

# REPORT ON OIL ENGINE MACHINERY.

No. 1306 {GENON  
K:16926}

Received at London Office

Date of writing Report 12/9/48 19 48 When handed in at Local Office 18.11. 19 48 Port of LEGHORN

No. in Survey held at LEGHORN Date, First Survey 12/5/48 Last Survey 15/8/48 19 48  
 Reg. Book. Number of Visits 18

on the Single Screw vessel TRAWLER "SANTA MAFALDA" Tons Gross 1272  
Triple Net 700  
Quadruple

uilt at LEGHORN By whom built ODERO-TERNI-ORLANDO Yard No. 221 When built 1948  
 Engines made at AMSTERDAM By whom made N.V. WERKSPoor Engine No. 480 When made 1948  
 onkey Boilers made at ANNAN By whom made COCHRAN & CO LTD. ANNAN Boiler No. 14948 When made 1948  
 Brake Horse Power 1100 Owners EMPRESA DE PESCA DE AVEIRO Port belonging to AVEIRO  
 N. Power as per Rule 198 <sup>NHP=187</sup> Is Refrigerating Machinery fitted for cargo purposes  Is Electric Light fitted YES  
 Trade for which vessel is intended FISHING

**ENGINES, &c.**—Type of Engines T.M.A.S. 398-SOLID INJECTION 2 or 4 stroke cycle 4 Single or double acting SINGLE  
 Maximum pressure in cylinders 48 Kg/cm<sup>2</sup> Diameter of cylinders 390 mm Length of stroke 680 mm No. of cylinders 8 No. of cranks 8  
 Mean Indicated Pressure 6.8 Kg/cm<sup>2</sup> Ahead Firing Order in Cylinders  Span of bearings, adjacent to the crank, measured  
 from inner edge to inner edge 496 mm Is there a bearing between each crank YES Revolutions per minute 295  
 Flywheel dia. 1500 mm Weight 1240 Kg Moment of inertia of flywheel (16lbs. in<sup>2</sup> or Kg.cm.<sup>2</sup>)  Means of ignition COMPRESSION Kind of fuel used DIESEL OIL  
 Crankshaft, Solid forged dia. of journals as per Rule as approved Crank pin dia. 300 mm Crank webs Mid. length breadth 500 mm Thickness parallel to axis   
Semi built as fitted 310 mm Mid. length thickness 125 mm shrunk Thickness around eyehole   
All built

Flywheel Shaft, diameter as per Rule  Intermediate Shafts, diameter as per Rule as approved Thrust Shaft, diameter at collars as fitted 280 mm  
 as fitted  as fitted 329 mm as per Rule as approved as per Rule as approved

Crankshaft, diameter as per Rule  Screw Shaft, diameter as fitted 280 mm Is the tube shaft fitted with a continuous liner   
 as fitted  as fitted 280 mm as per Rule as approved as per Rule as approved

Bronze Liners, thickness in way of bushes as per Rule as approved Thickness between bushes as fitted 15.5 mm Is the after end of the liner made watertight in the  
 propeller boss YES If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ONE LENGTH

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  If two liners are fitted, is the shaft lapped or protected between the liners  Is an approved Oil Gland or other appliance fitted at the after  
 end of tube shaft No If so, state type  Length of bearing in Stern Bush next to and supporting propeller 1050 mm  
 Propeller, dia. 2440 mm Pitch 1452/1288 mm No. of blades 4 Material BRONZE whether moveable SOLID Total developed surface 2.38 sq. m.  
 Moment of inertia of propeller (16lbs. in<sup>2</sup> or Kg.cm.<sup>2</sup>)  Kind of damper, if fitted

Method of reversing Engines DIRECT Is a governor or other arrangement fitted to prevent racing of the engine when disengaged GOVERNOR Means of  
 lubrication FORCES Thickness of cylinder liners 30 mm Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled  
 lagged with non-conducting material LAGGED If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned  
 back to the engine  Cooling Water Pumps, No. TWO Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES  
 Bilge Pumps worked from the Main Engines, No. ONE ROTARY PUMP: 40 T/h. Can one be overhauled while the other is at work   
 Pumps connected to the Main Bilge Line No. and size ONE: 60 Tons/h - ONE: 30 Tons/h  
 How driven ELECTRIC MOTOR

