

REPORT ON OIL ENGINE MACHINERY.

No. 112074

Received at London Office 31 DEC 1928

Date of writing Report 24 October 1928 When handed in at Local Office

Port of AMSTERDAM

Location in Survey held at AMSTERDAM

Date, First Survey 14 October Last Survey 24 June 1928

Number of Visits 14

--- on the Single Oil Engine No. 4973 for a 340 tons tanker Tons } Gross -
Net -

Wilt at Kobe By whom built Mitsui Bussan Kaisha Co. Ltd. Yard No. 120 When built to class 164

Engines made at Amsterdam By whom made Kromhout Motoren Fabriek Engine No. 4973 When made 1928

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

Brake Horse Power 350 Owners Ned. Ind. Tank Stoomboot My. Port belonging to Rotterdam

Nom. Horse Power as per Rule 100 Is Refrigerating Machinery fitted for cargo purposes - Is Electric Light fitted -

Trade for which vessel is intended - Sanriku-Coast, Japan

MAIN ENGINES, &c. Type of Engines Wauchope oil eng. Type 4 M. 6. 2 or 4 stroke cycle 2 Single or Double acting Single

Maximum pressure in cylinders 18 1/2 lb. per sq. in. Diameter of cylinders 42 1/2 in. Length of stroke 48 1/2 in. No. of cylinders 4 No. of cranks 4

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 53 1/2 in. Is there a bearing between each crank Yes

Revolutions per minute 240 Flywheel dia. 1000 in. Weight 2200 lbs. Means of ignition spark plug Kind of fuel used Crude oil

Crank Shaft, dia. of journals as per Rule 4 1/2 in. Crank pin dia. 2 1/2 in. Crank Webs Mid. length breadth 4 1/2 in. 1 1/2 in. x 1 1/2 in. Thickness parallel to axis as per Rule 1 1/2 in. Thickness around eye-hole as per Rule 1 1/2 in.

Flywheel Shaft, diameter as per Rule 2 1/2 in. Intermediate Shafts, diameter as per Rule 1 1/2 in. Thrust Shaft, diameter at collars as per Rule 1 1/2 in.

Tube Shaft, diameter as per Rule 1 1/2 in. Screw Shaft, diameter as per Rule 1 1/2 in. Is the tube screw shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 1/8 in. Thickness between bushes as per Rule 1/8 in. 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 Yes

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 Yes

If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft Yes

Length of Bearing in Stern Bush next to and supporting propeller 12 in.

Propeller, dia. 48 in. Pitch 48 in. No. of blades 4 Material Cast Iron whether Moveable Yes Total Developed Surface 100 sq. feet

Method of reversing Engines Clutch Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication oil

Thickness of cylinder liners 1/8 in. Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or 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 funnel

Cooling Water Pumps, No. 2 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. 2 Diameter 1 1/2 in. Stroke 100 in. Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line { No. and Size 2 How driven Hand

Lubricating Oil Pumps, including Spare Pump, No. and size (4) 2 plunger pumps 4 1/2 x 4 1/2

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 2

In Holds, &c. 2

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-bones Yes 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 Yes

Are all Sea Connections fitted direct on the skin of the ship Yes 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 Yes

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 Water How are they protected as per Rule

What pipes pass through the deep tanks Water 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 Yes Is it fitted with a watertight door Yes worked from Hand

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork None

Main Air Compressors, No. 1 No. of stages 2 Diameters 3 1/2 x 4 1/2 Stroke 4 Driven by Main engine

Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 3 1/2 x 4 1/2 Stroke 4 Driven by aux. engine

Small Auxiliary Air Compressors, No. 1 No. of stages 1 Diameters 1 1/2 Stroke 4 Driven by Hand

Scavenging Air Pumps, No. 1 Diameter 1 1/2 Stroke 4 Driven by Hand

Auxiliary Engines crank shafts, diameter as per Rule 1 1/2 in. E.R.I. = 85 in. 41.4974 as fitted 1 1/2 in. E.R.O. 41.4974

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 Yes What means are provided for cleaning their inner surfaces manhole

Is there a drain arrangement fitted at the lowest part of each receiver Yes

High Pressure Air Receivers, No. 2 Cubic capacity of each 44.6 cu ft Internal diameter 18 in. thickness 1/2 in.

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 20/18 tons Working pressure by Rules 100 lb.

Starting Air Receivers, No. 2 Total cubic capacity 44.6 cu ft Internal diameter 18 in. thickness 1/2 in.

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 20/18 tons Working pressure by Rules 100 lb.



008049-008060-0238

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting Receivers Separate Tanks *Office*
(If not, state date of approval) *London 8. 13/4. 28.*

Donkey Boilers General Pumping Arrangements Oil Fuel Burning Arrangements

SPARE GEAR 1 Combustion chamber, 1 piston complete with rings and pin
12 piston rings; 4 igniter plates; 1 set of main bearing brass, bolts,
3 bottom end brass with bolts and nuts; 4 gudgeon pins;
4 roller steel slabs; 1 fuel pump complete; 1 fuel injector; 4 igniter
plates; 1 thread with nuts for cylinder head; 1 set of piston rings for
compressor, various lengths of tubes; 1 set of valves and springs for
compressor, packings for fuel injector and igniter plates, valves for bilge
and cooling pumps; 2 governor springs, valves for crankcase, oil fuel pump

The foregoing is a correct description,

P.P. N.V. KROMHOUT MOTOREN FABRIEK

D. GOE *D. Goep Jr.*

Manufacturer.

Dates of Survey while building	During progress of work in shops--	17/10	20/10	23/10	25/10	5/11	7/11	11/11	19/11	26/11	27/11	29/11	10/12	14/12	24/12	
	During erection on board vessel---															
	Total No. of visits	14														
Dates of Examination of principal parts—Cylinders		17/10	24/10	Covers	17/10	21/10	Pistons	17/10	5/12	Rods	Connecting rods	24/10	18/11			
Crank shaft		20/10	14/11	Flywheel shaft	Thrust shaft	21/11	26/11	Intermediate shafts	Tube shaft							
Screw shaft		Propeller	Stern tube	Engine seatings	Engines holding down bolts											
Completion of fitting sea connections		Completion of pumping arrangements	Engines tried under working conditions	14/11	28											
Crank shaft, Material		Steel	Identification Mark	Hydi. 1882 v.s.	29.9.20	Flywheel shaft, Material	Identification Mark									
Thrust shaft, Material		Steel	Identification Mark	Hydi. 1849	25.11.28	Intermediate shafts, Material	Identification Marks									
Tube shaft, Material		Identification Mark	Screw shaft, Material	Identification Mark												

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

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

Is this machinery duplicate of a previous case If so, state name of vessel *Ant. Rep. OP: 10678.*

General Remarks (State quality of workmanship, opinions as to class, &c. *See by OP: 3474.*)

The oil engine has been constructed under special survey in accordance with the approved plan and Secretary's letter.

All materials tested as required, workmanship good. Engines tried under full working conditions on test bench and good.

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

The amount of Entry Fee	£	:	:	When applied for,
Special	300.-	:	:	19
Donkey Boiler Fee	£	:	:	When received,
Travelling Expenses (if any)	12.-	:	:	15.1.29

Committee's Minute **FRI. 21 FEB 1930**
Assigned *See Kobe 6719*

ASM
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H. W. Bernhardt
Engineer Surveyor to Lloyd's Register of Shipping.
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