

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 12712

Date of writing Report 23/10/1939

When handed in at Local Office

7.11.

1939

Received at London Office

17 NOV 1939

No. in Survey held at

Reg. Book.

23390

Single

Triple

Screw vessel

TRIESTE

Date, First Survey 19<sup>th</sup> July 1938Last Survey 21<sup>st</sup> Oct 1939

Number of Visits 179

M/S. "DOÑA AURORA"

Built at

TRIESTE

Engines made at

TRIESTE

Donkey Boilers made at

TRIESTE

Brake Horse Power

6250

Horse Power as per Rule

1182.3

Trade for which vessel is intended

By whom built

CANT. RIUNITI DELL'ADRIATICO

Yard No. 1226

Tons

Gross 5011

Net 2977

By whom made

CANT. RIUNITI DELL'ADRIATICO

Engine No. 5284

When built 1939

By whom made

CANT. RIUNITI DELL'ADRIATICO

Boiler No. 1828

When made 1939

Owners THE DE LA RAMA STEAMSHIP

CO. INC.

Port belonging to ILOILO - P.I.

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted YES.

L. ENGINES, &amp;c.

Type of Engines SULZER-SING. AC. 2 ST. CRA

Maximum pressure in cylinders

55 kg/cm<sup>2</sup>

Indicated Pressure

6.5 kg/cm<sup>2</sup>

Diameter of cylinders

720 mm.

Length of stroke

1250 mm.

No. of cylinders

8.

No. of cranks 8.

Pitch of bearings, adjacent to the Crank, measured from inner edge to inner edge

920 mm.

Revolutions per minute

130

Flywheel dia.

2400 mm.

Weight

2100 kg.

Is there a bearing between each crank

YES.

Crank Shaft, dia.

Solid forged

as per Rule 458 mm.

as fitted 490 mm.

Crank pin dia.

490 mm.

Crank Webs

Mid. length breadth

900 mm.

Intermediate Shafts, diameter

Semi built

as per Rule 359.2 mm.

as fitted 374 mm.

Thrust Shaft, diameter at collars

as per Rule 458 mm.

as fitted 490 mm.

Thrust Shaft, diameter at collars

as per Rule 458 mm.

as fitted 490 mm.

Main Shaft, diameter

Solid forged

as per Rule 458 mm.

as fitted 490 mm.

Screw Shaft, diameter

as per Rule 394 mm.

as fitted 422 mm.

Is the tube

shaft fitted with a continuous liner

YES.

Liners, thickness in way of bushes

as per Rule 20.5 mm.

as fitted 20.5 mm.

Thickness between bushes

as per Rule 15.3 mm.

as fitted 15.5 mm.

Is the after end of the liner made watertight in the

YES.

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

YES.

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

YES.

If so, state type

Is an approved Oil Gland or other appliance fitted at the after end of the tube

YES.

Length of Bearing in Stern Bush next to and supporting propeller

1900 mm.

Propeller, dia.

5000 mm

Pitch

4200 mm.

No. of blades

4.

Material

M.B.A.

whether Moveable

NO

Method of reversing Engines

DIRECT.

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

YES.

Total Developed Surface

7.57 m<sup>2</sup>

Thickness of cylinder liners

45 mm.

Are the cylinders fitted with safety valves

YES.

Conducting material

YES.

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

YES.

Are the exhaust pipes and silencers

water sealed or lagged with

YES.

Pumps worked from the Main Engines, No.

2.

Diameter

Stroke

Pumps connected to the Main Bilge Line

No. and Size

3. (ONE BILGE-8" x 8" 100 1/2") (ONE BILGE-8" x 8" 150 1/2") (ONE BILGE-8" x 8" 30 1/2")

How driven

EL. MOTORS

Can one be overhauled while the other is at work

YES.

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

YES.

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

2. @ 120 mm φ.

4 @ 90 mm φ.

2 @ 90 mm φ.

2 @ 90 mm φ.

2 @ 90 mm φ.

2 @ 90 mm φ.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

2.

DIAM. 120 mm.

EACH.

Are the Bilge Suctions in the Machinery Spaces

YES.

Are they fitted with Valves or Cocks

YES.

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

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

YES.

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

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

YES.

Is the Shaft Tunnel watertight

YES.

Is it fitted with a watertight door

YES.

worked from

DECK.

Air Compressors, No.

2.

No. of stages

2.

Diameters

140/80 mm.

Stroke

120 mm.

Driven by

DIESEL ENGINE

Auxiliary Air Compressors, No.

Provision is made for first Charging the Air Receivers

WITH SMALL EMERGENCY

MOTOR COMPRESSOR.

No.

3.

Position

MAIN ENGINE R. PORT SIDE.

Is a report sent herewith

YES.

No. 171.

Auxiliary Engines been constructed under special survey

No. of stages

2.

Diameters

3 1/4" / 1 1/8"

Stroke

3 1/4"

Driven by

DIESEL ENGINE

No. of stages

2.

Diameters

No. of stages

2.

Diameters

140/80 mm.

Stroke

120 mm.

Driven by

DIESEL ENGINE

No. of stages

2.

Diameters

No. of stages

2.

Diameters

140/80 mm.

Stroke

120 mm.

Driven by

DIESEL ENGINE

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140/80 mm.

Stroke

120 mm.

Driven by

DIESEL ENGINE

No. of stages

2.

Diameters

No. of stages

2.

Diameters

140/80 mm.

