

# REPORT ON OIL ENGINE MACHINERY.

No. 18400

Received at London Office

Writing Report 1st August 1951. When handed in at Local Office 10th Aug. 1951 Port of Gothenburg 13 AUG 1951

Survey held at Uddevalla Date, First Survey 14th September 1950 Last Survey 22nd June 1951  
Number of Visits 10

on the Twin Screw vessel "ISLAS GEORGIA S" Tons Gross 9893 Net 5634

Uddevalla By whom built Uddevallavarvet A-B. Yard No. 113 When built 1951

made at Milwaukee, Wis., U.S.A. By whom made Nordberg Manufacturing Company Engine No. TSM 2975-6 When made 1949

Boilers made at Stockton By whom made Stockton C.E. &amp; Riley Boilers, Ltd. Boiler No. 7209-10 When made 1950

and 2 x 4250 Owners Yacimientos Petroliferos Fiscales Port belonging to Buenos Aires

as per Rule 2062 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

which vessel is intended General

INES, &amp;c. Type of Engines Heavy oil eng., Crosshead type, Solid 2 or 4 stroke cycle 2 Single or double acting Single injection

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

Rated Pressure 80 psi Ahead Firing Order in Cylinders 1-7-2-5-4-3-6 Span of bearings, adjacent to the crank, measured edge to inner edge Is there a bearing between each crank No Revolutions per minute 140

Weight Moment of inertia of flywheel (lbs. in<sup>2</sup> or Kg. cm.<sup>2</sup>) Means of ignition Compression Kind of fuel used Diesel oil

Solid forged dia. of journals as per Rule Crank pin dia. Crank webs Mid. length breadth Thickness parallel to axis

Cast built dia. of journals as fitted Intermediate Shafts, diameter as fitted 325 mm Thrust Shaft, diameter at collars as fitted

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Screw Shaft, diameter as fitted 360 mm Is the screw shaft fitted with a continuous liner Yes

Bushers, 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 stern 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-volatile No

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 the shaft No

If so, state type Length of bearing in Stern Bush next to and supporting propeller 1575 mm

Diameter 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. in<sup>2</sup> or Kg. cm.<sup>2</sup>) Kind of damper, if fitted No damper fitted

Reversing Engines Compr. air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes

Means of Forcing Thickness of cylinder liners Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled

with non-conducting material Lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned led to a funnel Cooling Water Pumps, No. 3 salt water a 250 M<sup>3</sup> per hour, and 3 fresh water a 250 M<sup>3</sup> per hour

Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

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 a 100 tons/hour, 1 bilge a 30 tons/hour, 1 transfer a 50 tons/hour

How driven Electrically Steam Electrically

Is bilge 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

Pumps, No. and size 1 a 100 tons/hour Power Driven Lubricating Oil Pumps, including spare pump, No. and size 3. 125 M<sup>3</sup>/hour

Independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both main bilge pumps and auxiliary pumps, No. and size:—In machinery spaces 3 x 3", 4 x 2" In pump room 1 x 2 1/2"

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 the bilge suction pipes in holds 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

Connections fitted direct on the skin of the Ship Also on stands Are they fitted with valves or cocks Valves Are they fixed 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

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

Do pipes pass through the deep tanks 1 bilge pipe from cofferdam Have they been tested as per Rule Yes

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

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 from one compartment to another Yes Is the shaft tunnel watertight No tunnel Is it fitted with a watertight door worked from

On the vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Compressors, No. None No. of stages diameters stroke driven by

Air Compressors, No. 2 No. of stages 2 diameters 11 1/4" x 4 3/4" stroke 8" driven by El. motor Hand started

Auxiliary Air Compressors, No. 1 No. of stages 2 diameters 5" x 2 1/4" stroke 3 1/2" driven by diesel eng.

