

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 4557

NOV 22 1937

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Date of writing Report 18th Nov. 1937 When handed in at Local Office 19 Port of Stockholm

No. in Survey held at Sickla, Skm. District Date, First Survey 1st December 1932 Last Survey 10th Sept. 1937
Reg. Book. Number of Visits 11

on the Single Screw vessel M/S Surigao Tons { Gross 790.04
Net 490.89

Built at Hong Kong By whom built Hong Kong Wharftown Yard No. 789 When built 1932
Engines made at Stockholm By whom made A.B. Atlas-Diesel Engine No. 55271 When made 1937

Donkey Boilers made at _____ By whom made _____ Boiler No. _____ When made _____
Ordered by Messrs. Koppel (Philippines Inc. Manila)

Brake Horse Power 960 Owners La Naviera Filipina Inc. Port belonging to Cebu
Nom. Horse Power as per Rule 188 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____

Trade for which vessel is intended 1378 2276

OIL ENGINES, &c. Type of Engines Polar Diesel Oil Engine Type M46M 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders 55 kg/cm² Diameter of cylinders 340 mm Length of stroke 570 mm No. of cylinders 6 No. of cranks 6

Mean Indicated Pressure 7 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 484 mm Is there a bearing between each crank Yes

Revolutions per minute 250 Flywheel dia. 1200 mm Weight 570 kgs Means of ignition Compression Kind of fuel used Main Diesel Oil

Crank Shaft, dia. of journals as per Rule Crank pin dia. 220 mm Crank Webs Mid. length breadth 308 mm Thickness parallel to axis _____
as fitted 220 mm Mid. length thickness 122 Thickness around eyehole _____

The Flywheel is fitted at aft end of thrust shaft. Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter _____ Thrust Shaft, diameter at collars as per Rule
as fitted _____ as fitted 220 mm

Tube Shaft, diameter as per Rule Screw Shaft, diameter _____ Is the { tube } shaft fitted with a continuous liner { _____
as fitted _____ as fitted _____

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

propeller boss _____ 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 the tube
haft _____ If so, state type _____ Length of Bearing in Stern Bush next to and supporting propeller _____

Propeller, dia. _____ Pitch _____ No. of blades _____ Material _____ whether Moveable _____ Total Developed Surface _____ sq. feet

Method of reversing Engines By compressed air Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication _____

pumps. Thickness of cylinder liners 25.5 mm Are the cylinders fitted with safety valves _____ Are the exhaust pipes and silencers water cooled or lagged with
non-conducting material _____ If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine _____

Cooling Water Pumps, No. One Is the sea suction provided with an efficient strainer which can be cleared within the vessel _____

Bilge Pumps worked from the Main Engines, No. One Diameter 100 mm Stroke 140 mm Can one be overhauled while the other is at work _____
Double acting

pumps connected to the Main Bilge Line { No. and Size _____
How driven _____

the cooling 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
arrangements _____

Ballast Pumps, No. and size _____ Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size Two 350 liter/min
(each)

Are two independent means arranged for circulating water through the Oil Cooler _____ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge
pumps, No. and size:—In Machinery Spaces _____ In Pump Room _____

Holds, &c. _____

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 _____ Are the Bilge Suctions 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 _____

Are all Sea Connections fitted direct on the skin of the ship _____ Are they fitted with Valves or Cocks _____

Are they fixed sufficiently 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 _____

Are they 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 _____

What pipes pass through the bunkers _____ How are they protected _____

What pipes pass through the deep tanks _____ 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 _____

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 _____ Is the Shaft Tunnel watertight _____ 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 _____

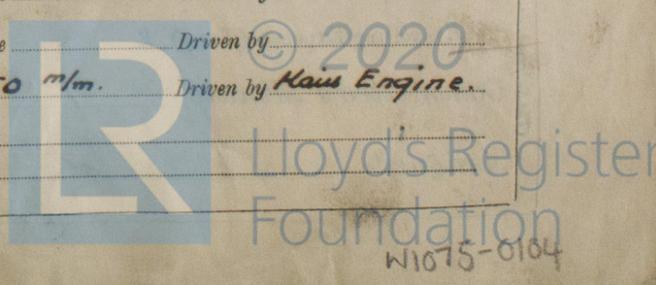
Main Air Compressors, No. One No. of stages 2 Diameters 175/70 mm Stroke 350 mm Driven by Main Engine