Stroke&lt;/



AIR RECEIVERS:—Have they been made under survey.

YES

State No. of Report or Certificate

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

YES.

Is a drain fitted at the lowest part of each receiver

YES

Can the internal surfaces of the receivers be examined and cleaned

YES.

STARTING AUXILIARY.

Injection Air Receivers, No.

ONE

Cubic capacity of each

70 LITRES

Internal diameter  $\phi = 303$  mm.

thickness

7.5 mm.

Seamless, lap welded or riveted longitudinal joint

SEAMLESS

Material

STEEL

Range of tensile strength

47 kg/mm<sup>2</sup>

Working pressure

by Rules 40 kg/cm<sup>2</sup>Actual 30 kg/cm<sup>2</sup>

Starting Air Receivers, No.

TWO

Total cubic capacity

20 m<sup>3</sup>

Internal diameter

1402/1450 mm

thickness

24/25 mm

Seamless, lap welded or riveted longitudinal joint

D.B. ST.

Material

S.M.S.

Range of tensile strength

44/50 mm

Working pressure

by Rules 30.8 kg/cm<sup>2</sup>Actual 30 kg/cm<sup>2</sup>

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

YES.

PLANS. Are approved plans forwarded herewith for Shafting

30/6/38 &amp; 9/6/1938

Receivers

13/6/1938-2/7/38

Separate Fuel Tanks

25/11/1938

Donkey Boilers

9/12/38 &amp; 30/3/39

General Pumping Arrangements

9/12/1938

Pumping Arrangements in Machinery Space

9/12/1938

Oil Fuel Burning Arrangements

20/10/1939

SPARE GEAR.

Has the spare gear required by the Rules been supplied

YES.

State the principal additional spare gear supplied

SEE ADDITIONAL LIST.

Cantieri Riuniti dell'Adriatico  
FABBRICA MACCHINE S. ANDREA

The foregoing is a correct description,

M. S. R.

Manufacturer.

Dates of Survey while building  
During progress of work in shops --  
During erection on board vessel --  
Total No. of visits

See attached typed sheet

179

Dates of Examination of principal parts—Cylinders

5/9/1938

Covers

28/9/1938

Pistons

21/9/1939

Rods

15/7/1938

Connecting rods

21/9/1939

Crank shaft

26/1/1939

Screw shaft

21/9/1939

Thrust shaft

21/9/1939

Intermediate shafts

3/8/1939

Tube shaft

29/8/1939

Screw shaft

7/2/1939

Propeller

22/6/1939

Stern tube

17/6/1939

Engine seatings

3/8/1939

Engines holding down bolts

29/8/1939

Completion of fitting sea connections

17/6/1939

Completion of pumping arrangements

4/10/1939

Engines tried under working conditions

9/10/1939

Crank shaft, Material

S.M.S.

Identification Mark

5825-12-26.1.39

Screw shaft, Material

S.M.S.

Identification Mark

5825-12-26.1.39

Intermediate shafts, Material

S.M.S.

Identification Marks

NE-4625-12-26.1.39

Thrust shaft, Material

S.M.S.

Identification Mark

5825-12-26.1.39

Intermediate shafts, Material

S.M.S.

Identification Marks

NE-4625-12-26.1.39

Tube shaft, Material

S.M.S.

Identification Mark

LLOYD'S-3710-3715

Identification Marks on Air Receivers

S.M.S.

Identification Mark

5825-12-26.1.39

Screw shaft, Material

S.M.S.

Identification Mark

LLOYD'S-3710-3715

Intermediate shafts, Material

S.M.S.

Identification Marks

NE-4625-12-26.1.39

Identification Marks on Air Receivers

S.M.S.

Identification Mark

5825-12-26.1.39

Screw shaft, Material

S.M.S.

Identification Mark

LLOYD'S-3710-3715

Intermediate shafts, Material

S.M.S.

Identification Marks

NE-4625-12-26.1.39

Identification Marks on Air Receivers

S.M.S.

Identification Mark

5825-12-26.1.39

Screw shaft, Material

S.M.S.

Identification Mark

LLOYD'S-3710-3715

Intermediate shafts, Material

S.M.S.

Identification Marks

NE-4625-12-26.1.39

Identification Marks on Air Receivers

S.M.S.

Identification Mark

5825-12-26.1.39

Screw shaft, Material

S.M.S.

Identification Mark

LLOYD'S-3710-3715

Intermediate shafts, Material

S.M.S.

Identification Marks

NE-4625-12-26.1.39

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

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

Is this machinery duplicate of a previous case

NO

If so, state name of vessel

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

This Engine has been constructed and fitted on board this vessel under special survey in accordance with the Rules, approved plans and Secretary letters. The material and workmanship are good. The main engine and auxiliaries have been tested under full working conditions and found satisfactory and in my opinion the machinery is eligible to have in the Society Register Book the notation of + L MC- 10.39.

"For D. Boiler and Auxiliaries please see attached Reports."

The amount of Entry Fee

Lira 535-

When applied for,

30/10/1939

Special

Lira 11849-

Donkey Boiler Fee

see 2nd Report

When received,

28/11/1939

Travelling Expenses (if any)

Lira 280-

2 riveted air receivers

Lira 227

Committee's Minute

FRI. 24 NOV 1939

Assigned

+ L MC. 10.39

Assigned

DB- 100 lbs. of

For up to 10 minutes

Engineer Surveyor to Lloyd's Register of Shipping.



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