

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 9548.

Colombo 1st June, 1925

Received at London Office

22 JUN 1925  
Colombo

Date of writing Report 4 August 1924 When handed in at Local Office

Port of Amsterdam

No. in Survey held at Reg. Book.

Amsterdam

Colombo

Date, First Survey 30 January

Last Survey July 31 1924  
Number of Visits 14

Single }  
Twin } Screw vessels  
Triple }

Oil engine no. 2701

Tons { Gross 223.96  
Net 121.

Master

Built at

Colombo

By whom built Walker Sons & Co

Card No. -- When built 1924

Engines made at

Amsterdam

By whom made

M. V. Kromhout Motorenfabrik

Engine No. 2701

When made 1924

Donkey Boilers made at

--

By whom made

--

Boiler No. --

When made --

Brake Horse Power

100

Owners

Asiatic Petroleum Co. Ltd.

Port belonging to

London

Nom. Horse Power as per Rule

29

Is Refrigerating Machinery fitted for cargo purposes

--

Is Electric Light fitted

✓

## OIL ENGINES, &c.

Type of Engines

Kromhout heavy oil engines 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders

16 Atm.

No. of cylinders 2

No. of cranks 2

Diameter of cylinders 335 mm.

Length of stroke

350 mm

Revolutions per minute

300

Means of ignition

Hot bulb

Kind of fuel used

heavy oil

Is there a bearing between each crank

yes

Span of bearings (Page 92, Section 2, par. 7 of Rules)

354 mm.

Distance between centres of main bearings

600 mm

Is a flywheel fitted

yes

Diameter of crank shaft journals

as per Rule approved  
as fitted 120 mm

Diameter of crank pins

120 mm

Breadth of crank webs

as per Rule approved  
as fitted 160 mm

Thickness of ditto

as per Rule approved  
as fitted 70 mm

Diameter of flywheel shaft

as per Rule approved  
as fitted 120 mm

Diameter of tunnel shaft

as per Rule approved  
as fitted 108 mm

Diameter of thrust shaft

as per Rule approved  
as fitted 108 mm

Diameter of screw shaft

as per Rule approved  
as fitted 110 mm

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

without liner

Is the after end of the liner made watertight in the propeller boss

Bronze shaft

If the liner is in more than one length are the joints burned

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

in oil

Type of outer gland fitted to stern tube

Cast iron gland

Length of stern bush

390 mm

Diameter of propeller

1200 mm

Pitch of propeller

825 mm

No. of blades

4

state whether moveable

no

Total surface

650 square feet

Method of reversing

Clutch gear

Is a governor or other arrangement fitted to prevent racing of the engine when declutched

Governor

Thickness of cylinder liners

no liners

Are the cylinders fitted with safety valves

no

Means of lubrication

forced lubrication

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material water cooled if the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

up funnel

No. of cooling water pumps

Is the sea suction provided with an efficient strainer which can be cleared

within the vessel

Yes

No. of bilge pumps fitted to the main engines

1

Diameter of ditto

3 3/4"

Stroke

1 5/8"

Can one be overhauled while the other is at work

Yes

No. of auxiliary pumps connected to the main bilge lines

none

How driven

Sizes of pumps

some rotary

No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps

1 1/2" & 1 1/4"

and in holds, etc.

hand deck pump (portable)

No. of ballast pumps

How driven

hand

Sizes of pumps

Is the ballast pump fitted with a direct suction from the engine room bilges

State size

Is a separate auxiliary pump suction fitted in

Engine Room and size

--

Are all the bilge suction pipes fitted with roses

Yes

Are the roses in Engine Room always accessible

Yes

Are the sluices on Engine Room bulkheads always accessible

none

Are all connections with the sea direct on the skin of the ship

Yes

Are they valves or cocks

both

Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates

Yes

Are the discharge pipes 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 all pipes, cocks, valves and pumps in connection with the machinery accessible at all times

Yes

Are the bilge suction pipes, cocks and valves arranged so as to prevent any

communication between the sea and the bilges

Yes

Is the screw shaft tunnel watertight

Yes

Is it fitted with a watertight door

no

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

No. of main air compressors

--

No. of stages

Diameters

Stroke

Driven by

--

No. of auxiliary air compressors

--

No. of stages

Diameters

Stroke

Driven by

--

No. of small auxiliary air compressors

one

No. of stages

one

Diameters

3"

Stroke

4"

