

DUAL SURVEY
L.R. & R.I.

8654

REPORT ON OIL ENGINE MACHINERY.

No. 8654

4b.

Received at London Office 17 NOV 1924

of writing Report 878 1024 When handed in at Local Office 887 24 Port of Genoa
in Survey held at Legnano and Date, First Survey 24/1/23 (LEGNAVO) Survey 25/1/23 (LEGNAVO)
Book. on the Single } Screw vessels
Twin }
Triple }
Built at By whom built STABILIMENTO TECNICO TRIESTINO Yard No. 743 When built
Engines made at Legnano By whom made S.A. Franco Tosi Engine No. When made
Boilers made at By whom made Boiler No. When made
Horse Power 2500 (1250 per motor) Owners Port belonging to
Horse Power as per Rule 553 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c. Type of Engines Tosi Diesel 2 or 4 stroke cycle 4 Single or double acting Single
Maximum pressure in cylinders 500 $\frac{1}{2}$ psi No. of cylinders 12 No. of cranks 12 (6 PER MOTOR) Diameter of cylinders 620 $\frac{1}{2}$ - 24 $\frac{1}{2}$ "
Length of stroke 975 $\frac{1}{2}$ - 38 $\frac{3}{8}$ " Revolutions per minute 125 Means of ignition Compression - Air Kind of fuel used Heavy Oil
Is there a bearing between each crank Yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 825 $\frac{1}{2}$ "
Distance between centres of main bearings 1240 $\frac{1}{2}$ " Is a flywheel fitted Yes Diameter of crank shaft journals as per Rule 374 $\frac{1}{2}$ "
DIAMETER OF FLYWHEEL - 2800 $\frac{1}{2}$ " = 9.2 FEET. as fitted 380 $\frac{1}{2}$ "
Diameter of crank pins 380 $\frac{1}{2}$ " Breadth of crank webs as per Rule 499 $\frac{1}{2}$ " as fitted 620 $\frac{1}{2}$ " Thickness of ditto as per Rule 210 $\frac{1}{2}$ "
WEIGHT OF FLYWHEEL - 15000 kg = 6.7 TONS as fitted 244 $\frac{1}{2}$ " Diameter of thrust shaft as per Rule 250 $\frac{1}{2}$ "
Diameter of flywheel shaft as fitted 380 $\frac{1}{2}$ " Diameter of tunnel shaft as fitted 322 $\frac{1}{2}$ "
Diameter of screw shaft as per Rule Is the screw shaft fitted with a continuous liner the whole length of the stern tube
as fitted the after end of the liner made watertight in the propeller boss If the liner is in more than one length are the joints burned
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
two liners are fitted, is the shaft lapped or protected between the liners If without liners, is the shaft arranged to run in oil
Type of outer gland fitted to stern tube Length of stern bush Diameter of propeller
Pitch of propeller No. of blades state whether moveable Total surface square feet
Method of reversing direct - air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Thickness of cylinder liners 57 $\frac{1}{2}$ "
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 If the exhaust is led overboard near the waterline, what means are provided to prevent water from being syphoned back to the engine
No. of cooling water pumps 2 - 1 PER MOTOR Is the sea suction provided with an efficient strainer which can be cleared
Within the vessel No. of bilge pumps fitted to the main engines 2 - 1 PER MOTOR Diameter of ditto 150 $\frac{1}{2}$ " Stroke 200 $\frac{1}{2}$ "
Can one be overhauled while the other is at work Yes No. of auxiliary pumps connected to the main bilge lines How driven
Sizes of pumps No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps: - In engine room
And in holds, etc. No. of ballast pumps How driven Sizes of pumps
Is the ballast pump fitted with a direct suction from the engine room bilges State size Is a separate auxiliary pump suction fitted in
Engine Room and size Are all the bilge suction pipes fitted with roses Are the roses in Engine Room always accessible
Are the sluices on Engine Room bulkheads always accessible Are all connections with the sea direct on the skin of the ship
Are they valves or cocks Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates
Are the discharge pipes above or below the deep water line Are they each fitted with a discharge valve always accessible on the plating of the vessel
Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times Are the bilge suction pipes, cocks and valves arranged so as to prevent any
Communication between the sea and the bilges Is the screw shaft tunnel watertight Is it fitted with a watertight door
Worked from If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork
No. of main air compressors 2 - 1 per motor No. of stages 3 Diameters 620 x 530 x 135 Stroke 300 $\frac{1}{2}$ " Driven by Main Motors
No. of auxiliary air compressors No. of stages Diameters Stroke Driven by
No. of small auxiliary air compressors No. of stages Diameters Stroke Driven by
No. of scavenging air pumps Diameter Stroke Driven by
Diameter of auxiliary Diesel Engine crank shafts as per Rule 194 $\frac{1}{2}$ " (AUX. MOTOR SIZE) as fitted 205 $\frac{1}{2}$ " Are the air compressors and their coolers made so as to be easy of access Yes
AIR RECEIVERS: - No. of high pressure air receivers 1 ATTACHED EACH MOTOR Internal diameter 292 $\frac{1}{2}$ " - 11.47" Cubic capacity of each 150 LITRES.
Material Steel Seamless, lap welded or riveted longitudinal joint Seamless Range of tensile strength Actual 295 Tons
Thickness 13 $\frac{1}{2}$ " = $\frac{8.19}{16}$ " working pressure by Rules 1275 $\frac{1}{2}$ psi No. of starting air receivers Internal diameter 460 $\frac{1}{2}$ "
Total cubic capacity 45/53 kg/cm² Material Steel Seamless, lap welded or riveted longitudinal joint
Range of tensile strength 28.6/34 Tons/cm² thickness 20 $\frac{1}{2}$ " Working pressure by rules Is each receiver, which can be isolated,
Fitted with a safety valve as per Rule Can the internal surfaces of the receivers be examined What means are provided for cleaning their
Inner surfaces Is there a drain arrangement fitted at the lowest part of each receiver

