

## REPORT ON OIL ENGINE MACHINERY.

No. 6799

Received at London Office - 8 SEP 1925

Date of writing Report

19

When handed in at Local Office

Sep 3

19

Port of Trieste

No. in Survey held at

Trieste &amp; Turin

Date, First Survey

1924 Nov 22

Last Survey

Aug 24

1925

Reg. Book.

Number of Visits

33

27173 on the

Single  
Twin  
Triple

Screw vessels

MALLY

Tons

Gross 5943

Net 3812

Master

Built at Monfalcone

By whom built

Aut. Nav. Triest. Yard No. 137

When built

1925

Engines made at

Turin

By whom made

S.A. FIAT STAB. GRANDI MOTORI

Engine No.

1226

When made

1925

Donkey Boilers made at

Luman

By whom made

Luman &amp; Co. Luman Rd.

Boiler No.

9288

When made

1924

Brake Horse Power

2400

Owners

Cosulich Soc. Triestina di Navig.

Port belonging to

Trieste

Nom. Horse Power as per Rule

686

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

See also Genoa Report

OIL ENGINES, &amp;c.—Type of Engines

Vertical inverted Diesel

2 or 4 stroke cycle

2

Single or double acting

single

Maximum pressure in cylinders

35 kg

No. of cylinders

4 x 2

No. of cranks

4

Diameter of cylinders

600 mm

Length of stroke

950 mm

Revolutions per minute

115

Means of ignition

Compression

Kind of fuel used

Diesel oil

Is there a bearing between each crank

yes

Span of bearings (Page 92, Section 2, par. 7 of Rules)

820 mm

Distance between centres of main bearings

1200 mm

Is a flywheel fitted

yes

Diameter of crank shaft journals

as per Rule 368 mm

as fitted 370 mm

Diameter of crank pins

370 mm

Breadth of crank webs

as per Rule 494 mm

as fitted 500 mm

Thickness of ditto

as per Rule 206 mm

as fitted 205 mm

Diameter of flywheel shaft

as per Rule 368 mm

as fitted 370 mm

Diameter of tunnel shaft

as per Rule 251 mm

as fitted 265 mm

Diameter of thrust shaft

as per Rule 264 mm

as fitted 280 mm

Diameter of screw shaft

as per Rule 276 mm

as fitted 300 mm

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

yes

If the liner is in more than one length are the joints burned

yes (elect. welded)

Is the after end of the liner made watertight in the propeller boss

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 two liners are fitted, is the shaft lapped or protected between the liners

yes

If without liners, is the shaft arranged to run in oil

yes

Type of outer gland fitted to stern tube

none

Length of stern bush

1200 mm

Diameter of propeller

3500 mm

Pitch of propeller

3400 mm

No. of blades

4

state whether moveable

no

Total surface

4.6 m<sup>2</sup>

square feet

overlap

Method of reversing

Direct

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

yes

Thickness of cylinder liners

53.5 mm

Are the cylinders fitted with safety valves

yes

Means of lubrication

forced

Are the exhaust pipes and silencers

water cooled or 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 back to the engine

yes

No. of cooling water pumps

2 attached each motor

Is the sea suction provided with an efficient strainer which can be cleared

yes

within the vessel

yes

No. of bilge pumps fitted to the main engines

none

Diameter of ditto

no

Stroke

no

Can one be overhauled while the other is at work

yes

No. of auxiliary pumps connected to the main bilge lines

two

How driven

electric

Sizes of pumps

8 x 7 1/2, 10 x 11

No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps

In engine room

3 x 3 1/2, 3 x 4 1/2

and in holds, etc.

two for each hold

3 1/2"

No. of ballast pumps

one

How driven

electric

Sizes of pumps

10 x 11"

two of line

Is the ballast pump fitted with a direct suction from the engine room bilges

yes two

State size

4 1/2"

Is a separate auxiliary pump suction fitted in

yes

Engine Room and size

yes 4 1/2"

Are all the bilge suction pipes fitted with roses

in holds

Are the roses in Engine Room always accessible

yes

Are all connections with the sea direct on the skin of the ship

yes

Are the sluices on Engine Room bulkheads always accessible

none

Are they valves or cocks

valves

Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates

yes

Are the discharge pipes 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 all pipes, cocks, valves and pumps in connection with the machinery accessible at all times

yes

Are the bilge suction pipes, cocks and valves arranged so as to prevent any

communication between the sea and the bilges

yes

Is the screw shaft tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from top of cylinders

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

yes

No. of main air compressors

one per motor

No. of stages

3

Diameters

510, 455, 110

Stroke

700

No. of auxiliary air compressors

one

No. of stages

3

Diameters

300, 260, 65

Stroke

250

Driven by

Electric motor

No. of small auxiliary air compressors

one

No. of stages

3

Diameters

185, 165, 42

Stroke

140

Driven by

Electric motor

No. of scavenging air pumps

one per motor

Diameter

1120

Stroke

700

Driven by

Compressor crank

Diameter of auxiliary Diesel Engine crank shafts

as per Rule 147 mm

as fitted 157 mm

Are the air compressors and their coolers made so as to be easy of access

yes

AIR RECEIVERS:—No of high pressure air receivers

4 (2 per motor)

