

REPORT ON OIL ENGINE MACHINERY.

No. 13910

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4b. of writing Report 19 When handed in at Local Office 9/11 1953 Port of TRIESTE
Survey held at TRIESTE Date, First Survey 23rd February '53 Last Survey 21st Oct. 1953
Number of Visits 18
261 Single on the Twin Screw vessel "NUBURI"
Tons Gross 510 Net 229
at TRIESTE By whom built Cantieri Rimiti dell'Adriatico Yard No. 1785 When built 1953-10
San Francisco By whom made General Metals Corporation Engine No. 51064 When made 1952
Enterprise Division
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
Maximum pressure in cylinders 720 lbs/ " Diameter of cylinders 12" Length of stroke 15" No. of cylinders 8 No. of cranks 8
Indicated Pressure 89 lbs/ " 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. cm²) — Means of ignition comp. Kind of fuel used Diesel

Material Solid forged dia. of journals as per Rule as appd. 8" Crank pin dia. 8" Crank webs Mid. length breadth 12.5" Thickness parallel to axis —
Solid built dia. of journals as fitted 8.5" Crank webs Mid. length thickness 3.125" Thickness around eyehole —
Al built as per Rule as appd. Thrust Shaft, diameter at collars as fitted 7" as per Rule as appd.
Intermediate Shafts, diameter as fitted 5.9" as per Rule as appd. Is the shaft fitted with a continuous liner no
Screw Shaft, diameter as fitted 5.9" as per Rule as appd. Is the shaft fitted with a continuous liner no

Size Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per Rule 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 —
ve 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-
sive — 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 yes If so, state type Cedervall Length of bearing in Stern Bush next to and supporting propeller 650 mm.
eller, dia. 1670 mm Pitch 1175 mm No. of blades 4 Material Bronze whether moveable fixed Total developed surface 0.95 sq. Mt.
ent of inertia of propeller (lbs. in² or Kg. cm²) 133 Kind of damper, if fitted —

Method of reversing Engines direct Is a governor or other arrangement fitted to prevent racing of the engine when disengaged yes Means of
igation forced Thickness of cylinder liners .85" Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled
gged 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
e Pumps worked from the Main Engines, No. 1 2" discharge rotary Can one be overhauled while the other is at work —
ps 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. motor (emg.) Aux. eng. Aux. eng. Main Eng.

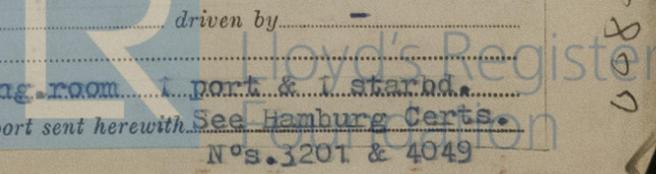
Is the cooling water led to the bilges no If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping
ngements —
ast Pumps, No. and size 3 at 35 T/Hr. Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 - 2" gear type
two independent 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 C.D. In pump room —
olds, &c. No. 1 hold 2 at 60 mm No. 2 hold 2 at 60 mm. From C/D 1 at 60 mm.

pendent Power Pump Direct Suctions to the engine room bilges, No. and size 1 at 80 mm starbd. 1 at 60mm port 1 at 80mm emergency
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
ssible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges. yes as practicable
all Sea Connections fitted direct on the skin of the Ship yes Are they fitted with valves or cocks valves Are they fixed
ciently 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
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. —

at pipes pass through the bunkers. none How are they protected —
at pipes pass through the deep tanks. none Have they been tested as per Rule —
all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times. yes - as practicable
he 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
ses, or from one compartment to another. yes Is the shaft tunnel watertight. none Is it fitted with a watertight door. — worked from. —
wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork. —

in Air Compressors, No. — No. of stages — diameters — stroke — driven by —
Auxiliary Air Compressors, No. 1 No. of stages 2 diameters 4 1/2" & 2 1/2" stroke 3" driven by Main Eng.
all Auxiliary Air Compressors, No. 1 No. of stages 2 diameters 38 c.mts. capacity driven by Aux. Eng.
at provision is made for first charging the air receivers. Hand compressor driven by Hand
venting Air Pumps, No. — diameter — stroke — driven by —
Auxiliary Engines crank shafts, diameter as per Rule — No. 2 Position Eng. room 1 port & 1 starbd.
e the auxiliary engines been constructed under special survey. yes Is a report sent herewith See Hamburg Certs.
N°s. 3201 & 4049

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AIR RECEIVERS:—Have they been made under survey... yes ✓ State No. of report or certificate See San Francisco Rpt. 10. pt. 4b.
 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 by Rules
 Starting Air Receivers, No. 2 Total cubic capacity 32 cuB.ft. Internal diameter 22" thickness 5/16"
 Seamless, welded or riveted longitudinal joint butt welded Material M.S. Range of tensile strength 28-32T/" Working pressure as a R

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 See San Francisco Separate fuel tanks 17
 (If not, state date of approval)
 Donkey boilers - General pumping arrangements 24.9.52 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
 lubr

—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. 23.-May 23.-July 10, 14, 21, 24, 25, 31.-Aug. 29,- Sept. 2, 4, 7, 12, 15, 19
 Total No. of visits Eighteen
 Dates of examination of principal parts—Cylinders * Covers * Pistons * Rods ✓ Connecting rods *
 Crank shaft * Flywheel shaft ✓ Thrust shaft * Intermediate shafts 24.7.53 Tube shaft ✓
 Screw shaft 21.7.53 Propeller 21.7.53 Stern tube 21.7.53 Engine seatings 29.8.53 Engine holding down bolts 29.8.53
 Completion of fitting sea connections July 53 Completion of pumping arrangements 19.10.53 Engines tried under working conditions 21.10.53
 Crank shaft, material * Identification mark * Flywheel shaft, material ✓ Identification mark ✓
 Thrust shaft, material * Identification mark * Intermediate shafts, material E.F.S. Identification marks LLLOYD'S 512
 Tube shaft, material ✓ Identification mark ✓ Screw shaft, material E.F.S. Identification mark LLLOYD'S 502
 Identification marks on air receivers Nº. 6583 LLOYD'S TEST 500 lbs. 24th July -51 Nº. 6577 LLOYD'S TEST 500 24th 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 Portable extinguishers and fire hoses. CO2 System. ✓
 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 C.R.D.A. Yard N°s. 1781/82/83/84
M/V's "NAIRA"-"NUKAHA"-"NURAGE"-"

General Remarks (State quality of workmanship, opinions as to class, &c.)
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 ... £ 1.14.0
 Donkey Boiler Fee... £ : :
 Travelling Expenses (if any) £ 3.0.0
 Committee's Minute
 Assigned + LMC 10.53
 When applied for 10.11.53
 When received 19
 FRIDAY - 4 DEC 1953



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