

# REPORT ON OIL ENGINE MACHINERY.

No. 13911  
7 - NOV 1953

Date of writing Report 28 10 1953 When handed in at Local Office 30 10 1953 Port of TRIESTE  
No. in Survey held at TRIESTE Date, First Survey 5th June 1953 Last Survey 23rd Oct. 1953  
Reg. Book. 35257 S on the Twin Screw vessel "INSUMAR" Gross 283 Tons Net 125  
Built at TRIESTE By whom built Cantieri Navale Giuliano S. Giusta Yard No. 35 When built 1953-10  
Engines made at Openshaw Manchester By whom made Messrs. Crossley Bros., Ltd. Engine No. 146643 When made 1952  
Donkey Boilers made at None By whom made - - - - - Boiler No. - When made -  
Brake Horse Power 300 Owners Indonesian Republic Port belonging to Djakarta  
M.N. Power as per Rule 60 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes  
Trade for which vessel is intended General Cargo

IL ENGINES, &c. —Type of Engines 2 or 4 stroke cycle Single or double acting  
Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks  
Mean Indicated Pressure Ahead Firing Order in Cylinders Span of bearings, adjacent to the crank, measured from inner edge to inner edge Is there a bearing between each crank Revolutions per minute  
Flywheel dia. Weight Moment of inertia of flywheel (lbs. in.<sup>2</sup> or Kg. cm.<sup>2</sup>) Means of ignition Kind of fuel used  
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  
Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule as appd. Thrust Shaft, diameter at collars as fitted 4 3/4" as appd.  
as fitted as fitted as fitted as fitted as fitted as fitted  
Tube Shaft, diameter as per Rule as appd. Is the tube shaft fitted with a continuous liner no  
as fitted as fitted as fitted as fitted as fitted as fitted  
Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the propeller boss  
as fitted as fitted as fitted as fitted as fitted as fitted  
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner  
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 yes If so, state type "BRUNTON" Length of bearing in Stern Bush next to and supporting propeller 21 1/4"  
Propeller, dia. 62 1/2" Pitch 50 1/4" No. of blades 4 Material M. Bronze whether moveable fixed Total developed surface 1340 sq. feet  
Moment of inertia of propeller (lbs. 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 yes Means of lubrication forced Thickness of cylinder liners 7/8" Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled  
lagged with non-conducting material yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine worked from M.E. 1 stand by (ballast pump)  
Cooling Water Pumps, No. 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 bilge pump 35 M<sup>3</sup>/Hr. 1 ballast pump 35 M<sup>3</sup>/Hr.  
How driven No. 1 Aux. H.O. Eng. No. 2 Aux. H.O. Eng.  
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 35 M<sup>3</sup>/Hr. Power Driven Lubricating Oil Pumps, including spare pump, No. and size 1 3 M<sup>3</sup>/Hr. 1 2 M<sup>3</sup>/Hr.  
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 at 60 mm In pump room  
Holds, &c. No. 1 and No. 2 holds 2 each at 60 mm. 1 at C.D. at 50 mm.  
Independent Power Pump Direct Suctions to the engine room bilges, No. and size One at 60 mm. One at 80 mm.  
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 as practicable  
Are all Sea Connections fitted direct on the skin of the Ship yes Are they fitted with valves or cocks both Are they fixed efficiently high on the ship's side to be seen without lifting the platform plates yes as far as practicable 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  
What pipes pass through the bunkers none How are they protected  
What pipes pass through the deep tanks none 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  
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 none 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. 1 No. of stages 2 diameters 5 3/4" & 4" stroke 4" driven by Main Eng.  
Auxiliary Air Compressors, No. 1 No. of stages 1 capacity 30 M<sup>3</sup>/Hr. driven by H.O. Eng. aggregate  
Small Auxiliary Air Compressors, No. - No. of stages - diameters - stroke - driven by  
Is that provision is made for first charging the air receivers Aux. gen. engine, driving compressor thro clutch can be started by hand  
Scavenging Air Pumps, No. 1 D.A. tandem diameter 20 1/2" stroke 6 1/4" driven by Main eng.  
Auxiliary Engines crank shafts, diameter as per Rule See Hamburg rpt. 10 No. two 24 B.H.P. Position one portside one starboard side M.E. room  
as fitted as fitted as fitted as fitted as fitted as fitted  
Have the auxiliary engines been constructed under special survey yes Is a report sent herewith No



AIR RECEIVERS:—Have they been made under survey.....Yes......State No. of report or certificate.....