Internal diameter

300 mm

Cubic capacity of each

125 litres

material

Steel

Seamless, lap welded or riveted longitudinal joint

Seamless

Range of tensile strength

46 kg minimum

thickness

11 mm

working pressure by Rules

71 kg

No. of starting air receivers

21

Internal diameter

300 mm

Total cubic capacity

8300 litres

Material

Steel

Seamless, lap welded or riveted longitudinal joint

Seamless

Range of tensile strength

46 kg min

thickness

11 mm

Working pressure by rules

71 kg

Is each receiver, which can be isolated,

yes

fitted with a safety valve as per Rule

yes, 4 group

Can the internal surfaces of the receivers be examined

by lamp only

What means are provided for cleaning their

inner surfaces

drain

Is there a drain arrangement fitted at the lowest part of each receiver

yes



IS A DONKEY BOILER FITTED? *yes*

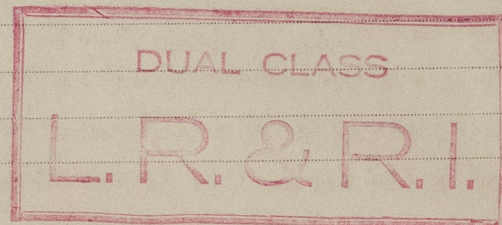
If so, is a report now forwarded? *yes Glasgow Report*

HYDRAULIC TESTS:—

*No 44110*

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS .....	7.4.25	1.50 kg	5 kg	A.L. & test per.	Water space only.
" " COVERS .....	7.4.25	1.50 kg	5 kg	"	Cylinder liner
" " JACKETS.....	7.4.25	1.50 kg	5 kg	"	
" " PISTON WATER PASSAGES.....	7.4.25	1.50 kg	5 kg	"	
MAIN COMPRESSORS—1st STAGE.....	12.2.25	70 kg	150 kg	"	
" 2nd " .....	12.2.25	15 kg	30 kg	"	
" 3rd " .....	12.2.25	4 kg	8 kg	"	
AIR RECEIVERS—STARTING .....	28.1.25	70 kg	150 kg	ASM date	
" INJECTION .....	28.1.25	70 kg	150 kg	applied pressure	
AIR PIPES .....	12.2.25, 3.7.25	70 kg	180 kg	L.S.	
FUEL PIPES .....	12.2.25	75 kg	150 kg	A.L. & test	
FUEL PUMPS .....	12.2.25	75 kg	150 kg	pressure	
SILENCER .....	—				
" WATER JACKET .....	none				
SEPARATE FUEL TANKS .....					

PLANS. Are approved plans forwarded herewith for shafting *2*. Receivers *1*. Separate Tanks *2*.  
SPARE GEAR *see attached list. ✓*



The foregoing is a correct description,

*See Girona Report*

Manufacturer.

Dates of Survey while building  
During progress of work in shops—*1924 June 12, Aug. 8, 26 Sept 25, 26 Oct 9, 23, 29, Nov. 13, 20, 27, Dec 7, 11*  
During erection on board vessel—*1924 Nov 22, Dec 2, 19 1925 Jan 5, Mar 5, 27, Apr 3, 20, May 5, 8, 11, 15, June 2, 23, July 2, 7, 18, 21, 22, 28, 30, Aug 3, 6, 7, 11, 14, 16, 20, 21, 22, 24*  
Total No. of visits *Turin 24 Monfalcone 33*

Dates of Examination of principal parts—Cylinders 7.4.25 Covers 7.4.25 Pistons 7.4.25 Rods 19.6.25 Connecting rods 19.6.25  
Crank shaft 19.6.25 Thrust shaft 2.7.25 Tunnel shafts 2.7.25 Screw shaft 12.12.24 Propeller 4.7.25 Stern tube 22.11.24 Engine seatings 22.11.24  
Engines holding down bolts 2.7.25 Completion of pumping arrangements 7.6.25 Engines tried under working conditions  
Completion of fitting sea connections 12.12.24 Stern tube 19.12.24 Screw shaft and propeller 19.12.24 & 4.7.25  
Material of crank shaft *Steel* Identification Mark on Do. *ASM 323, ASM 307, AL 372, AL 585* Material of thrust shaft *Steel* Identification Mark on Do. *ASM 436, ASM 387*  
Material of tunnel shafts *Steel* Identification Marks on Do. *ASM 348, 358* Material of screw shafts *Steel* Identification Marks on Do. *348-358*  
*464, 463, 343, 462, 449, 340, 341, 342, 415, 405, 430 AL 398, 406, 404*  
Is the flash point of the oil to be used over 150° F.

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, &c. (*Girona Report*) This oil engine machinery has been constructed under special survey in accordance with the Secretary's letters and with the requirements of the Rules. Material and workmanship are good. In my opinion the machinery is such as may be fitted in a vessel building to this Society's class.

These engines have placed on board at the Cantiere Navale Triestino, Monfalcone, and fitted under special survey. They have been tested under full working condition and found in order. In my opinion the machinery is suitable for the notation of + LMC 8.25

The amount of Entry Fee ... £ *784-* When applied for, *19*  
Special ... £ *3281-*  
Donkey Boiler Fee ... £ : : When received, *1925*  
Travelling Expenses (if any) £ *10 70-*  
Sunday Fee " *278-*

Committee's Minute

Assigned

*R. R. R. R.*  
Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 4 JUN 1926

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