Is the 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  
 arrangements

Ballast Pumps, No. and size ONE: 60 Tons/h Power Driven Lubricating Oil Pumps, including spare pump, No. and size ONE: 40 Tons/h  
ONE: 8 Tons/h  
 Are two 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:—In machinery spaces ONE: 45 mm - ONE: 85 mm - ONE: 66 mm In pump room   
 Holds, &c. ONE: 66 mm IN EACH HOLD.

Independent Power Pump Direct Suctions to the engine room bilges, No. and size ONE: 45 mm - ONE: 85 mm  
 Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes YES Are the bilge suction pipes in the machinery spaces led from easily  
 accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES  
 Are all Sea Connections fitted direct on the skin of the Ship YES Are they fitted with valves or cocks VALVES Are they fixed  
 sufficiently high on the ship's side to be seen without lifting the platform plates YES Are the overboard discharges 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 the blow off cocks fitted with a spigot and brass covering plate YES  
 Do all pipes pass through the bunkers  How are they protected   
 Do all pipes pass through the deep tanks  Have they been tested as per Rule

Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times YES  
 Are the arrangements 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 compartment to another YES Is the shaft tunnel watertight  Is it fitted with a watertight door  worked from   
 On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

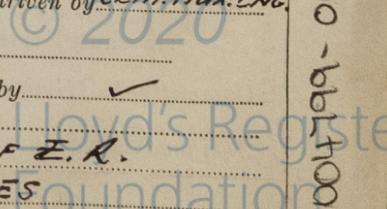
Main Air Compressors, No. ONE No. of stages TWO diameters 150/100 mm stroke 100 mm driven by MAIN ENGINE  
 Auxiliary Air Compressors, No. ONE No. of stages TWO diameters 185/80 mm stroke 150 mm driven by PORT AUX. ENG.  
 All Auxiliary Air Compressors, No. ONE No. of stages TWO diameters 100/45 mm stroke 45 mm driven by CENT. AUX. ENG.

Is provision made for first charging the air receivers MANUAL COMPRESSOR  
 Air Pumps, No.  diameter  stroke  driven by   
 Auxiliary Engines crank shafts, diameter as per Rule  No. THREE Position AT THE FORE END OF E.R.  
 as fitted

Have the auxiliary engines been constructed under special survey YES Is a report sent herewith YES

51/49

5800-608400-008  
191400



AIR RECEIVERS: - Have they been made under survey. **YES** State No. of report or certificate **C 2518 OF AMSTERDAM dated 7-6-48.**

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 **✓**

Starting Air Receivers, No. **TWO** Total cubic capacity **5000 LIT.** Internal diameter **768 mm** thickness **16 mm**  
Seamless, welded or riveted longitudinal joint **FUSION WELDED CLASS 7** Material **STEEL** Range of tensile strength **✓** Working pressure **Actual 30 Kg**

IS A DONKEY BOILER FITTED **YES** If so, is a report now forwarded **SEE GLASGOW REP. N° 72645**  
Is the donkey boiler intended to be used for domestic purposes only. **YES**

PLANS. Are approved plans forwarded herewith for shafting **11/10/46** Receivers **PLAN N° 87174 23/7/47** Separate fuel tanks **523 approved in GENOA 5/12/48 1/14/48 16/6/48**  
Donkey boilers. General pumping arrangements **12/2/48** Pumping arrangements in machinery space **✓**

Oil fuel burning arrangements. **✓**  
Have Torsional Vibration characteristics been approved. **YES** Date of approval **SEE LONDON LETTER 'E' 8/11/46**

SPARE GEAR.  
Has the spare gear required by the Rules been supplied. **YES**  
State the principal additional spare gear supplied. **✓**

**Società per Azioni**  
**ORBEO - TARNI - ORLANDO**  
The foregoing is a correct description, and the particulars of the installation are as approved for torsional vibration characteristics.  
Manufacturer.