Provision is made for first charging the air receivers The above diesel driven compressor

Lubricating Air Pumps, No. 2 for each engine Rotary stroke driven by Electric motors

Engines crank shafts, diameter as per Rule Journals: 7" Crank pins: 6" Position ER floor, 2 port and 2 stbd. forw. &amp; aft

Are auxiliary engines been constructed under special survey Yes Is a report sent herewith Yes Also Cleveland Report

**AIR RECEIVERS:**—Have they been made under survey Yes State No. of receivers 2340 - 1  
 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 ---  
 Starting Air Receivers, No. 2 + 1 Total cubic capacity 1 x 3 M<sup>3</sup> Internal diameter 976 mm. thickness 12 mm.  
 Seamless, welded or riveted longitudinal joint El. welded Material S.M. Steel Range of tensile strength 45-52 kg/mm<sup>2</sup> Working pressure ---

**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 London 15.8.1949 Receivers London 2.2.49 Separate fuel  
 (If not, state date of approval)  
 Donkey boilers --- General pumping arrangements London 15.3.49 Pumping arrangements in machinery space London  
 Oil fuel burning arrangements ---  
 Have Torsional Vibration characteristics been approved Yes Date of approval London 12.10.1948

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied Yes  
 State the principal additional spare gear supplied 1 propeller shaft

The foregoing is a correct description,  
**UDDEVALLAVARVET** Manufacturer.  
**AKTIEBOLAG**

Dates of Survey while building  
 During progress of work in shops - - -  
 During erection on board vessel - - - 14th September, 1950 - 22nd June, 1951  
 Total No. of visits 10

Dates of examination of principal parts—Cylinders --- Covers --- Pistons --- Rods --- Connecting rods ---  
 Crank shaft --- Flywheel shaft --- Thrust shaft --- Intermediate shafts 15.1.1951 Tube shaft ---  
 Screw shaft 1.3.1951 Propeller 1.3.1951 Stern tube 7.9.1950 Engine seatings 5.2.1951 Engine holding down bolts ---  
 Completion of fitting sea connections 23.11.1950 Completion of pumping arrangements 12.6.1951 Engines tried under working conditions ---  
 Crank shaft, material --- Identification mark --- Flywheel shaft, material --- Identification mark ---  
 Thrust shaft, material --- Identification mark --- Intermediate shafts, material S.M. Steel Identification marks ---  
 Screw shaft, material S.M. Steel Identification mark LL.Nos. 1157-8 (spare)  
 Identification marks on air receivers: 

Nos. 2340 - 41	No. 2342	Port: 6860-1; 11 LLOYD'S 936 AS 15.1.51
LLOYD'S TEST 45.5 KGS.	LLOYD'S TEST 35 KGS.	
WP 28 KGS.	WP 17.5 KGS.	
AS 19.9.50	AS 25.9.50	AS

Welded receivers, state Makers' Name Uddevallavarvet A-B. in accordance with the Rules  
 Is the flash point of the oil to be used over 150°F Yes for Welded Pressure Vessels Class II A

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 extinguishers 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 Yes If so, state name of vessel M/T "Islas Orcadas", Gothenburg

**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  
 been tested under full working power on a trial trip and found to work satisfactorily.  
 Material certificates in respect of the straight shafting and of the air receivers are forwarded  
 The main engines can easily be run continuously below 60 revolutions per minute, and in accordance  
 the Secretary's letter dated the 12th October, 1948, and of the 15th August, 1949, a notice board has been fitted  
 control station, stating that the main engines are not to be run continuously below 60 revolutions per minute  
 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  
 of +LMC 6.51, 2 Donkey Boilers à 150 lbs. per square inch working pressure, and Tail Shafts fitted with Cont.

Note: Part of the above survey was carried out on Wednesday the 13th June, 1951, between 04:00 and 07:00

The amount of Entry Fee ... £ --- : --- :  
 Special ... (1/3) ... Kr. 2720:00 : When applied for 10th Aug. 1951  
 Air Receiver Fee... Kr. 370:00 : When received --- 19 ---  
 Travelling Expenses (if any) Kr. 259:20 :

Anders Sjögren  
 Engineer Surveyor to Lloyd's Register



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 Foundation

Committee's Minute  
 Assigned +LMC 7.51 Oil Eng. (with Endorsement)  
CL. 2DB 150 lb.

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