Driven by

belt or hand

No. of scavenging air pumps

--

Diameter

Stroke

Driven by

--

Diameter of auxiliary Diesel Engine crank shafts

as per Rule --  
as fitted --

Are the air compressors and their coolers made so as to be easy of access

## AIR RECEIVERS:--

No. of high pressure air receivers

Internal diameter

Cubic capacity of each

material

Seamless, lap welded or riveted longitudinal joint

Range of tensile strength

thickness

working pressure by Rules

No. of starting air receivers

3

Internal diameter

253 mm

Total cubic capacity

2 of 75 litres, 1 of 50 l

Material

S.M. Steel

Seamless, lap welded or riveted longitudinal joint

Seamless

Range of tensile strength

28/32 tons

thickness

7 mm

Working pressure by rules

50 Atm

Is each receiver, which can be isolated,

fitted with a safety valve as per Rule

approved

Can the internal surfaces of the receivers be examined

Yes

What means are provided for cleaning their

inner surfaces

remove flange & S. Valve

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

Yes

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	28/5 31/5	16 Atm.	32 Atm.	Lloyd's Test F.N.B. 32 Atm 26.5.24 31.5.24	Good
2 Combustion chambers	31/5	16 Atm.	32 Atm.	31.5.24	do.
1 Spare " COVERS					
" " JACKETS					
" " PISTON WATER PASSAGES					
MAIN COMPRESSORS—1st STAGE					
" 2nd "					
" 3rd "				338-339-340	
3 AIR RECEIVERS—STARTING	31.7.24	16 Atm	35 Atm	F.N.B. 35 Atm 31.7.24	Do.
" INJECTION					
AIR PIPES	31.7.24	16 Atm	40 Atm		
FUEL PIPES	31.7.24	do	40 Atm		
FUEL PUMPS	31.7.24	do.	40 Atm		
SILENCER	31.7.24	0.5 Atm	3 Atm		
" WATER JACKET	31.7.24	-	Do.		
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting Retained in London office Separate Tanks ✓  
(If not, state date of approval)

SPARE GEAR 1 Combustion chamber, 1 piston ring, nuts complete, 1 gudgeon pin, plate, 2 bottom end bolts, nuts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of ledge & cooling hump valves; a quantity of assorted bolts, nuts, & crank case air vessels, 1 crank bearing brass, 1 fuel pump complete, a few lengths of air & fuel pipes with couplings, springs for fuel pump, 8 cones for spraying nozzles; 4 lower bearing brasses.

The foregoing is a correct description,  
N.V. Kromhout Motorenfabrik  
D. Goedkoop Manufacturer.

Dates of Survey while building: During progress of work in shops - January 30, Feb 25, March 27, May 26, 28, 31, June 10, 16, 19, 24, July 22, 23, 30, 31  
During erection on board vessel - Oct. 25, Nov. 3, 15, 17, Dec. 2, 5, 9, 10  
Total No. of visits 14 8

Dates of Examination of principal parts—Cylinders 27/3 28/5 c-chambers 27/3 31/5 Pistons 31/5 Rods ✓ Connecting rods 30/1  
Crank shaft 26/5 Thrust shaft 31/7 Tunnel shafts ✓ Screw shaft 22/7/24 Propeller 22/7 Stern tube 22/7 Engine seatings  
Engines holding down bolts 18" Completion of pumping arrangements Engines tried under working conditions 31/7.24 workshop  
Completion of filling sea connections ✓ Stern tube 31/7.24 Shop Screw shaft and propeller 31/7.24 Shop  
Material of crank shaft Nickel steel Identification Mark on Do. 1089 6.5.24 Material of thrust shaft Steel Identification Mark on Do. F.N.B. 29.7.24  
Connecting rods Identification Marks on Do. F.N.B. 18.6.24 Material of screw shafts Bronze Identification Marks on Do. A.E.F. 8.7.24  
Material of tunnel shafts Steel  
Is the flash point of the oil to be used over 150° F. yes  
Is this machinery duplicate of a previous case -- If so, state name of vessel --

General Remarks (State quality of workmanship, opinions as to class, &c.)  
The oil engine has been built under special survey in accordance with the approved plans, the Rules + Secretary's letters; material tested as required; engines tested under full working conditions in workshop & good.  
The engines have been forwarded to Colombo & will be placed in a vessel built (oil bunker) to the order of the Anglo-Saxon at that Port.  
Asiatic Petroleum Co. Ltd.

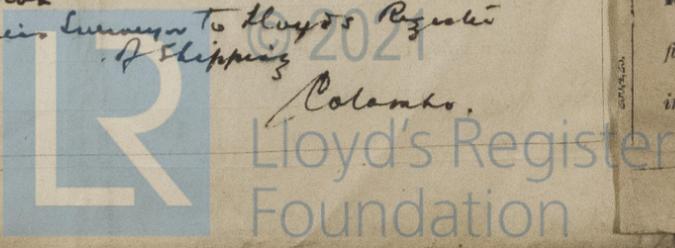
Certificate (if required) to be sent to (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee ... £ 200 -  
Special ... £ :  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ 12 -

When applied for, (Signed) F. N. Bernoski  
Engineer Surveyor to Lloyd's Register of Shipping.  
When received, 19  
Original Apt. attached  
19

Committee's Minute  
Assigned

FRI. 26 JUN 1925  
+ Lmb 12.24  
Oil Engines



CERTIFICATE WRITTEN