

REPORT ON OIL ENGINE MACHINERY.

No. 9548

11 SEP 1924

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

Received at London Office 19 Port of Amsterdam

No. in Survey held at Amsterdam Reg. Book.

Date, First Survey 30 January Last Survey July 31 1924 Number of Visits 14

on the Single Twin Screw vessels Oil Engine No. 2401

Tons Gross Net

Master Built at By whom built Yard No. When built

Engines made at Amsterdam By whom made Kromhout Motorsfabrik Engine No. 2401 When made 1914

Donkey Boilers made at By whom made Boiler No. When made

Brake Horse Power 100 Owners Anglo Saxon Port belonging to London

Net 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 Engine 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders 16 atm. No. of cylinders 2 No. of cranks 2 Diameter of cylinders 335 mm 13 3/16

Length of stroke 350 mm 13 3/4 Revolutions per minute 300 Means of ignition Hot Bull 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 as fitted 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 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 If without liners, is the shaft arranged to run in oil

Type of outer gland fitted to stern tube. cast iron gland Length of stern bush 390 mm Diameter of propeller 1100 mm

Pitch of propeller 825 mm No. of blades 4 state whether movable 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 40 mm

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

No. of cooling water pumps 1 Is the sea suction provided with an efficient strainer which can be cleared within the vessel

No. of bilge pumps fitted to the main engines 1 Diameter of ditto 3 3/4 Stroke 1 1/2

Can one be overhauled while the other is at work Yes No. of auxiliary pumps connected to the main bilge lines How driven

Sizes of pumps No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room and in holds, etc. No. of ballast pumps How driven 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 Are the roses in Engine Room always accessible

Are the sluices on Engine Room bulkheads always accessible Are all connections with the sea direct on the skin of the ship

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

Are the discharge pipes above or below the deep water line Are they each fitted with a discharge valve always accessible on the plating of the vessel

Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times Are the bilge suction pipes, cocks and valves arranged so as to prevent any communication between the sea and the bilges

Is the screw 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

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 No. of stages Diameters Stroke Driven by

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 5 Internal diameter 253 mm

Total cubic capacity 20/45 Liters 10/502 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 Can the internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces Is there a drain arrangement fitted at the lowest part of each receiver

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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	31 atm	Lloyd's test T. 13. 22 atm 28.5 24 31.5 24	Good
1. Combustion chambers " " COVERS	31/5	16 atm	32 atm	31.5 24	do
" " JACKETS	"	"	"	"	"
" " PISTON WATER PASSAGES	"	"	"	"	"
MAIN COMPRESSORS—1st STAGE	"	"	"	"	"
" 2nd "	"	"	"	"	"
" 3rd "	"	"	"	"	"
3 AIR RECEIVERS—STARTING	31.7.24	16 atm	35 atm	338. 339. 340 35 atm T. 13. 31.7.24	50
" INJECTION	"	"	"	"	"
AIR PIPES	31.7.24	16 atm	40 atm	"	"
FUEL PIPES	31.7.24	"	40 atm	"	"
FUEL PUMPS	31.7.24	"	40 atm	"	"
SILENCER	31.7.24	11.5 atm	3 atm	"	"
" WATER JACKET	31.7.24	"	50	"	"
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting *Returned in* Receivers *London Office* Separate Tanks *✓*
(If not, state date of approval)

SPARE GEAR 1 combustion chamber, 1 piston rings, nuts complete, 1 gudgeon pin & plate, 1 bottom end bolts, nuts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of bilge & cooling pump valves. A quantity of assorted bolts, nuts, 4 crankcase air vessels, 1 crank bearing brass, 1 fuel pump complete, a few lengths of air and fuel pipes with couplings, spring for fuel pump, 8 cones for spraying nozzles, 4 lower bearing brasses.

The foregoing is a correct description,
N.V. KROMHOUT MOTOREN FABRIEK

Goedkoop Jr.

Manufacturer.

Dates of Survey while building { During progress of work in shops—*January 30 Feb. 25 March 27 May 16 28 31 June 10 16 19 24 July 21 23 30 31.*
During erection on board vessel—
Total No. of visits *14*

Dates of Examination of principal parts—Cylinders *24/5 28/5* 1. chamber Covers *24/5 31/5* Pistons *31/5* Rods *✓* Connecting rods *30/1*
Crank shaft *24/5* Thrust shaft *31/5* Tunnel shafts *✓* Screw shaft *22/4 24* Propeller *22/4* Stern tube *22/4* Engine seatings *✓*
Engines holding down bolts *✓* Completion of pumping arrangements *✓* Engines tried under working conditions *31/14 workshop*
Completion of fitting sea connections *✓* Stern tube *31/4 24 shop* Screw shaft and propeller *31/4 24 shop*
Material of crank shaft *Nickel Steel* Identification Mark on Do *1058 4.5.24* Material of thrust shaft *Steel* Identification Mark on Do *1058 29.4.24*
Material of tunnel shafts *Steel* Identification Marks on Do *1058 18.4.24* Material of screw shafts *Brass* Identification Marks on Do *1058 8.4.24*

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 and Secretary's letters; material tested as required; engines tested under full working condition in workshop and good.
The engines have been forwarded to Calamba and will be placed in a vessel built for bunkers to the order of the Anglo Saxon at that Port.

The amount of Entry Fee ... *£200.-*

Special ... *£*

Donkey Boiler Fee ... *£*

Travelling Expenses (if any) *£ 12.-*

When applied for,

19

When received,

1/9/24

H. V. Berner

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

PM 26 JUN 1925

Assigned

See lbo 416



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Foundation