Is each receiver, which can be isolated, fitted with a safety valve as per Rule.....

Can the internal surfaces of the receivers be examined and cleaned.....

Is a drain fitted at the lowest part of each receiver.....

Injection Air Receivers, No.....

Cubic capacity of each.....

Internal diameter.....

thickness.....

Seamless, welded or riveted longitudinal joint.....

Material.....

Range of tensile strength.....

Working pressure.....

Actual.....

Starting Air Receivers, No.....

Total cubic capacity.....

Internal diameter.....

thickness.....

Seamless, welded or riveted longitudinal joint.....

Material.....

Range of tensile strength.....

Working pressure.....

Actual.....

IS A DONKEY BOILER FITTED.....no.....

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.....26th Sept. 1952.....

(If not, state date of approval).....

Receivers.....Nottingham.....

Separate fuel tanks.....

Donkey boilers.....

General pumping arrangements.....16th Sept. '52.....

Pumping arrangements in machinery space.....16th Sept. '52.....

Oil fuel burning arrangements.....

Have Torsional Vibration characteristics been approved.....

yes.....

Date of approval.....26th Sept. 1952.....

### SPARE GEAR.

Has the spare gear required by the Rules been supplied.....yes.....

State the principal additional spare gear supplied.....One screwshaft, one propeller and various miscellaneous items......

NOTE:— A notice board has been fitted at the main engine control station stating that the engine is not to be operated continuously between 220 and 255 R.P.M. and the engine tachometer has been marked accordingly.

CANTIERE NAVALE GIULIANO SAN GIUSTO  
Soc. A.R.L.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building  
During progress of work in shops - - - See Manchester Rpt. 4b N° 15506  
During erection on board vessel - - - 1953:— June 5.— Sept. 8, 22.— Oct. 13, 13, 15, 21, 22, 22, 23.  
Total No. of visits.....Ten.....

Dates of examination of principal parts—Cylinders.....Covers.....Pistons.....Rods.....Connecting rods.....

Crank shaft.....Flywheel shaft.....Thrust shaft.....Intermediate shafts.....13.5.53.....Tube shaft.....

Screw shaft.....13.5.53.....Propeller.....13.5.53.....Stern tube.....13.5.53.....Engine seatings.....22.9.53.....Engine holding down bolts.....22.9.53.....

Completion of fitting sea connections.....June '53.....Completion of pumping arrangements.....22.10.53.....Engines tried under working conditions.....22.10.53.....

Crank shaft, material.....Identification mark.....Flywheel shaft, material.....Identification mark.....

Thrust shaft, material.....Identification mark.....Intermediate shafts, material.....S.M.S......Identification marks.....E.23699.....

Tube shaft, material.....Identification mark.....Screwshaft, material.....S.M.S......Identification mark.....E.23699.....

Identification marks on air receivers.....35617-15.....35617-51.....

LLOYD'S TEST 17.9.52

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TP 575 lbs. WP 350 lbs (9501-15).....TP 575 lbs. WP 350 lbs (9501-51).....

Welded receivers, state Makers' Name.....See Nottingham Rpts......

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.....CO<sub>2</sub> portable extinguishers and water hoses.....

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.....

Is this machinery duplicate of a previous case.....yes.....If so, state name of vessel.....M/V "INIS" M/V "INTATA".....

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

The main machinery of this vessel was constructed under the supervision of the Manchester Survey and has now been efficiently installed aboard the vessel in accordance with Rule requirements, Secretary's letters and approved plans together with the auxiliary machinery constructed under supervision of the Hamburg Surveyors.

The workmanship and materials are good.

On completion the installation was tried under full working conditions at sea and found satisfactory.

In my opinion the machinery of this vessel is eligible to be classed with the records:

+ LMC - 10.53 Oil Engine Screwshaft O.G.

The amount of Entry Fee.....£ 34.6.0.....

Special.....£ .....

When applied for.....

Donkey Boiler Fee.....£ 1.15.0.....

When received.....

Travelling Expenses (if any).....£ 2.10.0.....

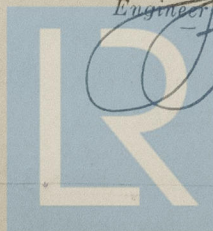
(Committee's Minute.....

Assigned.....+ LMC 10.53 Oil Eng (incl Torsional Prod.).....

O.G.

When applied for.....1953.....London.....

Engineer Surveyor to Lloyd's Register of Shipping



Lloyd's Register Foundation