Dates of Survey while building  
During progress of work in shops - - **SEE AMSTERDAM REP. N° 16542.**  
During erection on board vessel - - **FROM 19/5/48 TO 15/8/48**

Total No. of visits **18**  
Dates of examination of principal parts - Cylinders **✓** Covers **✓** Pistons **✓** Rods **✓** Connecting rods **✓**

Crank shaft **✓** Flywheel shaft **✓** Thrust shaft **12/5/48** Intermediate shafts **12/5/48** Tube shaft **✓**  
Screw shaft **12/5/48** Propeller **24/5/48** Stern tube **3/4/48** Engine seatings **12/5/48** Engine holding down bolts **4/6/48**

Completion of fitting sea connections **10/5/48** Completion of pumping arrangements **21/7/48** Engines tried under working conditions **5/8/48**

Crank shaft, material **STEEL** Identification mark **LLOYD'S 54609 J.H. 27-5-47 K.K. 4-12-47** Flywheel shaft, material **✓** Identification mark **LLOYD'S 5874 K.K. 16-3-48**  
Thrust shaft, material **STEEL** Identification mark **LLOYD'S 5528 K.K. 25-12-47** Intermediate shafts, material **STEEL** Identification marks **LLOYD'S 5874 K.K. 16-3-48**

Tube shaft, material **✓** Identification mark **✓** Screw shaft, material **STEEL** Identification mark **LLOYD'S 5874 K.K. 16-3-48**

Identification marks on air receivers **6189 - 6190 LLOYD'S TEST 48.5 Kg/cm² W.P. 30 Kg/cm² K.K. 3-6-48**  
Welded receivers, state Makers' Name **N.V. WERRSPOOR - AMSTERDAM.**

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 **1 FOAM EXTING. 136 lit. - 4 FOAM EXTING. 9 lit. - CO2 CONTAINER 5KG - STEAM HOSE WATER HOSE CONNECTIONS.**  
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 **YES**  
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.) **THE MAIN ENGINE AND SHAFTING, WHICH HAVE BEEN CONSTRUCTED UNDER SPECIAL SURVEY OF THE AMSTERDAM SURVEYORS (SEE AMSTERDAM REPORT N° 16542) HAVE BEEN SATISFACTORILY FITTED ON BOARD. THE MACHINERY HAS BEEN SURVEYED DURING FITTING OUT AND IS IN ACCORD WITH THE APPROVED PLANS, SECRETARY'S LETTERS AND RULE REQUIREMENTS. THE MATERIALS AND WORKMANSHIP ARE GOOD. ON COMPLETION THE MACHINERY HAS BEEN TRIED UNDER WORKING CONDITION AT SEA AT FULL POWER AND FOUND SATISFACTORY. THE COMPOSITE COCHRAN DONKEY BOILER N° 19948 (SEE GLASGOW REPORT N° 72645) HAS NOW BEEN SATISFACTORILY FIXED ON BOARD, EXAMINED UNDER STEAM AND ITS SAFETY VALVES ADJUSTED TO 105 lbs/sq. in. THE MACHINERY OF THIS VESSEL IS ELIGIBLE, IN OUR OPINION, TO BE CLASSED IN THE SOCIETY REGISTER BOOK WITH THE NOTATION: +L.M.C. 8-48, C.L. 8-48, "OIL ENGINE".**

50% LEAGHON 1/2 LIT. 26.400. =  
50% LONDON 1/2 LIT. 26.400. =  
The amount of Entry Fee...  
Pt. Special S. (GENOA 1/2) 24.000. =  
TRAV. EXP. (GENOA 1/2) 10.000. =  
Donkey Boiler Fee...  
REVENUE TAX (GENOA 1/2) 5.880. =  
Travelling Expenses (if any) =

When applied for **18. 11. 1948**  
PAYABLE IN LEAGHON  
When received **19**  
Engineer Surveyor to Lloyd's Register of Shipping  
Committee's Minute **FRI. 7 JAN 1949**  
Assigned

