

REPORT ON OIL ENGINE MACHINERY.

No. 13910

Received at London Office 16 NOV 1953

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. 19

53

Number of Visits

18

Book.

261 S. Single
on the Twin
Triple
X Quadruple

Screw vessel

"NUBURI"

Tons

Gross 510

Net 229

at TRIESTE

By whom built Cantieri Rimiti dell'Adriatico

Yard No. 1785

When built 1953-10

ines made at San Francisco

By whom made General Metals Corporation

Engine No. 51064

When made 1952

Key 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 ✓

num 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 ✓

heel dia.

33"

Weight

1409 lbs

Moment of inertia of flywheel (lbs. in² or Kg. cm²)

—

Means of ignition

comp.

Kind of fuel used

Diesel

Solid forged

Semi built

Alt built

dia. of journals

as per Rule

as appd.

Crank pin dia.

8" ✓

Crank webs

Mid. length breadth

12.5" ✓

Thickness parallel to axis

—

Mid. length thickness

3.125" ✓

Thickness around eyehole

—

heel Shaft, diameter

as per Rule

as fitted

Intermediate Shafts, diameter

as per Rule

as appd.

Thrust Shaft, diameter at collars

as per Rule

as appd.

Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as appd.

Is the

shaft fitted with a continuous liner

no ✓

ze 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

e 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

f tube shaft

eller, dia.

1670mm

Pitch

1175mm

No. of blades

4

Material

Bronze

whether moveable

fixed

Total developed surface

0.95

sq. ft.

ent of inertia of propeller

(lbs. in² or Kg. cm²)

133

Kind of damper, if fitted

hod of reversing Engines

direct

Is a governor or other arrangement fitted to prevent racing of the engine when disengaged

yes ✓

Means of

ication

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

Diameter

2" discharge rotary

Stroke

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 at 35 T/Hr.

1 at 35 T/Hr.

1 at 35 T/Hr.

1 at 35 T/Hr.

1 at 35 T/Hr.

e 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.

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 & 1 at 50mm

In pump room

—

olds, &c.

N^o. 1 hold 2 at 60 mmN^o. 2 hold 2 at 60 mm

From C/D

1 at 60 mm

1 at 60 mm

1 at 60 mm

1 at 60 mm

1 at 60 mm

1 at 60 mm

1 at 60 mm

1 at 60 mm

pendent Power Pump Direct Suctions to the engine room bilges, No. and size

1 at 80 mm

starpd.

1 at 60mm

port

1 at 80mm

emergency

1 at 80mm

1 at 80mm

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 ✓

valves ✓

Are they fixed

above

Are the overboard discharges above or below the deep water line

above

Are the blow off cocks fitted with a spigot and brass covering plate

all Sea Connections fitted direct on the skin of the Ship

yes ✓

Are they fitted with valves or cocks

yes ✓

Are they fixed

above

Are the overboard discharges above or below the deep water line

above

ciently 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

yes ✓

Are they fixed

above

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

yes ✓

Are they fixed

above

Are the overboard discharges above or below the deep water line

above

at pipes pass through the bunkers

none ✓

How are they protected

—

Have they been tested as per Rule

—

Have they been tested as per Rule

—

Have they been tested as per Rule

—

Have they been tested as per Rule

—

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 ✓

Are they fixed

above

Are the overboard discharges above or below the deep water line

above

Are the blow off cocks fitted with a spigot and brass covering plate

yes ✓

Are they fixed

above

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

yes ✓

Is the shaft tunnel watertight

none

Is it fitted with a watertight door

—

worked from

—

worked from

—

wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

—

Are they fixed

above

Are the overboard discharges above or below the deep water line

above

Are the blow off cocks fitted with a spigot and brass covering plate

yes ✓

Are they fixed

above

in Air Compressors, No.

—

No. of stages

—

diameters

—

stroke

—

driven by

—

Are they fixed

above

Are the overboard discharges above or below the deep water line

above

Are the blow off cocks fitted with a spigot and brass covering plate

Auxiliary Air Compressors, No.

1

No. of stages

2

diameters

4 1/2" & 2 1/2"

stroke

3"

driven by

Main Eng.

Are they fixed

above

Are the overboard discharges above or below the deep water line

above

Are the blow off cocks fitted with a spigot and brass covering plate

all Auxiliary Air Compressors, No.

1

No. of stages

2

diameters

38 c.mts. capacity

stroke

240 lit./hr. capacity

driven by

hand

Are they fixed

above

Are the overboard discharges above or below the deep water line

above

Are the blow off cocks fitted with a spigot and brass covering plate

at provision is made for first charging the air receivers

Hand compressor

—

Are they fixed

above

Are the overboard discharges above or below the deep water line

above

Are the blow off cocks fitted with a spigot and brass covering plate

AIR RECEIVERS:—Have they been made under survey... yes ✓ State No. of report or certificate See San Francisco Rpt. 10.4 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 by Rules as app Actual.

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 Lpd. S. 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.

—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 — Oct. 5, 6, 19, 21.
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 * LLOYD'S
Thrust shaft, material * Identification mark * Intermediate shafts, material E.F.S. Identification marks IL 512
Tube shaft, material * Identification mark * Screw shaft, material E.F.S. Identification mark IL 502
Identification marks on air receivers N° 6583 LLOYD'S TEST 500 lbs. 24th July 51 N° 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
FRIDAY - 4 DEC 1953

When applied for 10.11.53
When received 19.11.53
A/o rendered from 10.11.53

Engineer Surveyor to Lloyd's Register of Shipping

(Committee's Minute

Assigned

+ Lmc 10.53



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