

REPORT ON OIL ENGINE MACHINERY.

No. 8405

5 JAN 1931

st. 4b.

Received at London Office

of writing Report 29/12 1930 When handed in at Local Office

Port of Copenhagen

in Survey held at Copenhagen & Nakskov

Date, First Survey 4/11 1929

Last Survey 21/12 1930

Number of Visits 97

on the India Screw vessel

Tons { Gross 9849.15 Net 6030.63

at Nakskov By whom built 1/2 Nakskov Skibvaerft. Yard No. 39 When built 1930

ines made at Copenhagen By whom made 1/2 Bismister & Wain. Engine No. 1718 When made 1930

key Boilers made at Sheffield By whom made Bavy Bros. Ld. Boiler No. 1979 When made 1930

ke Horse Power abt. 5320 Owners 1/2 Det Asiatiske Kompagni. Port belonging to Copenhagen.

n. Horse Power as per Rule 948 Is Refrigerating Machinery fitted for cargo purposes yes. Is Electric Light fitted yes.

de for which vessel is intended Ocean Trade, gen. cargo, frozen meat & fruit



ENGINES, &c. Type of Engines Vertical Diesel, trunk piston, air injection or 4 stroke cycle 4 Single or double acting single

imum pressure in cylinders 35 kg/cm² Diameter of cylinders 630 mm Length of stroke 1200 mm No. of cylinders 2 x 8 No. of cranks 2 x 8

of bearings, adjacent to the Crank, measured from inner edge to inner edge 892 mm Is there a bearing between each crank yes.

utions per minute 145 Crank wheel dia. 1902 mm Weight 1180 kg. Means of ignition compression Kind of fuel used crude oil

ank Shaft, dia. of journals as per Rule 404 mm Crank pin dia. 414 mm Crank Webs Mid. length breadth 670 mm Thickness parallel to axis 266 mm

heel Shaft, diameter as per Rule 404 mm Intermediate Shafts, diameter as per Rule 11.15 Thrust Shaft, diameter at collars as per Rule 11.71

ce Shaft, diameter as per Rule 414 mm Screw Shaft, diameter as per Rule 12.254 Is the shaft fitted with a continuous liner yes.

ize Liners, thickness in way of bushes as per Rule 0.68 Thickness between bushes as per rule 0.511 Is the after end of the liner made watertight in the

eller boss yes. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner in one length.

he 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.

wo 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

Length of Bearing in Stern Bush next to and supporting propeller 1600 mm

propeller, dia. 13'-0" Pitch 11'-2" No. of blades 3 Material bronze whether Moveable No. Total Developed Surface 51.3 sq. feet

ethod of reversing Engines direct reversible Is a governor or other arrangement fitted to prevent racing of the engine yes. Means of lubrication

Thickness of cylinder liners 46 mm Are the cylinders fitted with safety valves yes. Are the exhaust pipes and silencers lagged with

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 the mast.

ling Water Pumps, No. 2, centrifugal, 300 g.p.m. Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes.

ge Pumps worked from the Main Engines, No. 2 Diameter 160 mm Stroke 244 mm Can one be overhauled while the other is at work yes.

mps connected to the Main Bilge Line No. and Size 2 off 160 mm dia. x 244 mm stroke / 1 off 150 t/l. / 1 off 30 t/l.

How driven by main engines. / electrically / electrically

last Pumps, No. and size 1 off rotary, 150 t/l. Lubricating Oil Pumps, including Spare Pump, No. and size 4 off, cog wheel, 60 t/l.

two independent means arranged for circulating water through the Oil Cooler yes. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

mps, No. and size:—In Machinery Spaces 2 off 3", 2 off 4", 1 off 1 1/2" (PIPE FUNNEL) In Pump Room

Holds, &c. N^o 1 HOLD: 2 off 3", N^o 2 HOLD: 2 off 4", DEEP TANK: 2 off 2 1/2", N^o 3 HOLD: 2 off 3 1/2", 1 off 2 1/2", N^o 4 HOLD: 2 off 3", 1 off 2 1/2", TUNNEL WELL: 1 off 2 1/2"

ependent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 off 3 1/2", 1 off 6", 1 off 7"

all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes. Are the Bilge Suctions in the Machinery Spaces

from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes.

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

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 above.

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.

at pipes pass through the bunkers yes. How are they protected tinned

at pipes pass through the deep tanks 2 off 3", 2 off 4" BILGE PIPES; 1 off 2 1/2" SECTION TO Have they been tested as per Rule the pipes are led through a watertight

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times. yes.

he 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

partment to another yes. Is the Shaft Tunnel watertight yes. Is it fitted with a watertight door yes. worked from upper deck.

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

ain Air Compressors, No. 2 removed No. of stages 3 Diameters 750-675-50 Stroke 420 mm Driven by main engine.

uxiliary Air Compressors, No. see special Rpt. No. of stages 1 Diameters 106-34 Stroke 80 mm Driven by Steam.

all Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 106-34 Stroke 80 mm Driven by Steam.

avenging Air Pumps, No. 1 Diameter 106-34 Stroke 80 mm Driven by Steam.

uxiliary Engines crank shafts, diameter as per Rule See separate Report

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

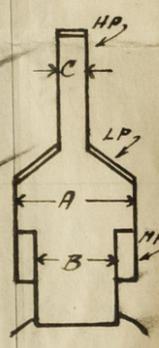
the internal surfaces of the receivers be examined and cleaned yes. Is a drain fitted at the lowest part of each receiver yes.