Auxiliary Air Compressors, No. _____ No. of stages _____ Diameters _____ Stroke _____ Driven by _____

Small Auxiliary Air Compressors, No. _____ No. of stages _____ Diameters _____ Stroke _____ Driven by _____

Scavenging Air Pumps, No. One Diameter 940 mm Stroke 350 mm Driven by Main Engine

Auxiliary Engines crank shafts, diameter _____ as per Rule _____
as fitted _____



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AIR RECEIVERS:—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.
High Pressure Air Receivers, No. None fitted Cubic capacity of each _____ Internal diameter _____ thickness _____
 Seamless, lap welded or riveted longitudinal joint _____ Material _____ Range of tensile strength _____ Working pressure _____
Starting Air Receivers, No. 2. Total cubic capacity 2000 litres. Internal diameter 650 mm. thickness 14 mm.
 Seamless, lap welded or riveted longitudinal joint Riveted Material S.H. Steel. Range of tensile strength 44-50 kg/mm² Working pressure _____
 by Rules _____ Actual 25 kg/cm²

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 E. 23/12/36 Receivers E. 6/8/30. Separate Tanks _____
(If not, state date of approval)

Donkey Boilers _____ General Pumping Arrangements _____ Oil Fuel Burning Arrangements _____

SPARE GEAR.

Has the spare gear required by the Rules been supplied } As per enclosed list. The spare gear has been examined
 State the principal additional spare gear supplied } before it was despatched.
The additional water circulating pump and the
daily fuel supply pump will be delivered
by the Ship Builders.

The foregoing is a correct description,

AKTIEBOLAGET ATLAS DIESEL
G. Jacobsson

Manufacturer.

Dates of Survey while building
 During progress of work in shops-- 1/32, 10/9, 27/5, 12/12, 35/11, 23/12, 36/1, 20/10, 8/9, 10/9
 During erection on board vessel--
 Total No. of visits 11 in shop.

Dates of Examination of principal parts—Cylinders 10/9/37. Covers 10/9/37 Pistons 10/9/37 Rods _____ Connecting rods 9/9, 9/9
 Crank shaft 10/12/35, 9/37. Seawater pump shaft 10/12/35, 9/37. Thrust shaft 1/32, 12/35, 9/37. Intermediate shafts _____ Tube shaft _____
 Screw shaft _____ Propeller _____ Stern tube _____ Engine seatings _____ Engines holding down bolts _____

Engines tried under working conditions 8-9-37.
 Crank shaft, Material S.H. Steel. Identification Mark LLOYDS N° 6536
 T.B. 12-12-35
 Thrust shaft, Material S.H. Steel. Identification Mark LLOYDS N° 6534
 T.B. 12-12-35
 Tube shaft, Material _____ Identification Mark _____
 Intermediate shafts, Material _____ Identification Marks _____
 Screw shaft, Material _____ Identification Mark _____

Is the flash point of the oil to be used over 150° F. _____
 Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with _____
 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 Please see Skm. Rpt N° 4179.

General Remarks (State quality of workmanship, opinions as to class, &c.)
I am of opinion that this engine is of superior material and workmanship, and as it has been designed and constructed under special survey, I have respectfully to submit that it be classed +LHC, as soon as it has been installed in a chartered vessel to the satisfaction of the Society's Surveyors.

The amount of Entry Fee .. £	:	:	When applied for,
Special <u>£ N° 572:-</u>	:	:	19
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	<u>29/12 1937</u>

Thorsen Nilow
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned Not for Classing
Committee

TUE 22 NOV 1936
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Certificate (if required) to be sent to
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)