

REPORT ON OIL ENGINE MACHINERY.

No. 17660.

23 AUG 1950

Received at London Office

Date of writing Report 16th August 50. When handed in at Local Office 22nd August 1950. Port of Gothenburg.

No. in Survey held at Uddevalla Date, First Survey 10th March, 1949 Last Survey 19th July 1950.
Reg. Book. Number of Visits 12

36036 on the ~~Twin~~ Screw vessel. "ISLAS MALVINAS" Tons Gross 9822
Net 5565

Built at Uddevalla By whom built Uddevallavarvet A-B. Yard No. 111 When built 1950

Engines made at Milwaukee, U.S.A. By whom made Nordberg Manufacturing Company Engine No. TSM 297-2 When made 1949

Donkey Boilers made at Paisley By whom made A.F. Craig & Co., Ltd. Boiler No. 23065 When made 1950
Total service BHP 2 x 4250 Brake Horse Power 2 x 4250 Owners Argentine Government (Yacimientos Petroliferos Fiscales) Port belonging to Buenos Aires

M.N. Power as per Rule 2062 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended General

OIL ENGINES, &c. — Type of Engines Heavy Oil Engine, Crosshead Type, 2 or 4 stroke cycle 2 Single or double acting Single
Solid Injection

Maximum pressure in cylinders 800 psi Diameter of cylinders 29" Length of stroke 40" No. of cylinders 7 No. of cranks 7

Mean Indicated Pressure 80 psi Ahead Firing Order in Cylinders 1-7-2-5-4-3-6 Span of bearings, adjacent to the crank, measured from inner edge to inner edge --- Is there a bearing between each crank --- Revolutions per minute 140

Flywheel dia --- Weight --- Moment of inertia of flywheel (lbs. in² or Kg. cm.²) --- Means of ignition --- Kind of fuel used Diesel

Crank Shaft, Solid forged dia. of journals as per Rule Crank pin dia. --- Crank webs Mid. length breadth --- shrunk Thickness parallel to axis ---
Semi built as fitted --- --- --- --- ---
All built --- --- --- --- --- ---

Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as fitted 325 mm. Thrust Shaft, diameter at collars as fitted ---
--- --- --- --- --- ---

Tube Shaft, diameter as per Rule Screw Shaft, diameter as fitted 360 mm. Is the (XOX) shaft fitted with a continuous liner Yes
--- --- --- --- --- ---

Bronze Liners, thickness in way of bushes as fitted 19 mm. Thickness between bushes as fitted 14 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 In 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 Fits tightly (The spare shaft charged with plastic material)
--- --- --- --- --- ---

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 1575 mm.
--- --- --- --- --- ---

Propeller, dia. 4280 mm. Pitch 3950 mm. No. of blades 4 Material Bronze whether moveable No Total developed surface 7.37 sq. Metres.
--- --- --- --- --- ---

Moment of inertia of propeller (lbs. in² or Kg. cm.²) --- Kind of damper, if fitted No damper fitted
--- --- --- --- --- ---

Method of reversing Engines Compr. air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Forced Thickness of cylinder liners 1.25" Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or 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 Led to funnel Cooling Water Pumps, No. 3 Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
--- --- --- --- --- ---

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--- --- --- --- --- ---

Bilge Pumps worked from the Main Engines, No. None Diameter --- Stroke --- Can one be overhauled while the other is at work ---
--- --- --- --- --- ---

Pumps connected to the Main Bilge Line (No. and size 1 ballast: 100 tons/hour, 1 bilge: 30 tons/hour, 1 transfer: 50 tons/hour. How driven Electrically Steam Electrically
--- --- --- --- --- ---

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 1: 100 tons/hour Power Driven Lubricating Oil Pumps, including spare pump, No. and size 3 x 225 M³/hour
--- --- --- --- --- ---

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 3 x 3", 4 x 2" In pump room Forward: 1 x 2 1/2"
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In ~~XXXXXX~~ Main Pump Room: 3 x 3", Dry cargo holds: 2 x 2 1/2" 1 x 5" ballast pump, 1 x 3 1/2" bilge pump, 1 x 3" transfer pump, 1 x 6" main cooling water pumps.
--- --- --- --- --- ---

Independent Power Pump Direct Suctions to the engine room bilges, No. and size --- 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 Some on tank top Are they fitted with valves or cocks Yes 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
--- --- --- --- --- ---

What pipes pass through the bunkers No coal bunkers How are they protected ---
--- --- --- --- --- ---

What pipes pass through the deep tanks Only bilge pipe from cofferdam Have they been tested as per Rule Yes
--- --- --- --- --- ---

Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes
--- --- --- --- --- ---

Is the 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 compartment to another Yes Is the shaft tunnel watertight No tunnel 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 ---
--- --- --- --- --- ---

Main Air Compressors, No. None No. of stages --- diameters --- stroke --- driven by ---
--- --- --- --- --- ---

Auxiliary Air Compressors, No. 2 No. of stages 2 diameters 11.1/4" x 4.3/4" stroke 8" driven by El. motor
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Small Auxiliary Air Compressors, No. 1 No. of stages 2 diameters 5" x 2.1/4" stroke 3 1/2" driven by Diesel eng.
--- --- --- --- --- ---

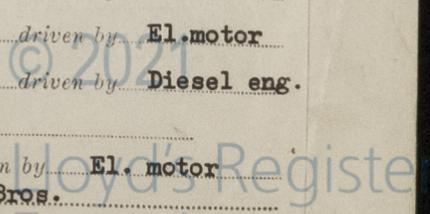
What provision is made for first charging the air receivers The above hand started diesel driven compressor
--- --- --- --- --- ---

Scavenging Air Pumps, No. 2 for each main engine diameter Rotary stroke --- driven by El. motor
--- --- --- --- --- ---

Auxiliary Engines crank shafts, diameter --- Journals: 7" Crank pins: 6" No. 4 sets Bush Sulzer Bros. ---
--- --- --- --- --- ---

Have the auxiliary engines been constructed under special survey Yes Is a report sent herewith Yes See also Clv. rpt. No. 1346.
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MADE AND PRINTED IN ENGLAND.