003599-003604-0085

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	3/10/23 + previous dates	35 kg	150 kg/cm ²	AL, DATE TEST PRESSURE	Cylinder Line of plain
" " COVERS	5/6/23 " "	"	"	"	"
" " JACKETS	3/10/23 " "	10 kg (SAY 1 KG)	6 kg/cm ²	"	"
" " PISTON WATER PASSAGES	5/6/23 " "	"	"	"	"
MAIN COMPRESSORS—1st STAGE	9/8/23 " "	4 kg/cm ²	10 kg/cm ²	"	Jackets tested to 6 kg.
" 2nd "	9/8/23 " "	16 kg/cm ²	32 "	"	"
" 3rd "	29/8/23 " "	70 kg/cm ²	150 "	"	"
AIR RECEIVERS—STARTING					
" INJECTION	3/5/23 " "	75 kg/cm ²	150 kg/cm ²	ASM, DATE TEST (SWF)	
AIR PIPES	10/8/23 " "	"	150 kg/cm ²		
FUEL PIPES	5/6/23 " "	"	150 kg/cm ²	AL " "	
FUEL PUMPS	5/6/23 " "	"	150 kg/cm ²	AL " "	
SILENCER					
" WATER JACKET					
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting (If not, state date of approval)

CRANK SHAFT APPROVED LONDON 9/4/20

Receivers STANDARD PLAN HEREWITH Separate Tanks

SPARE GEAR

To fill in at Trieste

All plans sent to Trieste

The foregoing is a correct description,

FRANCO TOSI
Società Anonima

Manufacturer.

Franco Tosini

Dates of Survey while building { During progress of work in shops - - 1923 Jan 24 Feb 16, Mar 9, 21, 29, 31 Apr. 6, 28 June 5 July 11, 12 Aug 9, 10, 29, Sept. 27, Oct 3 Nov 28
During erection on board vessel - -
Total No. of visits Genoa 18

Dates of Examination of principal parts—Cylinders 12/7/23 Covers 3/10/23 Pistons 5/6/23 Rods 12/7/23 Connecting rods 12/7/23

Crank shaft 11/7/23 Thrust shaft Tunnel shafts Screw shaft Propeller Stern tube Engine seatings

Engines holding down bolts Completion of pumping arrangements Engines tried under working conditions

Completion of fitting sea connections Stern tube HK 1254

Material of crank shaft Steel Identification Mark on Do. 1256 Material of thrust shaft Steel Identification Mark on Do.

Material of tunnel shafts Identification Marks on Do. Material of screw shafts Identification Marks on Do.

Is the flash point of the oil to be used over 150° F. Yes

Is this machinery duplicate of a previous case Yes If so, state name of vessel "SYCAMORE"

General Remarks (State quality of workmanship, opinions as to class, &c.) The main and auxiliary motors

and the Spare Parts have been constructed under special survey and in accordance with the approved plans, and the Secretary's letter. The

materials and workmanship are good, and this machinery is such as may

be fitted in a vessel for which the Record of + L.M.C. is contemplated. A copy

of this report together with approved plans and firing report have been sent

to the Trieste Surveyors.

DUAL SURVEY
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The amount of Entry Fee ... £ 8000

Special ... £ 3300

Donkey Boiler Fee ... £

Travelling Expenses (if any) ... £

When applied for,

12/11/24

When received,

2/12/25

Committee's Minute

FRI. 30 OCT 1925

Assigned

TUE. 26 JAN 1926

FRI. 16 JUL 1926

FRI. 25 JUN 1925



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