

REPORT ON OIL ENGINE MACHINERY.

No. 13902

Received at London Office

19 OCT

of writing Report 10 10 19 53 When handed in at Local Office 10 10 19 53 Port of TRIESTE
Survey held at TRIESTE Date, First Survey 13th Feb. '53 Last Survey 1st Oct. 19 53
Book. Number of Visits 18
257 S on the ~~Tank~~ ~~XTT~~ ~~Quadrant~~ Screw vessel "NAIKO"
Gross 511 Tons
Net 230
at TRIESTE By whom built Cantieri Riuniti dell'Adriatico Yard No. 1784 When built 1953-10
Lines made at San Francisco By whom made General Metals Corp. Enterprise Division Engine No. 51063 When made 1952
Boilers made at By whom made Boiler No. When made
Horse Power 480 Owners Republic of Indonesia Port belonging to Djakarta
Power as per Rule 96 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes
for which vessel is intended General cargo

ENGINES, &c. — Type of Engines D.M.G. 8 Vertical Marine 2 or 4 stroke cycle 4 Single or double acting single
Minimum pressure in cylinders 720 lbs/a" Diameter of cylinders 12" Length of stroke 15" No. of cylinders 8 No. of cranks 8
Indicated Pressure 89 lbs/a" Ahead Firing Order in Cylinders 1,4,7,3,8,5,2,6 Span of bearings, adjacent to the crank, measured
inner edge to inner edge 11.5" Is there a bearing between each crank yes Revolutions per minute 350
Wheel dia. 33" Weight 1409 lbs. Moment of inertia of flywheel (lbs. in² or Kg. cm.²) — Means of ignition Comp. Kind of fuel used Diesel
Solid forged as per Rule as appd. Mid. length breadth 12.5" Thickness parallel to axis —
dia. of journals as fitted 8.5" Crank pin dia. 8" Crank webs Mid. length thickness 3.125" Thickness around eye hole —
Wheel Shaft, diameter as per Rule as appd. Intermediate Shafts, diameter as fitted 5.9" Thrust Shaft, diameter at collars as fitted 7"
Screw Shaft, diameter as fitted 5.9" Is the (tube) shaft fitted with a continuous liner no
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
propeller 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-
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 tube shaft yes If so, state type as appd. (7.10.52) Length of bearing in Stern Bush next to and supporting propeller 650 mm.
Propeller, dia. 1670 mm Pitch 1175 mm No. of blades 4 Material bronze whether moveable fixed Total developed surface 0.95 sq. ft.
Moment of inertia of propeller 133 Kind of damper, if fitted —
Method of reversing Engines direct Is a governor fitted to prevent racing of the engine when decelerated yes Means of
operation forced Thickness of cylinder liners .85" Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers
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
to the engine — Cooling Water Pumps, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
Pumps worked from the Main Engines, No. 1 2" discharge rotary Can one be overhauled while the other is at work —
Pumps connected to the Main Bilge Line (No. and size 1 at 35 T/Hr. 1 at 35 T/Hr. 1 at 35 T/Hr. 1 2" rotary
How driven Elect. Mot. (emergency) Aux. Eng. Aux. Eng. Main Eng.
Is 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 —
Suction Pumps, No. and size 3 at 35 T/Hr. each Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 - 2" gear type
Two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both main bilge pumps and auxiliary
pumps, No. and size: — In machinery spaces 2 at 60mm / 2 at 50mm from dry tanks and 1 at 50mm C.D. in pump room —
Holds, &c. No. 1 hold 2 at 60mm / No. 2 hold 2 at 60mm From C/D. — 1 at 60mm
Dependent Power Pump Direct Suctions to the engine room bilges, No. and size 1 at 80mm starbd. 1 at 60mm port 1 at 80mm
emergency
Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes yes 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 yes as practicable
Are all Sea Connections fitted direct on the skin of the Ship yes Are they fitted with valves or cocks valves Are they fixed
sufficiently high on the ship's side to be seen without lifting the platform plates yes/ as practicable 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 —
Do all pipes pass through the bunkers none How are they protected —
Do all pipes pass through the deep tanks none 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 as practicable
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 none Is it fitted with a watertight door — worked from —
Is the vessel 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 2 diameters 4 1/2" & 2 1/2" stroke — driven by Main Eng.
Auxiliary Air Compressors, No. 1 No. of stages 2 diameters 38 c.mts. capacity stroke — driven by Aux. Eng.
All Auxiliary Air Compressors, No. 1 No. of stages 2 240 lit./Hr. capacity driven by hand
Is provision made for first charging the air receivers hand compressor
Suctioning Air Pumps, No. — diameter — stroke — driven by —
Auxiliary Engines crank shafts, diameter as per Rule No. 2 Position Eng. room 1 port & 1 starbd.
Have the auxiliary engines been constructed under special survey yes Is a report sent herewith see Hamburg certs. Nos. 3202 & 4022