AIR RECEIVERS:—Have they been made under survey. Yes No State No. of ~~receivers~~ receivers 2198-2199-2200
 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. None Cubic capacity of each --- Internal diameter --- thickness ---
 Seamless, welded or riveted longitudinal joint --- Material --- Range of tensile strength --- Working pressure --- by Rules ---
 Starting Air Receivers, No. 2 + 1 Total cubic capacity 1 x 3 M³ Internal diameter 976 mm. thickness 12 mm. appd. 28.0 kg/cm²
 Seamless, welded or riveted longitudinal joint El. welded Material S.M. Steel Range of tensile strength 45-52 kg/mm² Working pressure --- Actual 17.5 kg/cm²
 Actual 28.0 kg/cm²
 Actual 17.5 kg/cm²

IS A DONKEY BOILER FITTED Yes No If so, is a report now forwarded Yes
 Is the donkey boiler intended to be used for domestic purposes only No
PLANS. Are approved plans forwarded herewith for shafting 15.8.1949 London Receivers 2.1.1949 London Separate fuel tanks ---
 (If not, state date of approval)
 Donkey boilers --- General pumping arrangements 15.3.49 London Pumping arrangements in machinery space 15.3.1949 London
 Oil fuel burning arrangements ---
 Have Torsional Vibration characteristics been approved Yes Date of approval 12.10.1948 and 15.8.1949

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes
 State the principal additional spare gear supplied 1 propeller shaft, 1 impeller with shaft for scavenging air blower.

The foregoing is a correct description, and the particulars of the installation as fitted are as approved for torsional vibration characteristics.

Uddevallavarvet
 Manufacturer.

Dates of Survey while building
 During progress of work in shops ---
 During erection on board vessel 10th March, 1949 - 19th July, 1950.
 Total No. of visits 12

Dates of examination of principal parts—Cylinders --- Covers --- Pistons --- Rods --- Connecting rods ---
 Crank shaft --- Flywheel shaft --- Thrust shaft --- Intermediate shafts 10.3.1950 Tube shaft ---
 Screw shaft 23.1.1950 Propeller 23.1.1950 Stern tube 15-21.12.49 Engine seatings 6.2.1950 Engine holding down bolts 28.3.1950
 Completion of fitting sea connections 28.11.1949 Completion of pumping arrangements 7.7.1950 Engines tried under working conditions 12.6.1950

Crank shaft, material --- Identification mark --- Flywheel shaft, material --- Identification mark ---
 Thrust shaft, material --- Identification mark --- Intermediate shafts, material S.M. Steel Identification marks See below
 Tube shaft, material --- Identification mark --- Screw shaft, material S.M. Steel Identification mark Port: LL.1142
 Identification marks on air receivers

Nos. 2198-2199	No. 2200	Ident. marks on interm. shafts	Stbd: SB 16.11.49
Lloyd's test 45.5 kg.	Lloyd's test 30 kg.	Port main eng: Lloyd's 913-898	Lloyd's 913-898
WP 28 kg.	WP 17.5 kg.	AS 10.3.50	AS 10.3.50
AS 23.3.50	AS 27.3.50		

 Spare: LL.1516 AS 2.3.50

Welded receivers, state Makers' Name Uddevallavarvet A-B. in accordance with the Rules for Welded Pressure Vessels Class II A.
 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 x 140 litres foam extinguisher in boiler room.
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Oil tanker 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 Not required
 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 machinery of this vessel has been fitted on board under my inspection and to my satisfaction and has been tested under full working power on a trial trip and found to work satisfactorily.
 Material certificates in respect of straight shafting and air receivers are attached.
 The main engines can easily be run continuously below 60 revolutions per minute, and in accordance with the Secretary's letter dated the 12th October, 1948, and of the 15th August, 1949, a notice board has been fitted at the control station, stating that the main engines are not to be run below 60 revolutions per minute. No torsionograph records have been taken from the completed installation.
 The machinery of this vessel is eligible, in my opinion, to be classed in the Register Book with notations of +LMC 7,50, 2 donkey boilers á 150 lbs. per square inch working pressure, and Tail Shaft fitted with Continuous

Liner. Special Survey
 The amount of ~~XXXX~~ Fee ... Kr. 2720:00
~~XXXX~~ Late Fees ... Kr. 160:00 When applied for 22nd August 1950.
 Start Air Rec. ~~XXXX~~ Fee... Kr. 370:00 When received --- 19 ---
 Travelling Expenses (if any) Kr. 540:00

Anders Sjögren
 Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation

Certificate (if required) to be sent to Gothenburg Office. (The Surveyors are requested not to write on or below the space for Committee's Minute.)

Committee's Minute FRI. 22 SEP 1950
 Assigned +LMC 7.50 Oil Eng. (with endorsement)
C.L. 22B 15016.