

Rpt. 4b

Date of writing report 4th March, 1959

Received London

Port of GENOA

No.

24022

Survey held at GENOA

No. of visits

In shops 40

First date

3-3-58

Last date

18-2-59

On vessel

## FIRST ENTRY REPORT ON INTERNAL COMBUSTION MACHINERY

No. in R.B. Name M/V "NAVALMECCANICA" YARD No. 624 Gross tons

Owners Managers Port of Registry

Hull built at Castellammare di Stabia By S.A. Navalmeccanica Yard No. 624 When Year Month

Main Engines made at Genoa-Sampierdarena By S.A. Ansaldo-Stabilimento Meccanico Eng. No. 757008 When 1959

Gearing made at By

Donkey boilers made at By Br. Nos. When

Machinery installed at By When

Particulars of restricted service of ship, if limited for classification

Particulars of vegetable or similar cargo oil notation, if required

Is ship to be classed for navigation in ice? Is ship intended to carry petroleum in bulk?

Is refrigerating machinery fitted? If so, is it for cargo purposes? Type of refrigerant

Is the refrigerating machinery compartment isolated from the propelling machinery space? Is the refrigerated cargo installation intended to be classed?

The following particulars should be given as fully and as clearly as possible. Where the answer is "No" or "None", say so! Ticks and other signs of doubtful meaning are not to be used. Where the wording is not applicable to the installation, a black line may be inserted. If the main engines have been constructed at another port and are covered by a separate report, the particulars given in that report need not be repeated below, but the port and report number should be stated.

No. of main engines one No. of propellers one Brief description of propulsion system one oil engine directly coupled to one propeller

MAIN RECIPROCATING ENGINES. Licence Name and Type No. FIAT airless injection C 757 S supercharged

No. of cylinders per engine 7 Dia. of cylinders 750 mm. stroke 1320 mm. 2 or 4 stroke cycle two Single or double acting single

Maximum approved BHP per engine 7700 at 128 RPM of engine and 128 RPM of propeller.

Corresponding MIP 7,1 Kg/cm<sup>2</sup> (For DA engines give MIP top & bottom) Maximum cylinder pressure 65 Kg/cm<sup>2</sup> Machinery numeral 1540

Are the cylinders arranged in Vee or other special formation? in one vertical line If so, number of crankshafts per engine

TWO STROKE ENGINES. Is the engine of opposed piston type? no If so, how are upper pistons connected to crankshaft?

Is the exhaust discharged through ports in the cylinders or through valve(s) in the cylinder covers? through ports in the cylinders No. and type of mechanically driven scavenge pumps or blowers per engine and how driven seven piston type driven by main engine crossheads.

No. of exhaust gas driven scavenge blowers per engine two Where exhaust gas driven blowers only are fitted, can the engine operate with one blower out of action?

If a stand-by or emergency pump or blower is fitted, state how driven none No. of scavenge air coolers five Scavenge air pressure at full power 0,680 Kg/cm<sup>2</sup> Are scavenge manifold explosion relief valves fitted? yes

FOUR STROKE ENGINES. Is the engine supercharged? Are the undersides of the pistons arranged as supercharge pumps? No. of exhaust gas driven blowers per engine

No. of supercharge air coolers per engine Supercharge air pressure Can engine operate without supercharger?

TWO &amp; FOUR STROKE ENGINES—GENERAL. No. of valves per cylinder: Fuel one Inlet Exhaust Starting one Safety one

Material of cylinder covers cast steel Material of piston crowns cast steel Is the engine equipped to operate on heavy fuel oil? yes

Cooling medium for: Cylinders fresh water Pistons lubricating oil Fuel valves fresh water Overall diameter of piston rod for double acting engines

Is the rod fitted with a sleeve? Is welded construction employed for: Bedplate? no Frames? no Entablature? no Is the crankcase separated from the underside of pistons? yes Is the engine of crosshead or trunk piston type? cross-head Total internal volume of crankcase 101 m<sup>3</sup> No. and total area of explosion relief devices 7-10300 cm<sup>2</sup> Are flame guards or traps fitted to relief devices? no Is the crankcase readily accessible? yes If not, must the engine be removed for overhaul of bearings, etc? Is the engine secured directly to the tank top or to a built-up seating? How is the engine started? by compressed air.

Can the engine be directly reversed? yes If not, how is reversing obtained?

Has the engine been tested working in the shop? yes How long at full power? four hours. base 430 Q

CRANK &amp; FLYWHEEL SHAFTING. Date of approval of torsional vibration characteristics of the propelling machinery system 1-12-58 State barred speed range(s), if imposed for working propeller 55-66 RPM For spare propeller Is a governor fitted? yes Is a torsional vibration damper or detuner fitted to the shafting? none

Where positioned? Type No. of main bearings 8 Are main bearings of ball or roller type? no Distance between inner edges of bearings in way of crank 968 mm. Distance between centre lines of side cranks or eccentrics of opposed piston engines

Crankshaft type: Built, semi-built, solid. (State which) semi-built

Diameter of journals 550 mm. Diameter of crankpins 550 mm. Breadth of webs at mid-throw 916 mm. Axial thickness of webs 318 mm.

