

RECEIVED

# REPORT ON OIL ENGINE MACHINERY.

No. 18257



2 JUN 1951

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Writing Report 4th June 1951. When handed in at Local Office 12th June 1951. Port of Gothenburg

Survey held at Trollhättan Date, First Survey 12th April, 1950 Last Survey 21st May 1951. Number of Visits 8

by Rule Actual on the ~~XXXX~~ Single Screw vessel "IRISH" Approximate Tons Gross 1100 Net 500

by Rule Actual Norrköping By whom built Norrköpings Varv och Verkstad A-B. Yard No. 136 When built 1951

made at Trollhättan By whom made Nydqvist & Holm A-B. Engine No. 1324 When made 1951

Boilers made at --- By whom made --- Boiler No. --- When made ---

orse Power 900 Owners U.S.S.R. Port belonging to ---

Is Refrigerating Machinery fitted for cargo purposes --- Is Electric Light fitted ---

GINES, &c. Type of Engines Heavy oil, trunk type 2 or 4 stroke cycle 2 Single or double acting Single

m pressure in cylinders 50 kg/cm<sup>2</sup> Diameter of cylinders 345 mm. Length of stroke 580 mm. No. of cylinders 6 No. of cranks 6

ndicated Pressure 6.23 kg/cm<sup>2</sup> Ahead Firing Order in Cylinders 1-5-3-4-2-6 Span of bearings, adjacent to the crank, measured

ner edge to inner edge 504 mm. Is there a bearing between each crank Yes Revolutions per minute 250

dia. 1656 mm. Weight 2065 kgs Moment of inertia of flywheel 7899 Kg.cm<sup>2</sup> Means of ignition Compr. Kind of fuel used Diesel oil

Solid forged dia. of journals appd. 230 mm. Crank pin dia. 230 mm. Crank webs Mid. length breadth 310 mm. Thickness parallel to axis ---

el Shaft, diameter as per Rule --- Intermediate Shafts, diameter as fitted 165 mm. Thrust Shaft, diameter at collars as fitted 174.9 mm.

shaft, diameter as per Rule --- Screw Shaft, diameter as fitted 198 mm. Is the (screw) shaft fitted with a continuous liner No

Liners, thickness in way of bushes as per Rule --- Thickness between bushes as fitted --- Is the after end of the liner made watertight in the

er boss --- If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ---

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-

e. --- 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

ng rods. --- Is the shaft Yes If so, state type Cedervallé Adjustable No. 7 Length of bearing in Stern Bush next to and supporting propeller 800 mm.

shaft. --- er, dia. Pitch No. of blades Material whether moveable Total developed surface sq. feet

bolts. 28 Moment of inertia of propeller (lbs. in<sup>2</sup> or Kg. cm.<sup>2</sup>) Kind of damper, if fitted None

itions. 11 Direct with Is a governor or other arrangement fitted to prevent racing of the engine Yes Means of

ion Forced Thickness of cylinder liners 27.5 mm. Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled

marks. 20.6 d with non-conducting material Lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned

LLOYDS k. 20.6 the engine Cooling Water Pumps, No. 1 x 475 lit/m<sup>3</sup>n. Is the sea suction provided with an efficient strainer which can be cleared within the vessel. ---

umps worked from the Main Engines, No. 1 x 475 lit/m<sup>3</sup>n. Diameter 150 mm. Stroke 120 mm. Can one be overhauled while the other is at work. ---

connected to the Main Bilge Line No. and size --- How driven ---

ooling water led to the bilges. --- If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

ments. ---

mother tanks & Pumps, No. and size --- Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2 x 265 litres/minute

o independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both main bilge pumps and auxiliary

umps, No. and size: --- In machinery spaces. --- In pump room. ---

No. 135 s, &c. ---

ndent Power Pump Direct Suctions to the engine room bilges, No. and size. ---

the bilge suction pipes in holds and tunnel well fitted with strum-boxes. --- Are the bilge suction in the machinery spaces led from easily

ble mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges. ---

atisfact Sea Connections fitted direct on the skin of the Ship. --- Are they fitted with valves or cocks. --- Are they fixed

ly high on the ship's side to be seen without lifting the platform plates. --- Are the overboard discharges above or below the deep water line. ---

ntinuous y each fitted with a discharge valve always accessible on the plating of the vessel. --- Are the blow off cocks fitted with a spigot and brass covering plate. ---

ontrols. pipes pass through the bunkers. --- How are they protected. ---

pipes pass through the deep tanks. --- Have they been tested as per Rule. ---

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

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

or from one compartment to another. --- Is the shaft tunnel watertight. --- Is it fitted with a watertight door. --- worked from

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

ING Air Compressors, No. 1 No. of stages 2 diameters 85/210 mm. stroke 250 mm. driven by the engine

ary Air Compressors, No. --- No. of stages --- diameters --- stroke --- driven by ---

Auxiliary Air Compressors, No. --- No. of stages --- diameters --- stroke --- driven by ---

provision is made for first charging the air receivers. ---

nging Air Pumps, No. 1 (D.A.) crank type diameter 735 mm. stroke 580 mm. driven by the engine

ary Engines crank shafts, diameter as per Rule --- No. --- Position. ---

the auxiliary engines been constructed under special survey. --- Is a report sent herewith. ---

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4.B

**AIR RECEIVERS:**—Have they been made under survey... Yes... State No. of ~~XXXXXX~~ certificate... 7209 and 7

Is each receiver, which can be isolated, fitted with a safety valve as per Rule... Fusible plug. Safety valves on compressor.

