

REPORT ON OIL ENGINE MACHINERY.

No 107110

30 MAR 1950

Received at London Office

Date of writing Report 3/3/50 When handed in at Local Office 29 MAR 1950 Port of NEWCASTLE-ON-TYNE

No. in Survey held at BLYTH Date, First Survey 1st FEBRUARY, 1949 Last Survey 21st FEBRUARY, 1950
Reg. Book.

Number of Visits 36

✓ on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel NELLY MAERSK (YARD N° 342)Tons Gross 8223.08
Net 4805.36

Built at BLYTH By whom built BLYTH D.D. & S.B. CO. LTD Yard No. 342 When built 1950
 Engines made at TURIN By whom made SOC. AN. FIAT STAB. GRANDI MOTORI Engine No. 2973 When made 1942
 WALLSEND & NE. MARINE ENG. CO (1938) LTD 3172
 Donkey Boilers made at STOCKTON By whom made STOCKTON CHEMICAL ENGINEERS & BOILER NO. 7128 When made 1949
 RILEY BOILERS LTD
 Brake Horse Power 5100 Owners MESSRS A.P. MØLLER Port belonging to Fredericia
 Nom. Horse Power as per Rule 1328 Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted ☒
 Trade for which vessel is intended Carrying Petroleum in bulk.

OIL ENGINES, &c.—Type of Engines

2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders
 Mean Indicated Pressure
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge
 Revolutions per minute Flywheel dia. Weight
 Crank Shaft, { Solid forged as per Rule
 Semi built dia. of journals as fitted
 All built Crank pin dia.
 Flywheel Shaft, diameter as per Rule
 as fitted Intermediate Shafts, diameter as per Rule
 as fitted Tube Shaft, diameter as per Rule
 as fitted Screw Shaft, diameter as per Rule
 as fitted Thrust Shaft, diameter at collars as per Rule
 as fitted
 Bronze Liners, thickness in way of bushes as per Rule
 as fitted Thickness between bushes as per Rule
 as fitted
 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 or other appliance fitted at the after end of the tube
 shaft If so, state type Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. 5000 mm. Pitch 3815 mm. No. of blades 4 Material BRONZE whether Moveable or FIXED Total Developed Surface 96.23 sq. feet
 3020 mm.

Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication

Thickness of cylinder liners Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with
 non-conducting material LAGGED 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. Is the sea suction provided with an efficient strainer which can be cleared within the vessel ☒

Bilge 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 1-60 TONS/HR 1-150 TONS/HR 1-30 TONS/HR
 How driven MAIN ENGINE STEAM IND. STEAM IND.

Is the 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 arrangements ☒

Ballast Pumps, No. and size 1-150 TONS/HR Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1-60 TONS/HR 1-150 TONS/HR

Are two independent means arranged for circulating water through the Oil Cooler YES Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces 2-5" DIA. 3-3" DIA. 2-2 1/2" DIA. In Pump Room AFT PUMP 1-5" DIA.
 FORD PUMP 1-3" DIA.

In Holds, &c. ☒

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2-5" DIA.

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes YES Are the Bilge Suctions in the Machinery Spaces

ed from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES

Are all Sea Connections fitted direct on the skin of the ship YES Are they fitted with Valves or Cocks VALVES & COCKS

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates YES Are the Overboard Discharges above or below the deep water line ABOVE

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel YES Are the Blow Off Cocks fitted with a spigot and brass covering plate YES

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 YES

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 YES 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. 2 No. of stages 2 Diameters 3 1/2" 8 1/4" Stroke 7" Driven by STEAM ENGINE

Small Auxiliary Air Compressors, No. ☒ No. of stages ☒ Diameters ☒ Stroke ☒ Driven by ☒

Is provision made for first Charging the Air Receivers ☒

Scavenging Air Pumps, No. SEE GENOA RPT. NO 17369 Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule ☒ Pins 105 mm. JOURNALS 115 mm. Position PORT SIDE ENGINE ROOM

Have the Auxiliary Engines been constructed under special survey YES Is a report sent herewith COPENHAGEN PPT. RETURNED