If shrunk, radial thickness around eyeholes 252,5 mm. Are dowel pins fitted? no Crankshaft material Journals forged steel Approved 50-60 Kg/mm<sup>2</sup> Webs cast steel Tensile strength

Diameter of flywheel 2457 mm. Weight 3920 Kg. Are balance weights fitted? no Total weight Radius of gyration

Diameter of flywheel shaft 550 mm. Material S.M. Steel Minimum approved tensile strength 50-60 Kg/cm<sup>2</sup>

Flywheel shaft: separate, integral with crankshaft, integral with thrustshaft. (State which) integral with thrustshaft.

PLEASE RETURN THIS REPORT WITH YOUR FIRST ENTRY.

013812-013820-0225 1/2







# GENERAL REMARKS

State if the machinery has been constructed and/or installed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship and give recommendations for classification, including any special notation to be assigned. Where existing machinery is submitted for classification the circumstances should be explained as fully as possible.

The main engine of this vessel has been constructed under Special Survey of tested materials and in accordance with the approved plans, Secretary's letters and Rules Requirements.

The materials and workmanship are good.

This oil engine has been tried under working condition on bench at full power and found satisfactory.

The torsional vibration characteristics of the complete propelling system have been approved for a service speed of 128 RPM.

This engine has now been despatched to Castellammare di Stabia (Naples) and when same has been installed on board Navalmeccanica Yard No.624 and tried at full power to the satisfaction of the Society's Surveyors, the machinery will be eligible to be classed in the Society's Register Book with the record of +LMC (with date) and the notation "Oil Engine".

The engine not to be operated continuously between 55 & 66 RPM.

*A. Grasselli & W. Giunti*  
(A. Grasselli & W. Giunti).  
Engineer Surveyor to Lloyd's Register of Shipping.

## PARTICULARS OF IDENTIFICATION MARKS ((Including Port of origin) of important Forgings and Castings. (Copies of certificates should be forwarded with report.)

~~RODS~~ Connecting rods :- LLOYD'S GEN. P.103-P.109-P.110-P.111-P.124-P.125-P.126 W.G. 30-10-58

Piston rods :- LLOYD'S GEN. P.114-P.115-P.116-P.118-P.119-P.120- W.G. 10-11-58; P.163 W.G. 31-7-58

CRANKSHAFT ~~OR ROTARY SHAFT~~ LLOYD'S GEN.

S.2337 A.

FLYWHEEL SHAFT - G.M. 17-4-58

THRUSTSHAFT LLOYD'S GEN.  
SS. 6807  
G.M. 17-4-58

COLLAR :-

LLOYD'S GEN.

SS. 6774  
G.M. 17-4-58

GEARING

INTERMEDIATE SHAFTS -

SCREW AND TUBE SHAFTS -

PROPELLERS -

OTHER IMPORTANT ITEMS Crossheads :- Lloyd's Gen. 97- 97/1- 97/2- 97/3- 97/4- 97/5- 97/6- W.G. 29-9-58

Scavenge air pump piston rods :- P.35- P.36(2)- P.37- P.93(2)- P.94 A.G. 24-3-58

Two exhaust gas driven scavenge blowers, Genoa Certificate No. M.2907.

Is the installation a duplicate of a previous case? -

If so, state name of vessel -

Date of approval of plans for crankshaft 4-2-56

Straight shafting 22-5-58

Gearing -

Clutch -

Separate oil fuel tanks -

Pumping arrangements -

Oil fuel arrangements -

Cargo oil pumping arrangements -

Air receivers

16-8-54

Donkey boilers -

Dates of examination of principal parts:-

Fitting of stern tube -

Fitting of propeller -

Completion of sea connections -

Alignment of crank shaft in main bearings -

Engine chocks & bolts -

Alignment of gearing -

Alignment of straight shafting -

Testing of pumping arrangements -

Oil fuel lines -

Donkey boiler supports -

Steering machinery -

Windlass -

Date of Committee

FRIDAY - 1 JAN 1960

Decision

See Rpt. 1.

Special Survey Fee DURING CONSTRUCTION:

46 825.000 - 15% = 46 701.25

Expenses

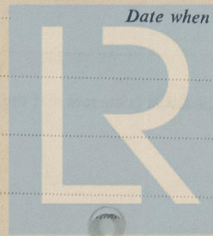
46 107.89 comp

REV. TAX.

46 24.27 each

Date when A/c rendered

12/3/59



Lloyd's Register  
Foundation