia of propeller (16lbs. in<sup>2</sup> or Kg.cm.<sup>2</sup>) ✓ Kind of damper, if fitted ✓ Means of  
hod of reversing Engines by gear Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes  
ication ✓ Thickness of cylinder liners 3/16" Are the cylinders fitted with safety valves no Are the exhaust pipes and silencers water cooled  
ugged with non-conducting material water cooled 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. Two Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

ge Pumps worked from the Main Engines, No. ✓ Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓  
nps connected to the Main Bilge Line { No. and size Two, one 70 tons / hour, one 20 tons / hour  
How driven by electric motors  
he 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  
ngements ✓

last Pumps, No. and size one for 70 tons / hour Power Driven Lubricating Oil Pumps, including spare pump, No. and size Two, off main engine  
two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary  
e pumps, No. and size: — In machinery spaces one 3 1/2" SB, one 3 1/2" port, one 2", one 1 1/2" In pump room ✓  
holds, &c. ✓ two 3 1/2"

ependent Power Pump Direct Suctions to the engine room bilges, No. and size two 3 1/2" Are the bilge suction pipes in the machinery spaces led from easily  
e all the bilge suction pipes in holds and tunnel well fitted with strum-boxes ✓ Are they fitted with valves or cocks valves Are they fixed  
ossible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes  
e all Sea Connections fitted direct on the skin of the Ship yes Are the overboard discharges above or below the deep water line above  
iciently high on the ship's side to be seen without lifting the platform plates yes Are the blow off cocks fitted with a spigot and brass covering plate ✓  
e they each fitted with a discharge valve always accessible on the plating of the vessel yes How are they protected ✓  
at pipes pass through the bunkers ✓ Have they been tested as per Rule ✓

at pipes pass through the deep tanks ✓ Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times yes  
e 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 yes 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 ✓  
xiliary Air Compressors, No. ✓ No. of stages ✓ diameters ✓ stroke ✓ driven by ✓  
all Auxiliary Air Compressors, No. ✓ No. of stages ✓ diameters ✓ stroke ✓ driven by ✓  
hat provision is made for first charging the air receivers ✓ diameter ✓ stroke ✓ driven by ✓  
avenging Air Pumps, No. ✓ No. Two, Paxman Ricardo, 4 RQ Position one on starboard, one between main engine  
uxiliary Engines crank shafts, diameter as per Rule 3 1/8" Is a report sent herewith no (F 4/6/48)

ave the auxiliary engines been constructed under special survey yes 013042-013051-0057

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... Receivers... 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...  
one complete cylinder cover  
Two cylinder liners  
Two pistons  
Two complete connecting rods  
Two fuel pumps

The foregoing is a correct description,

Manufacturer.

Dates of Survey... 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 shafts... 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... Two CO<sub>2</sub> containers, 2 foam apparatus

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 vessel was built as a landing craft, and has now been converted into a tanker for carrying oil in bulk, F.P. above 150°F, the original machinery being retained, except the 15KW. Lister generator which was removed. The main and auxiliary machinery was opened up and examined throughout. Scantling of main and aux engine crank shafts, interm shaft & screw shafts noted. The pumping arrangements were now amended in accordance with the plan approved on the 4th June 1948. The main engine is marked: SB: 1859 52981, 9.6.44. Port: 1859 53410. 2.6.44. The auxiliary engines are: Two Paxman-Ricardo 44 BHP engines. 45CSA. 4 cylinders, type "4 R D". Dia. 1100 revs. The cylinders are marked: Port cylinder cover 5046 12/5/45, jacket 5046 10/5/45, SB cover 5046 24/5/45, jacket 3044. It is recommended that this vessel's machinery be classed in the Register Book with notation of

LMC 1248 and screw shafts seen

The amount of Entry Fee... Special... Donkey Boiler Fee... Travelling Expenses (if any) £...  
When applied for... 19...  
When received... 19...

Committee's Minute

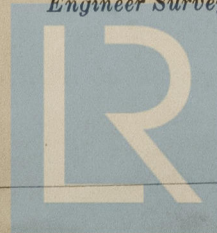
Assigned

FRI. 13 MAY 1949

+ LMC 1248 (with endorsement)

5648

Engineer Surveyor to Lloyd's Register of Shipping.



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Lloyd's Register Foundation

Rpt. 13.

No. in Su  
Reg. Book.

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