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... Survey held at...

Seamless, welded or riveted longitudinal joint... Material... Range of tensile strength... Working pressure...  
 1 a 800 lit. - 750 mm. 15 mm

**Starting Air Receivers, No.** 2... Total cubic capacity... 1800 litres... Internal diameter... thickness...  
 1 a 1000 lit. - 750 mm. 16 mm

Seamless, welded or riveted longitudinal joint... El. welded Material... S.M. Steel... Range of tensile strength... Working pressure...  
 45.3-49.2 kg/mm

**IS A DONKEY BOILER FITTED**... If so, is a report now forwarded...  
 Is the donkey boiler intended to be used for domestic purposes only...  
**PLANS.** Are approved plans forwarded herewith for shafting... 13.2.1950... Receivers... 13.2.1950... Separate fuel...  
 (If not, state date of approval)  
 Donkey boilers... General pumping arrangements... Pumping arrangements in machinery space...  
 Oil fuel burning arrangements...  
 Have Torsional Vibration characteristics been approved... Yes... Date of approval... London 13.2.1950...  
 speed range of 98 a

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied... Yes. To be checked on board.  
 State the principal additional spare gear supplied...  
 The foregoing is a correct description, and the particulars of the installation as fitted are as approved  
 torsional vibration characteristics.

**NYDQVIST & HOLM AKTIEBOLAG**  
 Konstruktionskontoret  
 O. F. Fiedler

Manufacturer.

**Dates of Survey while building**

During progress of work in shops - -	12th April, 1950 - 21st May, 1951.
During erection on board vessel - -	-----
Total No. of visits	8

**Dates of examination of principal parts**—Cylinders 21.8.1950 Covers 21.8.1950 Pistons 6.4.1951 Rods --- Connecting rods 6.4.1951  
 Crank shaft 6.4.1951 Flywheel shaft --- Thrust shaft 18.9.1950 Intermediate shafts 20.6.1950 Tube shaft ---  
 Screw shaft 20.6.1950 Propeller --- Stern tube 3.5.1950 Engine seatings --- Engine holding down bolts ---  
 Completion of fitting sea connections --- Completion of pumping arrangements --- Engines tried under working conditions 27.8.1950

**Identification marks**

Crank shaft, material	S.M. Steel	Identification mark	LL.No. 1982 OS 6.4.51	Flywheel shaft, material	---	Identification mark	---
Thrust shaft, material	S.M. Steel	Identification mark	LL.No. 1958 OS 18.9.50	Intermediate shafts, material	El. steel	Identification marks	LL.No. AS 20
Tube shaft, material	---	Identification mark	---	Screw shaft, material	Electro steel	Identification mark	LL.No. AS 20

**Identification marks on air receivers**

100 litr.	LLOYD'S TEST 42 KGS. WP 25 KGS. SW 30.5.50	800 litr.	LLOYD'S TEST 42 KGS. WP 25 KGS. SW 13.11.50
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Welded receivers, state Makers' Name... Avesta Jernverks A-B., Avesta, Sweden

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... ---

Description of fire extinguishing apparatus fitted... ---

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo... --- 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... ---

Is this machinery duplicate of a previous case... Yes... If so, state name of vessel... M/T "Ischim", A-B. Norrköping Verkstad Yard No.135, Gothenburg Entry Report No.17746.

**General Remarks** (State quality of workmanship, opinions as to class, &c.)

This machinery has been built under Special Survey in accordance with the Rules and approved plans

The workmanship and materials are good and test sheets in respect of the latter are attached.

The engine has been tried under full working power in shop and found to work satisfactorily.

A notice board stating that the engine is not to be run continuously between 98 and 118 R.P.M. has been delivered with the engine and the tachometer will be marked accordingly.

This machinery is eligible, in my opinion, to be classed +LMC with date when securely fitted on board the vessel under inspection and to the satisfaction of the Society's Surveyors.

The amount of Entry Fee (2/3) Kr. 970:-

Special ... .. £	When applied for 12/6 19 51.
Donkey Boiler Fee... .. £	When received 19
Travelling Expenses (if any) Kr. 103:50	

*O. F. Fiedler*  
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute TUES. 29 JAN 1952

Assigned See F.E. M... rpt.



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