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AIR RECEIVERS: - Have they been made under survey SEE RPT. N° 17369

State No. of Report or Certificate

Is each receiver, which can be isolated, fitted with a safety valve as per Rule YES

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, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓
Actual ✓

Starting Air Receivers, No. SEE RPT. N° 17369 Total cubic capacity ✓ Internal diameter ✓ thickness ✓
Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength ✓ Working pressure by Rules ✓
Actual ✓

IS A DONKEY BOILER FITTED? YES

If so, is a report now forwarded? YES

Is the donkey boiler intended to be used for domestic purposes only NO

PLANS. Are approved plans forwarded herewith for Shafting SEE RPT. N° 17369

Receivers SEE RPT. N° 17369 Separate Fuel Tanks YES

Donkey Boilers YES General Pumping Arrangements ✓ Pumping Arrangements in Machinery Space YES

Oil Fuel Burning Arrangements YES

SPARE GEAR.

Has the spare gear required by the Rules been supplied YES ✓

State the principal additional spare gear supplied MAIN ENGINE

1-CYLINDER LINER COMPLETE, 1- PISTON WITH RINGS, 72- PISTON RINGS, 2- COMPLETE FUEL PUMPS (TOP & BOTTOM CYLINDERS), 2- TOP FUEL VALVES, 2- BOTTOM FUEL VALVES.

The foregoing is a correct description. (AS FAR AS APPLICABLE)

Manufacturer.

Dates of Survey while building
During progress of work in shops 1949 FEB. 1, 17, 25, MAY 10, JUNE 24, JULY 11, SEPT. 5, 9, 12, 13, 14, 20, 26, OCT. 10, 11, 12, 13, 17, 19, 25, NOV. 11, DEC. 9, 12, 30, 1950 JAN. 4, 5, 10, 12, 1951
During erection on board vessel - - FEB. 4, 7, 17, 18, 21
Total No. of visits 36

Dates of Examination of principal parts - Cylinders

Crank shaft SEE RPT. N° 17369 Flywheel shaft 14/9/49 Thrust shaft 20/9/49 Intermediate shafts 14/9/49 Rods 5/1/50 Connecting rods 18/2/50
Screw shaft 14/9/49 Propeller 7/2/50 Stern tube 20/9/49 Engine seatings 14/9/49 Engines holding down bolts 5/1/50
Completion of fitting sea connections 20/9/49 Completion of pumping arrangements 4/2/50 Engines tried under working conditions 18/2/50
Crank shaft, Material Identification Mark SEE RPT. N° 17369 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

T.V.Cs approved Sec. 8/3/50. for 115 R.P.M. Provided NOT 60 to 80 R.P.M.

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 YES

Description of fire extinguishing apparatus fitted STEAM SMOTHERING & ELLERHAMMER FOAM

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo OIL TANKER 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 not required

Is this machinery duplicate of a previous case 17369 If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

The foregoing machinery has been fitted to the "hully mawls" (Blyth Ford n°342) & subsequently tried under working conditions on a sea trial & found satisfactory. Torsionograph records have been taken from the main engine shafting system by the Society's Research Staff. The damaged main engine bedplate casting has been repaired in accordance with London Office requirements. The machinery of this vessel, in my opinion, is eligible in my opinion to have the notation LMC 2.50, O.B.S. 2.50 & Screw shaft (C.L.) even 9.49. Subject to torsionograph records taken on the vessel's sea trial being approved by the Committee & the repairs to the main engine bedplate being specially examined not later than the end of February 1951. (See ante)

The amount of Entry Fee .. £ 102 : 12 : When applied for,
Special £ : : 19.
Donkey Boiler Fee £ : : When received,
Travelling Expenses (if any) £ 1 : 19 : 19.

Committee's Minute

FRI. 21 APR 1950

Assigned LMC 2.50 Oil Eng Subject (with endorsement)
C.L. 273 18016

Thomas D. Potts
Engineer Surveyor to Lloyd's Register of Shipping.



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