

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.

36036 on the Twin Screw vessel "ISLAS MALVINAS" Gross Tons 9822 Net Tons 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 Owners Argentine Government (Yacimientos Petroliferos Fiscales) Port belonging to Buenos Aires

Brake Horse Power 2 x 4250 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. cm²) --- 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 --- Thickness parallel to axis ---

Semi built as fitted --- Crank webs Mid. length thickness --- shrunk Thickness around eye-hole ---

All built as fitted --- Thrust Shaft, diameter at collars as fitted ---

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 (screw) 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. Metres.

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. cm²) --- 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 salt water: 3 x 250 M³/h. — 3 fresh water: 3 x 250 M³/h.

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. 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"

In Main Pump Room: 3 x 3", Dry cargo holds: 2 x 2 1/2"

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 1 x 5" ballast pump, 1 x 3 1/2" bilge pump, 1 x 3" transfer pump, 1 x 6" main cooling water pumps.

Are all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction 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

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.

as fitted Journals: 7" — Crank pins: 6" Position E.R. floor: 2 port, 2 starboard fore & aft

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

AIR RECEIVERS:—Have they been made under survey. Yes ✓ 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. 17.5 kg/cm²
Actual. 28.0 kg/cm²
17.5 kg/cm²

IS A DONKEY BOILER FITTED Yes ✓ 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: BR 7.11.49

Identification marks on air receivers. Nos. 2198-2199 Lloyd's test 45.5 kg. WP 28 kg. AS 23.3.50
No. 2200 Lloyd's test 30 kg. WP 17.5 kg. AS 27.3.50
Ident. marks on interm. shafts Stbd: SB 16.11.49
Port main eng: Stbd. main eng: Lloyd's 913-898 Lloyd's 913-898 AS 10.3.50 AS 10.3.50
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. Steam under donkey boilers and main engines, 8 x 12 litres foam extinguishers, 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 torsigraph records have been taken from the completed installation.

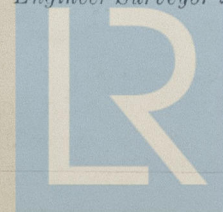
The machinery of this vessel is eligible, in my opinion, to be classed in the Register Book with notations of +LMC 7.50, 2 donkey boilers á 150 lbs. per square inch working pressure, and Tail Shaft fitted with Continuous

Liner. Special Survey
The amount of XXXX Fee ... Kr. 2720:00
XXXX Late Fees ... Kr. 160:00
Start Air Rec. XXXX Fee ... Kr. 370:00
Travelling Expenses (if any) Kr. 540:00

When applied for 22nd August 1950.

When received --- 19 ---

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



Lloyd's Register Foundation

Gothenburg Office

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

Assigned +LMC 7.50 Oil Eng. (with endorsement)
C.L. 2DB 15016.

FRI. 22 SEP 1950