igh Pressure Air Receivers, No. 2 WORKING. Cubic capacity of each 400 LITERS Internal diameter 358 mm thickness 21 mm

ameless, lap welded or riveted longitudinal joint lap welded. Material S.M. steel Range of tensile strength 22.2 t/0 Working pressure by Rules 66.9 kg/cm²

arting Air Receivers, No. 2 Total cubic capacity 1450 cu. ft. Internal diameter 6'-0" x 6'-1 1/16" thickness 1 1/16 ENDS 1 3/16

ameless, lap welded or riveted longitudinal joint triple rivet. Material S.M. steel Range of tensile strength 26 Working pressure by Rules 25 kg/cm²



IS A DONKEY BOILER FITTED? *yes.*

If so, is a report now forwarded? *yes, Sheffield Rpt. 1*

Is the donkey boiler intended to be used for domestic purposes only *also for heating brim when thawing off brim pipes in insulated*

PLANS. Are approved plans forwarded herewith for Shafting *yes.* Receivers *yes.* Separate Tanks *yes.*

Donkey Boilers *yes.* General Pumping Arrangements *yes.* Oil Fuel Burning Arrangements *yes.*

SPARE GEAR.

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

State the principal additional spare gear supplied *please see accompanying list of spare gear.*

The foregoing is a correct description,

AKTIESELSKABET

BURMEISTER & WAINZ MASKIN- OG SKIBBYGGERI

Manufacturer.

Dates of Survey while building	During progress of work in shops -	4/11, 16/11, 21/11, 25/11, 29/11, 3/12, 7/12, 11/12, 15/12, 19/12, 23/12, 27/12, 31/12, 4/1, 8/1, 12/1, 16/1, 20/1, 24/1, 28/1, 31/1, 3/2, 7/2, 11/2, 15/2, 19/2, 23/2, 27/2, 31/2, 3/3, 7/3, 11/3, 15/3, 19/3, 23/3, 27/3, 31/3, 3/4, 7/4, 11/4, 15/4, 19/4, 23/4, 27/4, 31/4, 3/5, 7/5, 11/5, 15/5, 19/5, 23/5, 27/5, 31/5, 3/6, 7/6, 11/6, 15/6, 19/6, 23/6, 27/6, 31/6, 3/7, 7/7, 11/7, 15/7, 19/7, 23/7, 27/7, 31/7, 3/8, 7/8, 11/8, 15/8, 19/8, 23/8, 27/8, 31/8, 3/9, 7/9, 11/9, 15/9, 19/9, 23/9, 27/9, 31/9, 3/10, 7/10, 11/10, 15/10, 19/10, 23/10, 27/10, 31/10, 3/11, 7/11, 11/11, 15/11, 19/11, 23/11, 27/11, 31/11, 3/12, 7/12, 11/12, 15/12, 19/12, 23/12, 27/12, 31/12, 1930
	During erection on board vessel -	2/9, 10/9, 24/9, 28/9, 7/10, 15/10, 17/10, 23/10, 3/11, 11/11, 17/11, 18/11, 21/11, 25/11, 28/11, 29/11, 4/12, 11/12, 12/12, 13/12, 17/12, 21/12, 1930
Total No. of visits		97

Dates of Examination of principal parts - Cylinders *31/12, 7/1, 15/1, 26/1, 5/2, 19/2, 20/2, 27/2, 29/2, 31/2, 7/3, 14/3, 23/3, 30/3* Pistons *7/4, 14/4, 23/4, 30/4* Rods *10/4, 29/4, 7/5* Connecting rods *10/4, 29/4, 7/5*

Crank shafts *4/2, 7/2, 13/2, 18/2, 30/2* Flywheel shaft *and* Thrust shafts *13/2, 26/2, 13/3* Intermediate shafts *7/3, 30/3* Tube shaft *✓*

Screw shafts *30/4, 10/9* Propellers *2/9* Stern tubes *15/4, 27/4, 29/4* Engine seatings *24/4, 17/10* Engines holding down bolts *3/11, 4/11*

Completion of fitting sea connections *29/9* Completion of pumping arrangements *17/11* Engines tried under working conditions *6/13, 23/13, 13/1*

Crank shaft, Material *S.H. ingot steel* Identification Mark *4.5-4.30* Flywheel shaft, Material *✓* Identification Mark *✓*

Thrust shaft, Material *S.H. ingot steel* Identification Mark *13-5-30* Intermediate shafts, Material *S.H. ingot steel* Identification Marks *6.9-5-30*

Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *S.H. ingot steel* Identification Mark *6.30-4-30*

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.*

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo in deep tanks, *yes.* If so, have the requirements of the Rules been complied with *yes.*

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 *No.* If so, state name of vessel *✓*

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

This machinery has been constructed and fitted under special survey and in accordance with the Society's Rules, the approved plans and the requirements contained in the Secretary's letters E dated 25/4, 21/6, 2/8, 3/10, 2/12, 1929 and 6/9, 2/10, 1930.

The material used in the construction has been tested and examined as per Rules, either by us or per Certificates produced, and the workmanship is of good description throughout.

After completion of the installation on board the vessel the main and auxiliary engines with all their appliances were tested under full power working conditions and found to work satisfactorily, and on the final trial trips the maneuvering of the main engine was tested and found good.

Recommend the vessel's machinery to have notation of +LMC-12-30, OIL ENGINES

C.L.

The amount of Entry Fee *14.* *109.20* When applied for, *2.1.1931*

Special *2380.56* When received, *2401.80 - 19/11/31*

Donkey Boiler Fee *50.00* *899.46 - 14/12/31*

Travelling Expenses (if any) *701.50*

SUNDAY FEES & LATE FEES *85.00*

Committel's *60.00*

Assigned *+ Lmb. 12.30 oil Eng. SB-100 lbs*



Certificate (if required) to be sent to Surveyors' Office, Cebu.