4/11/53

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Propd

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AIR RECEIVERS:—Have they been made under survey yes State No. of report or certificate see S.Fo.Rpt.
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, welded or riveted longitudinal joint - Material - Range of tensile strength - Working pressure -
Starting Air Receivers, No. two Total cubic capacity 32 cubic ft. Internal diameter 22" thickness 5/16"
Seamless, welded or riveted longitudinal joint butt welded Material M.S. Range of tensile strength 28.32 T/ Working pressure -

IS A DONKEY BOILER FITTED no 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 23.12.48 N.Y. 7.10.52 Ind. S. Fo. Separate fuel tanks -
(If not, state date of approval) 24.9.52 Donkey boilers - General pumping arrangements - Pumping arrangements in machinery space 24.9.52
Oil fuel burning arrangements -
Have Torsional Vibration characteristics been approved yes Date of approval 7.10.52

SPARE GEAR.

Has the spare gear required by the Rules been supplied YES
State the principal additional spare gear supplied One Screwshaft One bronze propeller and various small items

NOTE:- The main engine governor has been suitably adjusted, a notice board has been fitted at the control station stating that the engine speed should not rise above 370 R.P.M. and the tachometer marked accordingly.

CANTIERI RIUNITI DELL'ADRIATICO

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building
During progress of work in shops - - See San Francisco Report 4b.
During erection on board vessel - - 1953:-Feb.13.May 23.June 16.July 10,14,21,24,25,26. Aug. 25,29. Sep.7,9,15, 28,29. Oct. 1.
Total No. of visits Eighteen

Dates of examination of principal parts—Cylinders X Covers X Pistons X Rods - Connecting rods X
Crank shaft X Flywheel shaft ✓ Thrust shaft X Intermediate shafts 26.8.53 Tube shaft X
Screw shaft 14.7.53 Propeller 16.2.53 Stern tube 14.7.53 Engine seatings 26.8.53 Engine holding down bolts 26.8.
Completion of fitting sea connections 10.7.53 Completion of pumping arrangements 29.9.53 Engines tried under working conditions 29.9.
Crank shaft, material X Identification mark X Flywheel shaft, material - Identification mark LLOYD
Thrust shaft, material X Identification mark X Intermediate shafts, material E.F.S. Identification marks IL 51
Tube shaft, material ✓ Identification mark ✓ Screw shaft, material E.F.S Identification mark LLOYD's IL 500
Identification marks on air receivers N°. 6618 LLOYD's TEST 500 lbs. 23. NOV. 51 N°. 6576 LLOYD's TEST 500 lbs. 24. MAY. 51

Welded receivers, state Makers' Name See San Francisco Report 10
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 CO2 system Portable extinguishers and fire hoses
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo no 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 no
Is this machinery duplicate of a previous case yes If so, state name of vessel Cantieri Riuniti dell'Adriati Yard N°. 1781 - 1782 - 1783

General Remarks (State quality of workmanship, opinions as to class, &c. M/V's "NAIRA"-"NUKAHA"-"NU")
The main machinery of this vessel was constructed under the supervision of the San Francisco Surveyors and has now been efficiently installed on board the vessel in accordance with Rule requirements, the Secretary's letters and approved plans, together with the Auxiliary machinery constructed under the supervision of the Hamburg Surveyors.
The workmanship and materials are good.
On completion the installation was tried under full working conditions at sea and found satisfactory.
In my opinion the machinery is eligible for a classed vessel with records:

+ LMC - 10.53 Oil Engine - Screwshaft O.G.

The amount of Entry Fee ... £ 34 .. 6 .. 0
Special ... £ : : :
Donkey Boiler Fee... £ : : :
Car fund £ 1 .. 14 .. 0
Travelling Expenses (if any) £ 3 .. 0 .. 0

When applied for 12.10.53
When received 19.10.53

TUESDAY 24 NOV 1953

Assigned + LMC 10.53 Oil Eng. (Torsional Endorsement.)
OG.

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